



NIEHS WETP Awardee Meeting

December 3-5, 2003
Research Triangle Park, NC

NIEHS WETP

Awardee Meeting and Technical Workshop

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Training from the Inside Out: Assessing and Refining Our Programs

Proceedings of the NIEHS Worker Education and Training Program
December 2003 Meetings

Produced by the National Clearinghouse for Worker Safety and Health Training
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I. Welcome and NIEHS Update

Facilitators: Joseph Hughes, Sharon Beard, Ted Outwater, Patricia Thompson, and Carolyn Mason, NIEHS

The NIEHS staff provided updates on the significant progress made by the WETP over the years. Patricia Thompson pointed out that the hazardous waste worker training had delivered 61,690 courses, reaching 1,146,775 workers, accounting for over 16 million contact hours of health and safety training. Nearly 2.5 million of those contact hours were delivered in the WETP training programs at the Department of Energy (DOE). Sharon Beard and Ted Outwater reviewed the many training initiatives since the 1999 RFA including the Superfund Job Training Initiative, the use of advanced training technologies for worker training, Integrated Safety Management initiatives at DOE, and new models for low literacy training.

II. Clearinghouse Update

Facilitators: Bruce Lippy and Kerry Murray, National Clearinghouse

Bruce Lippy, Director of the National Clearinghouse for Worker Safety and Health Training reviewed the new staff that had been hired by MDB, Inc. the operator of Clearinghouse. He also described how the Clearinghouse is actively promoting the work of the entire WETP network by speaking at major conferences. Technical staff from the Clearinghouse had spoken at nearly a dozen conferences since the NIEHS Trainers' Exchange in March, including an international conference on environmental management in Oxford, England.

III. Setting the Stage for the Roundtables on Organizational Effectiveness and Challenges and Emerging Issues

Speaker

Glenn Paulson, UMDNJ School of Public Health

Dr. Glenn Paulson, Professor in the ENOH Division, also serves as Acting Associate Dean for Research for the UMDNJ School of Public Health. His expertise and experience cover both the science and the policy of a wide spectrum of environmental and occupational health issues. He has served as a member or chairman of numerous advisory boards for federal, state and local agencies, as well as on many National Academy of Science panels.

Summary of Presentation

Glenn Paulson, who has served as Chair of the Champions Panel during the WETP Strategic Planning process, examined several challenges and opportunities associated with workforce safety and training. Mr. Paulson maintained that although noticeable overlap exists between enduring and emerging challenges, there is still much to be learned in addressing both. He listed common challenges as shifts in the job market, changes in the workforce, workplace safety, instructor burnout, culture wars, and funding.

Dr. Paulson then talked about new areas of concern ranging from mold and mildew remediation, counter-terrorism awareness, and emergency and public health preparedness. He pointed out that planners and awardees could best prepare to meet such concerns by actively seeking and developing new relationships among one another. He further emphasized that the diversity in size, skill, and talent of awardees and their organizations could be a great benefit towards the stability and increased active support for WETP in the long-term.

Finally, Dr. Paulson concluded with a discussion about the Academic Centers for Public Health Preparedness (A-CPHP) program. A-CPHP is positioned as a national system that would provide a continuum of accessible learning opportunities for frontline workers throughout their careers. If established, such a system could play an integral role to broaden efforts to advance the public health system, develop effective medical countermeasures, and respond to bioterrorism incidents should they occur.

IV. Program and Organizational Effectiveness: Lessons Learned/Lessons Shared

Facilitator

Craig Slatin, The New England Consortium (TNEC)

Craig Slatin introduced the session by challenging the audience to think about effective methods to introduce diversity to and support of training program personnel. Mr. Slatin commented that most of the awardees, as training providers, also function as service providers. More so, in order to successfully build the capacity of the workplace to meet employee health and safety conditions, emphasis and attention must focus beyond training alone.

- A. *Midwest Consortium for Hazardous Waste Worker Training: Annual Self-Audit*
Speaker: Carol Rice, Midwest Consortium

Summary of Presentation

Carol Rice discussed the benefits of using an internal self-audit to assure quality control and assurance. Since 1994, the Midwest Consortium's self-audit allows for review of complex training center operations and progress, identification of potential problems, clarification of pending needs, and the establishment of new benchmarks. The self-audit, required by NIEHS, is also reviewed during the competitive renewal process.

Ms. Rice then outlined the six main content elements of the self-audit. These include assessment of Consortium policies and procedures ranging from annual trainer meeting to ANSI standards; training programs such as the 40-hour site worker and 24-hour operations-level emergency response refreshers; evaluations; new products; required reports such as the Competitive Renewal and the NIEHS annual report; and marketing tactics.

The outcomes of the self-audit are then reviewed for several key features. First, responses are compared for expected versus actual results. Second, areas requiring change are identified. Finally, action items and plans are documented. Overall, the self-audit serves as a tool towards achieving consistency and tracking compliance with procedures and policies.

B. Laborers-AGC Education and Training Fund
Speaker: Cindy Herleikson, Laborers-AGC

Summary of Presentation

During her presentation, Cindy Herleikson demonstrated how consortia can be used, organized, and managed to best address an organization's goals. Since its conception, the Laborers-AGC program has expanded to twenty-two EPA and seven DOE regional training sites. To manage this growth, Laborer's engaged in contractual arrangements that provide assistance with program oversight, which can be divided into two categories: administrative and programmatic. Ms. Herleikson then discussed the differences and importance of both categories.

Administrative oversight, executed through legal documents, detailed policies, financial reporting, and accurate data, ensures that consortia programs remain on time and focused. Laborer's employed these tactics in the following ways. Agreement letters document governing rules, services provided, budgets, and time frames. Consortia policies highlight details of meetings and site visits. Financial reporting accounts for reimbursement requests, supplies, financial status, and internal audits. Finally, training data, based on course applications, provide a timely reference for future analysis.

Continuing her discussion, Ms. Herleikson described programmatic oversight as a means to make certain that minimum criteria are met to ensure quality control. She highlighted several instances that Laborers-AGC promotes programmatic oversight. First, its policy manual guides what can be done and how it should be done within the organization. Next, an HW Advisory Board, comprised of a quality assurance quality control committee, manages a monitoring plan for the organization. Finally, instructor training provides refresher and train-the-trainer opportunities while set program evaluations allow for peer reviews, technical assistance updates, and course/instructor evaluations. Overall, diligent attention towards administrative and programmatic oversight facilitates the effective operation of awardee programs.

C. Establishing a Focus

Speaker: Tom McQuiston, Paper, Allied-Industrial, Chemical and Energy Worker International Union

Summary of Presentation

Mr. McQuiston's presentation highlighted the importance of advancing organizational competency and capacity with other organizations for the overall success of the Worker Education and Training Program. The Paper, Allied-Industrial, Chemical and Energy Worker International Union supported this notion when reviewing its current strategic plan. PACE emphasized that in order to advance human capital interests, leadership development, and other organizational issues, there should be an explicit effort to encourage competency and capacity in strategic plans.

