

## Registration Information

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There is no fee for this training; however, participants are required to register. Space is limited to 45 attendees. The on-line registration will be available at <http://srnl.doe.gov> after December 1, 2009.

### Ron Falta

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Professor of Environmental Engineering and Earth Sciences at Clemson University. Dr. Falta developed the EPA REMChlor model for analyzing remediation strategies at contaminated sites. He teaches and performs research primarily in the area of contaminant transport and remediation.

### Chuck Newell

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Vice President of GSI Environmental, Inc., Diplomat in the American Academy of Environmental Engineers, NGWA Certified Ground Water Professional, and an Adjunct Professor at Rice University. Dr. Newell's publications include co-authoring the book Ground Water Contamination: Transport and Remediation.



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Practical Models  
Supporting Remediation  
of Chlorinated Solvents



Center for Sustainable Groundwater and Soil Solutions

PRACTICAL MODELS  
SUPPORTING REMEDIATION OF  
CHLORINATED SOLVENTS

January 26—28, 2010

Newberry Hall, Aiken, SC

### Intended Audience

Practicing environmental professionals, regulators, and site owners responsible for closure

### Course Materials to be provided to participants

- CD with copies of REMChlor, BIO-BALANCE, MAROS, Mass Flux Toolkit and SourceDK and user guides for each; as well as electronic (pdf) copy of course slides.
- Notebook with handouts of all slides and exercises.

Participants will be asked to bring laptops and calculators, if possible. The exercises will be worked as teams. The teams will be organized so that one member of each team has a computer.



**January 26:** Following a short introduction, the morning will be devoted to a discussion of the challenges associated with developing groundwater remediation strategies for a site, and how practical models can support actions. The model discussion will focus on the types of models available, unique features of selected models, and how those features can support strategy development. Practical tools such as REMChlor, if used to their fullest, provide sound technical answers to common waste site remediation questions and support effective and efficient source and plume remediation.

The afternoon will be structured to illustrate how to use the tools to answer the questions everyone asks in regard to cleaning up groundwater units with the emphasis on chlorinated solvent contamination. Participants will be given hands on experience with several analytical models. The day's exercises will illustrate how to use the tools to answer the following questions:

- Will source remediation meet site goals?
- What will happen if no action is taken?

Participants will be provided hands on instruction on how to use the tools and will be shown how to integrate these tools to help develop robust characterization and/or remediation decisions. Exercises will be provided that allow attendees to use the tools to evaluate site treatment options.

**January 27:** Following a short recap of the first day, the second day will be devoted to a discussion of the remaining questions:

- Should I combine source and plume remediation?
- What is the remediation timeframe?

- What is a reasonable remediation objective?

This day will be structured in the same format as the afternoon of January 26.

**January 28:** An optional tour at the Savannah River Site providing information on innovative technologies developed or tested by the CSGSS that support groundwater cleanup activities will be offered. This will be a tour of field sites. Participants should be prepared for short walks on unpaved terrain. Tour participants must be U.S. citizens.

### Models and Software Systems to be Showcased:

- REMChlor (Remediation Evaluation Model for Chlorinated Solvents)
- BIOBALANCE
- MAROS
- Mass Flux Toolkit
- SourceDK

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