

The Northwest Environmental Training Center presents:

**Underground Storage Tank Installation Training  
Today's UST Installation Practices**

Course ID: WAPOL - 406  
 October 15, 2008, 8:30 A.M. to 5 P.M. (1 Day)  
 NWETC Headquarters - Seattle  
 650 South Orcas Street, Suite 220  
 Seattle, WA 98108

**Instructors:** Ben Thomas, Ben Thomas Associates and Petroleum Training Solutions, Inc. & others

**Description:** This course provides a general overview of the equipment, codes, and procedures to properly install underground petroleum storage tanks. A detailed review of the all parts and equipment will be followed by applicable codes, standards and certification. Various installation procedures will then be discussed, followed by safety concerns and hazard control measures.

Introduction	Release detection
Overview of parts and equipment	Pipes and fittings
National references, codes and standards (PEI RP-100, API 1615)	Testing piping
Certification standards (ICC)	Cathodic protection systems
Material handling	Electrical installations
Pre-installation inspection and testing	Documentation and training
Excavating, Backfilling, Anchoring	Safety (API 1646)
Spill containment and overfill prevention	
Secondary containment	

We also offer an **Underground Storage Tank INSPECTION Training** immediately following this course on October 16-17, 2008.

**About lead instructor:** Ben Thomas of Petroleum Training Solutions has nearly 19 years in the petroleum storage industry helping owners inspectors and contractors understand better UST rules to improve compliance and reduce leaks. He provides numerous workshops and seminars around the United States. See [www.USTtraining.org](http://www.USTtraining.org) for more information.

**Intended Audience:** Entry level UST installers, government inspectors, UST compliance officers and state, federal and tribal employees interested in expanding their knowledge on proper UST installations.

**Upon Completion:** Student should gain an appreciation for the variety of equipment and the complexity of piping and ancillary equipment. Students should also increase awareness of fire control and safety measures. Student should learn about proper standards, recommended practices and other resources related to UST installations.

**Course Materials:** Each attendee will receive a binder containing the course proceedings and reference material at the beginning of the class.

**What to Bring:** Pen or pencil (and paper if you prefer not to write in your binder) and a coffee cup and water bottle to reduce waste. Drinks and snacks will be provided both days.

**Continuing Education Units:** 0.7

**Registration: \$250 (\*\$195 reduced tuition is available for Native American tribes; government employees; nonprofits; students).** 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](mailto: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](http://www.nwetc.org)



# UNDERGROUND STORAGE TANK Inspection Training

The Northwest Environmental Training Center presents:

## Underground Storage Tank **INSPECTION** Training

Course ID: WAPOL - 405

October 16-17, 2008, 8:30 A.M. to 5 P.M. (2 Days)

NWETC Headquarters - Seattle  
650 South Orcas Street, Suite 220  
Seattle, WA 98108

**Instructors:** Ben Thomas, Ben Thomas Associates and Petroleum Training Solutions, Inc.

**Description:** This entry level two-day course is an excellent primer for new UST inspectors or anyone who needs a comprehensive overview of the requirements for UST systems. Get simple explanations on complex rules from top experts in the field, plus get practical advice on real-world site conditions to ensure you are better prepared for the nuances of compliance inspections. The team of instructors are highly qualified with decades of collective tank inspection experience and experience leading numerous UST inspection courses.

### Day 1

**7:30 AM Registration**

**8:00 AM Welcome and Overview (Thomas)**

- Today's problems
- Outline of the week

**8:30 AM Introduction (Thomas)**

- Course Goals and Expectations
- Mission and Authority
- Why care about USTs?
- Regulated Tanks
- Operator Training
- Energy Policy Act of 2005

**9:00 AM Review of Parts and Equipment (Thomas)**

- What's Underground
- Equipment
  - Tanks
  - Pump and Piping
  - Monitoring
  - Delivering
  - Venting
  - Dispensing
- Methods
  - Leak Detection
  - Fuel Transfers

### Day 2

**8:00 AM Overfill Prevention (Thomas)**

- Objectives
- Options
- Limitations/Problems
- Inspection issues
- Records

**9:45 AM Break**

**10:00 PM Release Detection Part 3: Other Methods (Wiese)**

- Inventory Control
- Statistical Inventory Reconciliation
- Manual Tank Gauging
- Soil Vapor/Groundwater Monitoring
- Suction Piping

