

NATIONAL AIR QUALITY TRAINING PROJECT

CATALOG OF COURSES

MARCH 2012

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LIST OF ACRONYMS

AERMOD	American Meteorological Society and the U.S. Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) Model
APTI	Air Pollution Training Institute
ATCM	Airborne Toxic Control Measure
BARCT	Best Available Retrofit Control Technology
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAM	Compliance Assurance Monitoring
NACT	California Air Resources Board
CEMS	Continuous Emission Monitoring
CEU	Continuing Education Unit
CGA	Cylinder Gas Audit
CMB	Chemical Mass Balance
CO	Carbon Monoxide
EI	Emissions Inventory
EKMA	Empirical Kinetic Modeling
EPA	U.S. Environmental Protection Agency
ESP	Electrostatic Precipitators
FRM	Federal Reference Method
HAP	Hazardous Air Pollutant
HMA	Hot Mix Asphalt
HRSG	Heat Recovery Steam Generator
ICE	Internal Combustion Engines
LAER	Lowest Achievable Emissions Rate
LDAR	Leak Detection and Repair
MACT	Maximum Achievable Control Technology
NAAQS	National Ambient Air Quality Standards
NAMS	National Air Monitoring Stations
NEI	National Emissions Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxide
NSPS	New Source Performance Standards
NSR	New Source Review
O ₃	Ozone
OSHA	Occupational Safety and Health Administration
PERC	Perchloroethylene
PM	Particulate Matter

PSD	Prevention of Significant Deterioration
QA/QC	Quality Assurance/Quality Control
RATA	Relative Accuracy Test Audit
SCR	Selective Catalytic Reduction
SCRAM BBS	Support Center for R egulatory A tmospheric M odeling B ulletin B oard S ystem
SI	Self-instructional
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Stations
SNCR	Selective noncatalytic reduction
SO ₂	Sulfur Dioxide
SO _x	Sulfur Oxide
STO	Source Test Observation
TEQ	Toxic Equivalency Quotient
UAQTP	Uniform Air Quality Training Program
UV	Ultraviolet
VHAP	Volatile Hazardous Air Pollutant
VOC	Volatile Organic Compound

National Air Quality Training Guide

INTRODUCTION AND PURPOSE

The purpose of this guide is to identify training courses appropriate for the various fields of work commonly found in federal, state, and local agency air programs. Each air quality agency has their own policy and procedures regarding training, and this document is meant to complement their current practices. Some of the courses identified may not be applicable for a particular agency or person. Courses may not be offered every year. This guide categorizes topics and generally available training courses under the following expertise functions:

Functions Requiring Air Pollution Training

- Introduction to Air Pollution Control
- Ambient Monitoring, QA/QC, & Data Analysis
- Emissions Estimation & Inventory Development
- Modeling, Forecasting, & Data Analysis
- Planning/ Regulation Development
- Permit Writing
- Inspection & Enforcement
- Air Toxics / Hazardous Air Pollutants
- Data Mobile Sources
- Climate Change

In addition to the above 10 key functions performed by agency personnel, it has been determined that there are other tasks or expertise required that are performed by personnel in one or more of the above functions. As such, we have identified three extensions or additional areas of expertise that are needed by certain individuals in the functions listed above. Certain courses have been identified in this guide under these additional areas of expertise. These additional areas of expertise are listed below:

Additional Areas of Expertise

- Pollution Control Foundations
- Stationary Sources
- Source Sampling and Monitoring

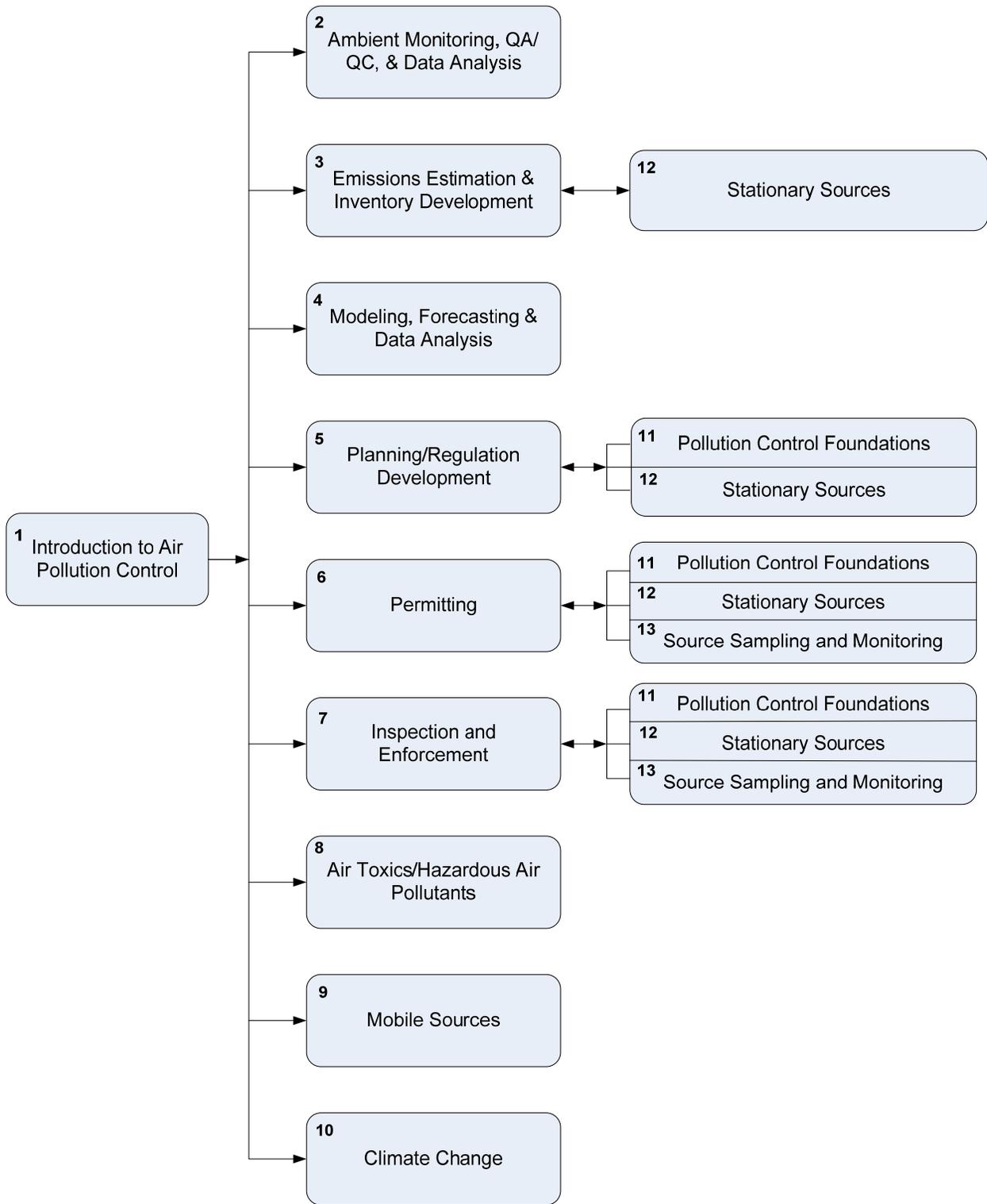
The following information is included in this guide:

- Definitions are included for the above functions and additional areas of expertise.
- A simple flow chart has been developed that reflects how the functions and additional areas of expertise are linked together.
- A tabular course listing has been developed that identifies courses that are included for each of the functions and additional areas of expertise.
- A list of frequently used acronyms or abbreviations has been developed as a reference tool for the user of this guide and is presented in the previous two pages.

Following the above information, the remainder of the document contains a full listing of course descriptions for all courses that have been included in this training document. Some courses are offered in classroom sessions and others are self-instructional (and/or internet based). The table of contents delineates the courses that are classroom sessions and those that are self-instructional.

Introduction to Air Pollution Control	These courses are designed for regulatory personnel who are new or will be beginning their career in the air quality regulatory field.
Pollution Control Foundations	These courses present fundamental information on the formation and control of various air pollutants.
Ambient Monitoring, QA/QC, & Data Analysis	These courses are designed for individuals within a regulatory agency whose role is to provide sampling and laboratory analysis of ambient air samples. Course topics also include quality assurance/quality control and analysis of ambient air quality data.
Emissions Estimation & Inventory Development	These courses are designed for regulatory personnel who have or will have the responsibility to develop emissions inventories.
Modeling, Forecasting, & Data Analysis	These courses are designed for individuals who will be using or interpreting the results of air quality models.
Planning / Regulation Development	These courses are designed for individuals who will be preparing State Implementation Plans or regulatory language.
Permitting	These courses are designed for personnel of state and local permitting agencies who must review and interpret permit applications and prepare permits. There are also relevant courses listed under pollution control foundations, stationary sources, and source sampling and monitoring depending on the individual assignments.
Inspection & Enforcement	These courses are designed for inspectors who determine compliance with air pollution control requirements in permits, regulations, and orders. There are also relevant courses listed under pollution control foundations, stationary sources, and source sampling and monitoring depending on the individual assignments.
Air Toxics / Hazardous Air Pollutants	These courses are designed for individuals who implement programs designed to reduce emissions of toxic or hazardous air pollutants. There are also relevant courses listed under other topics depending on the individual assignments.
Stationary Sources	These courses provide information primarily for regulatory personnel in permits, compliance/enforcement, or planning programs.
Source Sampling and Monitoring	These courses are designed for regulatory personnel who have or will have the responsibility to evaluate source test methods, approve test protocols, and review source test results as required under various federal and state regulations. In addition, these courses are designed for regulatory personnel who have the responsibility to establish requirements in permits or regulatory language for continuous emissions monitoring or compliance assurance monitoring or to evaluate data provided in response to such requirements.
Mobile Sources	These courses are designed for individuals who implement programs designed to reduce emissions from mobile sources, both on-road and off-road.
Climate Change	These courses present information on greenhouse gas emissions estimation and control and fundamental scientific information about climate change.

Function Flowchart



APTI CLASSROOM COURSES

APTI 345 EMISSION CAPTURE AND GAS HANDLING SYSTEM INSPECTION (1995)

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is designed for entry-level personnel at state and local permitting agencies who must review and interpret data in permit applications. The class is intended primarily for air quality staff who are responsible for permitting and compliance activity. The course is also structured for those individuals who must inspect industrial emission sources.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with emission capture and collection systems. Attendees will develop an ability to evaluate the following elements of a capture and control system:

- General ventilation
- Capture systems
- Inspection and performance evaluation
- Measurement methods
- Hood systems
- Fan systems

COURSE DESCRIPTION:

This course provides students with an understanding of the basic components of industrial emission capture and collection systems as well as insight into system design and performance. Case studies and demonstrations of various ventilation systems assist students in developing trouble shooting skills.

PREREQUISITES:

Successful completion of APTI courses RE:100 – Basic Concepts in Environmental Sciences (7 modules), SI:445 – Introduction to Baseline Source Inspection Techniques, or equivalent courses/experience.

