
Informal History of the National Air Pollution Training Program

6/23/21

Introduction

This informal history of the National Air Pollution Training Program is a compilation of information gathered from EPA and non-EPA staff and managers who have been involved in the state and local air pollution agency training program from the early 1980s to the early 2000s. The information reflects a diversity of perspectives reflected in the varying roles played by those whom we have consulted: an EPA manager, a lead classroom trainer in the National Air Compliance Training (NACT) program and leaders of multijurisdictional organizations. The people consulted were able to draw on memories from as far back as the 1970s – and the decades in between then and now. This history provides a general idea of how the program formed, when important training-related events took place and who was involved. It is fairly California Air Resources Board (CARB)-centric and Lake Michigan Air Directors Consortium (LADCO)-centric because we had easier access to those persons who were involved in training early in its history. The purpose of the document is to shine some light on the origins of the training program and the players and actions that brought the program to where it is now.

A special thanks goes out to the following individuals who have contributed content to this document:

- Lourdes Morales (EPA),
- Fred Thompson (EPA),
- Mike Koerber (EPA and former LADCO Executive Director),
- Mary Boyer [former Chief of Training and Compliance for CARB and more recently lead classroom overseer and trainer for National Air Compliance Training (NACT) training courses], and
- John Hornback [former Director of the Kentucky Division for Air Quality and retired Metro 4-SESARM (Southeastern Air Pollution Control Agencies) Executive Director].

We also wanted to particularly thank Mary Boyer and John Hornback. They provided rich oral and written histories that serve as much of the basis for this history summary.

Chronological History

➤ 1970s: Program Founding and Early Growth

- The national air training program started as “APTI” (Air Pollution Training Institute) in the early 1970s (see attached early logos).

- At the time, EPA's APTI program was considered the gold standard for air training.
- During this period, OAQPS offered basic air pollution training at RTP, NC in the form of 2-week classroom courses and through correspondence courses.
- During these years, the coursework was generally available only in paper format.

➤ **1980s-1990s: Substantial Program Expansion and Extension of Program Reach**

- After the Clean Air Act was amended in 1977, training needs in state and local air agencies grew.
- In the 1980s-1990s, about 25 EPA staff worked in the air pollution training program for Ron Townsend (Branch Chief) and Charlie Pratt (Section Chief). Ron Townsend provided manpower and technical expertise for the teaching component of the program and state and local agencies provided input on training needs.
- Meanwhile, in the 1980s, CARB started the National Air Compliance Training (NACT) Program to develop and deliver classroom training, initially only in California. Later in the 1980s, CARB started delivering courses in states outside of California. (See extended discussion of the NACT program below.)
- In the 1990s and into the 2000s, Howard Wright [Leader of the Education and Outreach Group (see attached organizational chart)] and Dennis Shipman of the same group both worked on the program. In this period, the program made a very substantial switch to satellite training. This shift represented the program's first shift to embrace new technology for delivery of training, which opened up huge opportunities to deliver training more cost effectively and meaningfully to state and local air agencies at remote locations across the country.
- Funding for this shift came when, around 1990, Clean Air Act section 105 grant money was used to fund training, totaling \$4.1M. \$2.1M was used by EPA for satellite training, videos and 6 training centers, \$1.7M was given to MJOs and \$304K to the National Council On Aging (NCOA).
- EPA's portion of the monies (\$2.1M) was used to fund training delivery activities:
 - EPA established >100 satellite downlink sites across the country located at EPA Regional Offices, EPA headquarters, state agencies, community colleges and Indian tribes (6 sites total). Downlink sites were also at the state level.¹
 - EPA typically held 2 live broadcasts per year on select Clean Air Act topics from a studio at located at NC State University in Raleigh, NC.
 - The broadcasts:
 - Provided opportunities for interactive Q & A;
 - Showed prerecorded tapes; and
 - Provided train-the-trainer sessions for site coordinators.
 - EPA also supported the creation of area training centers at several universities around the country – Rutgers University, University of Tennessee-Knoxville (for

¹ There were several issues with satellite training, including connectivity interruptions, no interactivity, and the fact that agency training coordinators in some cases would turn on the satellite broadcast and leave the room, with students left with no facilitation to discuss agency specific applications of concepts that the training was providing.