Mr. McQuiston proposed a straightforward process for organizations to follow when contemplating new methods for competency and capacity building. Organizations should first refer to and assess their internal program administration, delivery, and evaluation as well as

methods to better serve their diverse target audiences. After this understanding is achieved, organizations should then look towards gaining consensus with other organizations or grantees. It is this sharing of knowledge that will effectively contribute towards competency and capacity building within and among organizations.

V. Concurrent Sessions

A. Business Official Meeting

Speaker: Carolyn Mason, NIEHS

B. Program Official Meeting – Challenges and Emerging Issues

Facilitator: Ted Outwater, National Institute of Environmental Health Sciences

Speaker: Don Elisburg, National Clearinghouse

Summary of Presentation

The program official meeting served as an open forum to address new issues and to examine broad questions associated with WETP. Don Elisburg began his presentation with two observations. First, he reminded the audience that the Program is not an entitlement for any individual as its funding is at the mercy of the administration. His second observation was to be mindful of the reality that lies between great visions. Mr. Elisburg compared the Program to a maturing family business to elucidate this point. By asking if the Program has changed since its inception, if leadership influences are internal or external, if components should be let go or held onto, and if the understanding of the market has shifted, those affiliated with WETP can better prepare themselves for necessary adjustments related to evolving priorities.

Mr. Elisburg continued his discussion of challenges and emerging issues by referring to environmental justice, future funding, and innovative thinking. He emphasized that those working on training programs should collectively be more proactive at addressing diversity and reaching out for new funding sources, a message shared at Brownfields 2003 held in Portland, Oregon. Mr. Elisburg also pointed out that shifting priorities and markets must be considered when strategically planning. As cleanup moves away from Superfund sites to other target markets, programs expand, and terrorism and weapons of mass destruction increase in importance, planning must incorporate innovative training, outreach, and funding opportunities.

With optimism, Mr. Elisburg noted that even though funding for the Program has been static over the past ten years, the expectation of the Program being funded for that length of time is exceptional. The Program's success is exhibited through the lack of data on injury, sickness, and morbidity, which is testimony to the goal of protecting worker safety and health.

At the conclusion of Mr. Elisburg's presentation, the floor opened for candid discussion. Question about 1910.120, training personnel standards, minority workers and HAZWOPER, and financial allocations were among those asked.

VI. Keynote Address: Perspective on Emerging Issues for Worker Training

Speaker

Dr. Eula Bingham, Midwest

Dr. Bingham has been a strong supporter of worker training and the NIEHS program for many years. She is a professor of Environmental Health in the College of Medicine at the University of Cincinnati where she received her Ph.D. in a program of physiology, ecology and biochemistry in 1958. She served as the Assistant Secretary of Labor, in charge of OSHA, from 1977 to 1981 under the Carter Administration. Her current research interests include the medical screening of construction workers at DOE nuclear weapons production sites who may have been exposed to a wide range of hazards including radiation, toxic chemicals, and noise.

Summary of Presentation

Dr. Bingham, who has been involved with the NIEHS program since its inception, reviewed the history of worker training grants. The precursor to the NIEHS grant program was OSHA's New Directions Grants, which the agency began under Dr. Bingham's direction. Dr. Bingham noted the Don Elisburg had been instrumental in getting this grants program in place at DOL .

Dr. Bingham listed the key themes that represent the underpinning of the successful worker training program managed by NIEHS:

1. Maintaining human capital and leadership

Dr. Bingham reinforced the importance of strong management of grants programs. Besides providing better quality control, it is one of the main interests of federal auditors. She also praised the participatory training aspects of the program, which she learned about from Tony Mazzocchi and the labor movement.

2. Focusing on the Changing Workforce

The American workplace is changing so dramatically that we need to reconsider our training goals in the future. For instance, diversity is a better word than minority because Latinos have become the majority among some workforces. There has been a major technological shift and the manufacturing jobs that we have lost will never be coming back. Our approaches to protecting workers must reflect these changes if we want to remain relevant.

3. Keeping Prevention at the Forefront

Dr. Bingham applauded the previous discussions on making sure our programs keep prevention as a focus. She pointed out that this is what we have always been about, even if we used other terms, like empowerment. Prevention of exposures is far more valuable than training workers to protect themselves from hazards in the workplace that can be corrected.

4. Assuring Financial Support

This was first on her list. There are no programs without money. There is very little money out there for training of workers and the first thing to go during a downturn is money for health and safety and training. Dr. Bingham expressed concern about the potential for misuse of Homeland Security funding. She felt the states are going to plug these funds into other areas, given the budgetary problems being felt by all states. She suggested that in the future, more funding will come through the political process rather than through grants, but unions (rather than universities) are well positioned to obtain funding through this approach.

5. Increasing Recognition of the Program

Dr. Bingham felt that this is a great program, but the profile needs to go way up. She suggested an article in a major news magazine like Time where the public will see it and publication in journals where Homeland Security and FEMA will see it. She argued for more aggressive publicity of the good works of the program, such as having students or instructor write individual letters to their local Congressman, about the program. She stressed it shouldn't be form letters.

6. Embracing Diversity

Dr. Bingham pointed out immigration was the greatest movement of the 20th century and the program needed to highlight the excellent work done by awardees to ensure environmental justice and to provide career opportunities to minorities. These programs should be expanded.

7. Increasing sophistication of terrorism

Dr. Bingham sounded a warning in the area of future acts of terrorism, pointed out that most terrorist acts, like car bombs, are low technology, but we should plan for much higher tech acts. The programs training should incorporate this approach.

VII. How Has the NIEHS Worker Education and Training Program Adapted to Address Diversity, Outreach and Cultural Competence?

A. Characteristics & Relative Risk of Occupational Fatalities of Hispanic Construction Workers

Speaker: Jim Platner, Ph.D., Center to Protect Workers' Rights

Summary of Presentation

Jim Platner discussed the occupational fatalities and non-fatal injuries among Hispanic construction workers. Through some statistical data, he described the characteristics of Hispanic Construction Workers. Because the majority of Hispanic workers are recent immigrants to the United States, trainers should take that barrier into account. In addition, he explained that the Hispanic construction workforce is considerably younger (average of 5 years) than non-Hispanic

workers, and that they could become the emerging majority in the construction workforce due to continuing immigration. Another barrier to training is the fact that Hispanics have less education, and that literacy can be a bigger challenge than the language barrier. The majority of Hispanic workers are paid lower wages and don't have health insurance, which directly affects reported job injuries. They are less likely to miss work and report non-fatal injuries, but continue to have higher death rates. They are more likely to work in higher risk construction occupations, and within the high risk occupations, like helpers, roofers and laborers, they are more likely to die on the job. The difference in cause of death is mostly head injuries resulting from falls from heights. From this data, he identified the following issues as barriers for worker training programs. 1) Literacy is an issue in both English and Spanish. 2) Transportation /access to safe or preferred work assignments and getting to a job is a challenge even if they are well trained. 3) Language and communications barriers lead to not understanding safety directions. 4) The Cultural and Social Support Networks that workers develop do not exist for Hispanic workers because they are so new to the country and this makes finding and retaining employment more difficult, increases the likelihood of exploitation, and puts more pressure on them to work even if they are injured.