LAST UPDATED: 1995

APTI 350 ASBESTOS NESHAP INSPECTION AND SAFETY PROCEDURES (2005)

CLASS LENGTH: 4 days

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is designed for individuals who have a basic understanding of the compliance assessment requirements for any asbestos regulations within its state, region or territory. This class is intended for air quality professionals whose role is to inspect facilities which contain asbestos related materials and determine regulatory compliance status with any state or federal asbestos regulations.

LEARNING OBJECTIVES:

Those completing this course will gain an understanding of how to conduct an asbestos compliance assessment. Attendees will be able to assess the following factors related to asbestos control programs:

- Health effects of exposure to asbestos
- Identifying asbestos containing material
- Asbestos Inspector Safety Guidance
- Respiratory Protection
- Protective clothing
- Asbestos NESHAP regulation
- PRE: inspection planning
- Facility and landfill inspections
- Asbestos air sampling and analysis

COURSE DESCRIPTION:

This introductory course covers the basics of asbestos regulation, health effects, and identification of asbestos containing materials, OSHA Asbestos Standards, EPA Worker Protection Rule, STEM Guidelines, abatement techniques, respiratory protection requirements, protective clothing, and an in-depth review of the Asbestos NESHAP Regulation.

PREREQUISITES:

LAST UPDATED: 2005

APTI 380 FUGITIVE SOURCE INSPECTION

CLASS LENGTH: 3-day lecture and laboratory course **CEUs:** 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is specifically designed for field inspectors who have the responsibility to evaluate compliance with EPA regulations involving LDAR programs. This class is intended for new compliance engineers and scientists who are responsible for LDAR regulatory compliance activities.

LEARNING OBJECTIVES:

The participant will learn how to establish an agency fugitive leak inspection program, defining organization structure and responsibilities, equipment needs, selection, storage, calibration and maintenance, and standardized inspection techniques using audit checklists. In addition to the learning sessions, the course will offer structured panel discussions, field video tape presentations, and laboratory demonstrations of auditing instrumentation. All participants will receive a Course Manual, valuable handouts, and standardized auditing procedures that can be used in the field for reference when planning and administering an agency source inspection. The following topics will be covered:

- Regulations Associated with Fugitive Source Emissions
- Chemical and Physical Properties of Fugitive Emissions
- Applicable Source Categories of Fugitive Emissions
- Defining Leaks
- Federal Reference Method (FRM) 21
- Survey of Portable Instrumentation
- Agency Fugitive Leak Inspection Program
- Performing an Agency Inspection for Fugitive Leaks
- Future Tools For Determining Leak Detection
 - Smart LDAR
 - CellNet Data Systems and Adsistor Ring Sensor

COURSE DESCRIPTION:

As documented under various EPA regulations (NESHAP, NSPS), fugitive emissions of hazardous air pollutants (HAPs) from affected facility equipment must be monitored on a routine basis as part of a facility's leak detection and repair program (LDAR). In particular, these regulations specify Federal Reference Method (FRM) 21 as a procedure for identifying fugitive leaks of volatile hazardous air pollutant (VHAP) from valves, pumps, compressors, relief valves, connectors, flanges and various other pieces of equipment within a process. Equipment leak standards as identified in the regulations are designed to reduce volatile organic compound (VOC) and VHAP emissions from various components within the process.

These regulations have placed the responsibility of fugitive emission reduction of VOCs and VHAPs on the source through their LDAR program. With these programs comes the responsibility of agency personnel and inspectors to verify, inspect, and document the effectiveness of the source-specific LDAR program to minimize emissions. Verification of a source LDAR program meeting compliance requirements may be accomplished through a level approach. Level I involves agency records review. Level II involves on site inspection of the LDAR program, observation of source personnel performing leak detection using portable VOC analyzers meeting FRM 21 requirements, and evaluation of the data acquisition system. Finally, Level III involves agency personnel performing leak detection using portable VOC analyzers meeting FRM 21 requirements.

This course is specifically designed for field inspectors who have the responsibility to evaluate compliance with EPA regulations involving source LDAR programs designed to minimize fugitive VOC and VHAP emissions from specific process equipment. The course briefly reviews applicable regulations and sources affected by those regulations, the type of flanges and valves and other process equipment covered by the regulations, and how EPA defines leaks. Specific to this course offering, a thorough review of FRM 21 will be presented, along with review of field portable instrumentation. Presentations and demonstrations will involve the operation, check-out, calibration, and maintenance of field portable VOC analyzers through approved checklists. In particular, field demonstrations associated with proper orientation and use of portable analyzers in evaluating fugitive emissions from plant process equipment as part of an agency fugitive leak inspection program will be documented.

PREREQUISITES:

Successful completion of APTI course SI:422 – Air Pollution Control Orientation Course, or equivalent courses/experience.

LAST UPDATED:

APTI 400 INTRODUCTION TO HAZARDOUS AIR POLLUTANTS (2009)

CLASS LENGTH: 2-day lecture course

CEUs: 1.5

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is specifically designed for regulatory personnel who have the responsibility to evaluate and determine emissions and compliance status for Hazardous Air Pollutant (HAP) emission sources. This class is intended for engineers, scientists and technicians who are responsible for evaluation of HAP emission sources.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with HAP emission sources that may be regulated under Title I, Part A, of the Clean Air Act. Attendees will be able to conduct reviews of HAP sources to determine applicable regulatory requirements.

COURSE DESCRIPTION:

This course is designed to provide students with the necessary background to understand the provisions and programs regarding Hazardous Air Pollutants (HAPs) as outlined in Title III of the Clean Air Act Amendments of 1990. Students taking the course should be presently involved with (or should anticipate becoming involved with) HAPs, sources, effects, and control. Because the course is multi-disciplinary, people from diverse academic backgrounds should be able to understand and use the information presented. The following topics will be covered:

- History of air pollution control and regulation
- MACT standards
- Overview of Title III Clean Air Act Amendments 1990
- Other regulatory programs
- HAPs
- Risk Assessment and Management

PREREQUISITES:

Successful completion of APTI course SI:422 – Air Pollution Control Orientation Course, or equivalent courses/experience.

LAST UPDATED: 2009

APTI 413 CONTROL OF PARTICULATE EMISSIONS

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is a basic course that is designed for individuals within a regulatory agency whose role is to evaluate particulate emission sources for permitting and to determine the ongoing compliance status of such emission sources. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting and compliance activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the different types and the operating characteristics of control devices that are available for specific particulate emission sources. Attendees will be able to perform regulatory reviews involving the following elements of particulate emissions and control:

- Particle formation and behavior
- Particle size distributions
- Reverse air and pulse jet fabric filters
- Electrostatic precipitators
- Particulate wet scrubbers
- Hoods and fans effect on control equipment and process emissions
- Emission testing and monitoring

COURSE DESCRIPTION:

Students successfully completing this course will understand the operating principles of particulate control systems used at air pollution control sources. The scope of the course includes fabric filters, electrostatic precipitators, particulate wet scrubbers, and mechanical collectors. Introductory material concerning particle aerodynamic behavior and particle formation is provided as a basis for course materials on particulate control systems. This course provides a foundation for later courses concerning source sampling, inspection, and permit review. A scientific calculator is required for class exercises.

PREREQUISITES:

Engineering/scientific degree or successful completion of Course RE:100 – Basic Concepts in Environmental Sciences (7 modules), and six months of equivalent course/work experience.

LAST UPDATED: 1999

APTI 415 CONTROL OF GASEOUS EMISSIONS (1999)

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is a basic course that is designed for individuals within a regulatory agency whose role is to evaluate gaseous emission sources for permitting and to determine the ongoing compliance status of such emission sources. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting and compliance activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the different types and the operating characteristics of control devices that are available for specific gaseous emission sources. Attendees will be able to perform regulatory reviews involving the following elements of gaseous emissions and control:

- Basic concepts of gas behavior
- Sources of gaseous contaminants
- Emission testing and monitoring
- Carbon bed adsorbers
- Thermal incinerators (or oxidizers)
- Catalytic incinerators
- Absorbers
- Condensers
- Hood and fans effect on control systems

COURSE DESCRIPTION:

Students successfully completing this course will understand the operating principles of gaseous control systems used at air pollution control sources. Introductory material concerning gas stream characteristics, and sources of gaseous contaminants is provided as a basis for this course. This course introduces control of nitrogen oxides and sulfur oxides. This course provides a foundation for later courses concerning source sampling, inspection, and permit review. A scientific calculator is required for class exercises.

PREREQUISITES:

Engineering/scientific degree or successful completion of course RE:100 – Basic Concepts in Environmental Sciences (7 modules), and six months of equivalent course/work experience.

LAST UPDATED: 1999

APTI 418 CONTROL OF NITROGEN OXIDE EMISSIONS (1999)

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course was designed to address the needs of tribal, state, and local air toxics personnel involved in the permitting and compliance assessment of existing regulatory requirements as well as those personnel involved in the development of NO_x control programs. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting, compliance, and SIP planning activities.

LEARNING OBJECTIVES:

Those completing this course will gain an understanding of the mechanisms by which nitrogen oxide (NO_x) is formed in the combustion process as well as sources of NO_x emissions and the history related to regulating NO_x emissions from these sources. Attendees will be able to perform regulatory reviews involving the types, applicability, capability, and limitations of available control techniques to suppress the formation of NO_x emissions or to minimize NO_x emissions.

COURSE DESCRIPTION:

This course presents fundamental information on NO_x emissions from combustion sources such as industrial and utility boilers. The goal of this course is to present information that will help environmental professionals address present and future NO_x control issues. The course introduces a broad range of control technology topics and identifies some of the sources for obtaining further information on these topics. In addition, the manual that accompanies the course contains a bibliography of technical articles and publications on all control technologies addressed in this manual. This manual also lists web sites that are useful in obtaining additional information related to the control of NO_x emissions from combustion sources.

PREREQUISITES:

Engineering/scientific degree or successful completion of Course RE:100 – Basic Concepts in Environmental Sciences (7 modules), and six months of equivalent course/work experience.

LAST UPDATED: 1999

APTI 419B PREPARATION OF FINE PARTICULATE EMISSION INVENTORIES

CLASS LENGTH:

CEUs:

CLASS FORMAT: While this course has been designed for the classroom and is designated as a classroom course on this web site, this course is not currently scheduled to be offered by APTI training providers. The course materials are provided here for use by state, local and tribal governments who may wish to conduct such training. This course assumes that participants have a working knowledge of emission inventory terminology and techniques; thus it does not cover material on basic inventory development.

WHO SHOULD ATTEND:

This introductory course is specifically designed for regulatory personnel who have the responsibility to develop PM fine (PM_{2.5}) Emission Inventories. This class is intended for engineers, scientists and technicians who have responsibility for developing inventories or reviewing and approving inventories that are developed and submitted for industrial operations.

