

Bioremediation Seminars
Eastern Research Group, Inc.
110 Hartwell Avenue
Lexington, MA 02173-3134

PLACE
POSTAGE
HERE

DAY TWO 8:30AM to 5:00PM

NATURAL ATTENUATION

- Ground Water: Petroleum Hydrocarbons and Solvents
- Soils: Petroleum Hydrocarbons
- Landfills
- Sediments

BREAK

TREATMENT OF THE SUBSURFACE

- Site Characterization for Remedial Design

LUNCH

TREATMENT OF THE SUBSURFACE (continued)

- Source Control: Free Product Recovery and Hydraulic Containment
- Alternate Electron Acceptors
- Funnel and Gate
- Air Sparging
- Phytoremediation

BREAK

TREATMENT OF THE SUBSURFACE (continued)

- Monitoring
- Modeling
- Site Closure

CLOSING REMARKS

BULK RATE
POSTAGE & FEES PAID
EPA
PERMIT NO. G-35

United States
Environmental Protection Agency
Office of Research and Development
Cincinnati, OH 45268

Official Business
Penalty for Private Use \$300

EPA/540/F-96/500

United States
Environmental Protection Agency
Office of Research and Development

Technology Transfer

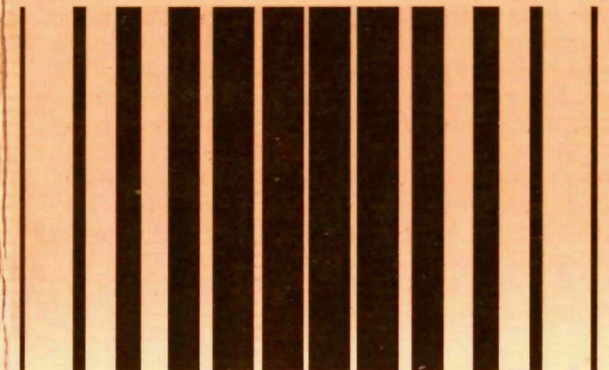
EPA Seminar Series
Bioremediation of
Hazardous Waste
Sites: Practical
Approaches to
Implementation

May 29-30, 1996 — Chicago, IL

June 4-5, 1996 — Kansas City, MO

June 6-7, 1996 — Atlanta, GA

June 18-19, 1996 — San Francisco, CA



INTRODUCTION

This technology transfer seminar series is sponsored by the U.S. Environmental Protection Agency's (EPA's) Biosystems Program, which coordinates EPA's research, development, and evaluation of full-scale bioremediation activities. The Biosystems Program strives to balance research on degradation processes with engineering activities that contribute to environmental cleanups.

PURPOSE

This seminar series will provide participants with state-of-the-art information on the practical aspects of implementing bioremediation. The series will be divided into the following sections:

- In Situ Treatment of Soils, Sediments, and Shorelines
- Ex Situ Treatment Without a Reactor
- Ex Situ Treatment Using Reactors
- Natural Attenuation of Ground Water and Soils
- In Situ Treatment of the Subsurface

Each section will include discussion of advantages and limitations, materials handling, types of wastes amenable to the treatment process, pre- and post-treatment requirements, and capital and O&M costs. The overall focus will be on applications in use in the field today, although the series will touch on processes that are nearing readiness for field use.

AUDIENCE

The presentations will contain useful information for field personnel in bioremediation from federal, state, and local agencies, as well as industry, vendors, contractors, and academia. Although some background information will be provided, participants should have some experience with the technology.

REGISTRATION

This seminar series is being presented free of charge. Attendance is on a first-come, first-served basis and is limited to 450 people per seminar. We encourage you to register early by completing the attached registration form and mailing it to the address printed on the back or faxing it to 617-674-2906. You will receive a confirmation package within 2 weeks of submitting the registration form, that includes a detailed agenda and logistical information. If you have questions regarding the registration process, please call 617-674-7374. For additional seminar information, contact Helen Murray, Eastern Research Group, Inc., 110 Hartwell Avenue, Lexington, MA 02173-3134, 617-674-7307.