B. Designing Training to Build Cultural Competency

Speaker: Michael Lythcott, The Lythcott Company

Summary of Presentation

Through his session Michael Lythcott provided context for the term “cultural competence” and how understanding these cultural issues can provide valuable insight into successful outreach, barriers to outreach, life skills training, and language issues. Lythcott explained that as managers and trainers we must become the tool of cultural competency.

In defining culture, Lythcott explained that culture tells you the unwritten rules, gives you a sense of belonging, helps you win the approval of others and is mostly invisible to members within the culture. Culture is a layered phenomenon and in order to break through it is important to find the common layer. Through his discussion he argued that stereotypes are a natural human condition because it is not possible to live in a multi-cultural environment without developing stereotypes. However, there is a comfort-competence link because if we are not comfortable with individual we are less likely to see their competence and reward them. Therefore, if you are in a position of authority you will more likely look at an individual's development, skills and competence and if there is cultural dissidence you will focus more on attitudes and behaviors. In order to build cultural competency through training it should focus on work-related career skills and not on making someone a “better” human being. In addition, it is important to create a safe and value-neutral environment where everyone feels that they have the right to participate, and to use interactive and active training modules. It is important to use an experiential learning cycle, which starts with a concrete experience, next a guided reflection, and then generalized learning. In order to plan for a successful training bring in an outside expert if you do not have adequate internal resources, train and certify your trainers, don't confuse awareness building and skill building, give trainees the communication tools to develop their cultural competencies, and finally use personal stories to reduce your distance with the audience.

Discussion

A question was raised about who benefits from bias. The presenters explained that by turning out trainees who are more culturally competent they would transform other areas. There is a bigger social implication and larger ripple effects in society.

During the discussion a question was raised whether racial disparities are rooted in race or in economic status and whether this is more of a class issue? The presenters explained that when looking at the Hispanic numbers if you correct for education and income you will find less fatality rates, but this is not the case for African Americans.

VIII. Breakout Sessions I

A. Life skills training and incorporation of cultural competence techniques

Facilitators: Myra Lewis, Xavier University; Daniel Johnson, Laborers-AGC; Michael Lythcott, Lythcott Company; and Sharon Beard, NIEHS

Summary of Presentation

This outreach breakout session examined life skills training to determine if and how cultural competence can be incorporated into broader worker training programs.

At the outset of the session, participants were asked to engage in a small group activity entitled “Take a Step - Double Reverse.” Participants were then asked to stand in a straight line. The facilitator posed a series of statements to the participants. Many of these statements were drafted from the experiences of the facilitators and after reviewing the results posed from the following statement to the workshop audience: Define in your own words the terms “culture and diversity.” If the statement pertained to the participant (i.e. if the statement were true), the participant was asked to either take a step forward or backward, until the set of questions was finished. An example of a question used in this exercise was: “If your parents bought your first car, take a step backward,” or “If you did not attend college, take a step forward.” At the end of the exercise, participants were then divided into three groups depending on their place in the room (those farthest back, those in the middle, and those farthest forward). Each group was asked to take ten minutes to create a list of things they all had in common with one another. The entire group then came together to read their lists and participants were asked to discuss the process of creating their lists and the perceptions that other groups had of the lists created by other teams.

Several observations were made about the process itself and the commonalities of group members. For example, the group that had stepped furthest back in line tended to be the youngest on average, and had experienced the greatest number of privileges, as far as education level, travel, opportunity, etc. Another group noted that they were all “Baby Boomers,” and felt that their commonality list was more sentimental and meaningful versus the superficial characteristics (travel, food preferences, education) that they felt bonded the “youngest” group. Finally, one observer in the third group noted that although they had a very difficult time identifying any commonalities, once they stripped the obvious, superficial layers away, he realized that many of them were actually very much alike.

In general, this exercise was meant to convey the importance of teaching trainers to understand why they think as they do – why we perceive others as we do; why we make certain assumptions; why our perceptions are molded by the culture to which we belong. This way of thinking – these layers of thought – were referred to as “cultural baggage.” Everybody has many layers of culture that influence the person that they are and the way that they think and identify themselves in relation to others.

Myra Lewis explained that Xavier has sometimes found it necessary to adjust their training program to account for certain cultural aspects. For example, trainers have incorporated life skills training to help students understand the reason for their behaviors – such as wearing pants low and baggy, or playing into an accepted “machismo” attitude. As part of this training, the trainer explains both the origin of the behavior, why it is accepted among a certain cultural group, and also how others perceive the behavior through their own cultural lens. Students are encouraged to try to understand how and why their own behaviors may be confusing to others and why it is sometimes necessary to therefore adapt to situations according to the cultural norms of a given environment (i.e. office environment vs. home vs. street).

Breakout participants were encouraged to consider these messages and apply them in their own life by immersing themselves in a new environment that challenges them to strip away their own “cultural baggage” and adjust or adapt to the surrounding setting.

- B. Outreach: How to effectively reach your target population? Are we reaching out enough?*
Facilitators: Jim Platner, CPWR; Wanda Moguel, Gladys Padro-Solar; and Shelia Pressley, NPRF

Summary of Session

This session focused on the following questions:

- Who is the target audience?
- What is the number of people to be recruited and how many actually were recruited?
- Which strategies worked? Which didn't?
- What advice would you give to others?

Dr. Richard Dwyer, from the Carpenters Union, pointed out that their minority training program needs to recruit 200 to get 35 students who are able to complete the full program. He was proud that 75-80% of their apprentices are people of color and 58 percent of their members live in the five boroughs of New York. They have reached out to the community development corporations to recruit folks from their community and employ them.

They have to sell to the corporations first. The corporations, in turn, will recruit the students. This is contracting out the outreach. They use handbills and faith-based attempts. They keep bringing them back. The screening is the most important part. They have never been under 85% placement. One community-based organization doesn't do any recruitment. Word of mouth is key.

Glenn Paulson agreed and endorsed the screening part. The Laborers do the screening through the union structure. The main lesson they drew is to only let in the motivated students. “All screening is local.” Glenn speaking for Laborers pointed out that they have very diverse populations coming into their programs.