LEARNING OBJECTIVES:

Those completing this course will develop an understanding of the principal stationary nonpoint and nonroad mobile source categories emitting PM fine particles. Attendees will be able to recognize how emissions are estimated for EPA's National Emission Inventory (NEI), and how state/local/tribal agencies can improve upon those estimates. Students will also be able to identify locations of on-line resources to facilitate improvements to PM fine inventories.

COURSE DESCRIPTION:

One topic currently experiencing a high demand for training is preparation of fine particulate matter (PM) emission inventories. Many government agencies (federal, state, local, tribal) and private organizations conduct training in the preparation of emission inventories. This training can cover a number of topics, including the calculation and compilation of point, stationary nonpoint, and mobile source emission estimates and data quality checking. Case studies are used to provide real-world examples of how state or local agencies can collect data to prepare inventories that are an improvement to the NEI methods.

The purpose of these training materials is to provide government and nongovernment agencies with an organized set of presentation slides and manuals to support such training in a classroom style setting.

PREREQUISITES:

Successful completion of APTI course SI 419A – Introduction to Emission Inventories, or equivalent courses/experience.

LAST UPDATED: 2009

APTI 423 AIR POLLUTION DISPERSION MODELS - APPLICATIONS

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is designed for individuals who have a basic understanding of atmospheric physics and the structure of air dispersion models. This class is intended for air quality professionals involved with analyzing dispersion modeling data and determining the results with regards to the requirements in permit applications and/or requirements associated with SIP and State Only compliance analyses or future Air Quality Planning.

LEARNING OBJECTIVES:

Students successfully completing this course will be able to select dispersion models appropriate to particular problems in air quality impact analysis, apply recommended models, and judge the validity of the models' output. Those completing this course will have an understanding of the following dispersion modeling topics:

- Dispersion parameters
- Plume rise
- Meteorological data
- Executing specific models for selected scenarios
- Selecting the appropriate air quality model
- Special meteorological situations and model options
- Modeling complex terrain situations
- Modeling hazardous/toxic pollutants
- Forum on air quality modeling issues
- EPA's & Guideline on Air Quality Models & and SCRAM BBS

COURSE DESCRIPTION:

Students will become familiar with selected theories of dispersion as employed in current regulatory modeling practice; and become familiar with EPA's preferred technical options. Students will be able to apply a number of models for point, area, and line sources. They will have use of personal computers and modem connections to EPA's Support Center for Regulatory Models (SCRAM) Bulletin Board System (BBS), to complete examples, exercises, and assignments.

PREREQUISITES:

Successful completion of APTI courses SI:409 – Basic Air Pollution Meteorology and SI:410 – Introduction to Dispersion Modeling, or equivalent courses/experience. Ability to use a personal computer for scientific applications.

LAST UPDATED: 1995

APTI 424 INTRODUCTION TO RECEPTOR MODELING

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This intermediate course is designed for individuals within a regulatory agency whose role is to provide air quality planning analyses for an urban air shed to help plan the air quality resources for a region. This class is intended for planning engineers, scientists and meteorologists who are experienced with air dispersion modeling and are responsible for state air planning activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the different types of modeling applications that can be used for state air shed planning purposes. Attendees will be able to apply the following air quality modeling concepts in permitting analyses:

- Mathematics and assumptions of receptor modeling
- Analytical methods for ambient and source measurements
- Application of the EPA receptor modeling software
- New applications (air toxics and volatile organic gases)
- Development of receptor models
- Source composition
- Microscopy and receptor modeling
- Regulatory case studies

COURSE DESCRIPTION:

Receptor models are a group of measurement-based air quality models for identifying the concentration of specific source categories at air measurement (receptor) sites. Students successfully completing this course will learn the major components and criteria for a successful Chemical Mass Balance (CMB) study, methods for ambient sampling and analysis, the requirements for source profiles, and principles of receptor modeling evaluation and validation. Students will be able to apply EPA's CMB software program to appropriate particle and gas monitoring databases. CMB model applications for particulate matter and volatile organic compounds (VOCs) will be reviewed. While this course focuses on CMB receptor modeling, the student will learn the fundamentals of other source apportionment techniques, including optical and scanning electron microscopy, radiocarbon analysis and multiple linear regression. Homework assignments will require students to apply CMB model software (provided) to test data sets using their PCs.

PREREQUISITES:

Engineering/scientific degree, skill in using a PC for scientific applications, and 6 months of equivalent work experience in emission inventories, atmospheric dispersion modeling, or completion of course SI: 410 – Introduction to Dispersion Modeling, and analytical methods for particles and analytical methods for particles and gas samples, or completion of course 435 – Atmospheric Sampling (1983) (PM 2.5 Monitoring Update – 1998) or SI:434 – Introduction to Ambient Air Monitoring. Students will also find it helpful to have completed a course in statistics, (e.g., SI:473A – Beginning Environmental Statistical Techniques).

LAST UPDATED: 1998

APTI 427 COMBUSTION EVALUATION (1980)

CLASS LENGTH: 4½-day lecture course

CEUs: 3.5

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is a basic course that is designed for individuals within a regulatory agency whose role is to evaluate combustion sources for permitting and to determine the ongoing compliance status of such emission sources. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting and compliance activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the different types of combustion sources and the operating characteristics of each source. Attendees will be able to apply the following combustion elements in a regulatory evaluation:

- Combustion sources burning liquid and solid wastes
- Combustion sources burning fossil fuel
- Combustion engines (diesel engines, gas turbines, etc.)
- Combustion principles
- Design and operational parameters
- Selected fundamental calculations
- Pollution control devices

COURSE DESCRIPTION:

Students successfully completing this course should have the knowledge to work on combustion-related pollution problems such as estimating the actual and potential air pollution emissions from combustion sources; reviewing applications for permits to construct combustion facilities; and developing recommendations to improve the performance of malfunctioning combustion equipment.

PREREQUISITES:

Engineering/scientific degree or successful completion of course SI:100 – Mathematics Review for Air Pollution Control, or six months of equivalent course/work experience.

LAST UPDATED: 1980

APTI 445 INSPECTION OF PARTICLE CONTROL DEVICES (2003) **(FORMERLY BASELINE SOURCE INSPECTION TECHNIQUES)**

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is specifically designed for field inspectors who have the initial responsibility to determine the compliance status for particulate emission sources with control devices. This class is intended for compliance engineers, scientists and technicians who are responsible for inspection of control devices at particulate emission sources.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with inspecting particulate control systems. Attendees will be able to evaluate the following equipment in a regulatory inspection:

- Baseline inspection techniques
- Cyclones
- Fabric filters
- Wet scrubbers
- Electrostatic precipitators
- Measurement of inspection parameters
- Flowchart preparation

COURSE DESCRIPTION:

This course presents fundamental procedures for particle control device inspection, problem diagnosis and compliance evaluation. Site-specific information is used to identify shifts in operating variables that indicate a potential for increased emissions. The baseline inspection approach is presented, and operating principles and inspection techniques for particle control devices (cyclones, fabric filters, wet scrubbers and electrostatic precipitators) are discussed. The use of portable instruments for gathering inspection data is also presented, and the preparation and use of flowcharts to organize and evaluate inspection data is discussed. Written and video case studies are used to reinforce the material.

PREREQUISITES:

Engineering/scientific degree or successful completion of SI:422 -- Air Pollution Control Orientation Course, or equivalent courses/work experience.

LAST UPDATED: 2003

APTI 446 INSPECTION PROCEDURES & SAFETY

CLASS LENGTH: 2-day lecture course

CEUs: 1.5

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This basic course is focused specifically on safety procedures for inspecting and evaluating air pollution control systems. This class is intended for compliance engineers, scientists and technicians (or field inspectors) who are responsible for inspection of industrial emission sources.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with expected safety procedures that should be followed when evaluating air pollution control systems. Attendees will be able to identify critical safety parameters associated with the following potential hazards encountered in an inspection:

- Inhalation hazards
- Burn hazards
- Electrical shock hazards
- Explosion and fire hazards
- Proper ladder climbing techniques
- Hazards involved in walking on elevated surfaces
- Ground level walking hazards
- Eye hazards
- Heat and cold stress
- Confined space entry
- Use of portable inspection instruments
- Elements of a good safety program

COURSE DESCRIPTION:

This course presents safety procedures for inspecting and evaluating air pollution control systems. Practical techniques are described to aid plant operations personnel and regulatory agency inspectors in minimizing health and safety hazards. Emphasis is placed on the early recognition and avoidance of problems. Unique combinations of hazards found around air pollution control systems are presented. The use of personal protection equipment is discussed. This course is intended to supplement general industrial hygiene and safety procedures which should be followed by all personnel engaged in field work.

PREREQUISITES:

Completion of Courses SI:445 – Introduction to Baseline Source Inspection Techniques, and SI:446 – Air Pollution Source Inspection, or comparable courses/work experience with air pollution control equipment.

LAST UPDATED: 1994

APTI 450 SOURCE SAMPLING FOR POLLUTANTS (1995)

CLASS LENGTH: 5-day lecture course

CEUs: 4

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is designed for individuals within a regulatory agency whose role is to observe source testing, evaluate source test methods, approve test protocols and review source test results as required under various federal and state regulations or as required by issued permits. This class is intended for compliance and field engineers, scientists and technicians who have responsibility for the above source testing tasks.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with source testing and source test methods. Attendees will be able to apply the following measurement concepts in a regulatory sampling event:

- Process tasks and basis for task requirements in EPA Reference Methods
- Source testing procedures for gaseous and particulate pollutants
- Source sampling equipment (function and calibration)
- Basic concepts of gases
- Calculations in source sampling
- Orsat analysis
- Quality assurance and safety in source sampling

COURSE DESCRIPTION:

This course develops the ability to plan, guide, evaluate, and (after experience on the job) perform source sampling measurements to determine rates of emissions from stationary sources. It clarifies EPA Reference Methods 1 to 4, and Method 5. The course develops knowledge of the equipment employed, understanding of why the prescribed methods are established, and ability to perform the calibrations and calculations which are a part of the reference methods. Instruction relies on laboratory exercises in which students work with stack sampling equipment. Students perform components of the various methods and extract a sample from an actual or simulated stack. They make the necessary calculations to follow a sampling procedure and to report test results. A scientific calculator is necessary for class and homework exercises.

PREREQUISITES:

Engineering/scientific degree or successful completion of Course RE:100 – Basic Concepts in Environmental Sciences (7 modules), or six months of equivalent courses/work experience.

