

WESTAR Council

Monitoring Compliance Testing & Source Test Observation (APTI 450/468)

September 28 – October 2, 2020

Washington Department of Ecology

300 Desmond Drive SE
Lacey, WA 98503

REGISTRATION DEADLINE:
Friday, September 4, 2020



WESTAR
Western States Air Resources Council

REGISTRATION INSTRUCTIONS:

First Time Users (www.APTI-Learn.net):

1. Click on the “First time user? Click here to register” link in the upper right-hand corner of the webpage;
2. First screen requires: 1) work email address; 2) first and last names; 3) password; and 4) security question;
3. Second screen asks about affiliation/agency. There are two options for filling out this section:
 - o Agency Quick Search, or;
 - o Affiliation/Agency
4. Third screen includes a list of job functions and other profile information. You can click as many (or few) job functions as appropriate. Once you have completed this third screen, you are done setting up your profile.

After completing the profile:

5. Click the “Register” tab on the left side, or the “Register” bubble in the middle of the page;
6. Scroll down the Training Calendar until you see training course that you are interested in registering for;
7. On the right side of the table you will see a “register” link;
8. Click the “register” link (be patient it takes a few seconds for the confirmation note to pop-up);
9. You will receive an automatically generated email saying that you have been placed on a waiting list (this is so unapproved attendees can be weeded out).
10. Once approved, you will receive a second email saying you are enrolled.

Previously Registered Users (www.APTI-Learn.net):

1. Enter email address and password in appropriate spaces;
2. Go to step 5 (above) and follow directions.

*IF YOU NEED ASSISTANCE REGISTERING FOR A COURSE PLEASE
CONTACT: JEFF GABLER (503) 478-4955 or JGABLER@WESTAR.ORG*

MONDAY, SEPTEMBER 28, 2020

8:30	am	Welcome & Introductions
8:40	am	Introduction/Sources of Methods/Defining HAPs
9:15	am	Pre-Test
9:45	am	EPA's National Stack Testing Guidance and Compliance Monitoring Strategy
10:30	am	Introduction to Stack Testing and Gas Physics <ul style="list-style-type: none">Gas PhysicsBoyle/Charles LawsCorrection to Standard Temperature and Pressure
12:00	noon	Lunch (on own)
1:15	pm	Stack Testing Basics: Overview of Federal Methods 1-2 <ul style="list-style-type: none">Classroom Demonstration with Method 5 Sampling Training<ul style="list-style-type: none">Sampling Point Locations (On-line IsoCal Spreadsheet)Stack Gas Velocity (On-line IsoCal Spreadsheet)State Agency Observer Checklist
3:00	pm	Break
3:15	pm	Stack Testing Basics: Federal Reference Methods 3-4 <ul style="list-style-type: none">Stack Gas Molecular Weight (On-line IsoCal Spreadsheet)Stack Gas Moisture (On-line IsoCal Spreadsheet)Sample Train ConfigurationAgency Observation Checklist
4:30	pm	Review of Day 1/Homework Problems
5:00	pm	Adjourn for Day

TUESDAY, SEPTEMBER 29, 2020

8:30	am	Homework Review
8:45	am	Federal Reference Method 5 Operation/Associated Equations/Setting % Isokinetic Sampling Rate
10:15	am	Break
10:30	am	The Source Test
10:45	am	Role of the Agency Inspector
12:00	noon	Lunch (on own)
1:00	pm	FRM 201/201A for PM-10

2:00	pm	FRM 202 Condensibles and Update
2:45	pm	Review of Laboratory Exercises at Source Simulator
3:00	pm	Laboratory Exercises <ul style="list-style-type: none">Station #1: Nozzle DiameterStation #2: DGM "V"Station #3: Orifice Meter "$\Delta H@$"Station #4: Stack Gas V_s & Q_sStation #5: Calibration of Type S Pitot TubeStation #6: Stack Gas MoistureStation #7: Pitot Tube InspectionStation #8: FRM 5 Sampling TrainStation #9: IsoCal Electronic Spreadsheet for FRM 5 TestStation #10: FRM 1 Traverse Point Determination
4:30	pm	Review of Day 2/Homework
5:00	pm	Adjourn for Day

WEDNESDAY, SEPTEMBER 30, 2020

8:30	am	Homework Review/Laboratory Exercises Review
8:30	am	Laboratory Exercises <ul style="list-style-type: none">Station #1: Nozzle DiameterStation #2: DGM "V"Station #3: Orifice Meter "$\Delta H@$"Station #4: Stack Gas V_s & Q_sStation #5: Calibration of Type S Pitot TubeStation #6: Stack Gas MoistureStation #7: Pitot Tube InspectionStation #8: FRM 5 Sampling TrainStation #9: IsoCal Electronic Spreadsheet for FRM 5 TestStation #10: FRM 1 Traverse Point Determination
~12:00	noon	Lunch (on own): Flexible Based on Teams' Needs
1:15	pm	Laboratory Exercises <ul style="list-style-type: none">Station #1: Nozzle DiameterStation #2: DGM "V"Station #3: Orifice Meter "$\Delta H@$"Station #4: Stack Gas V_s & Q_sStation #5: Calibration of Type S Pitot TubeStation #6: Stack Gas MoistureStation #7: Pitot Tube InspectionStation #8: FRM 5 Sampling Train

