

Concepts for Potential Chapter 250 Updates

Cleanup Standards Scientific Advisory Board
October 21, 2026





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Environmental Protection

Purpose

- Present concepts for potential future Chapter 250 updates
- Multiple sections of the regulations
 - 250.301(b)
 - 250.307
 - 250.406(c)
 - Tables 5A, 5B, and 8
 - Other items



List of Mutagens – 250.301(b)

- Inconsistent with other sources' lists of mutagens
- Possibly add mutagens
 - Review of toxicity supporting documents
- Impacts
 - Residential soil and/or groundwater values likely decrease



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Particulate Emission Factor (PEF) – 250.307

- Currently based on 1994 draft EPA guidance
- Considering update to 1996 final EPA guidance
- Could change Medium-specific Concentrations (MSCs) for nonvolatile substances in surface soil



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Relationship to Surface Water Quality – 250.406(c)

- Considering clarifications
- Impacts surface water quality waiver requests



Table 5A - K_{OC}

- Considering source update to EPA's Estimation Program Interface (EPI) Suite
 - Organic carbon partitioning coefficient (K_{OC}) Molecular Connectivity Index (MCI) Method
- Some K_{OC} values will change
- Potential Impacts
 - Multiplier for volatile organic non-use aquifer values
 - Soil to groundwater calculations for organic compounds



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Table 5A – VOC (Volatile Organic Compound)

- Values based on definition in 250.1
- Uses factors not published in Table 5A
 - Henry's Law Constant
 - Molecular weight
- Considering factor source update to EPI Suite
- Unlikely to change volatile designations or MSC values



Table 5A – Aqueous Solubility and Reference

- Considering source update to EPI Suite
- Will eliminate
 - reference column in Table 5A
 - list of references in 250.304(g)
- Unlikely to change any MSC values
 - Only use: compounds with calculated MSC exceeding the solubility limit



Table 5A – Boiling Point

- Considering source update to EPI Suite
- Also applies to melting point
 - Not published
 - Used in organic liquid determination
- Unlikely to change any MSC values



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Table 5B – Partitioning Coefficient (K_d)

- Considering updating source to EPI Suite
- Uses
 - Calculating soil-to-groundwater values
 - Modeling for fate and transport
- Unlikely to change MSC values



Table 8 – CPEC list

- Compounds of potential ecological concern
- Currently approximately 72 compounds
- Should include most compounds in MSC tables
- Considering deleting Table 8



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Other – Nonvolatile Inhalation

- Current calculations include sub-surface inhalation for nonvolatile compounds
- Considering update to eliminate these values



Other – Melting Point (MP)

- Currently used to determine organic liquid
- Add definition of organic liquid to §250.1
 - Regulated substances which are organics and liquids at standard temperature and pressure (STP)
 - $MP < 30^{\circ} C$
- Clarify §250.305(b) to use term “organic liquid”



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Conclusions

- Considering updating most sources to EPI Suite
 - Transparency
 - Uniformity
- Clarify other sections
- Use most up-to-date science



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Thank you

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Questions?

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