LAST UPDATED: 1995

APTI 452 PRINCIPLES & PRACTICES OF AIR POLLUTION

CLASS LENGTH: 3½- day lecture course

CEUs: 2.5

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This entry level course is specifically designed for regulatory personnel who are new to the air quality regulatory field. This class is intended for engineers, scientists and technicians who are new personnel in regulatory agencies and will have responsibility for permit review and/or regulatory compliance.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with the management of ambient air quality resources under the Clean Air Act and state and local regulations. Attendees will be able to identify the important points for each of the following elements on air pollution control:

- History of Air Pollution Control
- Health and Environmental Effects of Air Pollution
- Transport and Dispersion of Air Pollutants
- Air Quality Management
- Ambient Air Quality Monitoring
- Measurement of Emissions from Stationary Sources
- Emission Inventories
- Laws and Regulations
- Control of Emissions from Stationary Sources
- Control of Emissions from Mobile Sources
- Pollution Prevention
- Compliance Monitoring and Enforcement
- Indoor Air

COURSE DESCRIPTION:

This entry-level course presents a broad overview of the major aspects of air pollution control. The lessons include information about pollutants, pollutant sources, effects of pollution, dispersion of pollutants, measurement and control of emissions, laws and regulations pertaining to air pollution control, and other related topics. This course is a recommended background course for all areas of study in the APTI curriculum.

PREREQUISITES:

Students should have a college-level education and six months of equivalent work experience, or equivalent courses/experience. Course SI:422 – Air Pollution Control Orientation Course is highly recommended as a prerequisite.

LAST UPDATED: 2000

APTI 454 EFFECTIVE PERMIT WRITING

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory permit writing course is designed for entry level personnel at state and local permitting agencies, managers of programs which are impacted by permits, and inspectors who must read and interpret permit conditions. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting and compliance activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information that is expected for a complete air quality permit application as well as basic approaches for developing an effective permit for industry and the regulatory agency. Attendees will be able to identify the following critical features of establishing an effective permit:

- Identification of the components required in a complete permit application evaluation,
- Explanation of the functions and purposes of each component of a complete permit application,
- Description of the characteristics of an effective permit, and
- Explanation of the process and approaches that can be used to assure an effective permit is produced.

COURSE DESCRIPTION:

This course presents introductory information on the SIP and national programs in air pollution stationary source permitting. This course was designed to provide hands-on training in the methods and procedures used to effectively draft and review permit conditions used with a variety of permit programs. Examples of the various types of permit conditions are presented along with practical exercises.

PREREQUISITES:

Engineering/scientific degree or successful completion of Course RE:100 – Basic Concepts in Environmental Sciences (7 modules), and 6 months of general air pollution experience, or equivalent courses/experience.

LAST UPDATED: 1993

APTI 455 INSPECTION OF GAS CONTROL DEVICES AND SELECTED INDUSTRIES (2003) (FORMERLY ADVANCED INSPECTION)

CLASS LENGTH: 3-day lecture course

CEUs: 2

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is specifically designed for field inspectors who have the initial responsibility to evaluate and determine the compliance status for gaseous emission sources with control devices. This class is intended for compliance engineers, scientists and technicians who are responsible for inspection of control devices at particulate emission sources.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with inspecting gaseous emission control systems. Attendees will be able to evaluate the following equipment in a regulatory inspection:

- Baseline inspection techniques
- Adsorbers
- Thermal and catalytic oxidizers
- Condensers
- Nitrogen oxides control systems
- Sulfur oxides control systems
- Utility and industrial boilers
- Municipal and medical waste incinerators
- Iron and steel processes
- Asphalt plants

COURSE DESCRIPTION:

This course presents fundamental procedures for the inspection, problem diagnosis and compliance evaluation of gas control devices and significant industrial processes. Site-specific information is used to identify shifts in operating variables that indicate a potential for increased emissions. The baseline inspection approach is reviewed. Operating principles and inspection techniques for gas control devices (adsorbers, oxidizers and condensers) and specific control applications (flue gas desulfurization and nitrogen oxide control systems) are presented. Process descriptions and inspection issues are also discussed for fossil fuel fired boilers, waste incinerators, iron and steel processes, and asphalt plants. Written and video case studies are used to reinforce the material.

PREREQUISITES:

Engineering/scientific degree or successful completion of SI:422 – Air Pollution Control Orientation Course, or equivalent courses/work experience.

LAST UPDATED: 2003

APTI 461 INTERMEDIATE PERMITTING

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This intermediate permit writing course is designed for personnel of state and local permitting agencies who are new to reviewing permit applications for facilities that are deemed to be major sources under the federal New Source Review programs and the Title V program. This class is intended for permit engineers and scientists who are responsible for permitting major source activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with permitting emission sources under the federal Major New Source Review programs and the Title V program. Permitting approaches to avoid applicability to these programs will also be addressed. Attendees will be able to apply the following topics in a major source permit review:

- NSR/PSD requirements
- Operating permit requirements
- Permit drafting and analysis
- Source monitoring
- Compliance and enforcement
- Alternative approaches
- Record keeping and resources

COURSE DESCRIPTION:

This course will provide students with an intermediate-level knowledge of permitting so that they will be able to work in permit review or in the preparation of permit applications with some supervision for synthetic minor sources and major sources as defined in the federal New Source review Programs and the Title V program. Case studies will provide practical experience. Permitting requirements will be discussed in detail.

PREREQUISITES:

Students should have a college-level degree in engineering or the sciences and have successfully completed Course 460 – Introduction to Permits and Course 454 – Effective Permit Writing. Alternatively, students should have at least six months experience in air pollution control and exhibit a knowledge of permitting activities listed in the learning objectives, or equivalent courses/experience.

LAST UPDATED:

APTI 464 ANALYTICAL METHODS FOR AIR QUALITY STANDARDS

CLASS LENGTH: 5-day lecture course

CEUs: 4

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is designed for individuals within a regulatory agency whose role is to provide sampling and laboratory analysis of ambient air samples. This class is intended for air quality professionals, most likely chemists and technicians, who are responsible for the sampling and analysis of ambient air.

LEARNING OBJECTIVES:

Those completing this course will have an understanding of the requirements for ambient air sampling and laboratory analysis that is required for the sampling. The individual will gain an understanding of the following sampling and analysis tasks:

Laboratory

- Equivalent methods for SO₂
- Reference method for NO₂ and CO
- Reference and equivalent methods for O₃

Controlled Test Atmospheres

- Permeation tube systems
- Dynamic dilution systems

Performance Parameters of Instruments

- Zero drift, range, precision, rise time, lag time, and linearity

Audit Sample

- CO (instrumental)

COURSE DESCRIPTION:

This course is designed for chemists and technicians responsible for the sampling and analysis of ambient air. Calibration of continuous analyzers is covered. This laboratory course emphasizes the reference and equivalent methods for air quality standards, including Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), Ozone (O₃), and Carbon Monoxide (CO). Quality assurance programs are also introduced. Laboratory procedures and principles include the nondispersive infrared method for CO; the coulometric, flame photometric, and UV fluorescent methods for sulfur compounds; the chemiluminescent method and UV calibrations procedure for O₃; and the chemiluminescent method for NO₂. Students also learn the use of dynamic calibration systems to calibrate continuous air monitoring equipment and to determine performance specifications of the various instruments. A scientific calculator is helpful for preparing laboratory reports.

PREREQUISITES:

Successful completion of Course 435 – Atmospheric Sampling, or familiarity with basic laboratory techniques, including preparation and analysis of test atmospheres, calibration, and the use of common flow-measuring devices, and calculations involving the ideal gas laws, or equivalent courses/experience

LAST UPDATED: 1983

APTI 468 MONITORING COMPLIANCE TEST AND SOURCE TEST OBSERVATION

CLASS LENGTH: 4½-day lecture course

CEUs: 4

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is specifically designed for regulatory personnel who have or will have the responsibility to evaluate source test methods, approve test protocols and review source test results as required under various federal and state regulations or as required by issued permits. This class is intended for compliance and field engineers, scientists and technicians who have responsibility for the above source testing tasks.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with source testing and source test methods. The individual will gain an understanding of the following sampling-related tasks:

- Procedures and checklists to use when observing and certifying compliance source test methods
- Stack test basics [Federal Reference Methods (FRM) 1,2,3 and 4], FRM 5 for particulate matter, FRMs 6,7, and 8 for SO₂, NO_x, and sulfuric acid
- Information and guidance associated with EPA stack test methodologies for characterizing Title III HAPs from industrial sources.
- Standardized stack test methodology for sampling and analysis of HAPs as outlined in EPA's SW-846 Test Methods for Evaluating Solid Waste.
- EPA's stack test monitoring programs associated with PM₁₀ (FRM 201/201A) and condensable particulate (FRM 202) monitoring
- Specific observer checklist will be demonstrated during the presentation for each test methodology as part of the source test observation package

COURSE DESCRIPTION:

Since the passage of the Clean Air Act Amendments of 1990 (CAAA of 1990), industrial sources have had to quantify their emissions of hazardous air pollutants (HAPs) in order to demonstrate compliance with regulated emissions. To insure that the source test methods utilized to demonstrate compliance are performed according to EPA guidelines, both agency and industrial personnel will be required to observe stack tests to document that compliance with the methodology is being achieved. This will mean that an observer must be intimately familiar with over 30 or more stack test methods, each one with its own particular operation.

PREREQUISITES:

Engineering/scientific degree or one year work experience in source sampling. Successful completion of APTI 450 – Source Sampling for Pollutants is recommended, or equivalent courses/experience.

LAST UPDATED:

APTI 470 QUALITY ASSURANCE FOR AIR POLLUTION MEASUREMENT SYSTEMS

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is specifically designed for regulatory personnel who operate and oversee ambient air monitoring data. This class is intended quality assurance coordinators or managers, field or laboratory supervisors, and technicians involved with quality assurance of monitoring system data.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the information associated with the management of air quality monitoring systems required under the Clean Air Act and state and local regulations. Attendees will be able to apply the following topics in establishing a measurement system:

- Basic concepts of statistical control charts
- Regression analysis and control charts for calibration data
- Identification and treatment of outliers
- Quality assurance for SLAMS and PSD
- Performance and system audits
- Measurement
- Intra-laboratory testing
- Procurement quality control
- Data validation
- Quality costs

COURSE DESCRIPTION:

This course presents a broad overview of the quality assurance required for air pollution monitoring systems. Lectures present the basic quality management principles and techniques applicable to air pollution monitoring systems. It covers the four principal areas of management, measurement, systems, and statistics.

PREREQUISITES:

Students should be proficient in high school algebra and familiar with basic statistical concepts. Successful completion of APTI SI:100 "Mathematics Review for Air Pollution Control" will satisfy the high school algebra requirement. Course SI:473A -- Beginning Environmental Statistical Techniques is recommended for the statistical techniques used in this course. Students should also take APTI SI-471.

LAST UPDATED:

APTI 474 CONTINUOUS EMISSION MONITORING (1992)

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is designed for individuals within a regulatory agency whose role is to evaluate and to determine the operational and compliance status of Continuous Emission Monitoring Systems (CEMS) that are required to be operated on emission sources. This class is intended for engineers and other technical personnel who are responsible for the development and implementation of Continuous Emissions Monitoring (CEM) programs.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the following operational and regulatory focus associated with the operation of CEMS:

- System and operational principles
- Inspection techniques
- Enforcement procedures
- Review of regulatory basis for CEM and source- specific CEM requirements
- Performance Specification Test procedures and quality assurance requirements

COURSE DESCRIPTION:

This course reviews Federal CEM requirements, details of commercially available instrumentation, and QA and audit techniques. Emphasis is placed on CEM system inspection procedures and calculations necessary for agency inspectors to perform their job functions. The guide is a reference source for evaluating monitoring systems, applying Federal regulations, and introducing CEM auditing techniques.

