

Selected Alternative and Innovative Treatment Technologies for Corrective Action and Site Remediation

(A Bibliography of EPA Information Resources)

Winter Update
January 1993

New Publications Appear in Italics

A. Conferences and International Surveys

Forum on Innovative Hazardous Waste Treatment Technologies - Domestic and International (Abstract Proceedings):

First Forum, Atlanta, GA

EPA/540/2-89/055, PB90-268509

Second Forum, Philadelphia, PA

EPA/540/2-90/009, PB91-145649

Third Forum, Dallas, TX

EPA/540/2-91/016, PB92-233881

NATO/CCMS Project — International Evaluation of In Situ Bioremediation of Contaminated Soil and Groundwater. **EPA/540/2-90/012**

Remedial Action, Treatment, and Disposal of Hazardous Waste: Proceedings of the 18th Annual RREL Hazardous Waste Research Symposium.

EPA/600/R-92/028, PB92-166859

B. Technology Survey Reports/Guidance

Advancing the Use of Treatment Technologies for Superfund Remedies.

OSWER Directive 9355.0-26, PB90-272659

Approaches for Remediation of Uncontrolled Wood Preserving Sites. **EPA/625/7-90/011**

Assessment of Technologies for the Remediation of Radioactively Contaminated Superfund Sites. **EPA/540/2-90/001, PB90-204140**

Cleaning Up the Nation's Waste Sites: Markets and Technology Trends. **EPA/542/R-92/012, PB93-140762**

Contaminants and Remedial Options at Wood Preserving Sites. **EPA/600/R-92/182, PB92-232222**

Furthering the Use of Innovative Treatment Technologies in OSWER Programs.

OSWER Directive 9380.0-17, PB91-921366

Guide to Treatment Technologies for Hazardous Wastes at Superfund Sites. **EPA/540/2-89/052, PB89-190821**

Guidance on Remedial Action for Superfund Sites with PCB Contamination. **EPA/540/G-90/007, PB91-921206**

B. Technology Survey Reports/Guidance (cont.)

Handbook: Stabilization Technologies for RCRA Corrective Action. **EPA/625/6-91/026, PB92-114495**

Handbook on In Situ Treatment of Hazardous Waste-Contaminated Soils. **EPA/540/2-90/002, PB90-155607**

Innovative Operational Treatment Technologies for Applications to Superfund Sites (9 case studies). **EPA/540/2-90/006, PB90-202656**

Innovative Treatment Technologies: Overview and Guide to Information Sources, October 1991. **EPA/540/9-91/002, PB92-179001**

Innovative Treatment Technologies: Semi-Annual Status Report, Fourth Edition, October, 1992. (Fifth Edition will be available in June, 1993) **EPA/542/R-92/011**

Innovative Processes for Reclamation of Contaminated Subsurface Environments. **EPA/600/S2-90/017, PB90-199514**

On-Site Treatment of Creosote and Pentachlorophenol Sludges in Contaminated Soil. **EPA/600/2-91/019, PB91-223370**

Procuring Innovative Technologies at Remedial Sites: Questions and Answers and Case Studies. **EPA/542/F-92/012**

Procuring Innovative Technologies at Removal Sites: Questions and Answers and Case Studies. **EPA/542/F-92/013**

Remediation of Contaminated Sediments. **EPA/625/6-91/028**

Remediation of Sites Contaminated with TCE. **EPA/625/J-91/030, PB91-182311**

Selection of Control Technologies for Remediation of Lead Battery Recycling Sites. **EPA/540/2-91/014, PB92-114537**

Seminar Publication - Corrective Actions: Technologies and Applications. **EPA/625/4-89/020**

B. Technology Survey Reports/Guidance (cont.)

Subsurface Contamination Reference Guide.
EPA/540/2-90/011, PB91-921292

Summary of Treatment Technology Effectiveness for Contaminated Soil - Final Report.
EPA/540/2-89/053, PB92-963351

