

From time to time we see something as being important enough to justify dedicating an entire issue to a single topic. We have done that in this issue. Training is a topic important to the health and safety of every member of the Carnegie Mellon family, and every article in this issue will address some aspect of training. We hope you find it helpful.

OSHA Makes Ruling on Training

Jim Gindlesperger



How do you train a new employee, or how do you retrain an experienced employee? Even though you may think you are properly training your people, you may actually be violating OSHA laws. If your training consists of handing the employee a written procedure, no matter how well that procedure is written, you are not meeting OSHA's training obligations. On October 24, 2005 OSHA issued a letter of interpretation that clarified their position, saying that "...the mere distribution of procedures will not meet the training requirements...".

OSHA takes the position that training programs are to be a forum for explaining to employees how to use the information that the employer wants them to have. While OSHA does not specify what kind of forum can be used (classroom, audio visual, interactive video, etc.), they do require that employees have an opportunity to ask questions to ensure that they understand the information presented.

Training needs should also be evaluated at regular intervals to ensure that all aspects of the job are covered, and that new procedures or processes have not been introduced without a corresponding change in the training.

And don't forget to document all training. In OSHA's eyes, "not documented means not done".

EH&S has qualified trainers on nearly every safety and health topic, so if you need assistance, please call us at 8-8182.

What Training Should I Have?

Mark Banister

It is a considerable challenge to us in Environmental Health and Safety to ensure that all people on campus who are required (either by regulation or by University policy) to receive training, are identified and subsequently trained. Because training requirements are so widely varied and encompass such a broad range of topics, we have developed a matrix that we hope you will use to identify the training you need.

To use it, go to www.cmu.edu/ehs and select the "Training" link. Click on the "Training Requirements" link and then search under "Classification Type" for the job categories that describe your role on campus. There may be more than one! For each role selected, a list of the training classes you may need will pop up. Click on each for a more thorough description of who needs this training.

For example people who work in laboratories will see a listing of training needed to address their use of hazardous chemicals, and perhaps biological materials and/or radiation related sources. Health Services and Police/Security employees have their own set of training classes that are usually required. There are separate categories for office work, supervisors, students and other general areas of work. Workers in facilities-related activities generally have the most training required of them, due to the broad range of safety, environmental and hazardous materials issue they may address. Be sure to check out all that apply to you.

Please take the time to use this matrix and identify your training requirements. If you have any questions about whether you need a particular class or about how to enroll in a class, check out the balance of the EH&S Training web page or call us at 8-8182 for assistance.

John Zoll



It should come as no surprise that anyone who uses radioactive material or radiation producing devices, such as analytical x-ray machines is required to have training, but how about the documentation of that training?

Regulators often will ask radiation users if they have been trained. That question is sometimes followed up with a request for documentation of that training. This documentation, while also maintained in the Radiation Safety Office, should also be kept in the lab logbook that is used to track radioactive materials or x-ray use. Check the logbook in your lab for these documents, so that training questions may be answered quickly and with confidence. If training records are incomplete or missing, contact Radiation Safety, so that a copy may be provided for inclusion into your lab's logbook.

HAZCOM: Your Right-To-Know

Jeffrey Harris

One of the Occupational Safety & Health Administrations most significant standards, Hazard Communication (HAZCOM) provides ALL employees with information about potential health hazards from exposure to workplace chemicals. The goal is to provide you (the worker) with enough information to make knowledgeable decisions with respect to chemicals at work. This applies to ANY chemical in the workplace. Most commonly used by laboratory workers, the standard also applies to art studios, shops, the skilled trades, custodians and even office personnel.

Do you know the risks associated with the chemicals you use? Where do you find this information? What other chemicals are present and may be

dangerous? The answers are found in the Material Safety Data Sheets (MSDS).

Each chemical manufacturer is responsible for creating an MSDS. It outlines physical properties, fire and health hazards, routes of entry, exposure limits and clean-up/disposal protocols. If not provided with your chemical, you should request one. Manufacturers must provide it to you. You may also link to various databases with MSDS from our website (www.cmu.edu/ehs).

It is our mission, and the goal of HAZCOM, to educate you on the dangers of chemicals. We want to equip you with the tools & knowledge so you can protect yourself, and co-workers. Visit our website training page to schedule yourself, we also offer department specific training. HAZCOM is also a helpful tool for understanding non-work chemicals, such as cosmetics, foods, food additives and certain consumer products. "Because knowing, is half the battle."

Do You Park Like This?



If this is how you park, you may want to consider our Driver Training class!

Principles of Adult Learning: Application to Safety Training

Dr. Sandra Fouch and Michael Fouch, MSIH

Adults arrive at training with much additional 'baggage' when compared to children. They have many more life experiences, demands on time, and more psychological barriers, like past negative experiences. The instructor should attract and maintain attention, and evaluate the experiences that exist that may hamper the learning process.

In contrast, the life experience that adults bring to learning may provide the foundation for their new learning. This practical knowledge can be a real asset during the reflection times, if the

instructor can encourage dialogue and curb comments like, "This is how we did it..." Otherwise, participants may not want to change procedures, or be able to 'think beyond the box' for new ideas (Thoms, 2001).

Adults also must see the relevance of the material to their immediate needs since time limitations and commitments apart from work may make it difficult to make learning a priority (Alexander, 1999) They want a choice in the content and have a strong need for immediate application.

With these concepts in mind, the Environmental Health and Safety department worked to develop a new and improved Laboratory Safety and Hazardous Waste training for Carnegie Mellon University. The training was developed by incorporating adult learning principles into the safety information. The effectiveness of the training was measured through laboratory audits and compared with those that participated in the old version of the training. Relevance for the employees was enhanced by reviewing the training objectives up-front and then organizing the training by major categories.

We found that training professionals should strive to incorporate as many principles of adult learning into their training presentation as possible. The principles found to be most critical from this research project are:

- Relevance— The material presented should seem relevant to the adult participants.
- Similarity— The information presented should closely resemble the employees workplace conditions in order to ease the transfer of skills.

(continued in next column)

Principles of Adult Learning

- Active Participation—employees should be able to interact with the other employees and the trainer.
- Providing Objectives—By showing the objectives in the beginning the adults are able to see the "big

picture" and know the direction of the training.

There was a significant difference between the participants that attended the new training sessions. The average difference was one violation improvement from the participants that attended the new training compared to the old training. This was a statistical significant improvement.

The major difference between the training sessions was the inclusion of relevance so the trainees understood the program's objectives. Making participants aware of the gaps in their knowledge; where they are versus where they need to be, should be a goal in every training session. Explaining how the training will help the participants will contribute to engagement in the program. Trainers should familiarize themselves with adult learning principles to maximize the learning and retention of the participants. Any element that can contribute to a safer work environment should be implemented.

Don't Wait Until Later

Jim Gindlesperger



Training is one of the most important tools in workplace safety, yet it is one of the most neglected. Lack of time, budget shortfalls, or a lack of understanding of what type of training is required are some of the reasons given. Trainers in general, and EH&S in particular, understand those problems. We recognize that it isn't always easy to justify sending someone for training.

However, we always seem to find the time, the money, or the understanding if someone is injured. Then the question becomes, "Why weren't these people properly trained?"

The time to get the proper training is now. Today. Don't wait. Go to the EH&S web site for a listing of training classes we offer, and if you don't see a class that you'd think we should offer, let us know. We'll put one together for you.