



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Environmental Cleanup & Brownfields

# **Land Recycling Program Overview of Chapter 250 Proposed Rulemaking Responses to Public Comments**

**Cleanup Standards Scientific Advisory Board Meeting  
July 30, 2020**

**presented by  
Michael Maddigan  
DEP**

Tom Wolf, Governor

Patrick McDonnell, Secretary

# Public Comment Overview

## Today's Discussion

- CSSAB rulemaking discussion history
- Public comment summary
- Overview of public comments and responses for each general topic
- Next steps for the Comment-Response Document and Final-Form Rulemaking

# CSSAB Rulemaking Discussions

## Rulemaking Discussions with CSSAB

- DEP brought Chapter 250 technical questions to CSSAB during April 4, 2018 meeting
- Proposed rulemaking revisions discussed at following CSSAB meetings:
  - August 1, 2018
  - February 13, 2019
  - June 12, 2019
  - October 29, 2019

# Public Comment Summary

## Public Comment Period

- Proposed rulemaking published in February 15, 2020 edition of PA Bulletin with 60-day public comment period
- Public comment period extended to April 30, 2020, due to COVID-19 pandemic
- 140 comment documents submitted by 124 commenters

# Public Comment Summary

## Public Comments

- The majority of comments received were form-letters regarding a single topic
- Other comments from various organizations were extensive and covered multiple topics
- Consolidated similar comments and unique comments for a total of 40 comments requiring responses

# Public Comment Summary

- Organizations submitting comments:
  - Bucks Environmental Action
  - Penn Center of Excellence in Environmental Toxicology
  - Group Against Smog and Pollution (GASP)
  - PA Chamber of Business and Industry (PCBI)
  - Clean Air Council (CAC)
  - Marcellus Shale Coalition
  - Pitt Law Environmental Group
  - National Nurse-Led Care Consortium
  - City of Philadelphia Law Department
  - Barnes & Thornburg, LLP
  - Independent Regulatory Review Commission (IRRC)

# Public Comment Summary

## Public Comment Topics

- Proposed increase in non-residential direct contact soil numeric value for lead
- Other MSC-related issues
- Publication of values for Per- and Poly-Fluoroalkyl Substances (PFAS) compounds
- Vanadium soil values
- Other various issues with Act 2 and the Land Recycling Program

# Lead Soil Value

## History

- Proposed rulemaking updates the models for residential and non-residential soil lead values
  - Integrated Exposure Uptake Biokinetic (IEUBK) model evaluates residential exposure (2010)
  - Adult Lead Methodology (ALM) evaluates non-residential exposure (2003 using updated exposure parameters from 2017)
- Current Ch. 250 lead models from 1990 & 1991



# Lead Soil Value

## History

- Changes in lead soil values were discussed with CSSAB during 2018/2019 meetings

Direct contact Soil Lead Numeric Value	Current Value mg/kg	New Modeled Value Target Pb <sub>b</sub> = 10 µg/dL	New Modeled Value Target Pb <sub>b</sub> = 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 Soil Value

## History

- CSSAB recommended
  - Use proposed soil lead models
  - Use default EPA Office of Superfund Remediation and Technology Innovation (OSRTI) input values including a target blood lead level of 10  $\mu\text{g}/\text{dL}$
  - Monitor EPA's lead in soil evaluation for changes

# Lead Soil Value

## History

- Increase of non-residential direct contact lead value originally considered to be inconsequential by CSSAB and DEP because:
  - Using EPA default exposure factors in ALM
  - Non-residential soil-to-groundwater lead value is lower than direct contact value and will therefore become the non-residential soil MSC in most cases (See attached infographics for MSC selection process)

# Lead Soil Value

## Public Comments

- Non-residential direct contact soil lead value was a universal concern for commenters.
- Use of the ALM resulted in an increase in the non-residential direct contact numeric value for lead from 1,000 mg/kg to 2,517 mg/kg.
- 120 of the 128 commenters opposed the proposed lead numeric value.

