The Northwest Environmental Training Center presents:

**Collecting and Handling of Water Samples for Trace Metal Analysis**

**Sampling for Trace Metals using "Clean Hands/Dirty Hands" Method**

August 1, 2008, 9:00 A.M. to 5:00 P.M. :: Corinthian Yacht Club of Seattle

**Instructor:** Michelle Briscoe, VP of Analytical Services, Brooks Rand Labs

The following sampling course is designed for anyone collecting ambient water samples for low-level total and dissolved trace metals. This one-day course will include a half-day in the classroom with lectures covering the circumstances in which low-level detection limits would be desired or required, potential routes of metals contamination, necessary sampling supplies, various sampling techniques, proper handling and preservation of samples, and field quality assurance sample collection requirements. The second half of the day, students will engage in hands-on field exercises, where they will be given the opportunity to practice several surface water sampling protocols using various sample collection methods and following the "Clean Hands/Dirty Hands" sampling techniques.

**Overview of the Importance of Trace Metal Detection Limits**
A brief discussion regarding the requirements of the Clean Water Act, EPA Methods 1669 and 1631, and the need for low-level detection limits.

**EPA Analytical Methods and Preservation Requirements**
The instructor will go over various EPA Analytical Methods (1600-series) available for trace metals analysis. Instruction will also be provided for proper handling and preservation of samples prior to or immediately following laboratory receipt.

**Potential Sources of Contamination**
Participants will gain an understanding of different sources of contamination or interferences that can cause problems with trace metals analysis and ways to avoid contamination.

**Sample Considerations**
In order to obtain credible and scientifically defensible data, sampling considerations will be discussed in order to determine the most appropriate sampling sites and sample collection techniques.

**Sampling Supplies and Equipment**
We will go over the correct equipment and supplies that MUST be used in order to successfully collect a water sample for trace-level metals analysis. Surface and subsurface sampling supplies will be discussed, including equipment needed for proper field filtration.

**Sampling Techniques**
The instructors will go over **EPA Method 1669 "Clean Hands/Dirty Hands"** for several different sampling methods.

**Day schedule:** First part of the class, 9:00 A.M.-12:00 P.M. will be spent at the Corinthian Yacht Club of Seattle (7755 Seaview Ave NW, in the picture above), after lunch on your own, we will be meeting at the public dock right next to the Corinthian Yacht Club for water sampling exercises from 1 P.M.-5 P.M.

**Please read carefully, what to bring:** Please bring pen/pencil, notepad and a coffee mug to reduce waste, due to our mission we try our best to stay away from everything disposable,
in this respect there will be no bottled water available, please remember to bring your water bottle! We also advise that you bring a sunscreen, sunglasses and a light wind jacket. Coffee, tea, breakfast pastries and sodas will be provided.

**August 1, 2008, 9:00 AM,** Please arrive 10 minutes before the start time to allow time for check-in.

**Corinthian Yacht Club of Seattle :: 7755 Seaview Ave NW :: Seattle, WA**

**Continuing Education Units:** 0.7

**Registration:** $295 (**$250** reduced tuition is available for Native American tribes; government employees; nonprofits; students; and NAEP, NEBC, NWAEP 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. You may register via the registration link or by calling the Northwest Environmental Training Center at 206-762-1976.

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
### Accommodations near Corinthians Yacht Club of Seattle

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<tr>
<th>Accommodation</th>
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<tr>
<td><strong>Starlight Hotel</strong></td>
<td>5300 Ballard Ave NW</td>
<td>(206) 784-8304</td>
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<tr>
<td><strong>Watertown Hotel</strong></td>
<td>4242 Roosevelt Way NE</td>
<td>(206) 826-4242</td>
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<td><strong>Travelodge Seattle - North Aurora</strong></td>
<td>8512 Aurora Ave N</td>
<td>(206) 522-5000</td>
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<td><strong>Greenlake Guest House</strong></td>
<td>7630 E Green Lake Dr N</td>
<td>(866) 355-8700</td>
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<tr>
<td><strong>Hotel Nexus Seattle</strong></td>
<td>2140 N Northgate Way</td>
<td>(206) 365-0700</td>
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<td><strong>Everspring Inn</strong></td>
<td>8201 Aurora Ave N</td>
<td>(206) 789-1888</td>
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<tr>
<td><strong>Holiday Inn Express Hotel &amp; Suites Seattle (Northgate Mall Area)</strong></td>
<td>14115 Aurora Avenue North</td>
<td>(877) 863-4780</td>
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<tr>
<td><strong>Dibble House</strong></td>
<td>7301 Dibble Ave NW</td>
<td>(206) 783-0320</td>
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Phone: (206)762-1976, Fax: (206)762-1979
www.nwetc.org
Directions to:

Corinthian Yacht Club of Seattle
7755 Seaview Ave NW
Seattle, WA 98117

LOCAL TRANSIT:
Trip planner: http://tripplanner.metrokc.gov/

DRIVING FROM Seattle-Tacoma International Airport (SEA)
Merge onto WA-518 E via the ramp to I-405/I-5/Seattle/Tacoma
Take the exit on the left onto I-5 N toward Seattle
Take exit 172 onto N 85th St. Toward Aurora Ave N
Turn right at 32nd Ave NW/ Loyal Way NW
Continue on Golden Gardens Dr NW
Turn left at Seaview Pl NW
Turn left at Seaview Ave NW

DRIVING FROM Points North, via I-5 S
Take exit 172 to merge onto N 85th St
Turn right at 32nd Ave NW/ Loyal Way NW
Continue on Golden Gardens Dr NW
Turn left at Seaview Pl NW
Turn left at Seaview Ave NW

DRIVING FROM Points South, via I-5 N
Take exit 172 onto N 85th St. Toward Aurora Ave N
Turn right at 32nd Ave NW/ Loyal Way NW
Continue on Golden Gardens Dr NW
Turn left at Seaview Pl NW
Turn left at Seaview Ave NW

DRIVING FROM Points East, via I-90 W
Take exit 172 onto N 85th St. Toward Aurora Ave N
Turn right at 32nd Ave NW/ Loyal Way NW
Continue on Golden Gardens Dr NW
Turn left at Seaview Pl NW
Turn left at Seaview Ave NW
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## REGISTRATION FORM

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<td>Agency/Organization:</td>
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### Collecting and Handling of Water Samples for Trace Metal Analysis
- Sampling for Trace Metals using "Clean Hands/Dirty Hands" Method -
  
  **Course ID:** CHEM-305 (1 day) August 1, 2008, 9:00 A.M. to 5:00 P.M.
  **Corinthian Yacht Club of Seattle**
  7755 Seaview Ave NW, Seattle, WA 98117
  **Registration:** $295 ($250*)

*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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