

Training Program and Needs Assessment

2017

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Introduction:

Training is one of the most important components of a comprehensive health and safety program. Done correctly, it gives employees an opportunity to learn their jobs properly, bring new ideas into the workplace, reinforce existing ideas and practices and help put our safety and health program into action. Additionally, the Occupational Safety and Health Act (OSHA) and similar regulatory agencies require EHS training at the workplace in many different circumstances. The regulations make it clear when training is required.

ANSI Z490.1, titled “*Criteria for Accepted Practices in Safety, Health and Environmental Training,*” provides a national standard for creating, maintaining, and evaluating an EHS training program. With this plan, the University of Utah means to demonstrate our intention to implement an ANSI Z940.1 compliant training program.

This document is part of the complete “UU Safety Training Plan” with the overall objective to:

- Identify all required and recommended environmental, health, and safety training;
- Provide mechanisms to ensure that such training is completed;
- Document all safety training;
- Make training-related records and reports available to managers and regulatory agencies;
- Provide a mechanism to ensure continuous improvement of the Safety Training Program.

Application:

This document is to be utilized by OEHS to provide the frame work that every safety training program that is developed, implemented and re-evaluated at the University of Utah so as to ensure that all trainings are developed in a consistent manner.

If any of the provisions of this standard are not applicable, the other requirements of the standard shall still apply.¹

Objectives:

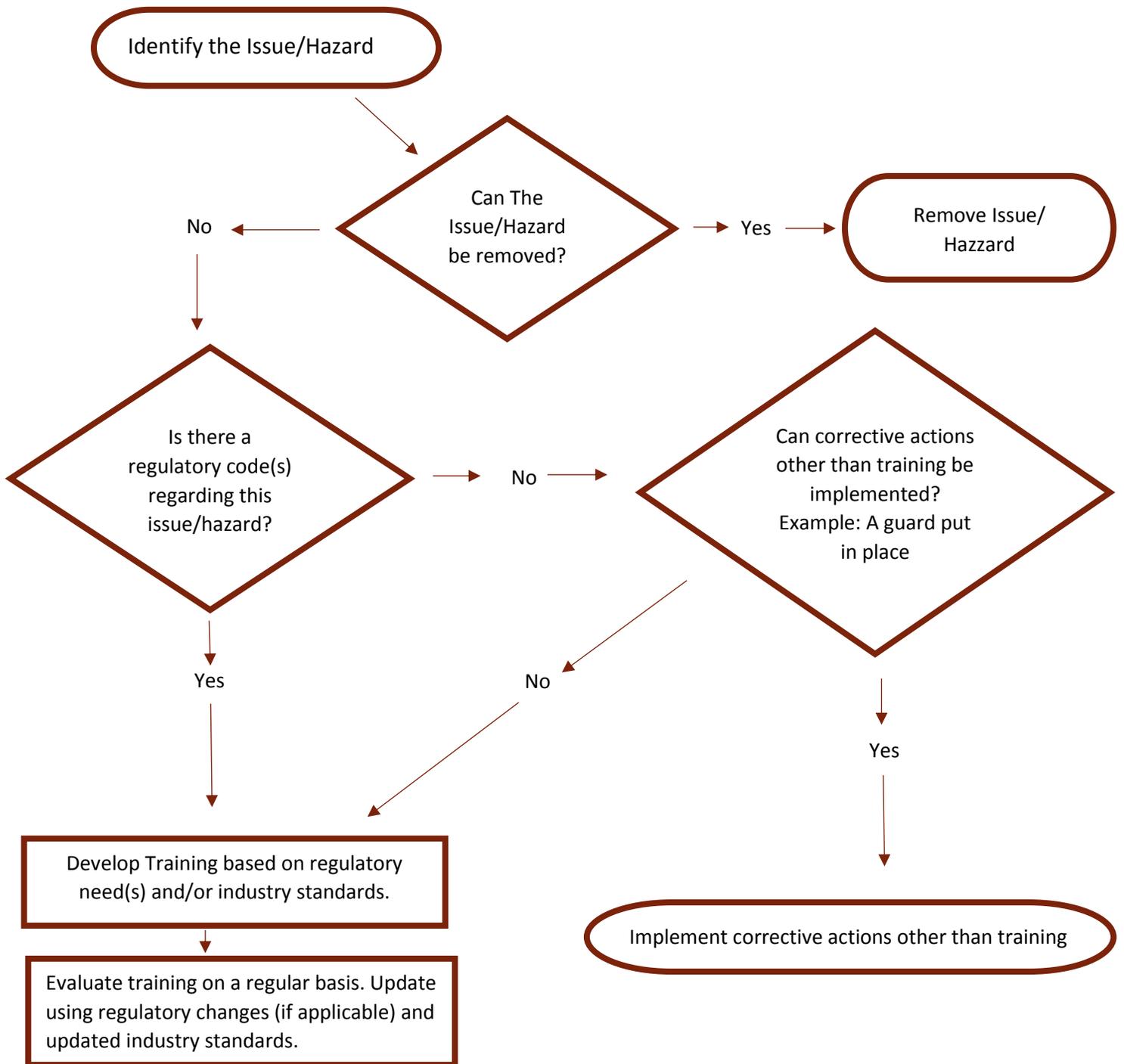
The objective of the “Training Program and Needs Assessment” document is to:

- Understand and apply the ANSI/ASSE Z490.1 – 2016, Section 4 standard in your training development which will give the framework to:
 - Decide if training is the correct response to a given issue.
 - Gather the information needed to create an effective training program.
 - Document all safety training.
 - Provide a mechanism to ensure continuous improvement of the Safety Training Program.