Don Ellenberger, speaking for the Center to Protect Workers Rights, noted that they have a minority worker training program, with one full-time recruiter. Local unions recruit for their students. A key is getting people into positions of power so they can recruit their people.

There was general agreement that it is easier for the unions. Glenn noted that there are professional organizations, like hospitals, that direct folks to take training. If you can reach the person at the top, you can get the training.

Richard Dwyer responded that their staff works with the CBO to keep them focused. It is important to look at why there is lot of turnover in any program.

The final report-back from the first group

The participants in this session broke into two groups to better discuss the questions posed earlier. The first group noted the following problems:

- attracting a new population
- dealing with forced diversification
- dealing with varied subcultural languages, such as Puerto Rican or Mexican among Spanish-speakers
- Overcoming communication issues

The group suggested the following strategies to deal with the problems:

- Don't identify with the organization or the race because it turns off other races or groups.
- Use an outside professional to translate.
- Avoid language problems by focusing on visual over verbal.
- Gravitate towards whatever organization or group has connections with your target population.
- Address the leaders in that community.

The final report-back from the second group

This group noted different problems:

- Reaching young workers
- Connecting with community
- Realizing that translation of materials is great, but if you don't have bilingual instructors and don't know the literacy levels of your audience problems will continue.

- Bringing groups together is difficult, consequently even negative events need to be evaluated as a potential to bring people together. One participant gave the example of major community events that was negative (two Hispanic workers were killed) that provided a window of opportunity to merge the communities and to focus on worker safety.

The group handed out “A Primer for Cultural Proficiency: Towards Quality Health Services for Hispanics. Workbook: Tools and Resources for Self-Assessment” published by Estrella Press for the National Alliance for Hispanic Health. The group noted that they had located this document on the National Clearinghouse website. It is a tool for health care organizations to assess how sensitive they are towards cultural issues.

C. Training Issues: Reassessment of literacy efforts, barriers to diversity, and language issues

Facilitators: Dinorah Barton-Antonio, CAC; Marianne Brown, CAC; and Katherine Anderson, National Clearinghouse

Summary of the Session

This session reassessed current literacy efforts and also examined efforts to address language issues and other barriers to diversity in the NIEHS WETP training community. The breakout session began with participants explaining how they were addressing limited literacy and language issues of trainees in their existing training programs and what challenges they currently faced. The major challenges they outlined were the lack of appropriate training materials, the lack of Spanish-speaking trainers, trainee literacy problems, and the need to train beyond the U.S. borders in order to reach workers entering this country. Currently most awardees that attended this session have translated training materials into languages other than English and have Spanish speaking trainers and translators/interpreters. In order to overcome literacy barriers some awardees shared that they were:

- incorporating more participatory and activity-based modules into their training;
- converting exams to a pictorial format;
- engaging in more hands-on training sessions;
- starting vocational ESL classes;
- creating a Learn at Home Literacy Program in order to help trainees keep their literacy levels anonymous; and
- engaging in some limited literacy peer help.

Some awardees were also concentrating on training in Mexican Border States. Some grantees explained that since most of their trainees spoke English fluently they did not see the need to incorporate other languages into their training. The facilitators pointed out that even if immigrant workers are fluent in English, they might participate more and feel more comfortable if the training is conducted in their native, first language. When asked for a show of hands of those who speak or are learning Spanish, 4 out of 22 present said they fit in that category.

Dinorah Barton-Antonio from the California Arizona Consortium/LOHP at UC Berkeley spoke to the group about cultural competence tools when working with Spanish-speaking workers. She

explained that the challenge lies in low-literacy skills as well as cultural issues. Culturally speaking, most Latino workers are employed in non-unionized companies. They enjoy being part of a group, yet it is hard to feel included and a part of the culture. Therefore, it is important to incorporate team projects and activities into trainings with Spanish speaking workers. Many feel they lack power and the understanding of issues and therefore feel a limited ability to make change. For this reason, it is important for them to have the knowledge about risks and standards. Given the strong anti-immigrant sentiment in this country, trainings should allow workers to become comfortable and to feel empowered.

Therefore, unions play an important role in helping workers feel empowered. Popular education, peer education, and adult education work by allowing workers to share with each other and show that they can make a difference. A participant explained that another challenge when working with Spanish speaking workers is the many different Spanish dialects. Therefore it is important to incorporate pictures or to add the other ways of saying that word in your documents. (e.g., there are several terms in Spanish for the English term “forklift.”)

Marianne Brown from the CAC/UCLA-LOSH Program made her Power Point presentation available in a handout since there was not enough time in this breakout to present it to the group. It emphasized that immigrant workers do not receive adequate health and safety training. Training must address their unique needs. It is important to make training relevant, active, participatory, and to have co-workers who are similar to them do the training. Marianne suggested that anyone interested in this issue obtain a copy of the publication “Safety is Seguridad,” which is available from the National Academies of Science/National Research Council. It consists of proceedings/papers from a NAS/NIOSH conference held in May 2002, which focused on how to reach Spanish-speaking workers with health and safety information and training. It may be available for download on the NAS website or can be purchased by contacting them.

The facilitators made a great deal of materials in Spanish and on limited literacy issues available to participants and encouraged them to visit the UCLA Labor Occupational Safety and Health (LOSH) Program website at www.losch.ucla.edu for more materials in Spanish. Marianne Brown asked people to contact her at ahelmer@ucla.edu if they needed certain educational materials for workers in Spanish and could not find them as Ms. Helmer at UCLA-LOSH can develop factsheets in Spanish as needed for WETP awardees. In addition, it was decided that it would be a good idea to create a network to share ideas for cultural competence, maybe through the Clearinghouse.

IX. Panel on Training and Homeland Security

A. Introduction and Overview of WETP activities

Speaker: Bruce Lippy, Ph.D., CIH, CSP, National Clearinghouse

Summary of Presentation

Since the 9/11 terrorist attacks, the NIEHS WETP and its awardee community have been deeply involved in efforts to protect workers who may be called upon to prepare or respond to a WMD incident. These efforts have focused on ways to improve awareness and response training for

worker populations, particularly those whose roles have not traditionally required significant Hazwoper training in the past, as specified under OSHA's 1910.120 standard.

Since the launch of the war on terrorism and the subsequent creation of a Homeland Security Department, much has been written about the nature of workplace security and how the risks facing workers have changed since 9/11, particularly given the potential for terrorists to access hazardous chemicals and pathogens whose release could impact thousands of workers and residents in nearby communities. This heightened focus on homeland security has raised several questions regarding the level of preparedness among emergency responders, skilled support personnel, hospital employees, chemical plant and nuclear workers, as well as utility and infrastructure workers who are likely to be called upon to respond to incidents involving significant destruction. How do we prepare these workers for such an incident? What type of training do they require? What level of funding is required to achieve the proper level of training? How do we incorporate this training at actual disaster sites, and how best to communicate the risks to an increasingly diverse workforce? These and other questions were examined by invited speakers and participating awardees during a Homeland Security panel at the December 2003 awardee meeting.