Superfund Engineering Issue—Treatment of Lead Contaminated Soils. EPA/540/2-91/009, PB91-921291

Superfund Innovative Technology Evaluation Program—SITE Program Fact Sheet.
OSWER Directive 9380.1-03AFS

Superfund Land Disposal Restriction (LDR) Guides.
OSWER Directives 9347.3-01FS through 10FS
(Non-EPA parties should contact the RCRA/Superfund Hotline for PB numbers at 1-800-424-9346)

Superfund Treatability Clearinghouse Abstracts.
EPA/540/2-89/001, PB90-119751

Survey of Materials-Handling Technologies Used at Hazardous Waste Sites.
EPA/540/2-91/010, PB91-921283

TCE Removal from Contaminated Soil and Ground Water.
EPA/540/S-92/002, PB92-224104

Technological Approaches to the Cleanup of Radiologically Contaminated Superfund Sites.
EPA/540/2-88/002, PB89-122121

Technologies and Options for UST Corrective Actions: Overview of Current Practice. EPA/542/R-92/010

Technologies of Delivery or Recovery for the Remediation of Hazardous Waste Sites.
EPA/600/S2-89/066, PB90-156225

Technology Screening Guide for Treatment of CERCLA Soils and Sludges. EPA/540/2-88/004, PB89-132674

Treatment of Lead-Contaminated Soils.
EPA/540/2-91/009

The Feasibility Study Development and Screening of Remedial Action Alternatives.
OSWER Directive 9355.3-01FS3, PB90-274416

The Superfund Innovative Technology Evaluation Program: Technology Profiles (Fifth Edition).
EPA/540/R-92/077, PB92-224294

C. Treatability Studies

Analysis of Treatability Data for Soil and Debris: Evaluation of Land Ban Impact on Use of Superfund Treatment Technologies.
OSWER Directive 9380.3-04, PB90-258476

Conducting Treatability Studies Under RCRA.
OSWER Directive 9380.3-09FS, PB92-963501

Guide for Conducting Treatability Studies Under CERCLA: Aerobic Biodegradation Remedy Screening.
EPA/540/2-91/013A&B, PB92-109065 & PB92-109073

Guide for Conducting Treatability Studies Under CERCLA: Chemical Dehalogenation.
EPA/540/R-92/013A&B, PB92-169044 & PB92-169275

C. Treatability Studies (cont.)

Guide for Conducting Treatability Studies Under CERCLA (Update). EPA/540/R-92/017A

Guide for Conducting Treatability Studies Under CERCLA: Soil Vapor Extraction. EPA/540/2-91/019A&B

Guide for Conducting Treatability Studies Under CERCLA: Soil Washing.
EPA/540/2-91/020A&B, PB92-170570 & PB92-170588

Guide for Conducting Treatability Studies Under CERCLA: Solvent Extraction.
EPA/540/R-92/016A, PB92-239581

Inventory of Treatability Study Vendors, Volume 1.
EPA/540/2-90/003A, PB91-228395

Regional Guide: Issuing Site-Specific Treatability Variances For Contaminated Soils and Debris from Land Disposal Restrictions (LDRS).

OSWER Directive 9380.3-08FS, PB92-963284

The Remedial Investigation Site Characterization and Treatability Studies.
OSWER Directive 9355.3-01FS2, PB90-274408

Treatability of Hazardous Chemicals in Soils: Volatile and Semi-Volatile Organics. ORNL-6451, DE89-016892

Treatability Potential for EPA Listed Hazardous Wastes in Soil. EPA/600/2-89/011, PB89-166581

Treatability Potential for 56 EPA Listed Hazardous Chemicals in Soil. EPA/600/6-88/001, PB89-174446

Treatability Studies Under CERCLA: An Overview, 12/89.
OSWER Directive 9380.3-02FS, PB90-273970

D. Ground Water

Behavior of Metals in Soils.
**EPA/540/S-92/018, PB93-131480

Bioremediation of Aquifers Contaminated with Organic Compounds. EPA/600/J-88/078, PB89-103527

