Update on Joint FRTR Initiatives

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FRTR Meeting

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Project Updates

- Decision Support Tools Matrix
- Long-Term Monitoring Optimization (LTMO) Seminar Report
- Upcoming Workshop on Nanotechnology for Site Remediation
Decision Support Tools

• 20 tools reviewed for matrix
• Criteria:
  – The end user able to use a computer, but not a computer modeling expert
  – Default output should be predictive (decision support) from input
  – Freely available to the public; no commercial software
• Technical review process
What’s New?

• Clu-in Posting (http://clu-in.org/products/dst/)
• Soon: Final Report
• Soon: Case Studies
  – VSP
  – SADA/FIELDS
  – Scribe
  – Johnson & Ettinger Model
  – Bioscreen
This web site provides information about software tools that can be used as part of a structured decision-making process for environmental site clean-up.

Move your cursor over the functional groups above to find out more. Click the functional groups to view the decision support tools for that group.

http://clu-in.org/products/dst
## DST Matrix

### All 20 Tools

<table>
<thead>
<tr>
<th>Decision Support Tool</th>
<th>Functions</th>
<th>File Input/Output</th>
<th>Contaminants</th>
<th>Media</th>
<th>Potential Technology</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANOVA tool</td>
<td>Cost Estimating, Calculations (Water Quality)</td>
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<tr>
<td>ARAMIS</td>
<td>Human Health Risk Assessment, Ecological Risk Assessment, Statistical Analysis, Conceptual Site Model</td>
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<tr>
<td>BIOCHEM I</td>
<td>Analytical Modeling, Site Screening, Remedial Process Selection</td>
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<tr>
<td>BIOCHEM II</td>
<td>Numerical Modeling, Visualization, Remedial Process Selection</td>
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<tr>
<td>BIOSCREEN</td>
<td>Analytical Modeling, Remedial Process Selection</td>
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<tr>
<td>CAMEO</td>
<td>Database, Emergency Response, Regulatory Reporting (ERCP), Analytical Modeling</td>
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<tr>
<td>FEEDS</td>
<td>Visualization, Health Sampling, Geographic Information, Cost/Benefit Analysis, Human Health Risk Assessment, Ecological Risk Assessment</td>
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<td>FIPUS</td>
<td>Visualization, Geospatial Interpolation, Data Acquisition</td>
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<td>GeoDEM</td>
<td>Visualization, Statistical Analysis, Commercial Interpolation</td>
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</tbody>
</table>

**Table**

- Input: Yes
- Output: Yes
- Interactive/Static: Interactive

**Graphic**

- Data: Yes
- Plot: Yes
- Excel: Yes
- Arc: NA
- SPSS: NA
- GIS: NA
- CAD: NA
- SWAT: NA
- Excel: NA
- GIS: NA
- CAD: NA
- SWAT: NA

**Potential Technology**

- Engineering
- Geotechnical
- Risk Assessment
- Hydrogeospatial

**Member**

- Engineer Geotechnical
- Risk Assessment
- Hydrogeospatial
- Emergency Response

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**Notes:**

- All tools are interactive and have file input/output capabilities.
- Contaminants include various environmental factors.
- Media types include soil, sediment, soil-gas, air, and surface water.
- Potential technology members are engineers, geotechnical experts, risk assessment professionals, and hydrogeospatial specialists.
What’s Next?

• Website Revision—comments from
  – FRTR members
  – Tool developers
  – Due JUNE 3, 2005
    Adam.michael@epa.gov
    703-603-9915
• Transfer site Clu-in.org → FRTR.gov
• Poster
• Add Tools?
Long-Term Monitoring Optimization (LTMO) Seminar Report
Long-Term Monitoring Optimization for Ground Water Seminar

- Location: Sacramento, CA
- Date: March 30-31, 2005
- Purpose: Familiarize Participants with Long-Term Monitoring Optimization Approaches, Benefits, and Pitfalls
  - Annual LTM costs are expensive and growing
  - Current monitoring may yield ‘wrong’ level of information given site objectives
  - LTM data are often not evaluated against monitoring objectives
  - LTMO confirms monitoring program meets monitoring objectives
- Sponsored by: Navy, Army Corp., Air Force, EPA (R9 and TIFSD), and California State
Day 1:
- Lectures on LTM Optimization Benefits, Approaches, Results Review, Case Studies, Resources
- 100 participants
- The audience consisted of state of CA employees (~60%), private sector employees (~20%), federal employees (~15%), and several employees from other western states (~5%)

Day 2:
- Hands On Use of recently developed quantitative, based on statistics and geostatistics, LTMO methods.
- 35 participants
- Participation was limited due to computer space
The seminar was a great success
  – Quickly filled with a long waiting list
  – Very interactive
  – Feedback was extremely positive
  – Evaluations from the seminar overwhelmingly indicated seminar was needed and should be conducted again

Documents: Roadmap to Long-Term Monitoring Optimization EPA 542-R-05-003

EPA/TIFSD is currently conducting 2 LTMO evaluations
EPA is considering additional deliveries in regions in the South, Midwest, and East

For further info: yager.kathleen@epa.gov
617-918-8362
Workshop on Nanotechnology for Site Remediation
Workshop on Nanotechnology for Site Remediation

• Purpose
  – Present latest research results
  – Discuss research needs
  – Stimulate increased collaboration
Workshop on Nanotechnology for Site Remediation

• Potential Sponsors and Organizers
  – EPA—ORD and TIFSD
  – Department of Commerce
  – DoD
  – DoE
  – FRTR
  – NASA
  – National Council for Science & the Environment
  – NIEHS
  – NSF
Workshop on Nanotechnology for Site Remediation

• Location/Date
  – Washington, DC
  – October 20-21, 2005

• Participants
  – 75 to 100 invited participants from academia, industry, and government

• Expected Outcome
  – Workshop proceedings
  – Potential partnership for future solicitation for research

• For further info: otto.martha@epa.gov
  703-603-8853