



# **Results of Benchmarking Study**

**Environmental Protection Agency  
Air Pollution Training Institute**



## Purpose of Project

- **Conduct a benchmarking study of the Air Pollution Training Program**
  - 1) Evaluate the current Air Pollution Training program (Task 1)
  - 2) Identify best practices of leading training programs (Task 2)
  - 3) Determine options and a plan of action for improving the current Air Pollution Training program (Task 3)



# Benchmarking Study Methodology

- **Task 1 - Evaluate current APTI training program**
  - Subject matter expert interviews with key stakeholders and APTI team
    - Over 20 interviews conducted
  - Review of APTI documents, web site, and training materials
  
- **Task 2 – Identify best practices of leading training programs**
  - Site visits with five organizations recognized as industry leaders in training and distance learning
  - Literature review
  
- **Task 3 – Determine options for improving the current Air Pollution Training program**
  - Highlight gaps between current and industry leading training programs
  - Provide options for moving APTI forward
    - Long-term changes
    - “Quick Fixes”



# Results and Options for Moving APTI Forward

- 1) Training Needs Assessment Process**
- 2) Training Design and Updating**
- 3) Training Delivery Methods**
- 4) Training Evaluation Process**



# Training Needs Assessment Process

## Current APTI Program

- Regular needs assessment provides limited information
  - Focuses primarily on likelihood to attend existing classroom courses
  - No competency or skill component
- No recent *strategic* broad-based needs assessment
- Data not consistently used to develop and update courses/offerings

## Industry Leader Programs

- Competency/skill assessment included as part of needs assessment
- Needs assessment data instrumental to decisions about training content and delivery methods



# Options for Improving the Current Needs Assessment Process

1. **Conduct a broad-based needs assessment to redefine APTI's role and scope**
  - Purpose is to determine:
    - Extent to which APTI is providing the right mix of courses and offerings to meet customer needs
    - What types of training and outreach APTI should be delivering and to whom
  - Solicit input from key APTI customers/stakeholders on:
    - Competencies/skills required for air professionals to be successful and those currently available
    - Whether critical competencies/skills should be provided by APTI (or could be obtained through other sources)
    - Most effective ways to deliver training to air professionals
  - Benefits
    - Determine which courses/offerings should be retained as is, updated, eliminated, and what new ones should be developed
    - Allow APTI to focus its limited resources on those courses/offerings most needed by air professionals and other key customers



## Options for Improving the Current Needs Assessment Process

### **2. Continue to conduct regular needs assessments**

- Move beyond “likelihood to attend classroom courses”
- Keep a pulse on whether APTI is meeting existing/new needs
- Conduct every 1 – 3 years



# Course Design and Updating

## Current APTI Program

- APTI training group may not encompass all key roles\*
- Lack of consistent standards and processes for designing and updating courses
- Some courses viewed as out-of-date or of poor quality

## Industry Leader Programs

- Course development is the responsibility of a core team made up of key roles\*
- Consistent standards and processes for designing and updating courses

\*Note: “Key roles” include subject matter experts, script writers, instructional design experts, technical experts, editors, and project managers



# Options for Improving Course Design/Updating

## 1. Create course content and development teams that encompass all key roles

- Examine roles and skills of current APTI team and determine gaps
- Acquire new roles/skills where necessary
- Provide additional training for team members
- Use contractors, as needed

## 3. Create and document a systematic process for designing courses

- Apply criteria to determine delivery media
- Define frequency/types of interactions for courses/offerings
- Require rehearsals for live broadcasts
- Pilot test all self-paced Web and classroom courses

## 2. Conduct a quality review of all course materials before they are distributed to trainees (e.g., check for typos and incorrect information)

## 4. Create and document a systematic process for reviewing/updating courses

- Timeline and schedule for course review
- Review team
- Automatic review notifications
- Communication plan



# Training Delivery Methods

## Current APTI Program

- Emphasis on classroom courses; satellite broadcasts for distance learning
  - Large portion of courses require air professionals to travel to complete training
  - Satellite broadcasts not viewed as effective
- A blended approach has not fully been adopted
- Opportunities for interaction in distance learning courses are limited and not taken advantage of
- Instructors are not always effective at delivering training in a given medium

## Industry Leader Programs

- More use of distance learning methods (particularly Web) versus classroom as the primary training delivery method
- Courses delivered via multiple methods (blended approach)
- Innovative methods to incorporate interactions into distance learning courses
- Instructors complete training before delivering courses



## Options for Improving Training Delivery Methods

### **3. Ensure synchronous distance learning courses provide sufficient opportunities for interaction**

- Evaluate current and past opportunities for interaction in satellite broadcasts
- Determine new ways to provide opportunities for interaction during broadcasts
  - Incorporate open telephone line during broadcasts
  - Create chat rooms
  - Provide trainees with an e-mail address for sending questions during a live Web session (if adopted)
- Ensure methods for incorporating interactions are effective
  - Publicize opportunities to interact
  - Establish proper etiquette
  - Use screeners and technology monitors to review incoming questions
  - Develop discussion questions prior to the broadcast
  - Follow up on unanswered questions



## Options for Improving Training Delivery Methods

4. **Improve the effectiveness of self-paced Web courses by enhancing opportunities for interaction**
  - Incorporate real-world simulations and case studies
  - Incorporate quizzes and assessments
  - Create engaging material
  - Use chat rooms or Web boards
  - Facilitate cohort-based training



## Options for Improving Training Delivery Methods

### **5. Ensure instructors have the tools and skills to teach**

- Select instructors with:
  - Subject matter expertise
  - Applied field experience
  - Experience in medium of course delivery
- Consider using professional speakers with subject matter experts to answer questions
- Provide instructors with standard guidelines for training in a particular medium



# Options for Improving Training Evaluation Process

## 1. Increase the effectiveness of level 1 evaluations

- Improve evaluation instruments
  - Add open-ended questions to determine:
    - Why the course was effective/not effective
    - How to improve the courses and the way it is delivered
  - Evaluate all courses/offerings regardless of the delivery medium (including self-paced Web)
  - Follow up on less favorable evaluations
    - Obtain additional feedback through interviews





# Options for Improving Training Evaluation Process

## 2. Expand beyond level 1 evaluations

- Plan for long-term evaluations
- Gain buy-in from key stakeholders
- Begin to evaluate learning transfer (level 3)

## 3. Create a process for monitoring/using data to make improvements

- Develop a systematic feedback process and set minimum course standards
  - Create a centralized database
  - Evaluate data for trends and make comparison among courses
  - Feed results to:
    - Those responsible for designing/updating courses
    - Course participants



## Recommended Next Steps

- **Discussions with APTI leadership, staff and other key stakeholders to determine the best options to implement**
  - Begin to define desired end state
  - Translate recommendations into actionable initiatives
  - Illustrate costs/benefits of recommended options
  - Prioritize short- and long-term actions
- **Conduct broad-based needs assessment to:**
  - Validate and further define the direction APTI should take in the future
  - Make decision about long-term options to adopt
- **Collect additional information about the feasibility of considered options**
- **Create change plan (e.g., timeline, accountabilities) and gain buy-in**
- **Implement change**
  - “Quick wins”
  - Long-term changes



## Learning More About the Benchmark Study

Study can be found at the Site Coordinator Resource website

<http://epa.gov/air/oaqps/eog/apti/admin.html>