Chemical Enhancements to Pump-and-Treat Remediation.
**EPA/540/S-92/001, PB92-180074

Contaminant Transport in Fractured Media: Models for Decision Makers. **EPA/540/4-89/004, PB90-268517

Considerations in Groundwater Remediation at Superfund Sites and RCRA Facilities—Update.
OSWER Directive 9283.1-06, PB92-963358

Dense Nonaqueous Phase Liquids—A Workshop Summary.
**EPA/600/R-92/030, PB92-178938

Emerging Technologies: BioRecovery Systems Removal and Recovery of Metal Ions from Ground Water: (Evaluation Report)

EPA/540/5-90/005A, PB90-252594

(Data and Supporting Information)
EPA/540/5-90/005B, PB90-252602

Estimating Potential for Occurrence of DNAPL at Superfund Sites.
**EPA Publication 9355.4-07FS, PB92-963338

D. Ground Water (cont.)

Evaluation of Ground Water Extraction Remedies:

Vol. 1, Summary Report

EPA/540/G-89/054, PB90-183583

Vol. 2, Case Studies (Interim Final)

EPA/540/G-89/054B, PB90-274440

Vol. 3, General Site Data, Data Base Reports

(Interim Final) **EPA/540/G-89/054C, PB90-274457**

Evaluation of Soil Venting Application.

EPA/540/S-92/004, PB92-232362

Facilitated Transport (Issue Paper).

****EPA/540/4-89/003, PB91-133256**

Fundamentals of Ground Water Modeling.

****EPA/540/S-92/005, PB92-232354**

General Methods for Remedial Operation Performance Evaluation.

****EPA/600/R-92/002, PB92-166042**

Ground Water Issue—Dense Nonaqueous Phase Liquids.

****EPA/540/4-91/002A, PB91-195974**

Ground Water Issue—Evaluation of Soil Venting Application.

****EPA/540/S-92/004, PB92-235605**

Ground Water Issue—Reductive Dehalogenation of Organic Contaminants in Soils and Ground Water.

****EPA/540/4-90/054, PB91-191056**

Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites.

EPA/540/G-88/003, PB89-184618

In Situ Aquifer Restoration of Chlorinated Aliphatics by Methanotrophic Bacteria.

****EPA/600/2-89/033, PB89-219992**

In Situ Bioremediation of Contaminated Ground Water.

****EPA/540/S-92/003, PB92-224336**

In Situ Treatments of Contaminated Ground Water: An Inventory of Research and Field Demonstrations and Strategies for Improving Ground-Water Remediation Technologies.

EPA/500/K-93/001

Opportunities for Bioreclamation of Aquifers Contaminated with Petroleum Hydrocarbons.

EPA/600/J-87/133, PB88-148150

Pump-and-Treat Ground Water Remediation Technology.

EPA/540/2-90/018, PB91-921356

Performance Evaluations of Pump-and-Treat Remediations (Issue Paper).

****EPA/540/4-89/005, PB92-114461**

TCE Removal From Contaminated Soil and Ground Water.

****EPA/540/S-92/002, PB92-224104**

E. Thermal Treatment

Applications Analysis Report: American Combustion Pyretron Destruction System.

EPA/540/A5-89/008, PB90-258427

Applications Analysis Report: SHIRCO Infrared Incineration System.

EPA/540/A5-89/010, PB90-233423

E. Thermal Treatment (cont.)

Demonstration Bulletin: Outboard Marine Corporation Site—Soiltech Anaerobic Thermal Processor.

EPA/540/MR-92/078

Demonstration Bulletin: Roy F. Weston, Inc.—Low Temperature Thermal Treatment System.

EPA/540/MR-92/019

Demonstration Bulletin: Soiltech ATP Systems—Aostra Soil-Tech Anaerobic Thermal Process.

EPA/540/MR-92/008

Engineering Bulletin: Mobile/Transportable Incineration Treatment.

