A Review of Allocation Methods and Rationale for Method Selection

Katherine Lasseter (klasseter@intell-group.com) (TIG Environmental, Bedminster, NJ, USA)
Dennis Farley (DFarley@intell-group.com) and Erin Pyne (epyne@intell-group.com)
(TIG Environmental, Bedminster, NJ, USA)

Background/Objectives: At large sediment Superfund sites, where multiple participants are expected to receive a share of cleanup costs through allocation, it is necessary to develop an allocation method that equitably assigns a share to all involved participants. To accomplish this, the methods must account for all Superfund site-specific characteristics, such as the area (or areas) requiring cleanup, number of contaminants requiring cleanup, the behavior of the water body where the site exists, the number of participants involved, and the nature and extent of participant contributions to the areas requiring cleanup. When attempting to comparatively assess the nature and extent of participant contributions in light of these factors, the allocation method must rely on available evidence. The selection of a specific allocation method relies on the answers to the following questions: (1) is the fact record robust enough to provide support for the selected allocation method – meaning, are multiple lines of evidence available to be evaluated for all participants? (2) is the fact record comparable for all participants – meaning, is the same level and type of evidence available to be evaluated within the selected allocation method? and (3) are the methods used to evaluate multiple lines of comparable evidence logical, consistent, and scalable – meaning, the methods can be applied to all participants?

Approach/Activities: The presentation reviews different categories of allocation methods: (1) quantitative or formulaic approaches that rely on distilling available evidence into numerical representations of concepts that approximate contributions; (2) qualitative approaches that interpret disparate amounts or types of evidence to rank relative contributions; and (3) negotiation-based approaches that bypass approximating or ranking contributions in favor of evaluating specific evidence to achieve agreement among participants. Presenters will describe the requirements for application of these approaches based on the three questions identified above and the potential application of known Gore and Torres factors within each approach. The presentation concludes with a discussion of the potential pitfalls of applying an approach when the requirements for application of that approach do not exist.

Results/Lessons Learned: The presenters will show that the application of each approach has specific requirements. Ignoring those requirements can result in unresolvable conflicts among allocation participants and/or among allocation participants and the allocator. Understanding the requirements for application of specific approach is key to developing consensus among participants.