MACT topics), University of Cincinnati, University of Illinois-Chicago, University of Texas-Arlington, and California Polytechnic State University (Cal Poly).

- EPA's self-instruction (SI) training offerings were originally located on EPA's Technical Training Network (TTN) website and were then later moved to the APTI website. SI courses were generally prerequisites to more advanced courses.
- In the 1990s, the Joint Training Committee (JTC) became an important resource for the national training program. During that period, STAPPA/ALAPCO (now NACAA) represented essentially all local and state air pollution control agencies in the United States. The local and state co-chairs of the STAPPA/ALAPCO Training Committee, along with the local and state training coordinators and other interested directors and staff, became known as the JTC. The JTC, along with EPA staff and MJO representatives, became the focal point in assessing training demand and funding needs and making recommendations to the STAPPA/ALAPCO Boards of Directors for annual training program funding amounts. Upon approval of the STAPPA/ALAPCO Boards, a specified amount of funding was sent to EPA for inclusion in the national STAG funds holdback process, which required such approval before distribution of funds. Later, with static funding amounts available, STAPPA/ALAPCO stopped taking annual action on training needs, allowing their standing decision to meet the state/local agency certification requirement for annual training holdback funding.

➤ **2000s: Program Growth Shifts**

- From the early 1990s to the mid-2000s, Lourdes Morales (of the Education and Outreach Group) played a key role in the management and growth of the training program. Initially, she was the International Training Coordinator, working mostly with Mexico as a result of NAFTA. Later she became the Group Leader.
- During her tenure, the program hosted annual training conferences for training site coordinators and the JTC.
- In 2002, the program made a significant shift and began to move certain training resources online.
- Instructional designer support came from several sources: Martha Strobel (EPA), universities, and a contractor (Isis Group, LLC)
- Subject matter experts were largely drawn from contractors, namely Isis.
- One new training effort that received a great deal of resources and support was "Air Toxics Now". Bob Schell (then contractor and EPA employee – now retired) was the Air Toxics Now host. The news magazine style broadcasts featured two or three different segments on air toxics topics of interest.
- During this period, state and local agencies objected to the diversion of substantial Section 105 (STAG) funds intended for state and local agencies to EPA; so, in the early 2000s, EPA's portion of training money (\$2.1M) was eliminated. The money instead was sent to the MJOs.
 - Slightly more than \$300,000 of the \$2.1M was also historically allotted to the NCOA program (now NOWCC). This funding level has been stable over the years. NCOA began receiving the funding during the CARB-to-NACT transition and

NCOA/NOWCC has continued to receive it under the NACT banner in more recent years.

- Training funding was initially weighted towards the NESCAUM region that had an established training academy and in the WESTAR region that has a large geographic area to serve. Funds in the early 2000s were slowly increasing to other MJOs while support was being maintained for the regional training centers. Around 2004-2005, a major funding issue arose relative to EPA's belief that MJO and regional training center funding should be competitively awarded. After much conversation and correspondence, this issue was resolved with an understanding that STAG funds approved by member agencies to fund MJOs did not have to be subject to competition. At that time, regional training center funds were eliminated and their previous allocations were reassigned to the MJOs according to a plan designed primarily by Mike Koerber and John Hornback. The reallocation continued to favor the established NESCAUM and WESTAR training programs but brought all other MJOs into alignment with similar allocations. Beginning with FY 2007 funds (that funded FY 2008 training activities), and since that time, the allocations have been as follow:
 - NESCAUM \$313,950
 - MARAMA \$252,153
 - Metro 4/SESARM \$252,152
 - LADCO \$252,152
 - CenSARA \$252,153
 - WESTAR \$367,500²
 - NCOA/NOWCC \$309,040
 - TOTAL \$2,000,000
- In the late 2000s, CARB stopped delivering NACT classroom courses to states outside of California and EPA began awarding a grant to NCOA to pay trainers in the Senior Environmental Employment Program to deliver this training.
- In 2005, EPA disinvested in training as priorities shifted and new funding was not available to meet those priorities. Much of EPA's training funding was redirected to other EPA initiatives.
- When funds were shifted, the MJOs became the primary administrators of the national training program.
- In 2011, to keep classroom component of the national air training program from being discontinued, EPA took over management of the NACT classroom training program operated under the grant to the NCOA SEE trainer program.