PREREQUISITES:

Student should have successfully completed APTI courses SI:100 – Mathematics Review for Air Pollution Control, and SI:476B – Continuous Emission Monitoring Systems - Operation and Maintenance of Gas Monitors, or have equivalent course/work experience.

LAST UPDATED: 1992

APTI 482 SOURCES AND CONTROL OF VOLATILE ORGANIC AIR POLLUTANTS

CLASS LENGTH: 4-day lecture course

CEUs: 3

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This basic course is designed for individuals within a regulatory agency whose role is to evaluate volatile organic compound emission sources for permitting and to determine the ongoing compliance status of such emission sources. This class is intended for new permit and compliance engineers and scientists who are responsible for permitting and compliance activities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the different types of volatile organic emission sources are present at industrial facilities and the types of control devices that are available for certain emission sources. Attendees will be able to perform regulatory reviews involving the following elements of gaseous emissions and control:

- Basics of organic chemistry and photochemistry
- VOC properties
- National emissions and the regulatory approach
- Source measurement of VOCs
- Surface coating processes
- Graphic arts processes
- Petroleum refining and product storage and distribution
- Liquid asphalt
- Degreasing processes
- Dry cleaning processes
- VOC control methods

COURSE DESCRIPTION:

This course prepares the student to evaluate techniques typically used to control volatile organic emissions from certain industrial sources. Process descriptions, emission sources and characterizations, regulatory requirements, and emission controls are discussed, along with techniques for field evaluation. Industrial sources covered include surface coating, graphic arts, petroleum refining, petroleum product storage and distribution, liquid asphalt, degreasing and dry cleaning. Supporting topics include basic organic chemistry, photochemistry, VOC properties, source measurement, national emissions inventory, and the Federal approach to regulation of VOC sources. A scientific calculator is required.

PREREQUISITES:

Engineering/scientific degree or successful completion of SI:422 – Air Pollution Control Orientation Course, or equivalent courses/experience.

LAST UPDATED:

NACT CLASSROOM COURSES

NACT 220 COMPLIANCE ASSURANCE MONITORING (CAM)

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for intermediate stationary source permit engineers and inspectors.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with compliance assurance monitoring. Attendees will be able to perform regulatory reviews involving the following elements of CAM:

- Effect of Title V
- Background of CAM
- Part 64 applicability
- Exception
- CAM monitoring design criteria
- Source, district, and EPA Roles
- Quality Improvement plan

COURSE DESCRIPTION:

On October 22, 1997, EPA promulgated the CAM rule, 40 CFR part 64, which addresses monitoring for certain emission units at major sources. The CAM rule, which applies only to emission units with active control devices whose potential pRE:control device emissions are at or above the major source thresholds, requires the title V permit for these sources to contain monitoring sufficient to give a reasonable assurance of compliance with requirements applicable to the source and with all permit terms and conditions over the anticipated range of operation. Thus, emission units with an approved CAM plan will require sufficient monitoring to satisfy the periodic monitoring requirement under title V and part 70.

The CAM rule generally will not require implementation of its requirements for most units subject to CAM until the first round of title V permit renewals, which will generally be 5 years after initial permit issuance. Therefore, until emission units become subject to the requirements of part 64, the initial title V permit for major sources with units subject to Federal or SIP regulations will need to include periodic monitoring for these CAM units.

CAM concepts like background, 40 CFR part 64 (CAM) applicability, who will be affected by CAM., who is exempt from CAM, CAM timing, monitoring design criteria, frequency of monitoring, source, District & EPA roles in evaluating CAM plans, quality improvement plans will be discussed in this course.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP) and Course 299 – Theory & Application of Air Pollution Control Devices, or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 221 CONTINUOUS EMISSION MONITORING

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

New, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with continuous emission monitoring. Attendees will be able to perform regulatory reviews involving the following elements of Continuous Emissions Monitoring systems:

- CEM Implementing regulations
- CEM basic theory and operation
- CEM system components
- System certification requirements
- Inspection and quality assurance

COURSE DESCRIPTION:

Continuous emission monitoring (CEM) involves determining compliance of stationary sources with their emission limitations on a continuous basis. CEM are also used for process control and to monitor the operations of the control equipment. In this course, we will review the purpose and applicability of CEM systems mandated by federal regulations such as 40 CFR Part 60 and Part 75. We will discuss several different types of commercially available extractive & in situ systems with emphasis on performance specifications, including installation, design, testing, & certification. We will also discuss data recording & reporting requirements, system calibration & quality assurance program including procedures for conducting performance audits (CGA, linearity & RATA).

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 222 PRINCIPLES OF AMBIENT AIR MONITORING

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is specifically designed for regulatory personnel who operate and oversee ambient air monitoring data. This class is intended quality assurance coordinators or managers, field or laboratory supervisors, and technicians involved with quality assurance of monitoring system data.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with principles of ambient air monitoring. Attendees will be able to perform regulatory reviews involving the following elements of ambient air monitoring:

- Regulations and Standards
- Monitoring Networks
- Station Siting
- Instrumentation
- Documentation
- Data Handling
- Quality Assurance
- References and Resources

COURSE DESCRIPTION:

This course covers the basic design and theory of ambient air monitoring, quality assurance and control methods as they relate to monitoring instruments, site development criteria and data processing. This course will address PM_{2.5} and other particulate methods, ozone, oxides of nitrogen, carbon monoxide, hydrocarbon, sulfur dioxide, meteorology systems, data recording systems, gas calibration systems, and zero air systems.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2008

NACT 224 OBSERVING SOURCE TESTS

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

New, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with observing source tests. Attendees will be able to perform regulatory reviews involving the following elements of source testing:

- Basic principles of source test observation (STO)
- The fundamentals of source testing methods
- Method 5
- Sampling train and procedures
- Sample recovery observations
- Procedural inspections, calculations, report writing and QA techniques

COURSE DESCRIPTION:

Observations of compliance performance emission tests are an important part of any air pollution enforcement program. Data obtained during these tests are used to determine compliance with regulatory standards or to determine baseline operating conditions for a source. We present the basic principles of STO and the fundamentals of source testing methods, including Method 5, sampling train and procedures. We also discuss sample recovery observations, procedural inspections, calculations, report writing and QA techniques. Students will participate in a Method 5 sampling train "mock inspection" and receive hands-on training.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 230 SURFACE COATING: METAL PARTS & PRODUCTS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Surface Coating: Metal Parts & Products.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with metal parts and products operations. Attendees will be able to perform regulatory reviews involving the following elements of Metal Parts operations:

- All types of coatings
- Application techniques applied in the controlled conditions of a factory
- Control Technologies
- Inspection procedures
- Coating steps and points of emissions
- List of Hazardous Materials found in Coatings

COURSE DESCRIPTION:

This course addresses the complex matter of paints and coatings used in the manufacture or refurbishment of metal parts and products. Combining lecture, discussion, and informational video, students are introduced to topics such as coating formulation, volatile content limits, transfer efficiency, application equipment, inspector sampling, and laboratory analysis for liquid and powder coatings.

PREREQUISITES:

This course is a prerequisite for all classes in the course #230 series.

LAST UPDATED: 2009

NACT 230.4 G RAPHIC ARTS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Graphic Arts operations.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with graphic arts operations. Attendees will be able to perform regulatory reviews involving the following elements of Graphic Arts operations:

- Ink Components
- Five Common Types of printing
- Printing Processes
- Estimating Emissions
- Regulations and Standards
- Field Inspections

COURSE DESCRIPTION:

This course addresses the use of inks, coatings and surface preparation/cleanup materials used in the graphic arts industry. Classroom discussion will focus on printing methods, process descriptions, emission control techniques and inspection procedures. Volatile Organic Compound (VOC) content, graphic arts rule limitations and basic VOC emission calculations are outlined and discussed, as well. Discussion of regulatory issues such as the federal NESHAPS, RACT guidelines and the local prohibitory rules are also included. Students will also receive first-hand experience during the afternoon field visit (mock inspection) at a local business with a permitted printing operation.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 233 SOLVENT CLEANING: DEGREASING OPERATIONS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Solvent Degreasing Operations.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with solvent cleaning specifically degreasing operations. Attendees will be able to perform regulatory reviews involving the following elements of Degreasing operations:

- Types of solvents
- Types of degreasers
- Emission control equipment used and inspection procedures
- Regulatory issues such as the Title III MACT standards
- NESHAPS for Halogenated Solvents
- RACT/BARCT guidelines
- Local prohibitory rules

COURSE DESCRIPTION:

This course provides baseline information on a variety of solvents cleaning/degreasing operations. Topics include: types of solvents, types of degreasers, emission control equipment used and inspection procedures. Discussion of regulatory issues such as the Title III MACT standards, NESHAPS for Halogenated Solvents, RACT/BARCT guidelines and local prohibitory rules are also included. Students will also receive first-hand experience during the afternoon field visit (mock inspection) at a local business with a permitted solvent cleaning operation.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2009

NACT 242 HOT MIX ASPHALT FACILITIES

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Hot Mix Asphalt Facilities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with hot mix asphalt facilities. Attendees will be able to perform regulatory reviews involving the following elements of Hot Mix Asphalt facilities:

- Introduction
- Emissions and Effects
- Process
- Control
- Permit Requirements
- Inspection Procedure

COURSE DESCRIPTION:

Hot Mix Asphalt (HMA) facilities produce asphaltic concrete. Asphaltic concrete is a mixture of well graded, high quality aggregate and asphalt cement that is heated and mixed in measured quantities. This course discusses the process of hot mix asphalt production, equipment, types of air pollution control, and techniques on how to perform a compliance inspection. There will be a field visit in the afternoon. Participants must bring their hard hats, safety shoes, hearing and eye protection.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 243 AGGREGATE PLANTS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

New, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with aggregate plants. Attendees will be able to perform regulatory reviews involving the following elements of Aggregate plants:

- Emissions and Health Impacts
- Aggregate Industry
- Aggregate Process
- Engineering Evaluation
- Inspection Procedures

COURSE DESCRIPTION:

Aggregate plants produce sand and gravel and crushed stone. These plants can also be considered major air pollution sources. Upon completion of this one-day course, the participant will better understand the process flow of sand and gravel and crushed stone operations and the legal requirements associated with aggregate plants. A field visit is included to provide hands-on inspection techniques. In order to participate in the field visit, all students are required to bring appropriate safety equipment (hard hat, safety shoes, hearing and eye protection).

