

EFCOG Best Practice #44

Web-based EMS Awareness Training Improves EMS Knowledge While Saving Time and Money

Facility: Los Alamos National Laboratory, Los Alamos New Mexico

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Brief Description of Best Practice:

Los Alamos National Laboratory (LANL) received third party certification of an ISO Standard 14001, Environmental Management System. By doing so, LANL fulfilled requirements set forth in DOE Order 450.1, Environmental Protection Program. Implementing Web-based EMS Awareness Training was LANL's first effort in creating worker-level awareness regarding such a system. This awareness fulfills the Training, Awareness and Competency portion of the ISO Standard requirement. Ultimately, the web-based training was well received.

Why the best practice was used:

EMS Awareness Training was launched on the web as a way to efficiently deliver effective training in a relevant, timely, entertaining and useful way. The methodology behind the training was to accommodate a variety of adult learning styles. It simultaneously presented training content in a format that included video, audio and text. Ultimately, this web-based format was a cost effective way to reach nearly 13,000 learners within a short period of time. This was critical in order to successfully pass the training, awareness and competence portion of the ISO audit.

What are the benefits of the best practice:

Cost-effectiveness

Rather than spend time and resources creating and delivering training in a traditional classroom setting, the web-based format was more cost effective. The expenses of classroom facilitation, energy use, multiple "live" course offerings and production of hard-copy classroom materials were eliminated through this delivery system.

Waste reduction

Less time spent traveling to and from training center resulted in a reduction of waste and resources use in terms of fuel consumption and air emissions.

Increased Awareness

By performing Level One evaluation (learner reaction), a shift in attitude about training was noted. The vast majority of the workers surveyed reported an increase in knowledge regarding EMS at LANL.

What problems/issues were associated with the best practice:

Given the variety of work that is performed here, few systems at Los Alamos are universal. This lack of consistency is evident in the training systems. Support was ultimately discontinued for technology to deliver the video portion of the web-based training. This resulted in the delivery of a less dynamic, read-only web-based training that did not include video and audio.

The potential existed for the learner to simply click through to the end of the training and apply for credit. This was a technological challenge related to the requirements for LANL to maintain its training records.

Cross platform issues existed. While the lab standard is a PC platform, many workers use Macs. This presented a challenge in terms of PDF and certain links that were dysfunctional on a Mac. Solutions were made to remedy these challenges.

How the success of the Best Practice was measured:

Level One evaluation – Learner Reaction

Description of process experience using the best practice:

The best practice resulted in an effective learning tool that was made mandatory for all LANL employees. As of August 2005, over 9500 employees have received the training (85%) with a deadline of Sept 30, 2005 for all employees to take the training. Experience with this tool has led to the development of a more-specific managers training in environmental requirements.