# Lead Soil Value

## Why Did Lead Soil Value Increase?

- EPA's OLEM Directive 9285.6-56 – *Transmittal of Update to the Adult Lead Methodology's Default Baseline Blood (2017)* updates two exposure parameters:
  - Default baseline blood lead concentration
  - Default geometric standard deviation

# Lead Soil Value

## One Concern – Multiple Reasons from Commenters

- PA's industrial history resulted in ubiquitous lead in soil in urban areas
- All levels of lead in humans is unsafe
- Inadequate justification for increase
- Relaxation of lead standards benefits corporations while harming citizens of PA
- Target blood lead level of 10  $\mu\text{g}/\text{dL}$  is scientifically invalid

# Lead Soil Value

## One Concern – Multiple Reasons from Commenters

- Soil-to-groundwater value does not always apply
- Not protective of women’s reproductive rights
- Increased potential for life-long birth defects
- “Non-residential” sites not just industrial – many are accessed by children and may become residential in the future
- Environmental Justice issue

# Solution to Lead Soil Values

## One Concern – One Solution

- OLEM Directive 9285 recognizes adverse health effects at blood lead concentrations  $< 10 \mu\text{g/dL}$ .
- **DEP proposing to decrease target blood lead level for ALM and IEUBK models from  $10 \mu\text{g/dL}$  to  $5 \mu\text{g/dL}$  (Table 7)**
  - **Non-residential direct contact value =  $1,050 \text{ mg/kg}$**
  - **Residential direct contact value =  $153 \text{ mg/kg}$**   
(Table 4A)



# Solution to Lead Soil Values

## Federal Support for Use of 5 $\mu\text{g}/\text{dL}$

- EPA is updating their soil lead strategy to incorporate a lower target blood lead level
- The Center for Disease Control (CDC) and other national public health organizations acknowledge adverse health effects at blood lead levels below 10  $\mu\text{g}/\text{dL}$

# Solution to Lead Soil Values

## PA Support for Use of 5 $\mu\text{g}/\text{dL}$

- PA public health agencies use 5  $\mu\text{g}/\text{dL}$  as a threshold value
  - PA Department of Health
  - Allegheny County Department of Health
  - City of Philadelphia
- Use of 5  $\mu\text{g}/\text{dL}$  brings soil direct contact numeric values more in line with current lead toxicity science and with other public health agencies in PA.

# Other MSC-Related Comments

- Concern over proposed increases in MSCs
  - Response: Sometimes the use of new scientific information or correction of errors results in increases in numeric values.
- Preamble does not address how decreases in MSCs result in increased costs to remediators
  - Response: The ability for remediators to select Act 2 standard means decreases in MSCs do not always translate to higher remediation costs.

# Other MSC-Related Comments

- Support for revisions that allow for calculation of chloride and sulfate MSCs.
- Concern about DEP's use of surrogate values
  - Response: Surrogate toxicity values are only needed when toxicity values for the original substance are unavailable.
  - DEP will include a description of the decision-making process used for determining surrogates in the next version of the Technical Guidance Manual (TGM).

## Other MSC-Related Comments

- Concerns regarding transparency and DEP's process for calculating MSCs for certain PAHs and new transport factor (TF) values
  - Response: **DEP will add footnotes to Table 5A for surrogate chemicals and will remove unnecessary surrogate footnote from Table 5B.**
  - DEP will consider the requested evaluation of TF factors during the next proposed rulemaking.

# PFAS Comments

- Concerns that proposed PFAS groundwater MSCs are not protective of human health and states should wait for EPA to publish MCLs
  - Response: Groundwater MSCs for PFOA/PFOS are based on Health Advisory Level (HALs) published in EPA's Drinking Water Standards and Advisory Tables as required by section 303(b)(3) of Act 2
  - Soil values calculated using the same toxicity values EPA used to calculate HAL

# PFAS Comments

- PFAS concerns regarding sampling and analysis guidance, limited lab capacities, treatment/disposal of PFAS contaminated media, and potential increased costs
  - Response: DEP recognizes these concerns but they are outside of the scope of this rulemaking. DEP will reassess this as new data becomes available during the following 36-month review cycle.
- Two commenters commended DEP for the promulgation of soil and groundwater MSCs for PFAS compounds.

