OFFICE OF LAND AND EMERGENCY MANAGEMENT

WASHINGTON, D.C. 20460

October 16, 2025

DIRECTIVE

SUBJECT: Residential Lead Directive for CERCLA Sites and RCRA Hazardous Waste Cleanup Program Facilities

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Date: 2025.10.16 14:55:55 -04'00'

TO: Regional Administrators

With this Directive, the Office of Land and Emergency Management (OLEM) is establishing a new vision for addressing residential lead exposures at Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) sites that integrates available authorities to provide multiple layers of protection in impacted communities. The actions outlined in this Directive directly support the Agency's bold commitment to reduce children's exposure to lead across the nation in an expedited manner.

Reducing exposure to lead improves communities' health and wellbeing. Cleanups of lead contaminated soil on residential properties and other high impact areas, combined with the education and action of individuals, communities and government partners, have proven to be an effective part of the Agency's overall strategy for reducing blood-lead levels in children. The updated approach outlined in this Directive formalizes the use of these layers of protection to encourage early response in areas of greatest concern and to leverage the expertise and resources of state and local partners for long-term protection that provides greater certainty to communities and other stakeholders.

This Directive provides updated guidance and establishes an approach to streamline response actions to address lead contaminated soil on residential properties at CERCLA sites and RCRA Hazardous Waste Cleanup Program facilities[1] by advancing the following:

- A removal management level (RML) of 600 parts per million (ppm),
- A regional screening level (RSL) of 200 ppm for lead in residential soil,

[1] The RCRA Corrective Action Program was rebranded as the Hazardous Waste Cleanup Program in October 2024.

- A target children's blood lead level (BLL) of 5 micrograms per deciliter (ug/dL) to develop Preliminary Remediation Goals (PRGs),
- A roadmap for response action decision-making at residential properties and other high impact areas for children (e.g., schools, playgrounds)[2] that includes engineered and non-engineered approaches, and
- A series of process improvements to accelerate response actions that address lead contaminated soil on residential properties.

RATIONALE FOR UPDATED APPROACH

This Directive supersedes the January 2024 *Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities*[3] and provides clarity to EPA regions in addressing lead contaminated soil on residential properties at CERCLA and RCRA sites. Identifying a single RSL and a single target BLL with this Directive is a change from the recommendation made in the 2024 Guidance. Following efforts to implement the 2024 Guidance, the Agency has reevaluated the 2024 Guidance recommendation of a lower RSL and BLL where one or more additional sources of lead are identified. Upon further consideration, the Agency has determined that having a single RSL and target BLL reduces inconsistent implementation and provides clarity to decision makers and the public, allowing the Agency to address sites more quickly while remaining within its RCRA and CERCLA response authorities. Furthermore, the use of the same level for both the RSL and RML in the 2024 Guidance did not provide clear direction for prioritizing properties for cleanup based on lead concentrations, particularly with respect to when to pursue a CERCLA removal action. Lastly, the lower screening level identified in the 2024 Guidance was set below background lead concentrations in many areas, such as urban or historically mined areas, which further limited the ability to rapidly assess and remediate lead contaminated residential properties.

This Directive provides for greater consistency in screening across residential properties contaminated with lead, while also allowing for adjustments to RSLs, RMLs and PRGs on a case-by-case basis. The decision to eliminate elements of the 2024 Guidance does not impede the Agency's ability to apply available tools and authorities to ensure thorough evaluation and implementation of protective cleanups at lead contaminated residential properties at CERCLA and RCRA sites. Simply stated, cleanup decisions that follow the components of this Directive provide the necessary actions to protect communities affected by lead contamination.

Identifying all potential sources of lead in a community remains a priority to advance the Agency's broad commitment to reduce exposures to those sources. Pursuant to the *Federal Lead Action Plan*, the Agency's recently reconstituted Senior Leadership Lead Coordinating Committee will leverage additional authorities and cross-agency collaboration opportunities to provide more comprehensive protection to communities across the country. By leveraging the

[2] EPA defines residential properties as any area with high or unrestricted accessibility to sensitive populations (e.g., young children less than 7 years old) and includes, but is not limited to, properties containing single- and multi-family dwellings, apartment complexes, vacant lots in residential areas, schools, daycare centers, community centers, playgrounds, parks and other recreational areas, green ways, and any other areas where young children may be exposed to site-related contaminated media.