² WESTAR's training program was established in 1997. Western Air Programs were not receiving training on topics that were important to them. APTI training courses were "east-coast" focused (e.g., NOx for the acid rain program), and most of the courses were taught at Rutgers, University of Texas, University of Cincinnati, and CalPoly University (offered a limited number of training courses). As such, all of the staff at air bureaus in the western United States needed to travel to receive training. While the APTI Program served the needs of a many east of the Mississippi, the western United States was under served. As such, WESTAR worked with EPA to form and fund a western focused program.

- In 2012, EPA acquired and started operating a learning management system, APTI-Learn, for delivering online courses, tracking student training progress, housing classroom training materials and registering students for classroom training. The cost to acquire APTI-Learn was about \$110K for the first year. Ongoing maintenance expenses were approximately \$35K annually. The training program funded APTI-Learn's acquisition and maintenance with \$1M in funding from the EPA administrator in 2011.

➤ **2015-2019: Program Shrinkage, Maintenance, and Restart**

- After the mid2000s, the national air training program operated on a very small staff and very few dollar resources (contracts budget was less than \$150K). Staffing consisted of two EPA employees: Debbie Stackhouse and Eric Crump. Mary Ann Warner subsequently replaced Eric when he retired in 2015.
- With such few staff, EPA had a minimal ability to oversee the national program. EPA served as pass-through for grant funds. And Mary Boyer, a SEE contractor, in consultation with the MJOs, determined training needs for NACT courses, and developed and distributed training schedules for classroom instruction.
- During this period, for classroom instruction, EPA established procedures for tracking, processing, and approving SEE instructor timesheets and travel expenses for payment.
- EPA also established meeting management processes for JTC meetings – agendas, notetaking and action item follow up to improve their productivity. Previously, the meetings had been primarily discussion forums and were not outcome oriented. Activities during this period, included two JTC-EPA face-to-face meetings at EPA RTP.
- Products developed during this period included:
 - Three video-taped courses – Clean Power Plan, 2015 Ozone NAAQS Implementation and Oil and Gas.
 - Updating the most accessed and oldest course, APTI SI-105 Introduction to Air Pollution Control (renamed Introduction to Air Quality Management).
- In 2017, remarks made by OAQPS at the AAPCA spring meeting led the MJOs to begin evaluating possibilities of enhancing the national training program through adoption of more technology and other modernization. John Hornback, in particular, worked closely with the MJOs, EPA, AAPCA, and NACAA to advocate over the remainder of the decade for more resources, remote learning, and revisions to the JTC structure.
- In 2018, EPA's OAQPS hired a new Office Director who made it one of his priorities to revamp the national air training program following several extensive discussions with the MJO Executive Directors. The MJOs expressed concerns regarding their inability to get timely EPA technical review of training materials in the APTI-Learn LMS; therefore, they were each working with different versions of the same basic training courses. The OAQPS Office Director hired a new division director for the Outreach and Information Division in which the training program is located from an organizational standpoint.
- To carry out the Office Director's mandate to revamp the national air training program, the new OID division director, Anna Wood, directed the training staff to develop a training vision for the future and a road map for how to achieve that vision. In addition, the manager of the group in which the training team is located - Adam Baumgart-Getz -

put together a hiring plan, as well as a plan for projected resources necessary to achieve the vision and the road map.

- When presented with these plans, the senior managers within OAQPS responded positively and by and large awarded the training team the resources it needed to carry out a revamping of the program which began in earnest in 2019.