EPA/540/2-90/014, PB91-228023

Engineering Bulletin: Thermal Desorption Treatment.

EPA/540/2-91/008, PB91-228080

Experience in Incineration Applicable to Superfund Site Remediation.

EPA/625/9-88/008

High Temperature Thermal Treatment for CERCLA Waste: Evaluation and Selection of Onsite and Offsite Systems.

EPA/540/X-88/006

F. Bioremediation

A Field Evaluation of Bioremediation of a Fuel Spill Using Hydrogen Peroxide.

PB88-130257

Applications Analysis Report: Biotrol, Inc.—Biotreatment of Wood Preserving Site Groundwater.

EPA/540/A5-91/001, PB91-227983

Bioremediation Case Studies: Abstracts.

EPA/600/R-92/044, PB92-232347

Bioremediation Case Studies: An Analysis of Vendor Supplied Data.

EPA/600/R-92/043, PB92-232339

Bioremediation of Contaminated Surface Soils.

EPA/600/9-89/073, PB90-164047

Bioremediation of Hazardous Waste.

EPA/600/R-92/126

Bioremediation Field Initiative Fact Sheets.

EPA/540/F-92/012

Demonstration Bulletin: Aqueous Biological Treatment System (Fixed Film Biodegradation).

Demonstration Bulletin: International Technology Corporation—Slurry Biodegradation.

EPA/540/M5-91/009

Engineering Bulletin: Slurry Biodegradation.

EPA/540/2-90/016, PB91-228049

Enhanced Bioremediation Utilizing Hydrogen Peroxide as a Supplemental Source of Oxygen: A Laboratory and Field Study.

EPA/600/2-90/006, PB90-183435

Interactive Simulation of the Fate of Hazardous Chemicals During Land Treatment of Oily Wastes: Ritz User's Guide.

EPA/600/8-88/001, PB88-195540

In Situ Bioremediation of Spills from Underground Storage Tanks: New Approaches for Site Characterization, Project Design, and Evaluation Performance.

EPA/600/2-89/042, PB89-219976

F. Bioremediation (cont.)

Mobility and Degradation of Residues at Hazardous Waste Land Treatment Sites at Closure.
EPA/600/2-90/018, PB90-212564/A5

Removal of Volatile Aliphatic Hydrocarbons in a Soil Bioreactor.
EPA/600/J-87/261, PB88-180393

The Federal Technology Transfer Act: Opportunities for Cooperative Biosystems Research with the U.S. EPA.
CERI-90-114

G. Physical/Chemical Treatment

Applications Analysis Reports:

- AWD Technologies—In Situ Vapor Extraction and Steam Vacuum Stripping
EPA/540/A5-91/002, PB92-218379
- Chemfix Technologies, Inc.—Chemical Fixation/ Stabilization
EPA/540/A5-89/011, PB91-187054
- Babcock and Wilcox Cyclone Furnace
EPA/540/AR-92/017
- BioTrol, Inc.—Soils Washing System.
EPA/540/A5-91/003, PB92-115245
- The Carver Greenfield Process—Dehydrotech Corporation
EPA/540/AR-92/002, PB93-101152
- CF Systems Corp.—Organics Extraction System
EPA/540/A5-90/002, PB91-113845
- DuPont/Oberlin—Microfiltration Technology
EPA/540/A5-90/007, PB92-119023
- HAZCON—Solidification Process, Douglassville, PA
EPA/540/A5-89/001, PB89-206031
- Horsehead Resource Development Co., Inc.—Flame Reactor Technology
EPA/540/A5-91/005, PB92-213214
- In Situ Steam/Hot Air Stripping Toxic Treatments
EPA/540/5-90/008, PB91-181768
- International Waste Technologies/GeoCon—In Situ Stabilization/Solidification
EPA/540/A5-89/004, PB90-269085
- McColl Superfund Site—Demonstration of a Trial Excavation
EPA/540/AR-92/015
- Retech, Inc.—Plasma Centrifugal Furnace (Final Report)
EPA/540/A5-91/007, PB92-218791
- Soliditech, Inc.—Solidification/ Stabilization Process
EPA/540/A5-90/005, PB91-129817
- Terra Vac—In Situ Vacuum Extraction System
EPA/540/A5-89/003, PB90-119744
- Ultrox International—Ultraviolet Ozone Treatment for Liquids
EPA/540/A5-89/012, PB91-129759