Dr. Bruce Lippy, director of the National Clearinghouse for Worker Safety and Health Training, opened the panel with an introduction of each speaker and a brief recap of what NIEHS WETP and its awardee network have done over the past two years to ensure that workers are trained to respond safely to terrorist actions. He emphasized that WETP is a major force in training workers to respond safely to terrorist actions, having developed the official training program at the WTC disaster cleanup and having garnered direct experience in responding to WTC, the Pentagon, and the anthrax cleanups. He also pointed out that WETP, through the Clearinghouse, generated the first comprehensive report on worker safety at the World Trade Center, the October 23, 2001 report by Elisburg and Moran. Subsequent reports, including the April 2002 workshop report, "Learning from Disasters: Weapons of Mass Destruction Preparedness Through Worker Training" and the December 2002 study, "Improving the Training of Skilled Support Personnel for Responding to Terrorist Actions: A Review of the Problems and Feasible Solutions" have strongly influenced the national debate on the correct course for training workers.

B. Public Health Strategies to Protect Workers During Responses to Terrorism

Speaker: Rebecca Head, Ph.D., Washtenaw County Public Health Department (WCPHD)

Rebecca Head, Director of Public Health Preparedness for WCPHD in Michigan, opened the panel discussion by addressing the development of worker protection strategies through education and training. Dr. Head has worked for Washtenaw County Government since 1986. She is active in the American Public Health Association's Environment Section. She has a bachelor's degree in education, a master's in environmental health services and a doctorate in toxicology, all from the University of Michigan.

Summary of Presentation

Dr. Head emphasized that the role of the public health worker has increased, broadening into an ‘all-hazards’ approach, involving an active role in both man-made and natural disasters. This increased role brings challenges that the public health community must address through increased education and training, as well as improved communication and collaboration with and among local, regional, and state organizations, local hospitals, and the community.

Dr. Head pointed out that while a great deal of training is now offered on how to teach public health workers to respond to acts of terrorism, not enough specific training exists on how to teach these workers to protect themselves. The central question therefore becomes: What are the next steps? How can organizations such as NIEHS, CDC/NIOSH, and the EPA promote and expand the existing worker training model? Partnerships with CDC-funded Academic Centers for Public Health Preparedness (<http://www.asph.org/phprc/index.cfm#ACPHP>), or current HRSA-funded Training Centers (<http://bhpr.hrsa.gov/publichealth/phtc.htm>) were mentioned as possible vehicles for collaboration. In addition, collaboration with local and state public health agencies can be valuable as a mechanism to explore joint ventures.

Given the numerous challenges presented by today’s ‘all-hazards’ environment, Dr. Head underscored how important it is to recognize your organization’s limitations and adapt to them, as it is impossible to have all the resources necessary to prepare for every potential emergency. Partnerships and mutual aid agreements, as well as joint exercises and training greatly help to leverage available resources, raise awareness, and expand the number of workers with access to current training opportunities.

C. Chemical Terrorism: The View from the U.S. Chemical Safety and Hazard Investigation Board (CSB)

Speaker: Gerald V. Poje, Ph.D., Chemical Safety and Hazard Investigation Board (CSB)

Dr. Gerald V. Poje has served as a Board Member of the CSB since its inception in November 1997. The primary mission of the CSB is to investigate and promote the prevention of major chemical accidents at fixed facilities. Prior to joining the Board, Dr. Poje directed international programs and public health for the National Institute of Environmental Health Sciences, focusing on issues of disease prevention, health promotion and environmental justice.

Summary of Presentation

In his presentation to WETP awardees, Dr. Poje addressed the risks posed by terrorist incidents at chemical plants and what is being done at a federal interagency level to address the risks. To frame the nature of U.S. chemical accidents, Poje explained that U.S chemical firms incur approximately 3-5 billion dollars per year in total accident losses. Insurance firms pay out about 1 billion to these firms for such losses. It is difficult to assess the total number of incidents that actually occur per year due to “data holes” at various levels, and differences in reporting requirements that can result in under-reporting.

Using examples from several accident investigations conducted by the CSB over the past several years, Dr. Poje emphasized the need for organizations to focus on prevention, even while planning for response and clean-up. Reactive incidents are a national safety problem that can be

alleviated through the application of enhanced federal regulatory and non-regulatory programs that address such issues as incident tracking, public access to information, and process-specific conditions for the storage, handling, and use of chemicals.

Poje pointed out that the call for primary prevention programs is not new. The Inherently Safer Approach, first proposed by Kletz in 1978, advocated eliminating the hazard from the chemical process rather than adding on safety features (or “layers of protection”) to control and manage hazards. For example, limiting the amount of a chemical stored at a facility is an inherently safer approach than storing large, unlimited quantities of a chemical at a facility, which might require instituting several layers of protection (emergency response systems, physical protections) to reduce the risk of a hazard.

Poje underscored the need to push this inherently safer approach as the Administration and the chemical industry debate the need for federal regulations to enforce and enhance security measures at chemical plants. More broadly, we need to advocate this approach in an effort to elevate the realities of what is happening in order to better develop the worker training skills advocated by the Program and its awardee network.

D. Emergency Response and Protecting Infrastructure Workers: Training At-Risk Sectors in Emergency Response

Speaker: Paul Penn, EnMagine, Inc.

Paul Penn, EnMagine Inc. (www.hazmatforhealthcare.org), a long-time Hazmat trainer from California, discussed the impact and changing nature of emergency responder training on a number of populations at risk and how they should be trained to deal with terrorist attacks. His presentation focused specifically on the health care and hospital sector and its interface with the emergency responder community.

Summary of Presentation

Mr. Penn provided a broad summary of significant changes in incident management and response on the national level that have occurred or will occur as a result of Bush Administration policies and directives. The primary driver of this change lies with Homeland Security Presidential Directive-5 (HSPD-5) (<http://www.whitehouse.gov/news/releases/2003/02/20030228-9.html>), signed in February of 2003. HSPD-5 directed the creation of a single, comprehensive national incident management system (NIMS). The NIMS is intended to “include a core set of concepts, principles, terminology, and technologies,” including training, multi-agency coordination, and qualifications and certifications. The creation of this new, comprehensive National Response Plan has been a complex undertaking, and one that has involved the input of numerous agencies and organizations involved in incident management and response.

