



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

Overview of Chapter 250 Draft-Final Rulemaking

Cleanup Standards Scientific Advisory Board
(CSSAB) Meeting
December 16, 2020

Tom Wolf, Governor

Patrick McDonnell, Secretary

Today's Discussion

- Proposed rulemaking summary
- Vanadium and lead in soil
- Error corrections
- Changes to tables
- Next steps for the final-form rulemaking and comment response document

Rulemaking Timeline and Summary

- Discussed proposed rulemaking with CSSAB throughout 2018 and 2019
- Published draft regulation for public comment February – April 2020
- Discussed public comments and proposed amendments at CSSAB's July 2020 meeting
- Continued discussion on two topics throughout 2020: vanadium and lead in soil

Vanadium in Soil

- CSSAB proposed a new method to calculate direct contact values with vanadium based on a different toxicity value.
- DEP shared CSSAB's proposed method and toxicity value with the State Toxicologist at Pennsylvania's Department of Health (DOH) and requested a toxicological review.

Vanadium in Soil

- DEP is prohibited from changing elements in a final-form rulemaking that were not presented in the proposed rulemaking
- Restrictions come from Commonwealth Documents Law (45 P.S. 1102-1208) and Commonwealth Attorneys Act (71 P.S. 732-301)

Lead in Soil

- A proposed change in lead soil models resulted in an increase in non-residential direct contact soil numeric values
- This change prompted public concern and comments that questioned the existing target blood lead level of 10 $\mu\text{g}/\text{dL}$

Lead in Soil

Soil Lead Value Comparison

- Comparison of current soil lead values with proposed and revised values using target blood lead levels of 10 µg/dL and 5 µg/dL, respectively.

Direct contact Soil Lead Numeric Value	Current Value mg/kg	New Modeled Value Target Pb _b = 10 µg/dL	New Modeled Value Target Pb _b = 5 µg/dL
Residential	500 (UBK)	420 (IEUBK)	153 (IEUBK)
Non-residential	1,000 (SEGH)	2,517 (ALM)	1,050 (ALM)

UBK = Uptake Biokinetic Model (1990)

SEGH = Society for Environmental Geochemistry and Health (1991)

Lead in Soil

CSSAB Lead Workgroup Analysis

- Workgroup provided analysis of the new model's application to the Act 2 program
- Calculated modeling outputs with varying target blood lead levels, probabilities, and environmental media inputs
- Workgroup recommended DEP consider use of average lead concentrations as an additional option for Statewide health standard attainment demonstration

Lead in Soil

Decisions Based on Workgroup Analysis

- Use a target blood lead level of 5 $\mu\text{g}/\text{dL}$
- Use a Probability of Exceeding the Target Blood Lead Level of 5%
- Use all environmental media inputs
- Resulting lead values in Table 4A:
 - Non-residential direct contact value = 1,100 mg/kg
 - Residential direct contact value = 150 mg/kg(Both rounded to two significant figures)

Lead in Soil

Decisions Based on Workgroup Analysis

- Use of averages as an attainment method for the Statewide health standard for lead in soil is not included in this rulemaking but is still under consideration
- This topic requires additional evaluation and discussion

Correction of Errors

- Public comment identified missing and incorrect information for calculating MSCs for certain PAHs
- DEP added footnotes to Table 5A for surrogate chemicals and will remove unnecessary surrogate footnote from Table 5B

Correction of Errors

- A footnote error regarding the generic soil-to-groundwater values of “NA” for the newly added Per- and Poly-Fluoroalkyl Substances (PFAS) compounds was corrected
- Footnote was added stating, “N/A – SOIL TO GROUNDWATER VALUES CAN NOT BE CALCULATED FOR THESE COMPOUNDS.”

Correction of Errors

Aroclors

- Table 5A inadvertently showed Aroclors removed in proposed rulemaking
- Removed brackets for final-form rulemaking

Other Table Changes

- Changes to toxicity values for the following chemicals were discussed at the July CSSAB meeting but cannot be changed due to Commonwealth Documents Law restrictions:
 - 2-Nitropropane
 - Antimony
 - Cyanide

Other Table Changes

- Merphos Oxide was amended in the proposed rulemaking, so this change is permissible
 - Oral reference dose (RfD_o) removed from IRIS
 - Replaced in Table 5A with ATSDR* value
 - Changed numeric values in Tables 1, 3A, and 3B

*ATSDR - Agency for Toxic Substances and Disease Registry

Next Steps for Rulemaking

- Finalize revisions to Preamble and Comment-Response document
- Final-form rulemaking presented to Environmental Quality Board in Spring 2021



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Questions?

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