HOTEL INFORMATION

A block of rooms has been reserved at a special group rate at each of the hotels listed below. The hotels will issue these rooms on a first-come, first-served basis. The rooms will be held until the cutoff date, which is approximately 4 weeks prior to each seminar. Please make your reservations directly with the hotel. Reference the "EPA BIOHAZ SEMINAR" to receive the special group rate. Government employees must present a tax exempt certificate and a government I.D. upon check-in to be eligible for tax exemption. To receive the group rate at the hotel, make your room reservations now by using the phone numbers listed below.

SEMINAR LOCATIONS

The Bismarck Hotel
171 West Randolph Street
Chicago, IL
Tel: 800-643-1500 or 312-236-0123
Rate: \$90.00/night plus tax, single occupancy

Kansas City Marriott Downtown
200 West 12th Street
Kansas City, MO
Tel: 800-548-4782 or 816-421-6800
Rate: \$63.00/night plus tax, single occupancy

Radisson Hotel Atlanta
Courtland and International Boulevard
Atlanta, GA
Tel: 800-333-3333 or 404-659-6500
Rate: \$71.00/night plus tax, single occupancy

Cathedral Hill Hotel
1101 Van Ness Avenue
San Francisco, CA
Tel: 800-622-0855 or 415-776-8200
Rate: \$96.00/night plus tax, single occupancy

SPEAKERS

Mr. Dolloff Bishop
National Risk Management Research Laboratory (NRMRL), U.S. EPA, Cincinnati, OH

Dr. Daniel Pope
Dynamac Corporation, Ada, OK

Dr. Gregory Sayles,
NRMRL, U.S. EPA, Cincinnati, OH

Dr. John Wilson, NRMRL, U.S. EPA, Ada, OK

Speaker (to be determined).

SEMINAR AGENDA

Each seminar will begin at 8:30AM and adjourn at 5:00PM on both days. Preregistration will take place starting at 7:30AM at each location. The confirmation package will include a detailed agenda.

DAY ONE 8:30AM to 5:00PM

OPENING REMARKS

REGIONAL PERSPECTIVE

BACKGROUND

- National Status on Applications: Technologies in Use, Wastes Treated
- Biodegradation and Metabolism
- Environmental Factors Affecting Biodegradation
- Site Characterization

BREAK

IN SITU TREATMENT OF SOILS, SEDIMENTS, AND SHORELINES

- Bioventing
- Land Treatment
- Phytoremediation
- Confined Treatment Facilities (CTFs)
- Oil-Contaminated Shorelines

LUNCH

EX SITU TREATMENT WITHOUT A REACTOR

- Land Treatment Units (LTUs)
Case Study: Libby Superfund Site
- Composting
- Biopiles
- Aerated Lagoons
- Fungal Treatment

BREAK

EX SITU TREATMENT USING REACTORS: AQUEOUS, SOLID, AND VAPOR PHASES

- Slurry Reactors
- Fixed Film Reactors
- Suspended Growth Reactors

(continued on back page)

SEMINAR REGISTRATION FORM

BIOREMEDIATION OF HAZARDOUS WASTE SITES: PRACTICAL APPROACHES TO IMPLEMENTATION

Please register me for the following seminar(s):

- ☐ Chicago, IL, May 29-30, 1996
- ☐ Kansas City, MO, June 4-5, 1996
- ☐ Atlanta, GA, June 6-7, 1996
- ☐ San Francisco, CA, June 18-19, 1996

Affiliation:

- ☐ U.S. EPA
- ☐ Other Federal Agency
- ☐ State EPA
- ☐ Local Government
- ☐ Academia
- ☐ Vendor
- ☐ Industry
- ☐ Contractor
- ☐ Other

Name: _____

Title: _____

Organization: _____

Address/Mail Code _____

City/State/Zip Code: _____

Telephone: _____

Fax: _____

E-mail: _____

Do you have access to the Internet? ☐ Yes ☐ No

Mail or fax registration to:
Eastern Research Group, Inc.
110 Hartwell Avenue
Lexington, MA 02173-3134
617-674-7374
Fax: 617-674-2906