Turning to the issue of training for healthcare professionals, Mr. Penn described a tiered approach that is supported through his own training organization. At the top is the gatekeeper and technician, for a total of 40 hours of training. At the bottom of the tier is hazard communication, which is provided to all employees (see Penn presentation to see the complete

tier diagram). The level and the nature of training depend upon the worker's role and tasks in the event of a potential incident.

In response to the central question, "What do we want to teach people?" Penn referred to four training elements for healthcare professionals:

1. SIN: Safety, Isolate the Scene and Deny Entry, and Notify (Defensive Actions)
2. CIA: Command, Identify, and Develop Action Plans
3. PCP: PPE, Control, Contain, Cleanup, and Protective Actions; and
4. DDD: Decon, Dispose, Document

In summary, the biggest challenges to training for this industry are twofold: enforcing the respiratory protection standard and finding time away from work for training. Both of these are not insurmountable; they are institutional choices that can be examined and addressed.

E. Question and Answer Period

Participants were invited to ask questions of the Homeland Security panel following their presentations.

A question was raised as to what triggers were being discussed for enacting a public health response in cases when workers are exhibiting disease symptoms or when there is a biological incident at a manufacturing plant, for example. Rebecca Head admitted that there was no good answer to the question because it depends upon the severity of the situation and the worker or patient in question. Having the right connections with local public health organizations, however, would be helpful, as it provides an established communications channel should such an event occur.

Another issue that was raised was the need for better 'rights-to-know' and improved information dissemination to workers and the community. A representative from Xavier mentioned that they had written a letter to the EPA requesting information on the risks facing their community from a local petrochemical facility. A response was never received. Further inquiries led them to be told that this information is not being released due to security concerns. What is the security reason behind keeping information from communities that may be essential in saving their lives in the event of a disaster?

X. Breakout Sessions II

- A. Skilled support personnel, instructor and worker training, and next steps in developing a registry*

Facilitators

Bruce Lippy, National Clearinghouse; John Moran, National Clearinghouse; Pete Stafford, CPWR

This session continued discussions on skilled support personnel following the major meeting in Beckley of awardees with funding to train SSP. Don Ellenberger of CPWR noted that they had printed several thousand copies of their DVD. They are using 4,000 OSHA-500 certified instructors to deliver the training through building trades councils. CPWR is only training trainers. The councils will be training workers.

Patrick Bell from the Operating Engineers described the additional training they have added to their basic course. New modules include stress management and incident command, although they are still working on what the optimum course length should be.

Jack Huenefeld from OAI told the group about the work they have been doing with the supplemental funds they have received from NIEHS. They intend to train all first responders in the State of Kentucky to HAZWOPER technician level. OAI used the Operations level materials from the IAFF and then built on a technician level. They have three state police training to specialist level for handling methamphetamine labs.

The group discussed the applicability of OSHA's 1910.120 standard and there was significant concern that even though NIEHS WETP felt it applied, there was a strong chance that local incident commanders may not. With construction work, everything is based on contractors. The group dealt with how to prequalify the workforce. Cindy Herleikson pointed out that the best laborers would be employed and if there were an incident, the chance is strong you would end up with the dregs of the workforce. Dave Treanor noted that the Army Corps of Engineers has prequalified "removal contractors" under Superfund. This was a model Dave felt we should explore. Jeff Borkowski noted that under the ICS there is a safety officer who has responsibility for safety and health at the site.

Those participants who had attended the Seattle meeting in December noted that there was consensus there that a construction liaison officer was a good way to bring contractors into the Incident Command Structure. The group thought it was the right time to push the concept of a construction liaison officer because the NIMS was still being finalized. There was agreement that we should put together a prototype to pilot test this effort. Jack Huenefeld mentioned the non-mandatory Appendix F to the OSHA HAZWOPER standard as a good model for getting OSHA to adopt recommendations of WETP without having to resort to regulation. Cindy Herleikson described the Laborers SSP program that was funded by a Susan Harwood grant. It is a 2-day program and is all manual and no DVD. Don Ellenberger noted that the CPWR was only training instructors through their program, but that these instructors would in turn train workers.

B. Chemical Security

Facilitators

Gerald Poje, CSB; Tom McQuiston, PACE; and Chip Hughes, NIEHS

In this breakout session, participants addressed the question: What can organizations like the WETP awardees do to facilitate better protection from terrorist attacks at their facilities and what is the importance of prevention in mitigating the effects of terrorism?

Discussion opened with a highly cited statistic. According to the EPA Risk Management Program (RMP) data, there are 123 chemical facilities in the United States that, if attacked, could place more than one million people at risk. These figures account for both workers and community members placed at risk.

THEME: Balancing Prevention and Emergency Response

Understanding the heightened security risks facing chemical plants and their workers, it is important to consider the response potential against the disaster potential. The latter far outweighs the former, arguing for the need to focus on prevention strategies aimed at balancing the situation. We can no longer look at emergency response in isolation of risk reduction.

Tom McQuiston explained that PACE has been actively promoting the theme of prevention in its own training for years. They have recently developed a new curriculum that focuses on how to take all elements of the Process Safety Management (PSM) standard, and using those systems of safety, examine what can happen and how these systems can be used to prevent incidents from occurring at a trainee's facility. And, for example, what new inherent safety considerations a re-visited "Process Hazard Analysis" might raise now that the possibility of an intentional act can be viewed as a "process hazard."

Session participants agreed that unless we start pushing prevention as an all-hazard, everyday issue, significant change would not occur. The suggestion was made that the PSM standard may be a good start as a model for a chemical/hazardous site safety approach, and that it should be made clear that just having an emergency response plan is not good enough at these facilities. Prevention elements must be combined closely at the worker level so that they can see the success.

The discussion then turned toward the issue of taking action in order to enact real change. There are obviously limits to what people and resources can do, but some organizations, such as the ACC, have made efforts to define vulnerability assessments and draft industry guidelines. The drawback to such consensus-driven efforts, however, is that they tend to accommodate the lowest common denominator. As for elevating it to the federal level, OSHA penalties tend to be low in comparison to the disaster potential, and the standards-making process can stretch out for years. What, then, can we do?

Representatives from PACE suggested following their own example by engaging in dialogue with workers whose plants have resolved some of these problems through prevention strategies (getting rid of chlorine, for example). These examples can be mimicked at plants throughout the country. Education will be a key component of any action plan.

Discussion also focused on chemical incident impacts on firefighters and construction workers, and therefore on the need for a common approach towards primary prevention that would optimize the roles, responsibilities and collaborations among industrial workers, members of the building trades and emergency responders.

