

November 2 & 3, 2006  
Westford Regency, Westford, MA

NEIWPCC and API in association with ITRC have designed this two-day training course to enhance your professional awareness of technical issues related to fuel oxygenate characterization and remediation. An outstanding group of instructors composed of state and federal regulators, researchers, and private-sector practitioners will present you with a balanced program offering both theoretical and field-based information covering site characteristics, remedial technology selection, design and implementation.

NEIWPCC is applying to the MA LSP Board for LSP continuing education credits for this course. When finalized, NEIWPCC will send an email notifying all registrants and potential registrants of the number of credits assigned.



ITRC

MtBE and Other Fuel Oxygenates:

### Considerations for Assessments and Remediation

NEIWPCC  
New England Interstate Water  
Pollution Control Commission  
116 John Street  
Lowell, MA 01852-1124

Non-Profit Org.  
U.S. Postage  
PAID  
Wilmington, MA  
Permit No.  
200

MtBE and Other Fuel Oxygenates:

### Considerations for Assessments and Remediation



ITRC



MtBE and Other Fuel Oxygenates:

### Considerations for Assessments and Remediation

A classroom training session sponsored by NEIWPCC and API in association with the Interstate Technology & Regulatory Council (ITRC)

November 2 & 3, 2006

Westford Regency  
Westford, MA



ITRC

116 John Street, Lowell, MA 01852-1124  
Phone: 978-323-7929, Fax: 978-323-7919

Day 1

# Thursday, November 2, 2006

- 9:00 A.M. **Registration and Information Desk Open**  
Refreshments Available
- 9:30 A.M. **Welcome and Introductions**  
*Susan Sullivan, Deputy Director, NEIWPCC*  
*Fred McGarry, P.E., DEE, ITRC MtBE Team Leader and Moderator*
- 9:45 A.M. **Key Issues and Solutions Related to Oxygenates and State Regulatory Programs**, *Kara Sergeant, NEIWPCC*
- 10:15 A.M. **A Brief History of Gasoline**
  - Multiple Oxygenate Usage – Same Sites
  - Emerging Issues
  - Ongoing API Research*Bruce Bauman, American Petroleum Institute*
- 10:45 A.M. Break
- 11:00 A.M. **Recent Gasoline Composition Studies**, *James Weaver, Ph.D., U.S. Environmental Protection Agency's Office of Research and Development*
- 11:15 A.M. Instruction Session #1  
**Properties of Gasoline Components Sources and Releases Site Conceptual Model and Site Characterization**  
*Eric Nichols, P.E., LFR, Inc.*
- 12:15 P.M. **Luncheon**
- 1:30 P.M. **Formation, Transport & Plume Modeling Computer Modeling**  
*James Weaver, Ph.D., U.S. Environmental Protection Agency's Office of Research and Development*
- 2:30 P.M. Practical Application #1  
**Computer Modeling**, *James Weaver, Ph.D., U.S. Environmental Protection Agency's Office of Research and Development*
- 3:45 P.M. Break
- 4:00 P.M. **Assessing Oxygenates in Bedrock Environments**, *Nancy Kinner, University of New Hampshire*
- 5:00 P.M. **Selecting Appropriate Technologies – Site Considerations**  
*Fred McGarry, P.E., DEE*
- 5:20 P.M. **Questions and Answers**, *Fred McGarry, P.E., DEE*
- 5:30 P.M. Adjourn Day 1

Conference Agenda

Day 2

# Friday, November 3, 2006

- 7:30 A.M. Refreshments
- 8:00 A.M. **Biodegradation - Monitored Natural Attenuation (MNA) for Oxygenates, How it evolved, why it occurs and stable carbon isotopes**  
*John Wilson, U.S. Environmental Protection Agency*
- Biodegradation – What Do We See in the Field?** *James Landmeyer, USGS*
- 10:00 A.M. Break
- 10:15 A.M. **Oxygenate Treatment Technologies**, *Fred McGarry, P.E., DEE*
- 10:30 A.M. Instruction Session #2  
**Ex Situ Technologies**
  - a. Pump and Treat
  - b. Pump and Treat Case Studies
  - c. Aeration/Sorption/Carbon
  - d. AS/BioGAC case studies
  - e. Advanced Oxidation
  - f. Ex Situ Bioremediation*Fred McGarry, P.E., DEE and Eric Nichols, P.E., LFR, Inc.*
- 12:30 P.M. **Luncheon**  
**New Hampshire MtBE Drinking Water Study**  
*Joe Ayotte, New Hampshire USGS*
- 1:30 P.M. Instruction Session #3  
**In Situ Technologies**
  - a. In Situ Bioremediation: USGS Case Studies, *Jim Landmeyer, USGS*
  - b. In Situ Chemical Oxidation (ISCO), *Eric Nichols, P.E., LFR, Inc.*
  - c. SVE/Air Sparging, *Eric Nichols, P.E., LFR, Inc.*
  - d. Thermal Remediation, *Jeff Kuhn, Montana DEQ Petroleum Release Section*
- 3:00 P.M. **Remediation Performance Monitoring – How Do We Measure Success?**  
*Jeff Kuhn, Montana DEQ Petroleum Release Section*
- 3:30 P.M. **Treatment Technologies – Cost Comparison**, *Fred McGarry, P.E., DEE*
- 4:00 P.M. **The Future is Now! Ethanol Considerations**, *Curt Stanley, API/Shell*
- 4:30 P.M. **Challenges of Fuel Oxygenates**, *Fred McGarry, P.E., DEE*
- 4:45 P.M. **Distribute Course Certificates and Collect Evaluations**  
*Kara Sergeant, NEIWPCC*
- 5:00 P.M. Adjourn

Conference Agenda

Fees/Hotel Information

MtBE and Other Fuel Oxygenates:

## Considerations for Assessments and Remediation

Fees: **\$250** Government Attendees; **\$600** Private Sector  
MA LSP Credits: Pending



**The Westford Regency Inn & Conference Center**  
219 Littleton Road, Westford, MA 01886  
Tel: 978-692-8200; www.westfordregency.com

Individuals should call The Westford Regency to make reservations: **978-692-8200**. In making reservations, please reference the group name: **NEIWPCC NORTHEAST OXYGENATE TRAINING PROGRAM** to receive the group rate of **\$110**. Government attendees must identify themselves as such to receive a rate of **\$99**.

Deadline for hotel reservations: **October 11, 2006**.

**The meeting will take place in the Westford Regency's Concord Amphitheater.**

Registration

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Town/City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Tel: \_\_\_\_\_

Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Select Payment Method

**Payment expected prior to the date of the program, payable to NEIWPCC.**

Check # \_\_\_\_\_ Amount: \_\_\_\_\_

P.O. # \_\_\_\_\_ Amount: \_\_\_\_\_

-or-

Credit Card # \_\_\_\_\_ Amount \_\_\_\_\_

indicate Visa, MC or Discover \_\_\_\_\_ **3-digit code (Visa only)** \_\_\_\_\_  
located on back of card

Name on card \_\_\_\_\_ Expiration \_\_\_\_\_  
month/year

Signature Required \_\_\_\_\_ Date \_\_\_\_\_

Please return this form and payment to:

NEIWPCC  
New England Interstate Water Pollution Control Commission  
116 John Street, Lowell, MA 01852-1124

Conference Registration