# PFAS Comments

- DEP should evaluate and publish anticipated background levels of PFAS due to atmospheric deposition
  - Response: Act 2 and Chapter 250 currently describe the process remediators should follow for determining background standards which can be applied to compounds that may be the result of atmospheric deposition. The background standard may be pursued on a site-by-site basis.



# Comments on Vanadium

- MSCs for vanadium should be modified or removed because the residential soil MSC for vanadium is below naturally occurring levels,
- The current vanadium MSCs are unworkable and are not supported by the CSSAB.
- PA's residential soil MSC is lower than several other states' vanadium soil cleanup values.

# Comments on Vanadium

- One commenter has discouraged the use of the current Provisional Peer-Reviewed Toxicity Value (PPRTV) due to a high level of uncertainty.
- This commenter advises the use of a vanadium toxicity value from EPA's Regional Screening Level (RSL) table which is based on the Integrated Risk Information System (IRIS) toxicity value for vanadium pentoxide.

# Next Steps for Vanadium Soil MSC

- DEP recognizes this value is very low and problematic for remediators.
- DEP will monitor EPA's evaluation of the potential toxicity of multiple vanadium-containing compounds.
- DEP will continue to work with its stakeholders.

# Transparency in Studies

- More transparency needed in the funding for the scientific studies that are the basis for toxicity values used to calculate MSCs
  - Response: All of the studies that EPA and other public health agencies use to establish their toxicity values are available to the public for review.

# Environmental Professional Language

- DEP should consider adding “qualified environmental professional” to § 250.12
  - Response: Proposed language for § 250.12 does not exclude qualified environmental professionals from preparing submittals as long as the submittals are stamped by a licensed professional.

# Public Involvement Plans

- Suggestion to add requirements for remediators when developing Public Involvement Plans (PIPs)
  - Local municipalities are entitled to the rights provided in Section 304(n) and (o) of Act 2 with respect to notices, reviews, and community involvement, including PIPs.
  - DEP is bound by the rules of Act 2 when determining regulatory language and requirements for PIPs.

# EPA Methods References

- Requests to specify EPA methods to be used in determining the Practical Quantitation Limit (PQL) and “alternative sampling methods” relating to proposed amendments to § 250.4(a) and § 250.10(d), respectively
  - Response: DEP refrains from naming specific EPA manuals or methods to ensure that additional revisions to the Ch. 250 regulations are not required each time EPA revises a manual or method referenced in Ch. 250.

# DEP Changes to Tables

- MERPHOS OXIDE
  - Oral reference dose (RfD<sub>o</sub>) removed from IRIS
  - Replaced in Table 5A with ATSDR value
  - Changed numeric values in Tables 1, 3A, and 3B
- 2-NITROPROPANE
  - Inhalation Unit Risk (IUR) value from PPRTV added to Table 5A and IUR from HEAST removed
  - Changed numeric values in Tables 1, 3A, and 3B

ATSDR = Agency for Toxic Substances and Disease Registry

HEAST = Health Effects Assessment Summary Tables



# DEP Changes to Tables

- ANTIMONY
  - Added inhalation reference concentration (RfC<sub>i</sub>) value from ATSDR to Table 5B
  - No value previously available
  - No changes to numeric values
- CYANIDE
  - Removed RfC<sub>i</sub> value from Table 5B
  - Previous value was removed from IRIS database
  - No changes to numeric values

# DEP Changes to Tables

- AROCLORS
  - Inadvertently showed all Aroclors being removed from Table 5A in proposed rulemaking
  - Removed brackets for final-form rulemaking

# Final-Form Rulemaking Next Steps

- Continue working to address the comments we received on the proposed rulemaking
- Finalize revisions to Preamble and Annex including tables
- Finalize Comment-Response document
- Return to October CSSAB meeting with Final-form Annex
- Deliver final-form rulemaking to the EQB in mid-2021



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**Questions?**  
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