C. Hazmat for health care and infrastructure workers

Facilitators: Paul Penn, EnMagine; Rebecca Head, WCPHD; and Amy Mock, AFSCME Training and Education Institute

Summary of Presentation

Through this breakout session, the discussion centered on improving the training of “first receivers” in the health care industry and identifying unique training needs of the diverse population of infrastructure workers. The session began by dividing the group into teams; each team was tasked with defining first responders by job classification. The groups outlined the following workers as first receiver: Administrative personnel, EVS, Transportation, Construction, Service workers, School, funeral, medical examiner- coroner, Nurses, Security guards, EVS Lab, Telecommunications, Veterinarians, Transportation- bus, metro, Sanitation, WTP, State employees- health and environment, Infrastructure, Phone, utility, Volunteers, red cross, Transportation, Construction Workers, Funeral directors- coroner- medical examiner, Nursing Staff, EVS, Telecommunications, Security, Laboratory, Sanitation Workers, Distribution of water WTP, Local state employees related to health environment, Utility workers/phone, Pipe fitters/steamfitters, Volunteers- Red Cross, Fence line communities, Lab, Veterinarians, and Transportation- bus, metro.

Following this, the groups analyzed the training available to these different job categories and defined shortfalls and potential solutions. The teams presented the following information. For hospitals, while information is made available there is no training. The trainings hospital personnel receive are mostly in the form of mock incidents with very little health and safety components. In addition, the majority of training revolves around biohazards. The decentralized nature of hospitals is also a barrier to training. Most training focuses on the issue of surge capacity (how to deal with an overflow of patients) and is patient driven not employee focused. All training is crisis driven. Another challenge is that the state of health care is at capacity. For solutions the team felt that there is a lot to be learned from the AIDS and SARS epidemic in terms of training and safety issues. In addition, it may require regulatory requirements.

Administration personnel fit into the category of “first receivers” instead of first responders since they do not currently receive any health and safety training when it comes to emergency response, but they will be the first to come into contact with the casualties of such attacks. The team felt that the training for this population of workers should be basic because this population does not have deep understanding of the technical issues. It should also integrate an emergency response from the community level. It would be useful to create a “Community Emergency Response Team” or *CERT*.

Sanitation worker training should start at an early stage, PK-12. In addition, it would be important to add components of the training to apprenticeship programs. The main challenge with such a training program would be a funding source. The group suggested making it expensive for people to not have the training by tying it to their insurance rates. In order to train workers in the infrastructure category, schools should do the training. The group explained that even the Red Cross BBP Training requires no training outside of learning CPR.

In conclusion, Paul Penn discussed the importance of setting up an incident command system and practicing it. He recommend that people plan their company picnic using this system because if people know it well and practice it, the practice of it will come more naturally.

XI. Protecting Workers Through Training: Emerging Issues

Facilitator

Patricia Thompson

A. Mold: Health and Training Implications for Worker Protection

Speaker: Denny Dobbin, Society for Occupational Safety and Health

NIEHS WETP has begun studying the emerging issue of mold remediation as it applies to the development of guidelines for the protection and training of remediation workers. This panel discussion examined current microbial remediation guidelines, work practices, training needs and curricula development. Denny Dobbin introduced this panel discussion by outlining some of the upcoming mold related activities. He explained that there are guidelines coming out from AIHA, ASSE, and other organizations. In addition, they are hoping to get consensus from Clinicians on health effects of mold exposure. In January there will be worker training workshop and a stawperson document drafted following this training. After both workshops in 2004, there will be a conference that will have broader participation.

B. Mold: Current Guidelines

Speaker: Christopher D'Andrea, MS, CIH, New York City Department of Health and Mental Hygiene

Christopher D'Andrea addressed the current status of available guidance documents concerning microbial contamination in buildings and focused on the New York City Department of Health and Mental Hygiene's Guidelines on Assessment and Remediation of Fungi in Indoor Environments. Workers who are affected by mold exposure include remedial workers, maintenance/building engineers, agriculture workers (much data comes from these workers but the exposures are typically much greater than to other workers), office workers, and inspectors.

The potential health impacts of mold exposure are hypersensitivity diseases such as hypersensitivity pneumonitis and possibly asthma. In addition, it can have toxic effects. Dead mold does not mean that it isn't toxic or allergenic therefore their guidelines call for mold removal and cleaning surfaces versus killing mold.

The goals for the remediation are to remove or clean the contaminated materials, contain contaminants to the work area, protect workers from exposures, and always correct the cause of water accumulation. The 1993 New York City DOH Guidelines on Stachybotrys were the first guidelines, which recommended a half-face respirator. These were followed by the 1995 Health Canada Guidelines, which expanded the NYC guidelines and the 1999 ACGIH Bioaerosols guidelines. In 2000 NYC DOHMH revised their guidelines on fungi, which defined small, medium, and large jobs in terms of square footage of mold. These were followed by a 2001 US EPA Guideline of Fungi and 2003 OSHA Advisory-both of these used the NYC guidelines

delineations on defining job size by square footage. In addition, ASSE, ACGIH and NYC DOHMH are considering putting out new guidelines and documents.

One challenge with worker exposure and protection from mold is that the tasks are not well defined as far as exposure. There are no clinical tests to determine time of exposures and no biological index to look at to indicate when, where, and to what levels they were exposed. The size of contaminated area determines the level of containment but is not necessarily linked to potential hazards. Engineering controls and work practices are important yet they are not well studied.

They are considering updating the NYC Guidelines but are struggling with clearance sampling issues because it is difficult to show that a job has been properly completed. In addition, they are working to clarify and expand on the assessment of hidden mold.

Training and certification is currently not required by Federal, State, or Local governments although Texas is poised to implement requirements next year.

C. Mold: Awardee Work Practices and Training

Speaker: Glen Paulson, NJ/NY Consortium/ UMDNJ School of Public Health

Summary of Presentation

In the absence of the originally scheduled speaker Al DiVita from L-AGC, Glenn Paulson discussed the development of the Laborers-AGC microbial remediation training curriculum and the rising demand for this training among their constituents. The Laborers-AGC originally developed a mold/mildew course 10 years ago. Based on growing demand, in early 2002, L-AGC and its Advisory Board created a special committee to develop a new and broader course, titled Microbial Remediation. This was peer reviewed by external organizations (NIEHS, EPA, NYCDOH, CDC, the LIUNA training network, and medical professionals). The course content included introduction to indoor air quality, health effects, work area sampling, hazard communication, PPE, work area preparation and remediation techniques, and decontamination. It was aimed to include government agency personnel as well as journey worker and apprentice laborers, experienced asbestos and lead workers, contractor personnel from supervisor, and owners. The course was designed to be 24-hours, 10-hour classroom/10-hours hands-on, written test, and 4-hour demonstration test. The title of the course reflects a foundation for clean-up beyond mold. The recommended levels for PPE, decon, etc. are similar to asbestos.