**12:15 PM Lunch**

**1:30 PM Suspected Releases (Thomas)**

- Conditions of suspected releases
- Response actions
- Assessing Impacts

**2:00 PM Administrative Rules and Record Keeping (Department of Ecology)**

- Permits
- Notification
- Inspection forms

**10:00 AM Morning Break**

**10:15 AM Corrosion Protection (Hailey)**

- Introduction to UST's, Corrosion, & General Requirements
- Causes of Corrosion
- Corrosion Control & Samples of Corrosion Control & Technology
- Cathodic Protection - Galvanic
- Inspection tips, resources
- Testing Cathodic Protection - Galvanic
- Troubleshooting
- Cathodic Protection - Impressed Current

**12:15 Lunch (on your own)**

**1:00 PM Release Detection Part 1: Common Methods for Tanks (Thomas)**

- Objectives
- Summary of options
- Automatic Tank Gauging: Reports, keypad functions,
  - TLS 300/350
  - TLS 200/250
  - Incon 1000/1001
  - Other brands
- Interstitial Monitoring

**2:45 PM Afternoon Break**

**3:00 PM Release Detection Part 2: Methods Pressurized Piping (Young)**

- Principles of Line Pressure
- Catastrophic Line Leak Detection
- Electronic ALLDs

Other Piping Methods (Weise)

- Line Tightness Testing
- Interstitial Monitoring

**4:30 PM Vapor Recovery (Wilson)**

- Vapor loss from USTs
- Stage I
- Stage II

**5:00 PM Adjourn first day**

- Record keeping requirements

**2:30 PM Break**

**2:45 PM Inspections (Department of Ecology)**

- Documentation
- Preparation
- Site Arrival
- Inspection Tips
- Enforcement
- Bottom Line

**3:45 PM Financial Responsibility (Gooding)**

- Mechanism Options
- Overview of coverage requirements

**4:30 PM Closing Remarks, Questions and Answers (Thomas)**

**5:00 PM Adjourn**

We also offer an **Underground Storage Tank Installation Training-Today's UST Installation Practices** preceding this course on October 15, 2008

**About lead instructor:** Ben Thomas of Petroleum Training Solutions has nearly 19 years in the petroleum storage industry helping owners inspectors and contractors understand better UST rules to improve compliance and reduce leaks. He provides numerous workshops and seminars around the United States. See [www.USTtraining.org](http://www.USTtraining.org) for more information.

**Intended Audience:** This course is intended for State and Federal UST government inspectors, UST compliance officers, compliance consultants, and UST owners and operators. The bulk of the material presented in this course is applicable in

most states.

**Course Materials:** Each attendee will receive a binder containing the course proceedings and reference material at the beginning of the class along with a CD-ROM containing a comprehensive reference library of UST guidance documents, policy, and operations information..

**What to Bring:** Pen or pencil (and paper if you prefer not to write in your binder) and a coffee cup and water bottle to reduce waste. Drinks and snacks will be provided both days.

**Continuing Education Units:** 1.3

**Registration: \$495** (\*\$395 reduced tuition is available for Native American tribes; government employees; nonprofits; students). 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.

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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

<b>Georgetown Inn</b> 6100 Corson Ave S Seattle, WA <i>0.25 mi</i>	(206) 762-2233	<b>La Hacienda Motel</b> 5414 1st Ave S Seattle, WA <i>0.93 mi</i>	(206) 762-2460
<b>Westmark Hotels</b> 4742 42nd Ave Sw # 626 Seattle, WA <i>3.05 mi</i>	(206) 281-9977	<b>Seattle Hotel</b> 315 Seneca St Seattle, WA <i>3.85 mi</i>	(206) 623-5110
<b>Munson Motel</b> 7060 E Marginal Way S Seattle, WA <i>0.44 mi</i>	(206) 762-6684	<b>Silver Cloud Hotel Stadium</b> 1046 1st Ave S Seattle, WA <i>2.56 mi</i>	(206) 204-9800
<b>Airline Motel</b> 7070 E Marginal Way S Seattle, WA <i>0.44 mi</i>	(206) 766-9807	<b>The Edgewater</b> 2411 Alaskan Way Pier 67 Seattle, WA <i>4.35 mi</i>	(206) 728-7000



Directions to:

**Northwest Environmental Training Center**

HEADQUARTERS

650 South Orcas Street, Suite 220  
Seattle, WA 98108

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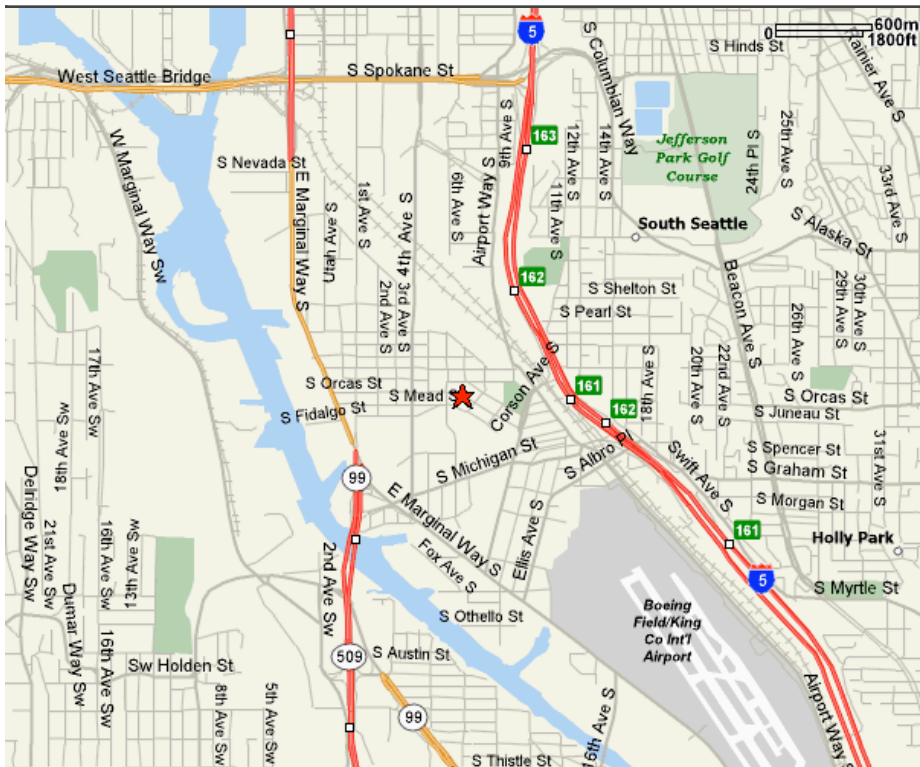
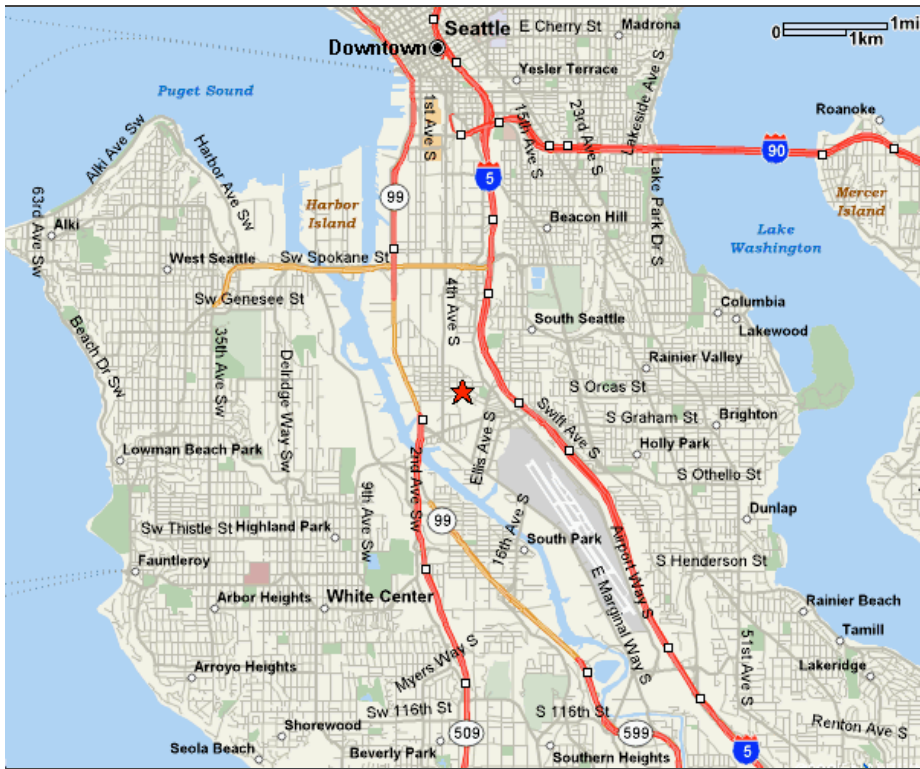
**From I-5 (Northbound or Southbound):**

