

Poster Number

20

Topic	Effect assessment
Title	The Tissue Residue Approach for Toxicity Assessment (TRA): Potential Application for Contaminated Sediment
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Summary: The tissue residue approach for toxicity assessment (TRA) associates tissue concentrations of chemicals with adverse biological effects in a dose-response fashion that can be used to determine critical body residues. These CBRs can then be used to develop tissue quality guidelines (TQGs), which may be used as the primary metric or translated into water or sediment guidelines with bioaccumulation factors. Not all toxicants are amenable to this type of analysis; however, some appear to exhibit relatively consistent results that can likely be applied in a regulatory framework. The strongest feature of this approach is causality; hence, guidelines derived with tissue concentrations are based on data demonstrating a causal relationship between the acquired dose and the biological effect. The TRA has utility for assessing contaminated sediment and an approach is presented in this poster. By using tissue residue toxicity metrics, toxic potency, variable bioaccumulation, and bioavailability can be considered separately when developing SQG values.