➤ **2020 and Forward: Program Restructure and Renewal**

- Using momentum after 2016 and especially beginning in 2018, the revitalization of the national training program gained speed. EPA added significant staff to the training program to implement the new training vision and roadmap. A Coordinating Committee was added to the JTC to provide decision making, guidance, assignments, and assessment, as well as to collect needs from local/state agencies and review progress on various projects. Four workgroups were formed under the Coordinating Committee to execute the training plan – Communications (originally Planning and Support), Curriculum, Delivery, and Learning Management System. With EPA's invaluable assistance, this hierarchy, as periodically adjusted, continues to function successfully in improving delivery of required training to a broader universe of air quality professionals across the nation.
- The training team is now carrying out a new program that include a new set of eight air curricula, a new learning management system and a staff that is becoming increasingly knowledgeable and able to develop trainings on its own.
- The EPA training team is supported by the MJOs, and various state and local subject matter experts will be used to implement the program.

Select Historical Topics

➤ **National Air Compliance Training (NACT) Classroom Training – from California Air Resources Board (CARB) to Senior Environmental Employment (SEE) trainers**

Development of the National Air Training Instruction Program

- In the 1980s, when EPA training funding was cut, CARB, which oversees air quality management for the State of California, and the local air districts across California, decided to its own air training program to better meet California's needs.³
- During this time, CARB's classroom training program was initiated.
- When OAQPS chose not to continue classroom training delivery for the entire U.S., CARB decided to build its own program to mirror EPA's training program. Four to fifteen 100 level courses (and one 200-level course) were developed at CARB and the districts. They were delivered in CA in 2-wk segments by 10 CARB trainers. They included air compliance and enforcement training, NACT.

³ California's rules were, and still are, so different and stringent compared to federal rules (which APTI training courses focused on, rightfully so) that APTI training courses didn't help California staff. As such California had to set up a training program for their staff.

- CARB was the chief funder of the air classroom instruction program, with a small contribution from EPA's Region 9 office.
- John Rasnick was the division director for the OAQPS division that was responsible for the air training program at the time; he was previously a trainer for CARB.
- STAPPA/ALAPCO had a training committee with a state co-chair and a local co-chair. Mary Boyer, CARB compliance training program lead at the time, was the state co-chair for the committee, followed by Mike Dowd (Virginia), along with their local co-chair Charles Lagges (Cook County, Illinois), and later Cory Chadwick (Hamilton County, Ohio).
- The JTC became a working group with EPA and the state and local co-chairs.
- In the early 1980s, Mary Boyer attended a STAPPA/ALAPCO training meeting in Florida. At that meeting, the Florida director, Ivan Cherinenko, asked if it was possible to export CARB's courses out of state. That was the beginning of delivering courses outside of CA.
- A non-profit agency, California Air Pollution Control Association (CAPCOA), was used to help facilitate paying the instructors' travel costs. The instructors at that time were only CARB staff. Over time, it became costly for CARB to travel out-of-state, so states contributed \$5K to CAPCOA for a one-week training to cover CARB travel. (CAPCOA took a 10% administrative fee and CARB received the balance.)
- It was challenging to manage this process, as well as have CARB continue to provide trainers, so the decision was made to use NCOA as the agency to pay for the travel and salaries of SEE trainers. CARB discontinued using their staff to train outside of CA in the early 2000s. SEE trainers delivered CARB training material that CARB updated.
- By 2002, the CARB/NACT course library was well-established.
- In 2002, CARB was receiving EPA and STAG funding for the training for only CA training courses.
- Mary Boyer discussed training needs with the STAPPA/ALAPCO board and CARB ended up being funded by EPA via the section 105 grant. Funding over time increased to the current level of \$309,940. (CARB never received any section 105 grant money to do the national training program.)
- Mary Boyer discussed training needs with the STAPPA/ALAPCO board and CARB ended up being funded by EPA via the section 105 grant. Funding over time increased to the current level of \$309,940.
- CARB began prohibiting out-of-state travel, so EPA, with approval from the JTC and NACAA Board, started taking a portion of the 105 grant money off the top to fund SEE trainers through NCOA; CARB still updated, printed and distributed training materials to students (states did not want EPA's old training material) and oversaw approval of travel expense reports and timesheets.
- CARB's trainers trained almost exclusively in CA and the NCOA SEE trainers trained in the rest of the country