- 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

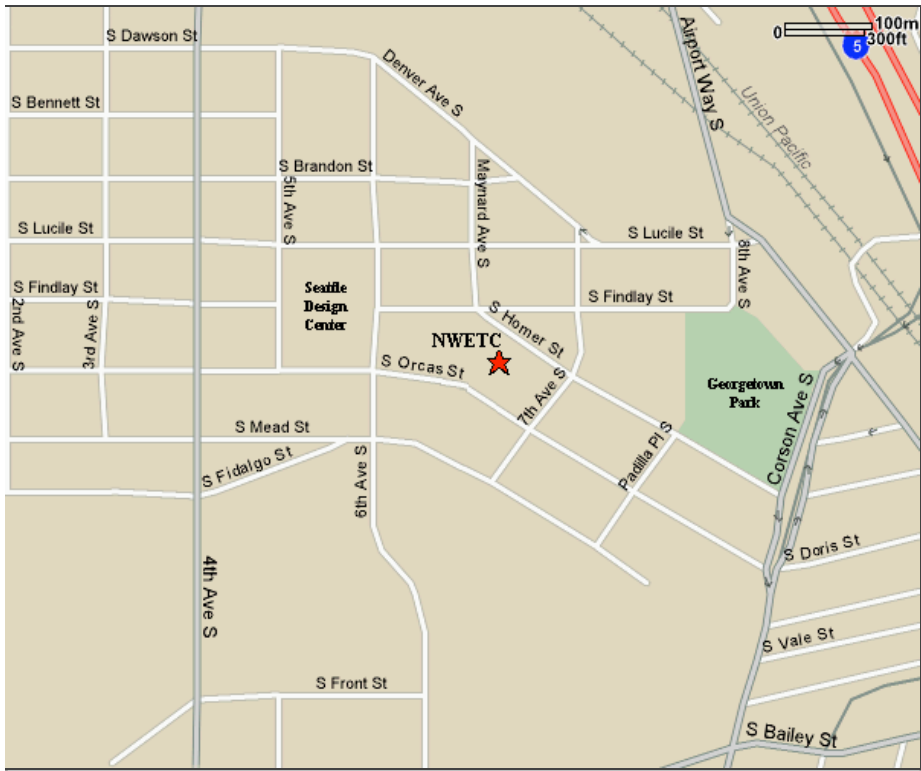
**From 99 (Northbound or Southbound):**

- 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.

**MAPS:**









**NORTHWEST ENVIRONMENTAL TRAINING CENTER**  
650 S Orcas Street, Suite 220, Seattle, Washington 98108  
Ph: (206)762-1976, Fax: (206)762-1979  
www.nwetc.org

### REGISTRATION FORM

Name: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Agency/Organization: \_\_\_\_\_

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

Street Address (cont'd): \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_ Title: \_\_\_\_\_

**Indicate Course[s]:**

**Underground Storage Tank Installation Training** \$ \_\_\_\_\_  
Course ID: WAPOL-406, October 15, 2008  
NWETC headquarters, 650 S Orcas St #220, Seattle, WA 98108  
**Registration: \$250 (\$195\*)**

**Underground Storage Tank Inspection Training** \$ \_\_\_\_\_  
Course ID: WAPOL-405, October 16-17, 2008  
NWETC headquarters, 650 S Orcas St #220, Seattle, WA 98108  
**Registration: \$495 (\$395\*)**

\*Reduced rates for Native American Tribes; nonprofits; government; students; and NEBC, NAEP and NWAEP members. **An additional \$50 discount applies to all registrants when registering for both classes.**

**Payment Method:** Check  PO  Credit Card (Visa Mastercard) **Total: \$** \_\_\_\_\_

**Credit Card or PO #:** \_\_\_\_\_ **Exp:** \_\_\_\_\_

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

**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.