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 244 CONCRETE BATCH PLANTS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Concrete Batch Plants.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with concrete batch plants. Attendees will be able to perform regulatory reviews involving the following elements of Concrete Batch plants:

- Introduction
- Industry History
- Emissions and Health Impacts
- Concrete Industry Description
- Inspection Procedures
- Engineering Evaluation/Permit Process

COURSE DESCRIPTION:

Concrete is a mixture of water, cement, sand, gravel and other substances designed to harden and form durable surfaces and structures. A batch plant is a facility which collects and stores concrete ingredients, selects and combines proportions, and dispenses the mixture into a mixer-truck. This course covers process and control, air pollution control measures, inspection procedures, and legal requirements applicable to concrete batch plants. There will be a field visit in the afternoon. Participants must bring their hard hats, safety shoes, hearing and eye protection.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 245 CEMENT PLANTS

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Cement Plants.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with cement plants. Attendees will be able to perform regulatory reviews involving the following elements of Cement plants:

- How is Cement Made
- Types of Cement Kilns
- Types of Calciner Towers
- Classes of Cement
- Raw materials in Cement
- Major Components of Portland Cement Clinker
- Types of Cement
- Inspection Techniques
- Types of controls used

COURSE DESCRIPTION:

Cement is a powdered substance made primarily of burned lime, clay, and fly ash. Cement manufacturing involves many processes including mining, crushing, screening, recovery, calcining, finishing, grinding, conveying and shipping. Particulates can be emitted from any of these steps. Facilities can also operate on a variety of fuels requiring additional air pollution control. This course covers the production processes of cement manufacture with corresponding air pollution control issues. There will be a field visit in the afternoon. Participants must bring their hard hats, safety shoes, hearing and eye protection.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 246

AGGREGATE, ASPHALT, & CONCRETE BATCHING OPERATIONS

CLASS LENGTH: 2 days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Aggregate, Asphalt, & Concrete Batching Operations.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with aggregate, asphalt, & concrete batching operations plants. Attendees will be able to perform regulatory reviews involving the following elements of Aggregate, Asphalt, and Concrete Batching operations:

The following topics will be covered in this course:

- Emissions and Health Impacts
- Aggregate Industry
- Aggregate Process
- Engineering Evaluation
- Inspection Procedures for Aggregate, Asphalt and Concrete operation
- Concrete Emissions and Effects
- Hot Mix Process and Control
- Permit Requirements
- Health Impacts

COURSE DESCRIPTION:

This course will provide an overview and discussion of the processes commonly seen at sand and gravel operations, concrete batching operations, and hot mix asphalt (HMA) operations. Processes such as quarrying, sizing of quarried material, sorting, stockpiling, and transfer of aggregate products will be discussed in the aggregate section of this class. Concrete batching issues such as dust abatement and the flow of aggregate and cement materials will also be discussed. Hot mix asphalt operations also have many similar processes, and we will discuss the similarities with aggregate and concrete batching operations, including aggregate handling, storage, transfer, processing, and more. Additionally, we will also explore some of the issues that are particular to HMA facilities such as “blue smoke” controls which can include baghouse filters and capture/incineration of blue smoke mist. Combustion controls such as low-NOx burners will also be discussed as they pertain to HMA and aggregate operations. This course includes a field trip to a local aggregate/concrete/HMA facility to observe the process in-person, and affords an opportunity for students to interact with facility operators.

PREREQUISITES: NACT 101, or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 251 ASBESTOS DEMOLITION AND RENOVATION - REGULATOR TRAINING

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for air pollution inspectors.

LEARNING OBJECTIVES:

Those completing this course will gain an understanding of the health effects of asbestos exposure and the Demolition and Renovation NESHAP requirements for asbestos containing buildings. The emphasis is on inspector safety, case development, the decision to enter containment, sampling and decontamination.

COURSE DESCRIPTION:

This course is designed for air pollution inspectors. A variety of asbestos issues are discussed in this one-day course. Since contamination is a major concern when working near asbestos, safety is emphasized. The aspects of an effective inspection with proper and thorough case development are outlined and reviewed as is locating non-notifiers. Group participation is encouraged throughout the course as each individual topic is addressed. Specific coverage is given to health effects of exposure, containment practices, sampling procedures, chain of custody and documentation.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 261 POLYESTER RESIN AND FIBERGLASS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for permit engineers, compliance engineers and inspectors. The course is designed to provide an overview of Polyester Resin and Fiberglass Facilities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with polyester resin and fiberglass plants. Attendees will be able to perform regulatory reviews involving the following elements of Polyester Resin and Fiberglass plants:

The following topics will be covered in this course:

- Plastics and Plastic resin uses
- Plastic resin theory / operation
- Air pollution control devices
- Implementing regulations
- Typical permit conditions
- Inspection procedures
- Federal regulations

COURSE DESCRIPTION:

This course provides information to air pollution inspectors on the history, use of raw materials, production methods, emission control methods and inspection procedures for polyester resin and fiberglass facilities. This course covers pollution prevention, legal requirements, and RACT/BACT. Upon completion of this course, inspectors will be able to understand what is required of the facility to remain in compliance with the requirements. A field visit to a local facility is included to provide hands-on inspection techniques.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2009

NACT 262 FUGITIVE VOC EMISSIONS INSPECTIONS

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of VOC leak inspections.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with fugitive VOC emission inspections. Attendees will be able to perform regulatory reviews involving the following elements of fugitive emissions:

- Regulated Facilities
- Components
- Estimating Emissions
- Regulations and Standards
- Portable Hydrocarbon Analyzers
- Field Inspections

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 270 INCINERATORS

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of incinerators (control devices).

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with incinerators operations. Attendees will be able to perform regulatory reviews involving the following elements of incinerators:

The following topics will be covered in this course:

- 3 T's of combustion
- Types of combustion
- Categories of Industrial Incinerators
- Typical Incinerator Operating Procedures
- Typical Operational Errors
- Incinerator Emissions & Control
- Incinerator Inspection
- Air Pollution Control Points of Inspection

COURSE DESCRIPTION:

This course will focus on the process, emission control equipment and inspection procedures of small to medium sized solid waste incinerators. The types of incinerators include biomedical, pathological, crematories and commercial heat stripping ovens. This course does not address municipal waste combustors, biomass or hazardous waste incinerators. There is an afternoon field visit where students will receive first-hand experience during a mock inspection of a local business with a permitted incinerator.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 271 STATIONARY RECIPROCATING ENGINES

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Stationary Reciprocating Engines.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with stationary reciprocating engines. Attendees will be able to perform regulatory reviews involving the following elements of stationary reciprocating engines:

- Background Information
- Theory and Operation
- Air/Fuel Delivery Systems
- Reciprocating Engine Emissions
- Emissions Control Methods
- Regulations
- Inspecting Stationary ICEs

COURSE DESCRIPTION:

Stationary reciprocating engines are used widely for power generation, gas compression, and many other purposes. They are also a significant source of air contaminants and as such are the focus of increased regulation. This course covers reciprocating engine operating theory, both standard and "cutting-edge" emission control technologies, regulations, permit conditions, and inspection procedures.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 272 STATIONARY GAS TURBINES

CLASS LENGTH: 1½ days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Stationary Gas Turbines.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with stationary gas turbines plants. Attendees will be able to perform regulatory reviews involving the following elements of stationary gas turbines:

- Gas turbine history, theory of operation
- Gas turbine uses
- Air pollution control devices
- Gas turbine regulations
- Typical permit conditions
- Inspection procedures
- Continuous emission monitoring
- Source testing requirements

COURSE DESCRIPTION:

With an increase in demand of the electric utility industry, stationary gas turbines have become more popular in recent years as combined-cycles, peaking power plants and cogeneration facilities. The course discusses uses of gas turbines, fundamentals of operation of modern turbines with emphasis on state-of-the-art controls to achieve some of the lowest emission concentrations for this source category. The course also discusses combined cycles with HRSG units, steam turbines and power generation. This is followed by a detailed discussion on emissions and control techniques such as Dry Low-NO_x combustors with staged combustion, water or steam injection followed by SCR and CO catalysts. Applicable federal and local BACT regulations, permitting requirements, and agency inspection procedures and safety concerns are thoroughly discussed.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 273 INDUSTRIAL BOILERS

CLASS LENGTH: 1½ days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of industrial boilers.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with industrial boiler operations. Attendees will be able to perform regulatory reviews involving the following elements of industrial boilers:

- Air Pollution - Why
- Boiler Uses
- Boiler Theory and Operation
- Air Pollution Formation
- Air Pollution Control Devices
- Boiler Regulations
- Typical Permit Conditions
- Inspection Procedures

COURSE DESCRIPTION:

Boilers are one of the most common emission sources and range in use from small fire tube boilers to large utility boilers associated with power plant facilities. The course discusses uses of boilers, heat transfer methods and fundamentals of operation of modern industrial and utility boilers including those fired by natural gas, biomass, municipal waste and coal (circulating fluidized bed units). The course also discusses steam turbines and power generation. This is followed by a detailed discussion on emissions and control techniques such as Low-NOx burners, FGR, staged combustion, SCR and SNCR. New technologies such as Ultra Low-NOx 9 ppm burners, applicable federal and local BACT regulations, permitting requirements and agency inspection procedures and safety concerns are thoroughly discussed.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 281 ELECTROSTATIC PRECIPITATORS

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of ESPs (control devices).

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with electrostatic precipitators operations. Attendees will be able to:

- List the major industrial applications for ESPs.
- Explain the theory of operation of ESPs, using appropriate terminology
- Describe the major types/categories of ESPs.
- List the main things to consider in designing an ESP.
- List the major components of a typical ESP and explain the functions of these components.
- Be aware of how ESP performance can be monitored by operators.
- Explain in detail how to conduct an inspection of an ESP.

COURSE DESCRIPTION:

This course will help the inspector understand the fundamentals of electrostatic precipitator operation for fine particulate or aerosols and the likely defects or operator oversights. Topics include: theory and design, cleaning cycles, operation and maintenance and inspection techniques.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 282 BAGHOUSES

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of baghouses (control devices).

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with baghouse operations. Attendees will be able to identify the following with respect to baghouses:

- What are we looking at?
- Why do we care?
- How does fabric filtration work?
- Types of baghouses
- Design and operation of baghouses
- Operation and maintenance problems
- Baghouse inspection

COURSE DESCRIPTION:

Baghouses are one of the most effective and widely used control devices for fine particulate matter. This course will present the major uses for baghouses, operational theory and design, applicable regulations, permit conditions and inspection procedures. The course also includes a brief discussion of baghouse troubleshooting and maintenance.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2008

NACT 284 VOLATILE ORGANIC COMPOUND CONTROL DEVICES

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Volatile Organic Compound Control Devices.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with volatile organic compound control devices. Attendees will be able to perform regulatory reviews involving the following elements of gaseous emissions control:

The following topics will be covered in this course:

- Absorbers
- Adsorbers
- Condensers
- Oxidizers
- Process descriptions
- Rule discussion
- Inspection procedures

COURSE DESCRIPTION:

This course provides an overview of equipment used to control the emissions of volatile organic compounds (VOCs). Specifically: absorbers, adsorbers, condensers and oxidizers will each be covered. Classroom discussion will focus on process descriptions, rule discussion and inspection procedures for the VOC control equipment. The afternoon field visit will allow students to see and inspect one of the control options covered in class.