Demonstration Bulletins:

- Toronto Harbour Commissioners—Soil Recycling Treatment Train
EPA/540/MR-92/015
- Silicate Technology Corporation—Solidification/ Stabilization Organic/Inorganic Contaminants
EPA/540/MR-92/010
- SBP Technologies—Membrane Filtration
EPA/540/MR-92/014

G. Physical/Chemical Treatment (cont.)

- Bergman USA—Soil/Sediment Washing System
EPA/540/MR-92/075
- Resources Conservation Co.—The Basic Extractive Sludge Treatment (B.A.S.I.C.)
EPA/540/MR-92/079

Engineering Bulletins:

- Chemical Dehalogenation
EPA/540/2-90/015, PB91-228031
- Chemical Oxidation Treatment
EPA/540/2-91/025
- Soil Washing Treatment
EPA/540/2-90/017, PB91-228056
- Solvent Extraction Treatment
EPA/540/2-90/013, PB91-228015
- In Situ Soil Flushing
EPA/540/2-91/021
- In Situ Soil Vapor Extraction
EPA/540/2-91/006, PB91-228072
- In Situ Steam Extraction
EPA/540/2-91/005
- Supercritical Water Oxidation
EPA/540/S-92/006

Battelle Memorial Institute—Development of Electro-Acoustic Soil Decontamination (ESD) Process for In Situ Applications.
EPA/540/5-90/004

Bio-Recovery Systems—Removal and Recovery of Metal Ions from Groundwater.
EPA/540/5-90/005A

Cleaning Excavated Soil Using Extraction Agents: A State-of-the-Art Review.
EPA/600/2-89/034, PB89-212757

Comprehensive Report on the KPEG Process for Treating Chlorinated Wastes.
PB90-163643

Development of Electroacoustical Soil Decontamination (ESD) Process for In Situ Application.
EPA/540/5-90/004

Evaluation of BEST™ Solvent Extraction Sludge Treatment Technology 24 Hour Test.
EPA/600/S2-88/051, PB88-245907

Field Studies of In Situ Soil Washing.
EPA/600/S2-87/110, PB88-146808

Vitrification Technology for the Treatment of Hazardous and Radioactive Waste.
EPA/625/R-92/002, PB92-201110

Innovative Technology: In Situ Vitrification.
OSWER Directive 9200.5-251FS, PB90-274192

Radio Frequency Enhanced Decontamination of Soils Contaminated with Halogenated Hydrocarbons.
EPA/600/2-89/008, PB91-161764

Soil Vapor Extraction Technology: Reference Handbook.
EPA/540/2-91/003, PB91-168476

State of Technology Review: Soil Vapor Extraction Systems.
EPA/600/2-89/024, PB89-195184

Technology Evaluation Report: U.S. EPA, RREL: Debris Washing System.
EPA/540/5-91/006A

H. Technical Support

Ground Water Research - Technical Assistance Directory.
EPA/600/9-89/048

Hazardous Substance Research Centers Program:
Program—Summary, FY 1991. 21R-1005

Innovative Hazardous Waste Treatment Technologies:
A Developers Guide to Support Services.
EPA/540/2-91/012

ORD Technical Assistance Directory. CER1-91-29

ORD Topical Directory. EPA/600/9-86/006

OSWER Source Book for Training and Technology
Transfer. PB92-102169

Technical Support Services for Superfund Site Remediation and RCRA Corrective Action. EPA/540/8-91/091