[3] U.S. EPA (U.S. Environmental Protection Agency). 2024. Updated Residential Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. https://semspub.epa.gov/work/HQ/100003435.pdf

efforts of this coordinating committee, OLEM can ensure its actions are appropriately directed to CERCLA and RCRA sources of residential lead contamination rather than to sources that can be addressed by other authorities, such as lead-based paint or water service lines. Site teams may consider information on other potential sources of lead in collaboration with internal and external program partners to ensure the appropriate authorities are applied in an impacted community.

UPDATED GUIDANCE

With this Directive, OLEM advances 200 ppm as the RSL for sites with lead contaminated residential properties and sets the RML at three times the RSL, consistent with the standard approach for other contaminants, to assist in the prioritization of highest risk properties within a site. This Directive also advances a target children's BLL of 5 μg/dL in the development of PRGs for sites with lead contaminated residential properties. The technical basis of these core elements of this Directive is described at the end of this Directive. EPA regions should continue to work collaboratively with state, tribal, local public health agencies and communities to establish priorities and implement the vision presented in this Directive.

Residential properties with lead concentrations below 200 ppm generally do not require further action, however further evaluation may be warranted below the screening level in some specific situations. EPA regions may adjust RSLs, PRGs and cleanup levels to ensure compliance with statutory and regulatory requirements and to account for relevant site-specific considerations such as technical limitations, bioavailability, and soil lead background levels.

RSLs are used to help identify and define areas that may need further evaluation. RMLs inform the process to prioritize and define areas that may pose the greatest threat to human health. The RSLs and RMLs are not default PRGs or cleanup levels.

For a response action to be deemed protective once it is implemented, all human and ecological risks are to be currently under control and anticipated to remain under control in the future. Where a site includes multiple individual residential properties, an array of engineered and non-engineered instruments is generally used to provide layers of protection. These actions may include physical removal, capping or treatment of contaminated soil to eliminate a direct exposure pathway, institutional controls (ICs) to restrict land use that would expose contamination, and informational devices to educate the public about potential lead exposure and ways to limit that exposure. Site-specific decision documents outline the actions to be applied in a particular response that, when layered together, achieve protectiveness. At sites with multiple residential properties, it is reasonable to expect that the layers may vary by property depending on unique circumstances including, but not limited to, access and property characteristics (e.g., paved surfaces, structures, or trees).

ICs and other non-engineered instruments (including the use of post-removal site controls under CERCLA removal authority) enhance the effectiveness of response actions. These tools, such as ordinances, advisories, educational campaigns, and public notices, play a crucial role in protecting human health by informing the public about the presence of contamination and promoting exposure prevention practices. A primary advantage is their ability to raise awareness among residents, landowners, and potential developers, ensuring that parties are informed about

site or property conditions and any restrictions or precautions necessary to prevent exposure. OLEM is committing to develop a model IC program, as detailed below, that draws upon current best practices, shares effective template documents and outlines expectations for monitoring and maintenance to support short- and long-term protectiveness.

CERCLA five-year reviews (FYRs) remain an essential statutory tool to evaluate protectiveness of both engineered and non-engineered remedy components at any site where hazardous substances, pollutants or contaminants remain on site above levels that permit unlimited use and unrestricted exposure, per CERCLA Section 121(c) and 40 CFR Part 300.430(f)(4)(ii). The findings of a FYR may result in the need for further evaluation, cleanup and/or institutional controls to support short- and/or long-term protectiveness.

ADDITIONAL PROCESS IMPROVEMENTS

This Directive is expected to result in more nationally consistent cleanup decisions and implementation, thereby accelerating the reduction of direct exposures to lead. In pursuit of these objectives, OLEM is committing to implement key process improvements and programmatic efficiencies by the end of calendar year 2025, particularly with respect to CERCLA sites. This commitment includes, but is not limited to, the following:

1. Issue a **roadmap for CERCLA response action decision making** at sites with lead-contaminated residential properties which will set forth how to select actions to apply layers of protection using removal and remedial authorities, education and outreach, and leveraging the unique strengths of states, tribes and other external parties.

