

Onsite Training for Hazardous Waste Management

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Abstract:

The University of Georgia is classified by the EPA as a Large Quantity Generator of hazardous waste, meaning UGA is under stringent federal and state waste management and training requirements. Historically, the University has had poor participation from faculty and staff in its hazardous waste training courses. UGA's Environmental Safety Division set out to determine the reasons for low attendance and then to correct any problems. Some of the complaints that surfaced were that the course was too long and too confusing. Others said the course was offered in a bad location, making it difficult to attend. There were also complaints about course and manual content being difficult to follow and utilize once the attendee returned to their workplace.

The division responded by simplifying the course format. Where the course had once been offered in initial and refresher courses, it was now changed to a single class format to eliminate confusion on which course an employee should attend. The manual for the course was changed to a more concise, less expensive version that could be followed and utilized in class as opposed to the old manual, which was handed out in individual pages and had to be constructed upon an attendee's return to their lab. The change producing the most profound effect was the venue in which the course was offered. Initially, the course was given one time a month in a building located on the outskirts of campus, while the refresher was only offered 8 times a year. The two training courses have been combined into one and are offered "on-site" or at the attendee's location. This practice makes the training more accessible to employees by allowing one trainer to travel to the many trainees as opposed to many trainees commuting to the trainer.

*The results of these changes were substantial. The number of trainees attending "Solid and Hazardous Waste Management" training in one year increased from **474** attendees under the old system to **1,396** attendees the next year under the new practice. The number of registered principal investigators attending the course increased from **5** to **99**. The number of classes taught jumped from **20** to **62**. By reconstruction of the manual, the price had dropped from over **\$5.00** to **\$1.53**, meaning the University could train approximately three times the number of people for less money. By implementing "on-site" training as its new practice, the University was able to train a considerably larger number of employees, which had the effect of increasing safety and regulatory compliance with the added benefit of doing so for less cost.*

Introduction

The University of Georgia, a land-grant and sea-grant university with state-wide commitments and responsibilities, is the state's largest institution of higher education. It is also the state's oldest, most comprehensive and most diversified institution of higher learning. With original scholarship, the University has not only long been seen as a leader in its environmental, agricultural, veterinary medicine, business, law and education schools but is also emerging as a power in the molecular biology, genetics and biochemistry fields. Cooperative extension, continuing education, public service, experiment stations and technology transfer are all designed to enhance the well-being of the citizens of Georgia through their work in economic, social and community development.

When the University of Georgia was incorporated by an act of the General Assembly on January 27, 1785, Georgia became the first state to charter a state-supported university. From its commencement, the University of Georgia has enjoyed tremendous growth as witnessed by its annual fiscal year budget, which tops \$1.1 billion. The university's current enrollment now exceeds 31,000 and requires the services of approximately 10,000 employees.

The university has grown into 13 schools and colleges with more than 170 academic programs. The University owns a total of 43,261 acres throughout the state of Georgia with its main campus of 4,308 acres located in Athens. Dr. Michael F. Adams was named

the twenty-first president of the University of Georgia on June 11, 1997 and Mr. Henry M. Huckaby serves as Senior Vice President for Finance and Administration.

Statement of Problem

Historically, the University of Georgia has had poor attendance in its hazardous waste training course. This is of concern because the university is under a regulatory requirement to train their employees who generate hazardous waste. Non-attendance in this course can result in improper waste labeling, accumulation and disposal; errors in mandatory waste records; and the production of excessive waste which can ultimately damage the university's image and finances as well as putting its employees at a health risk. Traditionally, faculty and staff have shown a reluctance to attend the training course, offered by the University's Environmental Safety Division (ESD), despite pressure and the threat of financial penalties from the Environmental Protection Agency and Georgia's Environmental Protection Division.

Design

Before changes could be made to the training program, ESD had to first determine the reasons employees were unwilling to attend the course in proper numbers. This information was gathered by surveying past attendees of the course to obtain input concerning the strengths and weaknesses of the training sessions. This polling was easy to accomplish as ESD staff were already in daily contact with their hazardous waste generators.

During this questioning, three problems were continually noted. First was the inconvenient location at which the course was conducted. The second problem that surfaced was that the course had a reputation of being too complex and lengthy and was out of the scope of the university's everyday user. Lastly, the manual for the course was confusing, swollen with extraneous information and fundamentally useless both during training and once the trainee returned to their lab setting.

