

Additional Course Details

MTBE & Other Fuel Oxygenates: Comprehensive Site Assessment and Successful Groundwater Remediation premiered December 2003 at the Marine Sciences Research Center, State University of New York, Stony Brook. The comprehensive, two day classroom style training course was designed to enhance professional awareness of advances in cutting edge field methods available to assess environmental impacts resulting from petroleum-based MTBE and other fuel oxygenate releases. The program continues to evolve and is frequently updated with the latest science and practices available. The course has been presented to hundreds of students in the United States and Europe with great success. We hope you will learn from our experienced instructors and enjoy interacting with other environmental professionals!

Interested in attending The MTBE and TBA Course?

The two day seminar will be held Monday and Tuesday March 6-7, 2006 at the Washoe County District Health Department, 1001 East Ninth Street, Building B, Reno, NV 89512. Please visit the course information website at www.themtbecourse.com or contact Shannon Harbour (702) 486-2850 x240 for more information.

Presented by:



Course Supporters:



Fees

Complete course fees are \$495 for consultants and industry representatives. Pre-qualified Nevada State and Washoe/Clark County employees will be admitted free of charge. Please contact Shannon Harbour (702) 486-2850 x240 for details. Non-Nevada State regulators may apply to have their course fee waived. Please contact Todd Margrave (619) 589-0784 for information. A limited number of reduced rate academic seats (full time students and faculty) are available for \$95 each. We accept cash, company checks, Visa, MC, American Express, Diners Club and other forms of payment. No company purchase orders accepted for this event. All fees must be fully paid by the start of class.

Registration Instructions

Course registration for the March 6-7, 2006 course will be provided by EnviroCourses.org via an on-line (internet-based) event management system. Please visit www.themtbecourse.com for complete details. Register online or telephone EnviroCourses.org (619) 589-0784 Monday-Friday 8:00 am to 5:00 PM PST.

Hotel Accommodations

The Holiday Inn Hotel - Downtown Reno has been selected as the official hotel for this training event. A block of 30 rooms are reserved at the special rate of \$69 per night (plus taxes.) A \$79 per night rate (plus taxes) is also available and includes daily breakfast. The hotel is located at 1000 East Sixth St., Reno, NV, 89512. Students are required to make their reservations directly with the Holiday Inn by calling (800) 315-2621. Mention "The MTBE Course" for the special group rates. Visit the Travel and Lodging section of www.envirocourses.org for more information.

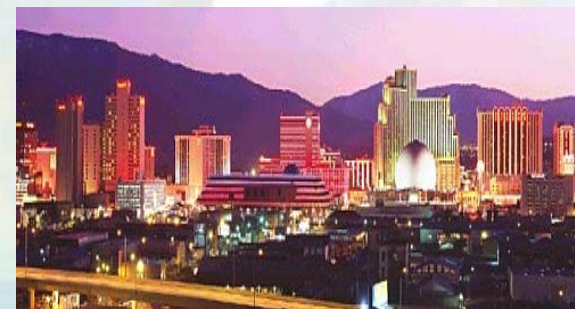
Meals and Transportation

Monday and Tuesday continental breakfast, lunch, and beverages will be provided on-site. All other meal, travel and incidental expenses are the student's responsibility. Please consult a travel agent for assistance.

ENVIROCOURSES.org

MTBE & TBA: Comprehensive Site Assessment and Successful Groundwater Remediation

Course Announcement



A Two-Day Classroom Training on
Monday & Tuesday March 6-7, 2006

Washoe County District
Health Department

1001 East Ninth St., Building B
Reno, NV 89512

Course Outline

Day One (Monday March 6, 2006)

7:00 am – Registration Opens

8:00 am – Welcome & Introduction

8:20 am – 10:00 am – *History, Nature and Detection of MTBE*

- History of Fuel Oxygenates
- U.S. Gasoline Composition Study
- Physical Properties and Sampling & Analytical Methods
- Sources and Releases