2. Establish a **National Center of Excellence for CERCLA Residential Lead Cleanups** as a centralized resource to share expertise across regions, identify and facilitate efficiencies, and establish best management practices across all phases of characterization and cleanup. This will include templates, site-specific technical support, training and a commitment to develop the following:

    a. A **National Residential Lead Portfolio Manager** to monitor the scope, schedule and cost of all CERCLA residential lead response actions, as well as identify and facilitate resolution of obstacles in conjunction with the Center of Excellence and site teams. The Portfolio Manager will develop and utilize dashboards to facilitate executive oversight and track progress at the project and program level.

    b. A **Contracting Strategy** for CERCLA residential lead cleanups that allows for efficient acquisition of cleanup contractors and creates measurable efficiencies by focusing contracting tools to address the unique requirements and challenges associated with residential cleanups.

    c. A **Model IC Program for CERCLA sites** for early and sustained implementation of institutional controls and other non-engineered instruments to complement engineered cleanup components. The model will draw upon current best practices to promote successful approaches, tools and templates for efficient application to empower

individuals and communities to protect themselves from lead risks. The improvements in this area are also expected to create new opportunities to leverage state and local governments.

TECHNICAL BASIS FOR THIS DIRECTIVE

Lead risk assessment does not use traditional toxicity values (e.g., reference dose for non-cancer risks, oral slope factor for cancer risks); rather, protectiveness for lead is defined by the risk of exceeding the target BLL for a given exposure scenario. Although no evidence for a safe level of lead in children's blood has yet been found, for the purpose of managing risks under CERCLA and RCRA, the Agency considers protectiveness to have been achieved at the vast majority of residential soil lead sites when there is no more than a 5% probability of exceeding a BLL of 5 µg/dL considering all exposures to lead for the child receptor. EPA first established this approach of developing a PRG by limiting the probability of exceeding a target BLL to 5% in the 1994 Soil Lead Directive.[4] EPA anticipates that a PRG developed following the steps provided in the *Superfund Lead-Contaminated Residential Sites Handbook*[5] (Handbook) and utilizing a target BLL of 5 µg/dL addresses the contribution of the CERCLA or RCRA release to elevated blood levels based on the best available science. This risk calculation, while unique to lead, is consistent with the intention of the non-cancer risk calculation outlined in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and is used similarly to manage risk. For additional information on the negative health impacts of lead and the method for calculating a site-specific PRG, refer to Chapters 8 and 9 of the Handbook, respectively. A summary of the scientific studies and methodologies to set site-specific screening levels and PRGs is also available in the Handbook. In particular, the findings of the National Toxicology Program's *Monograph on Health Effects of Low-Level Lead* (2012)[6], the Agency for Toxic Substances and Disease Registry's *Toxicological Profile for Lead* (2020)[7], and EPA's *Integrated Science Assessment for Lead* (2024)[8] provide a sound basis for this Directive.

NOTICE

This Directive should be considered for all sites with residential lead contamination subject to CERCLA response and RCRA Hazardous Waste Cleanup Program authorities, including federal facility cleanup programs subject to CERCLA section 120, and potentially by federal agencies using response action authorities delegated to them under Executive Order 12580. The statements in this document are intended solely as guidance. This document is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States.

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[4] U.S. EPA. 1994. Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities. OSWER Directive #9355.4-12. https://semspub.epa.gov/src/document/HQ/175347.

[5] U.S. EPA. 2024. Superfund Lead-Contaminated Residential Sites Handbook. https://www.epa.gov/superfund/lead-superfund-sites-guidance#residentialsites

[6] NTP (National Toxicology Program). 2012. NTP Monograph on Health Effects of Low-Level Lead. https://pubmed.ncbi.nlm.nih.gov/23964424/

[7] ATSDR (Agency for Toxic Substances and Disease Registry). 2020. Toxicological Profile for Lead. https://www.atsdr.cdc.gov/toxprofiles/tp13.pdf

[8] U.S. EPA. 2024. Integrated Science Assessment for Lead. https://assessments.epa.gov/isa/document/&deid=359536

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