PREREQUISITES:

LAST UPDATED: 2010

NACT 285 LANDFILL GAS CONTROL FACILITIES

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Landfill Gas Control Facilities.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the Landfill Gas control systems. The following topics will be covered in this course:

- Facts and figures regarding Landfills
- Primary and Secondary air pollutants at Landfills
- Methane monitoring equipment
- Inspections and safety tips
- Scientific principles behind landfill gas generation
- Landfill gas collection technologies and principles
- Landfill gas controls and energy uses
- Description of landfill gas monitoring equipment and proper use
- Regulatory Overview and Update on Green House Gas Regulations, CCR Title 17, Section 95460
- Inspection and Safety Tips

COURSE DESCRIPTION:

This course provides an introduction to the operation of landfill gas collection, controls and gas-to-energy systems. Special emphasis is placed on inspection techniques.

A landfill tour is provided to an active landfill site. Students will be able to discuss and observe landfill operations/activities and landfill gas extraction control components. Depending on the venue, this can be a flare for VOC/methane control, or internal combustion engines/turbines for VOC/methane control and energy generation.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 287 DRY CLEANING

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Dry Cleaning operations.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with dry cleaning operations. Attendees will be able to perform regulatory reviews involving the following elements of Dry Cleaning operations:

The following topics will be covered in this course:

- Introduction
- Industry History
- Emissions and Health Impacts
- The dry cleaning process
- The inspector's role in ensuring compliance with the Airborne Toxic Control Measure (ATCM) for Perchloroethylene from Dry Cleaning Operations, and
- Leak detection equipment

COURSE DESCRIPTION:

Self-inspection, leak checking and compliance assistance for facilities using perchloroethylene are emphasized in this one-day review of organic solvent fabric cleaning. Classroom discussion will focus on the dry cleaning process and the inspector's role in ensuring compliance with the NEW Airborne Toxic Control Measure (ATCM) for emissions of Perchloroethylene (PERC) from Dry Cleaning Operations. During the field portion (mock inspection) of the class, students will get hands-on experience using the latest leak detection equipment at a local permitted dry cleaning operation. For certification as a "Trained Operator", please see course #387.

PREREQUISITES: NACT 101 –Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 288 PETROLEUM REFINING

CLASS LENGTH: 2 days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended permit engineers, compliance engineers, and inspectors. The course is designed to provide an overview of Petroleum Refining.

LEARNING OBJECTIVES:

The initial section of this course will introduce participants to the terminology, basic chemistry, and process related emissions common to Petroleum Refineries. Participants will also be introduced to the many New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPs) and other air quality regulatory program requirements potentially applicable to a Petroleum Refinery. This discussion will include the air pollutants of concern and common control techniques.

The remainder of the course will focus on the four steps in the refining process – separation, treatment, conversion and blending. Each step will be addressed separately, including a discussion of the purpose of each step, common processes used to accomplish each step, air pollutant emissions associated with each process and associated inspection points. In addition, emissions and the control of air pollutants associated with supporting activities (such as waste water collection and treatment, tank farms, and safety flares) will be discussed.

COURSE DESCRIPTION:

Petroleum Refineries are a complex maze of vessels, pipes, heaters and processes whose purpose is to transform crude oil into usable products. Though no two refineries are identical, all refineries utilize the same steps to achieve this goal – separation, treatment, conversion and blending. Petroleum refineries emit significant quantities of various regulated air pollutants and are subject to a myriad of air quality regulatory requirements. The purpose of this course is to provide inspectors the basic knowledge necessary to conduct comprehensive inspections of Petroleum Refineries and to effectively communicate with Petroleum Refinery personnel. This course will include a field trip. Participants must bring their hard hats, safety shoes, hearing protection and eye protection. Participants need to check with their training coordinator to determine whether nomex protective clothing will be required for the facility tour.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2011

NACT 290 MACT GENERAL BACKGROUND INFORMATION

CLASS LENGTH: 1 day

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of General Background Information on MACT and ARB standards.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with MACT general background information. The following topics will be covered in this course:

- History: various ARB and EPA toxic regulations/programs: MACTs and ATCMs, ARB Hot Spots vs EPA Significant Risk Programs, EPA and California Accidental Release Prevention Programs
- CAA section 112
- MACT Timeline
- California MAC/ATCMs
- General/Specific requirements of some of the MACT regulations
- Information Resources to help with the MACT regulations

COURSE DESCRIPTION:

This course is designed to provide general background information on (1) various ARB and EPA toxic regulations/programs: MACTs and ATCMs, ARB Hot Spots vs EPA Significant Risk Programs, EPA and California Accidental Release Prevention Programs; (2) listing of toxic air contaminants and hazardous air pollutants, and of EPA's toxic source categories; (3) pathways for ARB and EPA enforcement; and (4) lowering a source's potential to emit (for MACT sources).

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2009

NACT 299 THEORY & APPLICATION OF AIR POLLUTION CONTROL DEVICES

CLASS LENGTH: 2 days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is intended for new, entry-level as well as semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in business and government. The course is designed to provide an overview of Theory & Application of Air Pollution Control Devices.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with the theory and application of air pollution control devices. Attendees will be able to perform regulatory reviews involving the following emissions control techniques:

The following topics will be covered in this course:

- Control of power plant emissions
- Control of oxides of nitrogen
- Control of particulate emissions and ammonia slip
- Introduction of VOCs and HAPs
- Introduction of VOC control
- Introduction to Control of PM
- Cyclones and Baghouses
- ESPs and Scrubbers
- Particulate Filters and Gas-Fired IC Engine Controls

COURSE DESCRIPTION:

This course will provide a detailed introduction to air pollution control equipment and methods used to control particulate and gaseous air emissions. The course will cover theory, operation, applications, design considerations, inspection strategies, compliance assurance monitoring and regulations for cyclones, baghouses, wet and dry scrubbers, electrostatic precipitators, carbon beds, bio filters, condensers, flares, thermal and catalytic oxidizers. NO_x controls like selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), flue gas recirculation (FGR), and ultra low-NO_x burners will also be discussed. This course includes a field trip to a local facility to observe controls in-person, and affords an opportunity for students to interact with facility operators. Personal Protective Equipment including hard hat, safety glasses, hearing protection, and closed toed shoes (preferably safety toed) will be required.

PREREQUISITES: NACT 101 – Uniform Air Quality Training Program (UAQTP), or equivalent courses/work experience.

LAST UPDATED: 2010

NACT 333 PERMIT PRACTICES & PROCEDURES I

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND: This course is designed for new permit writers, but it will also be useful for inspectors and other enforcement personnel who must read and interpret permit conditions and perform inspections of permitted sources. Rule writers and planners will benefit as well. This course is intended for personnel of State and Local agencies who have some experience in permit programs.

LEARNING OBJECTIVES:

- Identification of the components of permits,
- Federal, state and local permitting authority,
- Description of the characteristics of effective permitting agencies,
- The permit application and review process,
- The bases for various types of permit conditions, and
- Discussion of procedures and approaches involved in writing permit documents.

COURSE DESCRIPTION:

This course is a 2 1/2-Day Lecture Course providing hands-on training in the methods and procedures used to review permit applications and to prepare air quality permits. This course provides an overview of the methods and procedures used to prepare air quality permits. The course is intended for personnel of State and Local permitting agencies who are relatively new to permit programs. This course is taught at an introductory level, and is intended to be followed by NACT 334 –Permit Practices and Procedures II. The course is primarily a lecture course.

Course material will address state and local permits, as well as Title V federal operating permits. Other topics covered will include Compliance Assurance Monitoring; Monitoring, Reporting, and Record-keeping requirements; and toxic air contaminant issues associated with permitting.

PREREQUISITES: Engineering/scientific degree or successful completion of any fundamentals of air pollution course and 6 months of general air pollution experience, or equivalent courses/work experience.

LAST UPDATED:

NACT 334 PERMIT WRITING II

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is designed for semi-experienced stationary source permit engineers, inspectors, regulatory agency staff, and environmental specialists in government

LEARNING OBJECTIVES:

Those completing this course will gain an understanding of the information associated with permit writing. The following topics will be covered in this course:

- Review of permitting
 - Definition
 - Types
 - Authority
 - Process
 - Contents
 - State permits
 - SIP authorized state and local preconstruction review
 - Delegated federal programs
 - Title V
 - Public involvement
- New Source Performance Standards
- National Emission Standards for Hazardous Air Pollutants
- Toxics Issues

COURSE DESCRIPTION:

This course provides hands-on training in the methods and procedures used to review permit applications and to prepare air quality permits. This course is designed for personnel of State and local agencies that have some experience in permit programs. The course is designed primarily for permit writers, but inspectors who must read and interpret permit conditions and make site inspections will benefit as well.

Course material will address state and local permits, as well as Title V federal operating permits. Other topics covered will include Compliance Assurance Monitoring; Monitoring, Reporting, and Record-keeping requirements; and toxic air contaminant issues associated with permitting.

PREREQUISITES: Successful completion of any fundamental air pollution permitting course such as NACT 333 – Effective Permit Writing I, and 12 months of air pollution experience in a state or local air pollution permitting program, or equivalent courses/work experience.

LAST UPDATED: 2008

NACT 335 PRINCIPLES OF ENVIRONMENTAL COMPLIANCE & ENFORCEMENT

CLASS LENGTH: 3 days

CEUs: The entire series must be completed for a certificate of completion to be issued.

CLASS FORMAT: Classroom

WHO SHOULD ATTEND: New, entry-level stationary source inspectors, regulatory agency staff, and environmental specialists in business and government.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with to air pollution control and enforcement. The following topics will be covered in this course:

- Developing a framework for designing effective compliance strategies
- Understand different concepts and principles of environmental compliance and enforcement

COURSE DESCRIPTION:

This intensive a 3-day course providing a framework for designing effective compliance strategies and enforcement programs.

The course defines the terms compliance and enforcement, introduces basic principles, and explores different approaches for implementing each element of the framework. The instructors who guide participants through the concepts and principles of environmental compliance and enforcement deliver the course through a series of exercises. Participants, through a "case study" will take part in a negotiation session to resolve a violation of environmental requirements that mimics a real-life enforcement situation.

This course is designed for a student that seeks to understand the complete compliance process including enforcement. The student should come away with the knowledge and skills necessary to become a productive member of a compliance team. The two and one-half day course will focus on the enforcement case process used by US local, state and federal environmental agencies- primarily the administrative and civil judicial processes. Topics include targeting, collecting data that is necessary for case development, determining compliance status, selecting the appropriate enforcement option, penalties, negotiation, and case resolution follow-up. The course discusses all violation resolution options including informal actions, formal notices, administrative orders and administrative consent orders, civil litigation settlement, and case litigation. The importance of proper documentation and adherence to procedures will be emphasized. The course includes a combination of lectures, exercises, and role-playing. A manual is included with the course.