U.S. Bureau of Reclamation Assistance to the Superfund Program. OSWER Directive 9355.15FS, PB91-921319

Use of Office of Research and Development's Bioremediation Expertise in Superfund Removal Program.
OSWER Directive 9380.4-01, PB90-249798

I. Community Relations

A Citizen's Guide To:

- Innovative Treatment Technologies for Contaminated Soils, Sludges, Sediments, and Debris
EPA/542/F-92/001, PB92-235563
- How Innovative Treatment Technologies Are Being Successfully Applied at Superfund Sites
EPA/542/F-92/002, PB92-233071
- Soil Washing EPA/542/F-92/003
- Solvent Extraction EPA/542/F-92/004
- Glycolate Dehalogenation EPA/542/F-92/005
- Thermal Desorption EPA/542/F-92/006
- In Situ Soil Flushing EPA/542/F-92/007
- Bioventing EPA/542/F-92/008
- Using Indigenous and Exogenous Microorganisms in Bioremediation EPA/542/F-92/009
- Air Sparging EPA/542/F-92/010
- Fact Sheet EPA/542/F-92/011

Understanding Bioremediation: A Guidebook for Citizens.
EPA/540/2-91/002

J. Bulletin Board System/Databases

Alternative Treatment Technology Information

Center (ATTIC): a comprehensive automated bibliographic reference that integrates existing hazardous waste data into a unified, searchable resource. The on-line access number for ATTIC is (301) 670-3808. The system operator can be reached at (301) 670-6294.

Hazardous Waste Superfund Data Collection: a bibliographic data base for the EPA Headquarters Library Collection on the subject of hazardous waste available through the EPA Library Network. For more information, contact Felice Sacks (Labatt-Anderson), EPA Headquarters Library, (202) 260-3021.

J. Bulletin Board System/Databases (cont.)

Records of Decision System (RODS): an on-line data base which contains the full-text of Records of Decisions for Superfund hazardous waste sites. The number for RODS support staff is (703) 538-7590.

The Clean-Up Information Bulletin Board (CLU-IN): a publicly accessible, on-line computer system that fosters technology transfer and facilitates communication among those involved in solid and hazardous waste clean-up. The on-line access number for CLU-IN is (301) 589-8366. The system operator can be reached at (301) 589-8368.

Vendor Information System for Innovative Treatment Technologies (VISITT): a data base developed by EPA to provide current information on vendors of innovative treatment technologies. To order, fax or mail a request to NCEPI (information listed on final page). For other information, contact VISITT HOTLINE at 800-245-4505 or 703-883-8448. Version 2.0 of the data base will be available in April, 1993.

K. Technology Newsletters

Tech Trends (a newsletter on applied technologies for Superfund removals and remedial actions and for RCRA corrective action.)

No. 9, June 1992 EPA/542/N-92/003
No. 10, October 1992 EPA/542/N-92/004
No. 11, January 1993 EPA/542/N-93/001

Bioremediation In the Field (a newsletter on applications of bioremediation technologies under EPA's Bioremediation Field Initiative.)

No. 6, June 1992 EPA/540/N-92/002
No. 7, October 1992 EPA/540/N-92/003

Ground Water Currents (a newsletter on developments in innovative ground water treatment for Superfund Remediation and RCRA corrective action.)

No. 1, September 1992 EPA/542/N-92/005
No. 2, December 1992 EPA/542/N-92/006

L. The Federal Remediation Technologies Roundtable

Accessing Federal Data Bases for Contaminated Site Clean-Up Technologies (Second Edition).

EPA/542/B-92/002

Federal Publications on Alternative and Innovative Treatment Technologies for Corrective Action and Site Remediation (Second Edition).

EPA/542/B-92/001

Mission Statement.

EPA/542/F-92/013

Synopses of Federal Demonstrations of Innovative Site Remediation Technologies (Second Edition).

EPA/542/B-92/003

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(Single copies are available free of charge while supplies last.
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Cincinnati, OH 45242
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