

Technical Questions
Cleanup Standards Scientific Advisory Board Meeting
April 4, 2018

1. Groundwater ingestion rate in Chapter 250 is 2.0 L/day which is an old US Environmental Protection Agency (EPA) value. The 2011 Exposure Factors Handbook has a range of values based on age. EPA's Office of Solid Waste and Emergency Response (OSWER) Directive 9200.1-120 (Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors) recommends an adult residential drinking water ingestion rate of 2.5 L/day (90th percentile of consumer-only ingestion of drinking water for ages ≥ 21 years). This change would impact the residential "IngR" (ingestion rate) value for GW as calculated in footnote 4 in the table in § 250.304(d). Increasing the IngR value will result in lower MSC values.
2. EPA allows for rounding risk characterization results to one significant figure. This is due to the inherently high level of uncertainty involved in the risk assessment process. Act 2 provides very distinct risk thresholds of a 1×10^{-4} to 1×10^{-6} cancer risk and a hazard index (HI) of 1.0 for systemic toxicants. The Department has always viewed these risk thresholds as "bright lines" that cannot be crossed which is at odds with EPA's risk assessment guidance. The Department is seeking input on the interpretation of the statute that prohibits rounding HI values to one significant figure.
3. § 250.305(g) states that a person conducting a remediation of soils contaminated with a substance having a secondary Maximum Contaminant Level (MCL) will not be required to comply with the soil-to-groundwater pathway requirements for those substances to protect groundwater in aquifers for drinking water. This provision does not work for fluoride which has a secondary and a primary MCL. How should this section be revised to accommodate chemicals that have both a primary and a secondary MCL? Should the primary MCL always be used or the lower of the primary and secondary MCLs? This would also need to be addressed in the groundwater section.
4. EPA and the Centers for Disease Control and Prevention (CDC) have determined that childhood blood lead concentrations at or above 10 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$) present risks to children's health. However, the CDC has a blood lead action level of 5 $\mu\text{g}/\text{dL}$, meaning this is the reference level at which CDC recommends public health actions be initiated. Which blood lead level should the Department use to develop the MSCs?
5. The current definition of a volatile in § 250.1 excludes naphthalene as well as several other semi-volatiles that are included as contaminants of potential vapor intrusion concern in the Department's revised Vapor Intrusion Guidance. Should the Department change the definition of volatile to make it congruent with the Vapor Intrusion Guidance?

6. Many pesticide toxicity values that were previously available in EPA's Integrated Risk Information System (IRIS) database have been moved to the Office of Pesticide Program's (OPP) toxicity value database. Should the Department add the OPP database to the toxicity value source hierarchy in § 250.605?
7. The input parameters in Table 7 used in calculating the residential ingestion numeric value for lead in soil are based on EPA's Uptake Biokinetic (UBK) model from 1990. Should the Department update these input parameters for use in EPA's latest version of the Integrated Exposure Uptake Biokinetic (IEUBK) model? In addition, for non-residential exposure, should the Department consider changing or updating the model and reference from the Society for Environmental Geochemistry and Health [Wixson, B. G. (1991)] to the Adult Lead Model (ALM) used by EPA? [See § 250.306(e).]