



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

Proposed Rulemaking: Administration of the Land Recycling Program (25 Pa. Code Chapter 250)

Environmental Quality Board
March 12, 2024

Josh Shapiro, Governor

Jessica Shirley, Interim Acting Secretary

Purpose

The proposed amendments to Chapter 250:

- Comply with the Department of Environmental Protection's (DEP) obligation under 25 Pa. Code § 250.11 to review new scientific information that relates to the basis of Act 2 Medium-Specific Concentrations (MSCs) and propose appropriate changes to the EQB at least 36 months following previous regulatory update, and
- Clarify Chapter 250 administrative processes and requirements for regulated entities.

Proposed Changes - MSCs

MSCs are the concentrations of contaminants in soil and groundwater that are calculated to protect public health.

- Currently, approximately 400 contaminants have MSCs listed in Chapter 250, Appendix A
 - About 11% of soil MSCs have proposed revisions
 - About 8% of groundwater MSCs have proposed revisions
- Changes based on updates to toxicity values and peer-reviewed sources of toxicology information

Proposed Changes - PFAS

The proposed revisions will add and update soil and groundwater numeric values for per- and polyfluoroalkyl substances (PFAS).

- New
 - Hexafluoropropylene oxide (HFPO) dimer acid
 - HFPO dimer acid ammonium salt (Gen-X)
 - Perfluorobutanoic acid (PFBA)
 - Perfluorohexanoic acid (PFHxA)
 - Perfluorobutane sulfonate (PFBS) potassium salt
- Update to incorporate State maximum contaminant levels (MCLs) and Federal drinking water advisories
 - Perfluorooctane sulfonate (PFOS)
 - Perfluorooctanoic acid (PFOA)
 - Perfluorobutane sulfonate (PFBS)

Proposed Changes – Value Sources

Updates to toxicity value sources

- Carcinogenic polycyclic aromatic hydrocarbon (PAH) values
 - Supported by Cleanup Standards Scientific Advisory Board (CSSAB) workgroup's white paper
- Health Effects Assessment Summary Tables (HEAST)
- EPA's Office of Land and Emergency Management memo on alternative toxicity value sources

Proposed Changes - Lead

- Updates to direct contact soil values for lead
 - Models used to calculate the values
 - Model input values
 - Adding a statistical test for attainment
- Based on review of:
 - EPA Superfund Program
 - Public comments on previous Chapter 250 rulemaking and Advance Notice of Proposed Rulemaking
 - CSSAB consultation, workgroup & whitepaper

New Lead Models

- Update to current EPA Superfund lead models
- Residential values calculated using the Integrated Exposure Uptake Biokinetic (IEUBK) Model for Lead in Children
 - Designed to include all methods of exposure for a typical child, including dust and drinking water
- Non-residential values calculated using the Adult Lead Methodology (ALM)
 - Designed to protect fetus of a pregnant industrial worker

Lead Model Inputs

- Table 7 updated with default model inputs for IEUBK and ALM to calculate MSCs for lead
- Residential Model Inputs (IEUBK)
 - Default values set by the EPA, including a target blood lead level of 5 $\mu\text{g}/\text{dL}$
- Non-Residential Model Inputs (ALM)
 - Default values set by the EPA, including a target fetal blood lead level of 5 $\mu\text{g}/\text{dL}$ and a soil ingestion rate of an industrial worker

Lead IEUBK Model - Residential

Residential properties include:

- Schools and daycare facilities
- Recreational areas
- Parks and playgrounds
- Planned residential construction
- Nursing homes

▶ Lead ALM Model – Non-Residential

Non-residential properties include:

- Commercial
- Industrial
- Manufacturing
- Warehouses
- Equipment storage and maintenance facilities

Lead Soil MSC Summary*

	Direct contact		Soil-to-groundwater		Effective^	
	Current	Proposed	Current	Proposed	Current	Proposed
Residential	500	200	450	450	450	200
Non-residential	1,000	1,100	450	450	450	450

*All values in mg/Kg

^Effective values are applicable to most Statewide health attainments

- Residential Soil Lead MSC = 200 mg/Kg
- Nonresidential Soil Lead MSC = 450 mg/Kg

Lead Attainment Statistical Test

- Lead values calculation method is unique
- Add new attainment statistical test
 - Averaging soil attainment data (EPA recommended)
 - For lead direct contact attainment only
 - Consistent with methods to develop models and to attain site-specific standard
 - Additional requirements in Chapter 250 to prevent “hot spots”
- Cross references to the new attainment test were added to § 250.703(d) and § 250.707(d)

▶ Proposed Changes – Other Revisions

- Addition to aqueous solubility references
- Correcting typographical errors and clarifying confusing language
- Clarify that maximum contaminant levels (MCLs) and health advisory levels (HALs) become effective upon publication as *final* standards

Affected Stakeholders

This proposed rule will impact:

- Persons or businesses who remediate soil and groundwater contamination under the standards established by the Land Recycling Act and the Chapter 250 regulations.
- The health of individuals who may be exposed to contaminated soil and groundwater.

Economic Impact

- Generally, any cost related to a given site remediation depends in large part on which regulated substances are being remediated and what the specific soil and groundwater conditions are at the site.
- The proposed changes are not expected to add any significant costs, overall, to the cleanup of contaminated sites under this rulemaking.

Stakeholder Engagement

- **Previous Public Participation**
 - Previous Chapter 250 rulemaking public comments received in 2020
 - 2021 Advance Notice of Proposed Rulemaking
- **Advisory Committee**
 - Cleanup Standards Scientific Advisory Board (CSSAB) – five meetings during 2022 & 2023
 - Workgroups on Lead and Polycyclic Aromatic Hydrocarbons

▶ Why the Amendments are Necessary

The amendments to Chapter 250 are necessary because they:

- Are protective of human health
- Provide long-term predictability and improved efficiency for remediators
- Comply with the three-year review requirement as listed in Section 250.11

Recommendation

The Department recommends that the Board adopt this proposed rulemaking. A 60-day public comment period is recommended with at least three public hearings.



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