

# Air Quality Training Syllabus, July 2007

**Goal:** Enhance the learning curve for air quality consulting and establish a foundation for core air quality competencies.

**Objectives:**

1. Fill in historic information often overlooked/unexplained
2. Link work tasks with regulatory basis for work task
3. Broaden the scope of technical/regulatory information and understanding
4. Facilitate the transition to the technical mentoring phase
5. Demonstrate abilities in training exercise

The air quality program will be designed as a twelve session program culminating in a final training exercise that will involve a mock air quality consulting situation. Training session will be scheduled approximately every three to four weeks. Preparation for each session will involve consulting various resources and completing sample exercises. The material to be covered will use a typical New Source Review/Prevention of Significant Deterioration (NSR/PSD) permit application as a blueprint. A NSR/PSD permit application will be dissected and the contents will be examined in a larger context.

**Session 1 Organization and Structure:** Structure of federal rules (Code of Federal Regulations, statues, acts), organization of technical resources (U.S. EPA websites), interaction of court system (Appellate and Appeals courts), coordination between states and federal governments (SIP).

**Assignment(s):** None.

**Training Date: July 10, 2007**

**Session 2 Air Quality History:** Review the Clean Air Act and Clean Air Act Amendments, discuss significance of each act, develop list of definitions and acronyms. A sample air quality consulting project will be introduced and will serve as the basis for subsequent sessions.

**Assignment(s):** Prior to the session, read Chapters 1 and 2 of *"The Clean Air Compliance Self Study Course"*.

**Training Date: July 31, 2007**

**Session 3 New Source Performance Standards (NSPS) Examples:** Understanding an NSPS from applicability and monitoring/testing perspectives, review the NSPS for boilers and potentially lime kilns.

**Assignment(s):** Prior to the session, review structure of 40 CFR Part 60 Subpart A 60.1 thru 60.19 and compare to information contained in the NSPS for boilers 40 CFR Part 60 Subparts D, Da, Db, and Dc comprising 60.40 thru 60.46, 60.40a thru 60.49a, 60.40b thru 60.49b, and 60.40c thru 60.48c, respectively.

**Training Date: August 14, 2007**

**Session 4 National Emission Standards for Hazardous Air Pollutants (NESHAP) Examples** Focus on understanding the structure of NESHAPs by reviewing a specific standard in detail, reviewing the pre-1990 and post 1990 NESHAPs, 40 CFR Part 63 Subpart LLL will be reviewed

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**Assignment(s):** Prior to the session, review structure of 40 CFR Part 63.1 thru 63.16 and compare against headings of the sections to Subpart LLL. Also read Chapter 7 of *“The Clean Air Compliance Self Study Course”*.

**Training Date: September 11, 2007**

**Session 5 State Rules** The structure of state air rules will be covered in Session 5. The intent of the session will be to review the organization of two or three state programs and contrast and compare the programs. The state air programs that will be reviewed include Michigan, Pennsylvania, and Florida.

**Assignment(s):** Prior to this session, printout a copy of one of the three states air rules and identify where in the state rules, the PSD rules are contained, the minor source permitting rules are listed, where the stack testing requirements are listed, and where the Title V rules are located.

**Training Date: October 2, 2007**

**Session 6 Emission Inventory** Emission inventory development will be discussed. Relationship of emission factors, process data, conversion factors will be covered. Special focus on mass-based, volume-based, percent weight, concentration-based terms will be planned.

**Assignment(s):** After the training session, a series of conversion problems will be handed out. The problem set will be turned in for review. Additionally an emission inventory will be prepared that will be used for Session 6.

**Training Date: October 23, 2007**

**Session 7 NSR/PSD Attainment and Non-Attainment Session A** The NSR/PSD training will focus on the applicability and review of NSR/PSD. The example emission inventory will be integrated into this session. Examples will be covered that outline how the Reform rules work and how conventional NSR works.

**Assignment(s):** Prior to the session, review Chapters 2, 3, and 4 from Michigan DEQ Workbook.

**Training Date: November 13, 2007**

**Session 8 NSR/PSD Attainment and Non-Attainment Session B** Due to the complexity of PSD/NSR, a second session covering PSD will be held to go over additional working examples of PSD applicability. The NSR Clearinghouse will be discussed.

**Assignment(s):** At the end of Session 7, a list of key words and phrases will be handed out, provide definitions for the list as part of Session 8.

**Training Date: December 4, 2007**

**Session 9 Best Available Control Technology Examples** This session will provide examples of how to conduct a BACT and Lowest Achievable Emission Reduction (LAER) analysis. The session will be a working session that demonstrates the “Top Down” approach to conducting the BACT analysis.

**Assignment(s):** Prior to the sessions, review Chapter B of the U.S. EPA *“New Source Review Workshop Manual”*.

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**Training Date: January 3, 2008**

**Session 10 Title V Program** This session will highlight the basics of the Title V permit program, especially applicability of Title V. As a working example, a Title V renewal project will be discussed.

**Assignment(s):** Read Chapter 5 of *“The Clean Air Compliance Self Study Course”*.

**Training Date: January 24, 2008**

**Session 11 Compliance and Testing** Several Clean Air Act programs have compliance demonstration requirements. This session will highlight the role of compliance and the methods used to demonstrate compliance. Recordkeeping and reporting will be discussed.

**Assignment(s):** Prior to the sessions, review the Portland Cement MACT Part 63 Subpart LLL and Part 60 Subparts D, Da, Db, and Dc. Summarize in a table the general monitoring, recordkeeping, and testing requirements for both rules.

**Training Date: February 11, 2008**

**Session 12 Air Quality Modeling Session** The focus of this session will be to provide an overview of the air quality modeling process as it relates to PSD/NSR air permitting projects. A summary of air dispersion models and the general process that is part of the air quality modeling process will be covered.

**Assignment(s):** Prior to the sessions, review Chapter C III, Chapter D, and Chapter E I and II of the U.S. EPA *“New Source Review Workshop Manual”*.

**Training Date: March 4, 2008**

**Air Quality Consulting Exercise** A sample project will be presented to the session participants after Training Session 2. Over the remaining 10 sessions, the session participants will be responsible for developing a strategy for the project that can be presented either to a mock client or to a mock regulatory agency. The material to be included in the mock presentations may include some or all of the issues discussed in the various training sessions. The presentations will be delivered to members of RegTech who have been involved in the previous training sessions. The sample project will include preliminary information that will allow for the development of project-specific information.

**Presentation Date: To Be Determined**

Training Resources:

U.S. EPA *“New Source Review Workshop Manual”*

*“The Clean Air Compliance Self Study Course”*

Session handouts

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