Morning Break

10:15 am – 10:45 am – *Technology Selection & Application Considerations*

10:45 am – 11:00 am – *Site Conceptual Models*

11:00 am – 11:15 am – *Site Characterization (Part 1)*

- Source Zone and Plume Conceptual Scenarios

11:15 am – noon – *Plume Formation, Transport & Modeling*

Lunch: *Catered On-Site and Included with Seminar Fee*

12:45 pm – 2:00 pm - *Biodegradation*

2:00 pm – 3:00 pm – *Site Characterization (Parts 2-4)*

- Site Characterization Issues
- Triad "Plus" Case Study
- Performance Monitoring

Afternoon Break

3:15 pm – 3:30 pm – *Computer Tools & Online Calculators*

3:30 pm – 5:00 pm – *Practical Application (Sessions 1-3)*

Evening: *Reception at the Holiday Inn Hotel (14th Floor)*

Day Two (Tuesday March 7, 2006)

8:00 am – 10:00 am – *Remedial Technologies for MTBE & OFO:
Groundwater Extraction and Ex-Situ Treatment*

- Pump and Treat Data and Design Considerations
- Smart Pump and Treat (Case Study)
- Aeration
- Sorption
- Advanced Oxidation

Morning Break

10:15 am – 11:15 am – *Ex-Situ Bioremediation*

11:15 am – 11:45 am – *Ex-Situ Treatment Technology
Comparative Case Study: BioGAC / HiPox*

Lunch: *Catered On-Site and Included with Seminar Fee*

12:30 pm – 1:30 pm – *In-Situ Bioremediation*

- Aerobic
- Bioaugmentation
- Co-substrate Addition
- Oxygen-only Addition
- Anaerobic

1:30 pm – 1:45 pm – *Enhanced In-Situ Bioremediation Case Study*

1:45 pm – 2:15 pm – *Monitored Natural Attenuation and Case Study*

2:15 pm – 3:15 pm – *Air Sparging and Case Studies*

Afternoon Break

3:30 pm – 4:20 pm – *In-Situ Chemical Oxidation (ISCO) and Case Study*

4:20 pm – 4:30 pm – *Phytoremediation*

4:30 pm – 5:00 pm – *Practical Application (Session 4)*

5:00 – *Wrap-up and Evaluation*

Why Should You Attend The Course?

Groundwater contamination from fossil derived fuels occurs throughout the US. A wealth of scientific information and conventional technologies are available to treat conventional fuel hydrocarbons like benzene, toluene, ethyl benzene, and xylenes (BTEX). Characterization strategies and remediation technologies are less well known for fuel constituents such as methyl-*tert*-butyl ether (MTBE), *tert*-butyl alcohol (TBA) and other oxygenates which are often added to gasoline to increase octane ratings and to reduce harmful, air polluting combustion by-products.

Solutions Via Applied Science Associates (SVASA) and EnviroCourses.org, in cooperation with the Nevada Department of Conservation & Natural Resources, the Long Island Groundwater Research Institute, and the American Petroleum Institute invite you to participate in a comprehensive 2-day classroom style training course that will introduce basic principles, strategies and science-based methodologies for managing sites containing MTBE, TBA and other fuel oxygenates. Please join us on Monday and Tuesday March 6-7, 2006!

Course Instructors

Jeff Dey	Resource Control Corporation
Patricia Ellis	Delaware Dept. of Natural Resources & Environmental Control
Shannon Harbor	Nevada Department of Environmental Protection
Joe Haas	Global Hydrologic Services
Greg Hattan	Kansas Department of Health and Environment
Michael Hyman	North Carolina State University
Eric Nichols	LFR, Inc.
Ward Rogers	Calgon Carbon Corporation
Roy Spalding	University of Nebraska at Lincoln
Matt Tonkin	S. S. Papadopoulos & Associates, Inc.
Jim Weaver	U.S. Environmental Protection Agency