Changes at CARB

- Mary Boyer retired in 2010 and was rehired as a SEE trainer/program administrator in 2011 through NCOA, an organization that supplies EPA with skilled professionals who are 55+ years of age, some who served as trainers via an EPA grant arrangement.
- In 2011, CARB decreased the funding for the CA air training program and decreased the number of CARB trainers. CARB stopped managing the NCOA grant.
- So, in 2011, EPA took over management of the NCOA SEE trainer program to keep it from being discontinued. Mary Boyer has always administered it. Until 2019, EPA mostly passed through funding. CARB stopped updating the classroom training materials; OAQPS has not generally been updating the training materials. EPA never passed through funding to the CARB for this program. CARB continues to update the courses they conduct in CA.
- In 2018, the National Older Workers Career Center (NOWCC) took over operation of the SEE trainer grant when NCOA decided not to participate further in the SEE program.

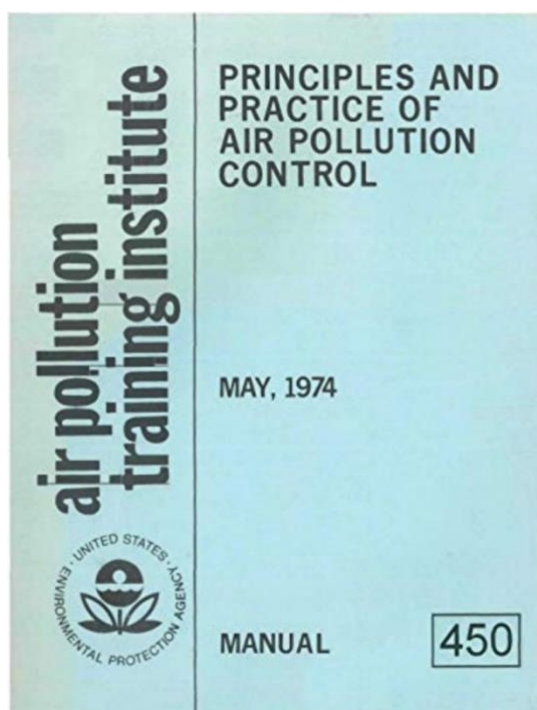
➤ **MJO Training Program – early 2000s to the present**

- In the early 2000s, MARAMA, Metro 4/SESARM, NESCAUM, WESTAR and CARB all had training programs.
- LADCO was focused on specific programs, e.g., SIP planning; when training grant money was made available, focus shifted to training.
- LADCO states liked LADCO-arranged classroom training because:
 - Subject matter was important
 - LADCO hired good trainers
 - The training provided an opportunity for collaboration between state air pollution professionals while at the training classes, e.g., BACT review
- Mike Koerber established and chaired the LADCO training committee after receiving training grant funding.
- In 2003 CenSARA hired a full-time training coordinator to contract with various universities, California Air Resource Board (CARB), and private organizations to develop and present training to the membership. Training dramatically increased course offerings and in fiscal year 2008 and CenSARA has presented over 500 courses to the membership since that time.
- Central states did not organize as an MJO until they needed to address regional haze.
- During this period, western states focused on regional haze and had somewhat of a training program, but CARB had the most substantial training program. These states used their grant money solely to provide classroom training; they did not hire training staff. Instead, they found and hired good contractors to deliver training.
- Specifically, by 2000 WESTAR's training program was offering 10-15 trainings per year. CARB definitely had the most substantial and popular program. The Regional Haze Program was run under WRAP at the time, not WESTAR. WESTAR was focused on the training needs of our agencies. WRAP was focused on the Regional Haze Program.
- LADCO states/locals did not participate in EPA satellite downlink trainings because of travel limitations to downlink sites; LADCO did not use CARB trainers or SEE trainers because the examples used were specific to CA.

- LADCO participated in university-sponsored trainings at University of Illinois Chicago (EPA training center).
- The Southeast established a training program in 1997. They used the University of Florida as a training grant recipient in the early years but by the late 1990s, Metro 4 was receiving grant funds for local/state agency training. In the mid-2000s, EPA Region 4 required that grant funds be split between Metro 4 and SESARM at which time two coordinated grants became active. In 2020, all Southeast MJO air grants were re consolidated, this time in a single SESARM grant.
- APTI-Learn never achieved the functionality that it promised, particularly with regard to reporting, and CenSARA built its own LMS to manage its own registrations and reports.

