

**POST-CONFERENCE PROCEEDINGS  
WORKSHOP SESSION SUMMARY  
NIEHS NATIONAL TRAINERS' EXCHANGE  
MARCH 2012**

**1. Session Title and Presenter's Contact Information**

"A Unique Leadership Course for Hazardous Materials Workers"  
Texas-Utah Consortium for Hazardous Waste Worker Training  
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**2. Workshop Summary**

Workshop participants are asked to collectively identify the skills needed for HAZWOPER-trained workers to progress to leadership positions, especially as they pertain to safely and successfully responding to hazardous waste or disaster events. After the responses are collected, a description of our novel Hazardous Materials Leadership Course is provided. The Hazardous Materials Leadership Course is a unique 16-hour, 2-day course designed for individuals wishing to progress professionally into positions of leadership within the HAZWOPER community. The course addresses the skills commonly identified as lacking among individuals wishing to ascend to leadership positions. The focus of the training is to develop or enhance skills related to management, leadership, data collection and analysis, presentation development, and hazard communication. Specific topics include:

- An overview of how the HAZWOPER paradigm has changed over time
- HAZWOPER performance measures and metrics
- Introduction to risk management and insurance
- Effective communications and communicating with data
- Basic security concepts for HAZWOPER operations
- Effectively managing the "under-exposed"
- Leadership scenarios/group exercises
- Professional development pathways for HAZWOPER leaders.

The course was created by the Texas-Utah Consortium for Hazardous Waste Worker Training (TUCHWWT), which is a partnership between The University of Texas School of Public Health's Southwest Center for Occupational and Environmental

Health and The University of Utah's Rocky Mountain Center for Occupational and Environmental Health. Feedback from course participants to date has been extremely positive. Comments have also resulted in slight adjustments to course content.

### **3. Methods**

Various needs assessments within the health and safety professions have indicated a lack of certain necessary leadership skills (NIOSH 2011). While we focus our collective attention on providing training so that work can be carried out safely, we do not typically spend time training individuals on how to effectively communicate or advance professionally. The issue of being able to articulate the value of preventive activities is critically important in the field of safety, because on a good day "nothing happens", but we unfortunately do not train individuals on how to effectively measure and articulate the value of prevention.

The Hazardous Materials Leadership Course begins with having participants list what they feel are the necessary knowledge and skill sets to ascend to leadership positions in the field. Inevitably, the comments center on topics such as communications, management, interpersonal skills and an understanding of finances.

The course then launches into a series of presentations covering these points. Specific segments include:

- An overview of how the HAZWOPER paradigm has changed over time
- HAZWOPER performance measures and metrics
- Introduction to risk management and insurance
- Effective communications and communicating with data
- Basic security concepts for HAZWOPER operations
- Effectively managing the "under-exposed"
- Leadership scenarios/group exercises
- Professional development pathways for HAZWOPER leaders.

Upon completion of the bulk of the presentations, participants are broken into groups of 3 to 5 individuals and are provided scenarios and a series of questions to discuss and answer. During the course, 4 different scenarios are provided, focusing on a physical hazard, a chemical hazard, a biological hazard and a radiological hazard. The questions provided are derived from various applicable regulations, focusing specifically on required knowledge. For example, the participants are asked to discuss and answer the following questions associated with a spill of formalin in an analytical lab supporting an environmental restoration project (an MSDS is provided upon request):

1. Identify the hazards present in this situation and the exposure pathways.
2. What are the safety and health risks present in the situation?

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3. What are the possible symptoms or indications of exposure to the hazards identified?
4. What resources might be used to gain more information about this hazard?
5. What actions should be taken to secure the site of the event?
6. What personal protective measures or equipment would be appropriate?
7. What other personnel should be contacted?
8. How should the hazardous material present be handled and disposed of?
9. How might the area be restored for its original use?
10. What medical surveillance and post exposure follow-up might be appropriate for the persons involved in this event?
11. What considerations should be included or enforced in the facility exposure or emergency control plan to aid in preventing such an event? Specifically address any engineering controls that might be used in the future.
12. What regulation(s) are applicable in this situation?

Additional discussion questions are not derived from the regulations, but are more focused on the leadership topics covered in the course material. For example:

13. Would this loss be covered by insurance? How would you know?
14. What data would you collect during and after the event?
15. How would you communicate this information visually?
16. How would you communicate to people who thought they may have been exposed, but likely were not?
17. What would the likely questions from the media be?

#### **4. Main Points**

The major points covered in each presentation in the two-day course include:

- How the HAZWOPER paradigm has changed over time

This is a discussion of the origins of HAZWOPER and its primary application in hazardous waste site operations (the “HAZWOP” portion of HAZWOPER) and a recent shift to its prolific use in emergency response and recovery (the “ER” portion of HAZWOPER).

- HAZWOPER performance measures and metrics

The discussion centers on the information that should be collected and presented on program activities and outcomes, rather than the information that is assembled for regulatory purposes. The importance of relating the information to key denominators such as hours worked, waste volumes collected or area physically supported is also covered.

- Introduction to risk management and insurance

Since many emergency situations eventually will involve some insurance claims, the basics of risk management and insurance are covered so that aspiring leaders will understand what sort of data is typically needed to achieve successful recovery for covered perils.

- Effective communications and communicating with data

Merely assembling performance measures and metrics is insufficient – the ability to display data in a way that others can readily understand it is equally important. This segment of the course speaks to the science and art of effective data displays and showcases a series of real-world data display make-overs.

- Basic security concepts for HAZWOPER operations

While many workers receive training in safety, many do not receive formal training in the basics of security. This session focuses on the basics of security and the simple things that any worker can do to enhance security in their worksite.

- Effectively managing the “under-exposed”

Although it is appropriate to focus on efforts towards protecting individuals who may be exposed to an agent at or above a regulatory limit or recommended threshold value, there is often little or no discussion on how to effectively manage those individuals who may be exposed to very low levels of an agent but still hold apprehensions. This course segment focuses on the proper management of such individuals.

- Leadership scenarios/group exercises

Four problem-based learning scenarios are provided for small group work, addressing four categories of risk: physical, chemical, biological and radiological. The questions to be answered address both regulatory requirements and leadership aspects.

- Professional development pathways for HAZWOPER leaders

The benefits of active involvement with professional societies are discussed along with a description of options for furthering academic accomplishments and the pursuit of board certification.

Feedback obtained from the first edition of the course indicated a strong interest in information on stress-related concerns for hazardous materials workers. Based on this feedback, the course content was subsequently modified to include a segment

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entitled “Contemporary Considerations and Emerging Research in Critical Incident Stress”. This session describes what critical incident stress is, the signs and symptoms of its manifestation, and techniques for prevention and coping. Feedback from participants in subsequent editions of the course specifically noted the welcomed inclusion of this topic.

**5. References**

Centers for Disease Control and Prevention National Institute for Occupational Safety and Health National Assessment of Occupational Safety and Health Workforce, October 2011. Available at <http://www.cdc.gov/NIOSH/OSHWorkforce/>.

**6. Workshop Handouts/Resources**

See presentation files uploaded to Clearinghouse website.