Discussion

One question asked about the possibility of creating a health outcome chart that differentiates different fungi or mold and defines their individual health effects and severity of the effects. In addition, training sessions should begin with this information so that workers will understand the potential outcomes. Another question was asked about the potential of building this training into certification. The issue of

Deutsche Bank 130 Liberty Street also came up. The presenters explained that the mold remediation done to the building had been thorough and that the introduction of Sheetrock and paper products had encouraged the growth of the mold when they became wet after flooding and exposure to the outdoor environment. Finally there was discussion about aggressive sampling

and the conclusion was that there is no resolution on aggressive sampling, but there is more talk about using HEPA filters to ensure clean air is coming in to the containment area to help ensure post remediation sampling accurately reflects the remediation that was performed.

XII. Advanced Training Technologies/E-Learning Panel

Facilitator

Paul Morse, TNEC

A panel on Advanced Training Technologies was included as part of the emerging issues discussion on Friday. Understanding how to best utilize and integrate technology into worker training programs is a relevant issue for all WETP awardees and will continue to increase in importance as technologies improve and on-line training becomes more prevalent.

In particular, the efficacy of advanced training technologies continues to generate heated discussion among the awardee community. Panel members Paul Morse (TNEC), Michael Glassic (Y-Stress), and Don Ellenberger (CPWR) discussed the process and challenges of integrating ATT into their own core training programs.

Paul Morse opened the panel with a few questions to provide a framework for discussion:

- How do awardees compare the training that they do using ATT with the traditional training that they have done?
- Are awardees melding hands-on training and technology to the greatest extent?
- How has the training been beneficial?
- As training technologies continues to advance in quality, is ATT threatening our training?

A. On-line Training Course

Speaker: Michael Glassic, Y-Stress, Inc./GMCLS

Summary of Presentation

Mike Glassic presented a segment from an on-line First responder awareness level course, designed for the George Meany Center for Labor Studies (GMCLS). The ultimate objective for this course was to take first generation e-learning (HTML) and apply streaming technologies to make it more exciting to the user. In addition, the course was developed such that course material and learning objects could be delivered over low bandwidth, making it as accessible as possible to those with varying bandwidth capabilities. Finally, the aim was to enable the final product to fit into any web portal that used learner centric approach, placing the learner at the center of knowledge.

A good test for any instructor or course designer is to ask if the course can stand alone. You should be able to pull learning objects from the material such that courses can be tailored to match the needs of the individual.

There were several important design/technology elements incorporated as part of the course design process that were essential to meeting the objectives mentioned above, including:

1. Reusable learning object (RLO) files were used and placed in a repository, so they had to be small.
2. Graphics, animation, audio, and questions were combined to create a rich experience of the user.
3. Graphics were used sparingly.
4. Coding language in Flash was used to get images to move without having to download the image.
5. Students were given the option to download audio external files, thereby reducing the necessary use of bandwidth.

A few statistics on technology use in both the home and the workplace helps to place the need for WETP training programs to incorporate advanced training technologies in context. 75 percent of workplaces and 40 percent of homes are connected by broadband. 50 percent of homes are connected by 56K modems. This particular training program was designed for a 28K modem. 62 percent of the course material is 8K in size or less, and 62 percent of the objects will download in 1.8 seconds or less on a 56 K modem. The average time to download Unit 1 resources for the course is 10 seconds.

Evaluation data for this online awareness course has shown an 80 percent course completion rate. The average increase in pre- and post-test scores was 30 percent.

B. DVD Training Course

Speaker: Don Ellenberger, CPWR

Summary of Presentation

Don Ellenberger, training director for the Center to Protect Workers' Rights, presented clips from a DVD-based training component that is part of the organization's Hazardous Waste refresher internet-based curriculum. A one-page lesson plan and references to the DVD can be found at CPWR's Hazardous Waste Refresher internet-based curriculum website at <http://www.cpwr.com/protected>, under Emergency Response.

A key message advocated by Mr. Ellenberger was that of the value of the training tools offered by an organization or employer to its students and/or workers: the better tools you can get from your employer, the better job you can do. The DVD is one training tool currently employed by CPWR to train its workers.

Mr. Ellenberger demonstrated a clip from a sheet metal safety training DVD that employs a virtual training tool. It contains slides, worker interviews, and simulations to convey key safety procedures and messages to the end user.

Should any awardee wish to obtain a copy of the CPWR DVD-based Emergency Response training component, you may contact him at dellenberger@cpwr.

C. Question and Answer Period

One audience member posed the question of how to introduce these new, advanced training tools to trainers who are not familiar with the technology, and help warm them to utilizing it in the classroom. A suggestion was made that a key message to convey to these trainers is that this technology is not intended as a replacement to traditional training methods. The theory that computers will replace trainers is simply not true. Blended learning, which employs a mix of both traditional classroom and online learning, has been proven to be more effective than online learning by itself.

It was also noted that reactions to demonstrations tended to attract people to the technology rather than push them away. Try not to sell instructors short, as they may be more interested in using these new technologies than one realizes. They will like new tools that can improve their training.

A representative from TNEC shared that their experience with trainers who were initially fearful of a new technology training tool was that this trepidation faded once they had an opportunity to work with the new tool and learn that its operation was not at all as difficult as perceived at the outset.

Finally, Don Ellenberger reminded participants to remember that you don't necessarily need a computer to do DVD-training. You can put it into your DVD machine and use it just as well. Also, it is important to consider that training technologies can be used as a complementary tool as PART of the course, not all of it.

XIII. Open Session: Emerging Issues

Facilitator

Kerry Murray, National Clearinghouse

Summary of Presentation

In this final session, participants were encouraged to offer additional insight on emerging issues/needs that were not covered in other parts of the meeting. The following suggestions were raised for consideration:

- 1) Create a white paper to distribute to Capitol Hill. In addition, write a publishable article in an effort to raise visibility about the program.
- 2) Methamphetamine training and other specialized level courses were mentioned as an emerging issue. NIEHS should look at specialized level courses such as those offered by the California Specialized Training Institute and California Clandestine Drug Training.
- 3) In order to compete with emerging technologies, we need better foreign language translation programs for the less common languages in an effort to assist in developing training programs for these worker populations. If we are going to go global, we may see a greater need? to work with our counterparts. The barefoot research and the website, www.ilo.org, were mentioned as potential resources.

- 4) It was suggested that NIEHS repeat some workshops from the past that were successful, such as:
 - a) The National Health and Safety Conference with NIOSH.
 - b) Joint labor-management partnerships initiative, which should be held in Washington, DC, so that we can help decision makers see what awardees are doing.
- 5) The development of Bilingual Curriculum Materials.
- 6) Incorporate the wireless phenomena. As cities, towns, etc. go wireless, WETP should think about the potential of taking computers to the people and developing wireless training programs.
- 7) The issue of global training potential, given the fact that truckers coming in from neighboring countries come from countries with less stringent safety and training standards.
- 8) Inherent safety.