The Northwest Environmental Training Center presents:

Quality Assurance/Quality Control
Management of Environmental Analytical Data
Course ID: CHEM-404
September 30 - October 1, 2008, 8:30 A.M. to 5 P.M. (2 Days)
NWETC Headquarters - Seattle
650 South Orcas Street, Suite 220 :: Seattle, Washington

Instructor: David L. Tooke, PhD
Director of Operations with Sustainable Systems, Inc.

Description: This course provides participants with an overview of QA/QC management of analytical data. It is intended for environmental professionals who require a basic understanding of QA/QC methodologies for managing the integrity of laboratory analytical data. The course includes some hands on data screening exercises to apply the course concepts to real-world scenarios.

Course Topics:

QA Program Overview
- Overview of the QA Process
- Quality Management Plans

Statistical Considerations
- DQO Process
- PARRC Definitions
- Overview of Statistical Methods

Planning, Implementation, and Assessment
- Systematic Project Planning
- QAPP/FSP/FWOP/SAP

Communicating with the Lab
- What the Lab Needs to Know
- What the Field Staff Needs to Know

Factors Surrounding Data Quality
- Potential Sources of Error
- Representative

Factors Surrounding Data Quality (Continued)
- Study Design
- Accuracy Requirements
- Field Procedures
- Analytical Procedures
- Routine Laboratory QC Procedures
- Overview of Data Verification and Validation Processes
- QA/QC Screening of Analytical Data
- Using Data to Support Decisions
- QA/QC Resources

Preparing for Sampling
- QAPP Based on Experience
- Access to Support
- Field Equipment Required

Legal Defensibility of Data
- Laboratory Accreditation
- Deliverable Requirements

About the instructor: David Tooke is currently the Director of Operations at Sustainable Systems in Missoula MT where he manages environmental permitting/regulatory compliance, new product development, quality assurance/quality control, and capital project development at their oilseed processing facility in Eastern Montana. Prior to this position, he modeled sulfur transport and fate as a research chemist at a western Montana pulp mill. He also served as the analytical chemist for all MACT-related compliance demonstrations at the pulp mill. Throughout his research, Dr. Tooke created several software applications for managing and reporting extensive datasets, and modeling biogeochemical cycles in industrial settings. Prior to this, Dr. Tooke worked as an analytical chemist for a commercial environmental lab for several years.
Intended Audience: The course is intended for environmental professionals involved with gathering, screening, and interpreting chemical analytical data related to soil and groundwater assessment and remediation. Some college level chemistry is helpful, but not required.

Course Materials: Each participant will receive a copy of the course proceedings including notes and reference material on the first day of the course.

Continuing Education Units: 1.3

What to Bring: Mechanical pencil, coffee mug and water bottle (to reduce waste). Please wear comfortable clothing appropriate for the prevailing weather.

Registration: $495 (*$395 reduced tuition is available for Native American tribes; government employees; nonprofits; students; and NAEP, NEBC, TAEP members). You may register via the link below or by calling the Northwest Environmental Training Center at 206-762-1976.

Cancellation Policy: Registration fees are fully refundable up to 30 days prior to the event and 50 percent refundable (or 100% credit) thereafter up to 3 business days prior to the event. No refunds are issued for cancellations occurring less than 3 business days before the start day. Course registration fees and cancellation policy are subject to change without notice.

Disability Accommodations: To request disability accommodations, please contact us at info@nwetc.org or (206) 762-1976 at least 30 days prior to the event.

Northwest Environmental Training Center
A nonprofit 501(c)(3) program of the Northwest Environmental Education Council
650 S. Orcas Street, Suite 220, Seattle, Washington 98108
Phone: (206)762-1976, Fax: (206) 762-1979
www.nwetc.org
### Accommodations near:

**The Northwest Environmental Training Center**  
**HEADQUARTERS**  
650 South Orcas Street, Suite 220  
Seattle, WA 98108  
PHONE: (206) 762-1976 | FAX: (206) 762-1979  
www.nwetc.org

<table>
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<tr>
<th>Hotel Name</th>
<th>Address</th>
<th>Distance</th>
<th>Phone Number</th>
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<td>6100 Corson Ave S, Seattle, WA</td>
<td>0.25 mi</td>
<td>(206) 762-2233</td>
<td>1046 1st Ave S, Seattle, WA</td>
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<td>(206) 204-9800</td>
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<td>3.05 mi</td>
<td>(206) 281-9977</td>
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<td>(206) 623-5110</td>
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<td>(206) 762-6684</td>
<td>5414 1st Ave S, Seattle, WA</td>
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<td>2411 Alaskan Way Pier 67, Seattle, WA</td>
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<td>Silver Cloud Hotel Stadium</td>
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<td>315 Seneca St, Seattle, WA</td>
<td>3.85 mi</td>
<td>(206) 623-5110</td>
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<td>(206) 728-7000</td>
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<td>The Edgewater</td>
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<td>(206) 766-9807</td>
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Directions to:

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From I-5 (Northbound or Southbound):
- Take the Michigan/Corson Street Exit
- Stay in right lane
- Right on Michigan Street (first light)
- Right on 6th Avenue South
- Right on Orcas Street
- Orcas Business Park is on the left next to the Post Office
- NWETC Headquarters is on the second floor at the north end of the building
- Parking is free on the street and in the triangular lot north of the building on S. Homer Street

From 99 (Northbound or Southbound):
- Go east on Michigan Street
- Turn left on 4th Avenue South
- Turn right on Orcas Street
- Orcas Business Park is on the left next to the Post Office
- NWETC Headquarters is on the second floor at the north end of the building
- Parking is free on the street and in the triangular lot north of the building on S. Homer Street
- Feel free to call us if you need directions in route or have any questions about parking: (206)762-1976.
REGISTRATION FORM

Name: ___________________________________________ Today’s Date: __________________

Agency/Organization: ________________________________________________________________

Street Address: _________________________________________________________________

Street Address (cont’d): ___________________________________________________________

City: __________________________ State: __________ Zip: __________________________

Phone: __________________________ Fax: __________________________

Email: __________________________ Title: __________________________

Indicate Course[s]:

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*Reduced rates for Native American Tribes; nonprofits; government; students; and NEBC, NAEP and NWAEP members.

Payment Method: Check ☐ PO ☐ Credit Card (☐ Visa ☐ Mastercard) Total: $______________

Credit Card or PO #: __________________________ Exp: __________________________

Notes: Please make checks payable to Northwest Environmental Training Center.

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