This intensive a 3-day course providing a framework for designing effective compliance strategies and enforcement programs. The course defines the terms compliance and enforcement, introduces basic principles, and explores different approaches for implementing each element of the framework. The instructors who guide participants through the concepts and principles of environmental compliance and enforcement deliver the course through a series of exercises. Participants, through a "case study" will take part in a negotiation session to resolve a violation of environmental requirements that mimics a real-life enforcement situation

PREREQUISITES: None

LAST UPDATED: 2010

NACT 345 ENFORCEMENT CASE DEVELOPMENT AND RESOLUTION

CLASS LENGTH: 3 days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This course is designed for new, entry-level stationary source inspectors, regulatory agency staff, and environmental specialists in business and government.

LEARNING OBJECTIVES:

Those completing this course will gain a basic understanding of the general information associated with air pollution control and enforcement. The following topics will be covered in this course:

- Targeting appropriate enforcement option, penalties, negotiation and case resolution follow-up
- Understand different violation resolution options
- Understand the procedure and documentation of the Enforcement and Compliance process

COURSE DESCRIPTION:

This course is designed for a student that seeks to understand the complete compliance assessment process including enforcement. The student should come away with the knowledge and skills necessary to become a productive member of a compliance team. The two and one-half day course will focus on the enforcement case process used by US local, state, and federal environmental agencies primarily the administrative and civil judicial processes.

Topics include targeting the appropriate enforcement option, penalties, negotiation, and case resolution follow-up. The course discusses violation resolution options, including informal action, formal notices, administrative orders and administrative consent orders, civil litigation settlement and case litigation. The importance of proper documentation and adherence to procedure will be emphasized. The course includes a combination of lectures, exercises, and role-playing.

PREREQUISITES: None

LAST UPDATED: 2010

NACT 350 BASIC INSPECTOR TRAINING

CLASS LENGTH:

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This introductory course is designed for new federal, state, local, and tribal environmental inspectors, and meets the training requirement under EPA Order 3500.1.

LEARNING OBJECTIVES:

Those completing this course will have an understanding of the compliance assessment practices that are employed for evaluating air emission sources. The individual will gain an understanding of the following inspector tasks:

- Permit condition compliance documentation and evidence gathering
- Role of the field inspector
- Complaints handling and other inspection investigations
- Inspection of air pollution sources

COURSE DESCRIPTION:

The course provides an overview of the aspects of inspection preparation, the procedures for conducting an inspection, and follow-up tasks that must be completed after conducting an inspection. Proper procedures are covered for investigating an air pollution complaint, conducting an inspection, and gathering evidence of an emission source compliance. The course also introduces various federal environmental laws and regulations to individuals that are new to environmental compliance programs.

PREREQUISITES: None

LAST UPDATED: 2010

NACT 355 ADVANCED INSPECTOR TRAINING

CLASS LENGTH: 3 days

CEUs:

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

The Advanced Inspector Training Course focuses on issues and techniques for the more senior inspector to help enhance and improve their inspection techniques and results.

LEARNING OBJECTIVES:

Those completing this course will have a thorough understanding of the compliance assessment practices that are employed for evaluating air emission sources. After completion of this class, the individual should be able to independently complete the following inspector tasks:

- Permit condition compliance documentation and evidence gathering
- Complete site inspections with appropriate documentation
- Complaints handling and other inspection investigations
- Inspection of air pollution sources

COURSE DESCRIPTION:

This course does not focus on any specific media but covers subjects applicable to inspections in all media. The course is intended to provide additional tools to obtain information before, during and after an inspection. The course will present “best practices” for conducting inspections and give the students an opportunity to discuss how these “best practices” apply or not to their own inspections. Each class will have the opportunity to discuss and evaluate specific issues or areas of interest to them.

Course Delivery

The course includes lectures, discussions, exercises, and role playing. Day one is mainly lecture and discussion with some minor role-play. Day two includes lectures and discussion and ends with a major inspection exercise to allow the student to apply the previous lessons. Day 3 is a review of the exercise followed by additional lecture and discussion on the criminal investigation program and the most advanced inspection techniques.

PREREQUISITES: None

LAST UPDATED: 2010

OTHER COURSES

CLASS LENGTH: 2 days

<http://www.epa.gov/otaq/models/moves/trainingsessions.htm>

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This free course is geared toward state and local agency staff that will use MOVES2010 and minor model revisions (e.g., MOVES2010b) for developing SIPs and conformity analyses.

LEARNING OBJECTIVES:

This course presents a comprehensive overview of the MOVES mobile source emissions model. This includes:

- Model structure
- Developing a “runspec” and input database
- EPA guidance on inputs for SIPs and regional conformity analyses
- Converting existing MOBILE6.2 inputs to MOVES inputs
- Best Practices and Tips
- Processing emissions output in MySQL
- Project-level analysis

COURSE DESCRIPTION:

The first day of the training, and part of the second day, provides a detailed look at using MOVES at the county scale for SIPs and regional conformity analyses based on the MOVES Technical Guidance for emissions inventories. The training covers various options for using MOVES, depending on the type of analysis and size of the area being modeled. The training also demonstrates how to create a county-level run specification file, how to use the County Data Manager to enter local data, how to use spreadsheet tools to convert MOBILE6-based input data to MOVES format, and how to generate emissions results in both Inventory and Emission Rate modes. The county-level portion of the training also addresses other features of MOVES, such as the custom domain, alternative vehicle and fuel technology, and retrofit input options. The final part of the training focuses on the use of MOVES at the project level. The course includes numerous hands-on exercises.

PREREQUISITES: None

Note: Also see MOVES web training website above for additional webinars on MOVES, including **Introduction to MOVES2010 and MOVES Batch Mode**

LAST UPDATED: Revision to be released in 2012

CLASS LENGTH: 3 days

<http://www.epa.gov/otaq/stateresources/transconf/training3day.htm>

CLASS FORMAT: Classroom

WHO SHOULD ATTEND:

This free course is geared towards state and local agency staff who will be completing PM hot-spot analyses for transportation conformity purposes, as well as those who may be reviewing, approving, or otherwise assessing hot-spot analyses. Previous modeling experience is not necessary, although familiarity with the MOVES (EMFAC in California), AERMOD, and CAL3QHCR models may be helpful.

LEARNING OBJECTIVES:

The first day of the course is an overview of the guidance and instruction on using MOVES (EMFAC in California) at the project level for PM hot-spot analyses. The second day includes guidance on selecting an air quality model, finding and using data, and placing air quality modeling receptors, followed by instruction on using the AERMOD dispersion model to complete air quality modeling for an analysis. The final day describes how to use CAL3QHCR for these analyses, obtain background monitoring data, and calculate design values and determine conformity for a project. A draft agenda is available on EPA's website. The course includes class discussion and numerous hands-on exercises, including a hypothetical project that will be carried through the course as the subject of a quantitative PM hot-spot analysis.

COURSE DESCRIPTION:

This three-day EPA-FHWA course provides detailed, hands-on instruction on how to complete a quantitative PM hot-spot analysis in accordance with EPA's 2010 guidance. The focus of the course is how to use the MOVES emissions model and AERMOD and CAL3QHCR air quality dispersion models to complete these analyses, but the training also includes discussion of the applicable transportation conformity policy guidance. (For course offerings in California only, the EMFAC emissions model will be taught instead of MOVES.)

PREREQUISITES: Due to the fact that this is a hands-on, technical course, class space will be limited to ensure an adequate participant-instructor ratio. Participants will need to install and test the MOVES2010b model as well as download course materials before attending the course. In California, EMFAC will be used. **Read EPA's PM Hot-spot Guidance before attending the course** to maximize their training time when in class.

LAST UPDATED: Spring 2012

CLASS LENGTH: 3
days

CEU's: 2.00 <http://www.ntionline.com/courses/courseinfo.php?id=84>

CLASS FORMAT: Classroom

FEE: \$650.00 for Contractor, Consulting, Non-USA Transportation or Government Agency, Other.

WHO SHOULD ATTEND:

New staff members as well as more senior staff who may not be familiar with the broad ramifications of the conformity process working in the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the Environmental Protection Agency (EPA), state departments of transportation (DOTs), metropolitan planning organizations (MPOs), state/county/local planning agencies, state and local air quality agencies, transit agencies and consultant firms.

LEARNING OBJECTIVES: develop a clear understanding of the dynamic relationship between transportation planning and air quality planning in the context of transportation conformity

- To provide an overview of the transportation planning and project development processes and to show how these processes are linked to the State Implementation Plan (SIP) through the conformity requirements
- To provide an understanding of the roles and responsibilities in inter-agency coordination and techniques to provide opportunities for public participation in the conformity process

COURSE DESCRIPTION:

This course presents basic information about conformity requirements and the relationship of the transportation and air quality planning processes in order to prepare agency staff (federal, state, and local) to participate in interagency and consultation and work effectively in implementing conformity requirements. This course was developed by the FTA and FHWA in consultation with EPA.

The Transportation Conformity course will present basic information about conformity requirements and the relationship of the transportation and air quality planning processes in order to prepare agency staff (federal, state and local) to participate in interagency consultation and work effectively in resolving conformity issues.

PREREQUISITES: None.

CLASS LENGTH: 1 hour

<http://www.epa.gov/otaq/stateresources/transconf/generalinfo/conform101.pdf>

CLASS FORMAT: Self instruction

WHO SHOULD ATTEND:

New staff members as well as more senior staff who may not be familiar with the basics of the transportation conformity program.

LEARNING OBJECTIVES:

The course covers the following:

- Define transportation conformity and describe how it relates to transportation planning and air quality planning
- Identify the frequency requirements for transportation conformity determinations
- Explain the consequences of an area's inability to achieve conformity
- Describe the roles and responsibilities of various agencies in planning and conformity
- Identify and explain the different components of transportation conformity:
- Define a "conformity SIP" and describe its role in the conformity process

COURSE DESCRIPTION:

This course covers a basic overview of key components of the transportation conformity process for new staff and managers.

PREREQUISITES: None.

LAST UPDATED: August 2011

OTAQ

OVERVIEW OF THE PM HOT-SPOT REQUIREMENTS AND GUIDANCE FOR TRANSPORTATION CONFORMITY

CLASS LENGTH: 1 hour

<http://www.epa.gov/otaq/stateresources/transconf/policy/pm-hotspot-overview.pdf>

CLASS FORMAT: Self instruction

WHO SHOULD ATTEND:

New staff members as well as more senior staff who may not be familiar with the basics of transportation conformity PM hot-spot requirements and EPA's December 2010 PM hot-spot modeling guidance.

LEARNING OBJECTIVES:

- The course covers the following:
- Background on conformity requirements
- Overview of PM hot-spot guidance
- EPA and DOT training efforts

COURSE DESCRIPTION:

This course covers a basic overview of key components of the transportation conformity PM hot-spot requirements and EPA's new modeling guidance.

PREREQUISITES: None.

LAST UPDATED: January 2012