From these findings, ESD developed a new strategy to boost enrollment and the distinction of the course. The first decision to be made was to offer the training "onsite," or at the trainee's location, be it their building or lab. The course had traditionally been offered in a dedicated facility on the outskirts of campus. The distance involved in reaching this location made walking prohibitive. Add to the fact that parking was scarce and controlled by the university's parking service, making parking citations a common occurrence for trainees. In essence, the simple act of getting to the course was enough to discourage many. "Onsite" training provided ESD with a solution to this problem. The decision was made to conduct training sessions in the buildings where the students, employees and researchers were already working, allowing close, convenient access within walking distance. It is more convenient for the university community to "send one trainer to many trainees" as opposed to the opposite.

The second action taken was to simplify the course itself and the fashion in which it was taught. Where the course had once been taught in lengthy three-hour formats, consisting of initial and refresher sessions, it is now combined into a single course that will satisfy

both requirements and reduce confusion on which session a person is to attend. Care was taken to remove any material that was not absolutely essential. The result was a concise one and a half hour course that reduced the confusion and dryness of separate three-hour classes. Many changes were also made to the actual course content itself. The old version consisted of black and white overheads from which the trainer read. The new onsite version corresponds to the manual and is a multimedia presentation, which utilizes hands-on demonstrations (e.g. visual aids, microscale chemistry apparatus, container labeling) and actual pictures taken from labs around campus.

The final major revision was to completely restructure the training manual. The manual in its original form had been handed out in a “loose leaf” sectional style. The training participants would construct their manual using a 3 ring binder upon their return to their lab. This made the manual exceptionally hard to follow during the training presentation. The original manual contained over 100 pages and was written with highly technical wording. All unnecessary items were omitted and the university’s duplicating department was consulted to determine what type of binding would work best for this application. These changes reduced the number of pages from 77 in the old manual to 36 in the new one and replaced a dilute, loose-leaf manual with a concise, spiral bound and user-friendly product that could be followed in the classroom and workplace alike.

Implementation

The implementation of onsite training turned out to be an easy and time efficient process that was well received by the university community. Deans and department heads were

notified of the course's importance and of the changes made to increase the convenience and efficiency of the course. Their assistance was also sought in reserving rooms in their respective buildings in which to hold the training sessions. The new course was trainer-led with a multimedia PowerPoint presentation replacing the black and white slides of the past effort. Current users of the university's hazardous materials program were emailed, advising them of changes and new course dates. The emails also gave instructions if a department wanted to schedule their own training course. In addition, ESD took steps to increase the quality of trainer. The presenter of the course began working towards accreditation in the environmental training arena. Certification was granted to the trainer as a Certified Environmental Trainer (CET) during the onsite training implementation period.

Benefits

The benefits of onsite training were realized immediately. Course evaluations completed by trainees offered praise and unanimous support for the changes made to the manual and locations in which the training was offered. In its first year, onsite training increased the number of attendees to **1,396** from **474** participants the previous year.

Getting principal investigators to attend the course is key because they are in charge of their labs, research and work operations. This new method of training was instrumental in securing their attendance as their participation was raised from **5** per year under the old training system to **99** per year under the new. ESD received many requests for onsite

training from individuals and departments. The total number of classes taught rose from **20** to **62** classes the year onsite training began.

Restructuring the manual played a vital role in the new course's acceptance but one unforeseen advantage was price savings. By shortening the manual and using new bindings, the price dropped from over **\$5.00** per manual to less than **\$1.53** per manual.

The sum of these changes meant that the university **trained almost three times the amount of people for less money**. Onsite training took the university one step closer to its goal of sustainability, allowing a higher level of safety and regulatory compliance and a higher standard of training with less money.

Retrospect

In reviewing the steps that resulted in onsite training, there is very little, if anything that would be done differently if it had to be done again. Every aspect of the training program was improved with no compromises having to be made. All input from faculty and staff was positive, more people attended the course and less money was required. There were many advantages and no liabilities discovered in conducting training in this fashion. In an effort to continually monitor the program for improvement however, the idea of online training is being considered and will be phased in to augment the current course.