

John Kingscott
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Status Report - Technology Cost and Performance Activities



*Federal
Remediation
Technologies
Roundtable*



- ◆ Treatment Technology Case Studies
- ◆ Site Characterization and Monitoring
- ◆ Remediation Technology Assessments
- ◆ Long-Term Management/Optimization

Activities Since December 2003 Meeting

- ◆ Developed new searchable database for Long-Term Management/Optimization case studies
- ◆ Labeled treatment case studies with dates as part of search routine
- ◆ Updated all areas with recent reports
- ◆ Produced a new Fact Sheet
- ◆ Compiling a CD-ROM and Abstract Report

LONG-TERM MANAGEMENT/ OPTIMIZATION

Long-Term Management/Optimization

73 Case Studies

- ◆ Criteria for including studies:
 - Site-specific (single- or multi-site)
 - Technologies are in place in the field and operating
 - Rationale for recommended improvement is clearly documented
 - Could also appear elsewhere as an FRTR case study

- ◆ Does not include (located elsewhere on FRTR):
 - Documents that include only general information about optimization policy/guidance, techniques or procedures (checklists, RSE/RPO procedures)
 - Computer models/user documentation for models
 - Analysis done as part of design prior to initial construction

Long-Term Management/Optimization Search Categories

- ◆ Site Name
- ◆ Remediation Technology To Be Optimized
- ◆ Type of Analysis
 - Groundwater Analysis (including Optimization)
 - Optimization Process (RAO, RPO, RSE)
- ◆ Status of Optimization Efforts (Evaluated vs. Implemented)
- ◆ Agency

Long-Term Management/Optimization (Profile of Case Studies)

- ◆ 63 address optimization of pump and treat systems
- ◆ 36 involve evaluation/optimization of groundwater monitoring networks
- ◆ 14 cover capture zone analysis
- ◆ 47 document procedures such as RAO, RPO, or RSE
- ◆ 6 focus on application of a model
- ◆ 28 include follow up observations after completion of optimization

TREATMENT TECHNOLOGY CASE STUDIES

New Treatment Technology Case Studies Identified Spring 2004

Agency	New Case Studies	Technology
Navy	6	In Situ Bioremediation, In Situ Chemical Reduction, Ex Situ Thermal Desorption
ESTCP	1	In Situ Bioremediation
DOE	1	In Situ Thermal Treatment
EPA		
TIFSD	6	In Situ Chemical Reduction, Pump and Treat, Air Sparging, Soil Vapor Extraction, In Situ Bioremediation
SITE	1	Ex Situ Vitrification
States	4	Multiple Technologies, From SCRD: Soil Vapor Extraction alone; Soil Vapor Extraction plus others; In-Well Air Stripping; In Situ Treatment (Chemical Oxidation, Bioremediation, Enhanced SVE)
Total	19	

SITE CHARACTERIZATION AND MONITORING

New Site Characterization and Monitoring Case Studies Identified Spring 2004

Agency	New Case Studies	Technology
Army	11	Explosives Characterization
ESTCP	3	Explosives Characterization; Leak Detection
EPA	10	Triad-Related Strategies; Field-Based Strategies; Sensor Technologies; Geophysical Techniques; Air Emissions Characterization
Total	24	

**REMEDICATION TECHNOLOGY
ASSESSMENTS
(Based on applications at
multiple sites)**

Remediation Technology Assessments

(Based on 54 Reports)

Technology	Agency	Number of Reports
Ex Situ Soil Treatment Thermal desorption, bioremediation – land treatment, incineration (on-site), soil washing	EPA, ITRC, ESTCP, NFESC, USACE	8
In Situ Soil Treatment Soil vapor extraction, bioventing, phytoremediation, solidification/ stabilization	EPA, ITRC, Navy, AFCEE, DoD	8
In Situ Groundwater Treatment – Bioremediation	EPA, ESTCP	5
In Situ Groundwater Treatment (Abiotic) Permeable reactive barrier, flushing, phytoremediation, air sparging, chemical oxidation, multi-phase extraction, in-well air stripping	EPA, USACE, ESTCP, DoD, AFCEE, ITRC	20
In Situ Groundwater Treatment – Monitored natural attenuation	EPA, ITRC, ESTCP	4
Containment	ESTCP, USACE	2
Technologies to treat a particular contaminant/site type (e.g. DNAPLs, UST sites)	EPA, ITRC, AFCEE	7

Next Steps

- ◆ Send out Fact Sheet and CD-ROM
- ◆ Consider future scope of CD-ROM
- ◆ Encourage use of web site and distribution of Fact Sheet and CD-ROM

Federal Agency Cost and Performance Points of Contact

Organization	Point of Contact
Army AEC	Layne Young
USACE	Greg Mellema
Navy	Charles Reeter/Joey Trotsky
Air Force	Erica Becvar
ESTCP	Andrea Leeson
DOE	Skip Chamberlain
EPA	John Kingscott/Kelly Madalinski
NASA	Mark Schoppet