- Station #9: IsoCal Electronic Spreadsheet for FRM 5 Test
- Station #10: FRM 1 Traverse Point Determination

4:30 pm Review of Laboratory Exercises

4:45 pm Review of Day 3/Homework

5:00 pm Adjourn for Day

THURSDAY, OCTOBER 1, 2020

8:00 am Homework Review

8:30 am Laboratory Exercises

- Station #1: Nozzle Diameter
- Station #2: DGM “V”
- Station #3: Orifice Meter “ΔH@”
- Station #4: Stack Gas V_s & Q_s
- Station #5: Calibration of Type S Pitot Tube
- Station #6: Stack Gas Moisture
- Station #7: Pitot Tube Inspection
- Station #8: FRM 5 Sampling Train
- Station #9: IsoCal Electronic Spreadsheet for FRM 5 Test
- Station #10: FRM 1 Traverse Point Determination

10:00 am New Advances in FRM 5 Sampling Equipment

10:45 am Introduction to VOCs/Selecting VOC Sampling & Analytical Methods (State of Pennsylvania Selection Process)

Reporting VOC Emissions (in ppms? In #/Hr.? etc.) and Calculations (i.e., “As Carbon?”; “As VOCs?”; “As Organics?”; As Propane?)

Midwest Scaling Protocol Approach to VOC Emissions from Wet/Dry Grain Mills and Ethanol Production Facilities

11:45 am Lunch (on own)

12:45 pm Overview of Stack Testing for VOCs Utilization FRMs 18, 25, 25A, CTS 035, and SW-846 Methods

1:15 pm Federal Reference Method 18

2:15 pm Federal Reference Method 25

3:15 pm Break

3:30 pm Federal Reference Method 25A

4:15 pm Strengths/Weaknesses of 18, 25, and 25A

4:30 pm Review of Day 4/Homework

5:00 pm Adjourn for Day

FRIDAY, OCTOBER 2, 2020

8:30 am FRM 320/ASTM D6348-03

9:30 am Federal Reference Method 26/26A/SW-846 & Methods 0050/0051

- Sampling Train Design
- Sampling Techniques
- Analytical Methodology
- Agency Observer Checklist

10:15 am Break

10:30 am Stack Testing Special Topics

- High Moisture Stacks
- High Pressure Stacks
- High VOC Concentration Stacks/Molecular Weight Determination

11:00 am Pre-Test

12:00 noon Final Exam

12:30 pm Adjourn

ABOUT THE TRAINING

The objectives of EPA’s APTI Course 468 will be to provide Agency personnel the needed background information, checklist, and guidance associated with EPA methodologies involving stack test for characterizing and quantifying criteria and HAPs from industrial sources. This course will address Federal Reference Methods (FRMs)1-5 (isokinetic stack testing and stack test basics), FRMs 2F, 2G, and 2H (velocity), stack testing for volatile organic compounds (FRMs 18, 25, 25A/B), SO₂ (FRMs 6, 6A, and 8), NO_x (FRMs 7, 7C), dioxin/furans and PCBs (FRM 23), heavy metals (FRM 29), instrumental (FRMs 3A, 6C, and 7E) and other organic and inorganic sampling methods.

The course will present standardized stack test methodology for sampling and analysis of air pollutants as identified in the Code of Federal Regulations (CFR), Part 60, Appendix A. In addition, information will be presented on EPA’s stack test monitoring programs associated with PM-10 (Methods 201A and condensable particulate (Method 202) monitoring. Information on continuous emissions monitoring will be discussed. Specific source test checklists will be demonstrated during the presentation for each test methodology as part of the course. Participants will learn how to use the checklist in performing source test

observations, how to observe mandated QA/QC requirements associated with each methodology, and how to use source test databases available to the air pollution scientist.

At the end of this course, the agency personnel will have an understanding of the unique source test methods used to accurately characterize air pollutant emissions from industrial sources. The agency inspector will learn about EPA's programs that require characterization of air pollutants from industrial sources utilizing FRMs.

SPACE LIMITATION: Registration is limited to 30 attendees. Air quality staff from the fifteen western states receive registration preference.

REGISTRATION FEES: There are no registration fees for state, local or tribal air quality agency staff. For federal employees the registration fees are \$700.

Hampton Inn
4301 Martin Way, E
Olympia, WA 98516
360-459-5000

TRAINING LOCATION

Washington Department of Ecology

300 Desmond Drive SE
Lacey, WA 98503

HOTEL INFORMATION

Attendees and speakers are responsible for making their own hotel reservations. Below is a list of hotels within ~1 mile of Washington Department of Ecology. Please ask for government rate.

La Quinta Inn
4704 Park Center Ave, NE
Lacey, WA 98516
360-412-1200

Comfort Inn
4700 Park Center Ave, NE
Lacey, WA 98516
360-456-6300

Ramada Inn
4520 Martin Way, E
Olympia, WA 98516
360-459-8866