Historic APTI and Other Training Images

https://www.youtube.com/watch?v=nK-rXD4fbkM&feature=emb_title





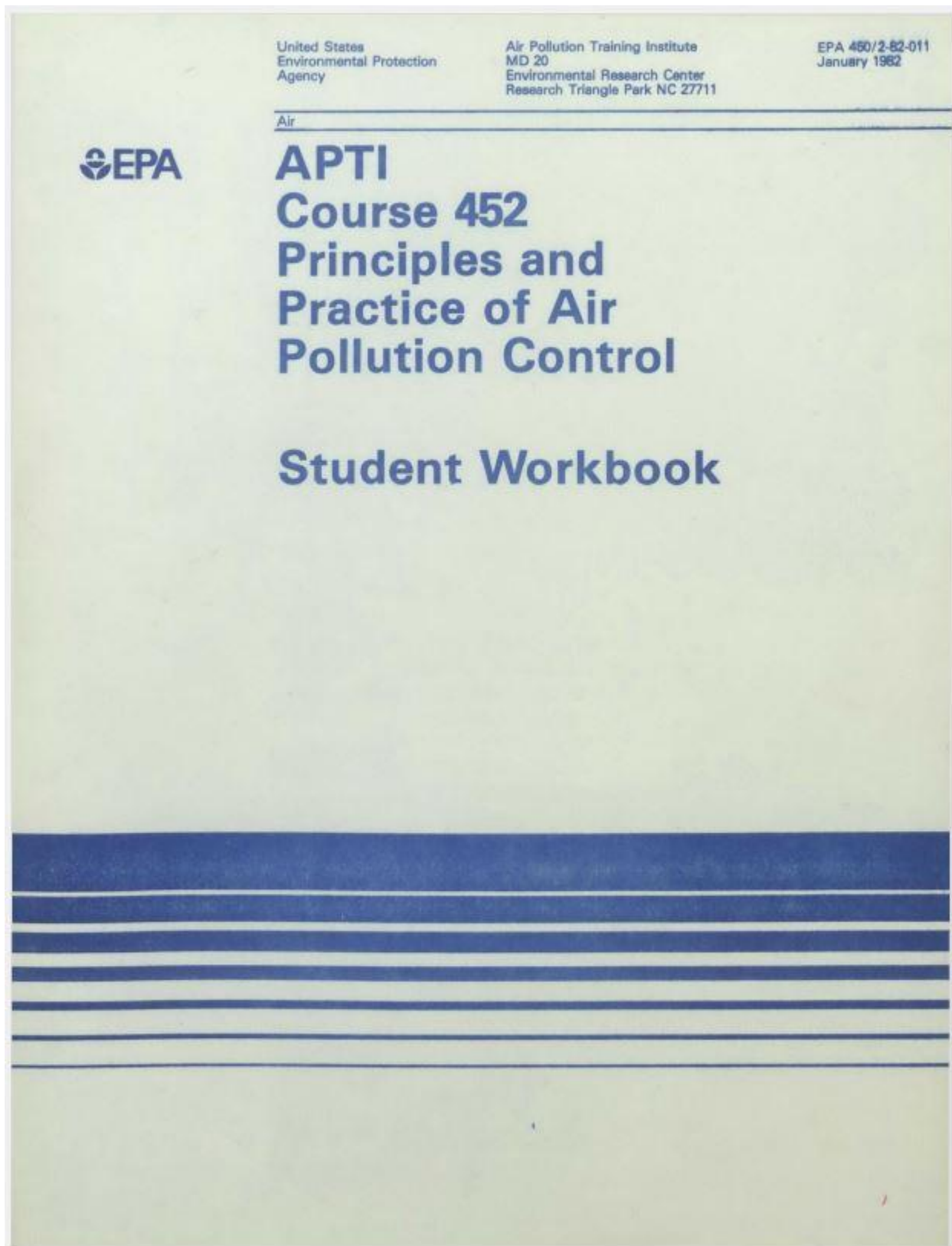
Air Pollution Dispersion Models:
Applications with the AERMOD Modeling System

