

01/13/03

**A WORKSHOP ON:
ENVIRONMENTAL STABILITY OF CHEMICALS IN SEDIMENTS**

8-10 April 2003

Wyndham San Diego at Emerald Plaza
San Diego, California

Monday, 7 April

4:00 – 7:00 **Early Registration**



Tuesday, 8 April

7:30 – 8:30 **Continental Breakfast/Registration**

8:30 – 9:30 **Open Workshop** (R. Engler, CE)

8:30 – 8:40 **Welcome/Introduction** (R. Engler, CE; S. Nadeau, SMWG)

8:40 – 8:50 **Questions on Sediment Chemical Stability**

- How can regulators and regulated entities integrate and apply existing knowledge of sediment chemical stability to make decisions on the appropriateness of in place remediation, sediment removal or natural recovery?
- What should we measure?
- Where and how should we measure?
- How do we predict contaminant fate and associated risks?

8:50 – 9:30 **Scope of Issue**

- Contaminated sediment distribution (S. Ireland, EPA)
- Superfund issues (Leah Evison, EPA)

9:30 – 10:00 **Regulatory Concerns/Cleanup Issues** (M. Palermo, CE; Steve Ells, EPA; S. Nadeau, SMWG)

10:00 – 10:30 **BREAK**

10:30 – 2:30 **Definition of Stability/Science Issues** (Panel Chair, D. Reible, LSU)

10:30 – 11:00 In Bed Transport Processes that Enhance or Suppress Chemical Mobility (L. Thibodeaux, LSU)

11:00 – 11:30 Sequestration and Desorptive Flux of Hydrophobic Organic Contaminants from Sediments (K. Rockne, UIC)

11:30 – 12:00 Organic Sequestration and Control of Bioavailability (D. Luthy, Stanford)

12:00 – 1:00 **LUNCH – on your own**

Definition of Stability/Science Issues (cont.)

- 1:00 – 1:30 Availability to Plants, Animals and Microorganisms (D. Reible, LSU)
- 1:30 – 2:00 Physicochemical Factors Controlling Stability of Toxic Heavy Metals in Sediments (B. Patrick, LSU)
- 2:00 – 2:30 Discussion – What Have We Learned?
- 2:30 – 3:00 **BREAK**
- 3:00 – 5:30 **Contaminated Sediment Flux versus Biological Response**
(Panel Chair, A. Burton, WSU)
- 3:00 - 3:30 Measuring Toxicity and Bioaccumulation (A. Burton, WSU)
- 3:30 – 4:00 Bioturbation and Contaminant Flux Rates: Why One Size Doesn't Fit All – (J. Germano, G.A. Inc.)
- 4:00 – 4:30 Approaches for Assessing the Bioavailability of Organic Contaminants to Benthic Organisms (P. Landrum, NOAA)
- 4:30 – 5:00 Linking exposure and bioavailability (T. Bridges, CE, A. Burton, WSU)
- 5:00 – 5:30 Discussion – What have we learned?
- 5:30 **ADJOURN**



Wednesday, 9 April

- 7:30 – 8:30 **Continental Breakfast**
- 8:30 – 9:00 **Impact Identification, Assessment, Prediction – Summary of Pellston SQG Workshop (R. Wenning)**
- 9:00 – 12:00 **Contaminants Fate, Mobility and Transformation** (Panel Chair, E. Hayter, EPA)
- 9:00 - 9:30 Phytoremediation as a potential clean-up strategy for organic and metals contaminants in sediment – (J. Schnoor – UI)
- 9:30 – 10:00 Fate of Metals in Sediments (H. Windon, Skidaway)
- 10:00 – 10:20 **BREAK**
- 10:20 – 10:50 The Behavior of Mercury in Sediments (G. Bigham, Exponent)
- 10:50 – 11:20 Metals Bioaccumulation and Sediment Assessment (B. Adams)
- 11:20 – 11:50 Discussion – What Have We Learned?

- 11:50 – 1:20 **LUNCH SERVED**
- 1:20 – 5:15 **Contaminants Fate, Mobility, Transformation and Degradation** – (Panel Chair, S. Apitz, Navy)
- 1:20 – 1:50 Water Column Transport Processes (E. Hayter, EPA)
- 1:50 – 2:20 Nature and Causes of Non-Particle Related Contaminant Release from Sediments (J. Connolly, QEA)
- 2:20 – 2:40 **BREAK**
- 2:40 – 3:10 Tools for the Assessment of Chemical Mobility of In-place Contaminated Sediment - (B. Chadwick, Navy)
- 3:10 – 4:40 Biological Availability of Sediment Bound HOC's as a Function of Microbial Degradation and the Quality of Organic Carbon (H. Fredrickson, CE)
- 4:40 – 5:15 Discussion – What have we learned?
- 5:15 **ADJOURN**



Thursday, 10 April

- 7:30 – 8:30 **Continental Breakfast**
- 8:30 – 12:00 **Modeling Chemical Fate and Effects in Sediments** (Chair, J. Connolly, QEA)
- 8:30 – 9:00 Modeling the stability of sediment processes influencing contaminants (Summary of Sediment Stability Workshop (J. Gailani, CE)
- 9:00 – 9:30 Relative Contribution of Non-Resuspension Release of PCB's from Surface Sediments: Field Data and Modeling Analysis (J. Depinto, Limnotech)
- 9:30 – 10:00 Screening models to predict contaminant fate (e.g., Recovery Model) (C. Ruiz, CE)
- 10:00 – 10:30 **BREAK**
- 10:30 – 11:00 Complex dynamic models (e.g., Wasp) (B. Ambrose, EPA)
- 11:00 – 11:30 Screening models to predict Ecological and human health risks (e.g., Trophic Trace) (T. Bridges, CE)
- 11:30 – 12:00 Case Studies – Metals/Organics (J. Connolly, QEA)
- 12:00 – 1:00 **LUNCH – on your own**

