



Workshop on Nanotechnology for Site Remediation

**FRTR Meeting
December 7, 2005**

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Outline

- **Workshop description**
- **Recommendations**
- **Next steps**

Purpose of Workshop

- **Present latest research results**
- **Conduct breakout sessions to discuss issues and develop recommendations**
- **Stimulate increased collaboration**

Description of Workshop

- **Location/Date**
 - Washington, DC
 - October 20-21, 2005
- **Participants**
 - Approximately 180 registrants from academia, industry, and government
 - US and international participants

Sponsors and Organizers

- **Commerce**
- **DoD**
- **DOE**
- **EPA**
- **FRTR**
- **NASA**
- **National Council for Science & the Environment**
- **National Institute of Environmental Health Sciences**
- **NSF**

Presentations

- **State of the science of the use of nanoscale zero-valent iron for DNAPL-contaminated ground water**
- **Research on other nanomaterials**
- **Fate and transport**
- **Case studies, including:**
 - **Navy sites**
 - **NASA site**
- **Potential toxicity**
- **Public perception**

Breakout Sessions: Recommendations

- **Increase research on**
 - **Fate and transport of nanomaterials**
 - **Detection methods**
 - **Contaminant destruction process using nanotechnology**
 - **Treatment trains that include nanotechnology**
 - **Toxicity of nanoparticles**
 - **Applied research and field implementation**

Breakout Sessions: Recommendations, Cont.

- **Technology Transfer and Validation**
 - **Develop simplified information to compare technologies using cost/benefits**
 - **Develop incentives for technology developers to contribute to risk understanding**

Breakout Sessions: Recommendations, Cont.

- **Information/Public Perception**
 - Increase outreach to States and to public
 - Adapt current community relations protocol for nanotechnology
 - Develop a “Citizen’s Guide” to nanotechnology for site remediation
 - Data needed on exposure and toxicity to assure public

Next Steps

- Publish proceedings and presentations on www.frtr.gov
- Develop cost and performance case studies
- Discuss potential collaborations