AERSCREEN

COURSE #423
DAY 4 MORNING

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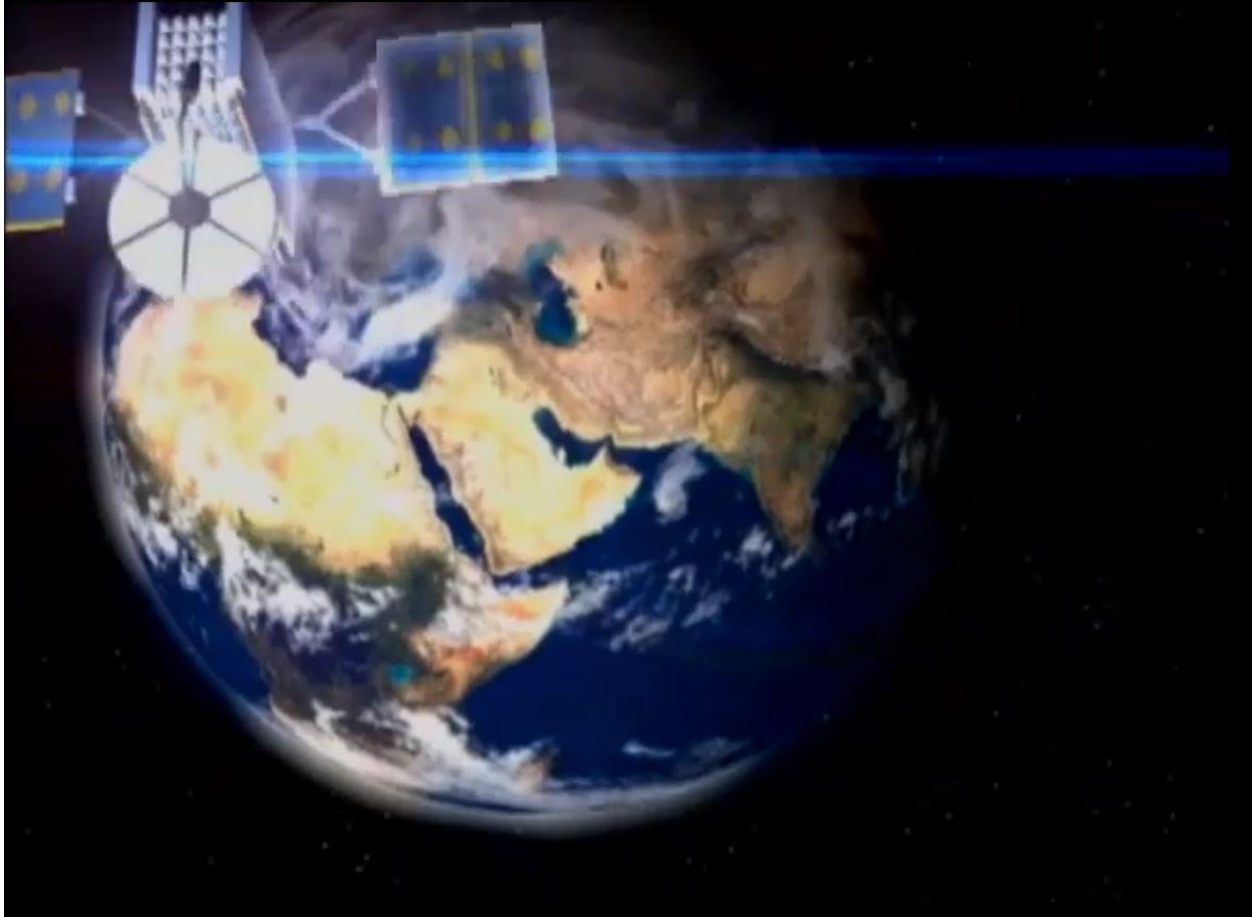


☰ Area Source Boilers Reporting and Recordkeeping Module 4









APTI V109 Module 1 Air Quality Data and Tools

A small image of the Earth as seen from space, showing blue oceans and white clouds, positioned in the upper left corner of the slide.

Air Quality Data & Tools for the Ozone Season and Beyond

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As of November 2001