¹ ANSI/ASSE Z490.1 – 2016, Section 1.3.1

Needs Assessment: Is training the answer?

The Initial step is discovering if training is the correct answer to an issue. Follow the work flow to decide if implementing a training program is the best solution to a problem.²



² ANSI/ASSE Z490.1 – 2016, sections 4.2 and 4.2.1

Training Needs Analysis: If training is needed, gather more information:

When it has been agreed that a training program is the best solution to correct an issue, then gathering the following information will assist with designing the training.³

- What the trainees are required to know or be able to do after the training is complete
- What are the characteristics of the trainees? items to include are:
 - Previous/existing knowledge
 - Skills/abilities
 - Language – Will this course need to be in multiple languages?
 - Education -
 - Culture -
 - Literacy -
 - Preferred learning methods – Visual, Auditory , Kinesthetic or a combination
 - Work schedules -
 - Interest in the training topic/reasons for interest – is this required per their job function or is the trainee interested in learning a new skill set etc.
- Site-specific information to include in training
- Review of any existing job analyses
- Applicable regulatory requirements
- Relevant industry standards

Create Learning Objectives:

A learning objective is something the employee will need to know or be able to do when the training is complete. The Learning Objective shall include.⁴

- The target audience
- The desired outcomes to be learned by the trainee:
 - Knowledge
 - Skill
 - Ability
- The condition of which the knowledge skill or ability will be demonstrated.

The criteria to determine if the learning objective has been met shall include: ⁵

- Specific - Tell the employee exactly what he or she should learn and what he or she should be able to do after the training
- Measurable - The objective is something that you can measure. Such as an action that you can observe. Write the objective in your training so they can understand if he or she satisfied the objective or not. Don't be vague or forget to provide a measurable guide for the trainee, the goal is to transfer knowledge and have the trainee demonstrate that transfer of knowledge.
- Achievable - Your learning objective must be something your employees have a chance of completing/satisfying. **Do not make the goal easy to attain either.**

³ ANSI/ASSE Z490.1 – 2016, section 4.2.2

⁴ ANSI/ASSE Z490.1 – 2016, sections 4.3.1 and 4.3.2

⁵ ANSI/ASSE Z490.1 – 2016, section 4.3.3

- Relevant - The objective shall be the trainee gets value in learning. Don't teach material that's not important or won't be used. The trainee needs to understand why it's important to them.
- Time-based - The objective for the training shall be the trainee will have to use it in a timely manner such as later today, tomorrow, or next week instead of next year. Explain if there are time-constraints on the employee's performance. For example, they should be able to complete the objective "at the end of this training."
- Prerequisites - What background, experience, knowledge, skills, and abilities will employees need before they begin your training so that they can perform well and have a fair shot at satisfying the learning objectives? Determine a list of the course prerequisites, and come up with a way of notifying workers of the prerequisites, and helping workers attain those prerequisites if necessary.

Course Design:

Items you shall consider when designing a course.⁶

- The training delivery method
- The training content
- Instructional materials for the employees
- The trainer's guide
- The location of the training
- The training schedule
- The qualifications of the trainer

Delivery Method- Examples of possible ways to conduct the training.⁷

- Instructor-led training in a classroom setting
- Online e-learning courses
- DVDs
- Videos delivered online
- On-the-job, in-the-field training
- Peer mentoring
- Group discussions
- Case studies
- Safety exercises performed in a classroom setting
- Safety demonstrations
- Group interactive safety training activities
- Webinars
- Others

More than one delivery method can be used to conduct the training, such as blended learning. Providing options for the target audience allows them to learn in a fashion that works best for them.⁸

Feedback – provide a mechanism for trainee questions and concerns to ensure comprehension of content. Examples include:

⁶ ANSI/ASSE Z490.1 – 2016, section 4.4

⁷ ANSI/ASSE Z490.1 – 2016, section 4.4.1

⁸ ANSI/ASSE Z490.1 – 2016, section E4.4.1

- Question and Answer sessions during instructor-led training
- Group discussions
- Feedback from an instructor while the employee performs simulated hands-on exercises
- Feedback from a fellow trainer, mentor, or supervisor after the training
- Electronic feedback to questions presented and answered in an e-learning course (multiple-choice or true/false questions)
- Feedback in role-playing or simulation e-learning courses
- An anonymous comments drop-box provided during the trainings
- Contact information for the trainer and organization to send follow-up emails to when training is over.
- Others

Content - Where do you get the information you are trying to get across in your training. Where will you get that information? ⁹

You should use credible sources, including:

- Current literature
- Recognized scientific principles
- The judgement of subject matter experts (SMEs)
- Regulatory requirements
- Site-specific issues
- Industry Standards

Instructional Materials - Once you've identified your training audience, your training delivery method and your learning objectives. It's time to begin creating those training materials.¹⁰

Items you will need to include are:

- A trainer's guide
- A trainee's manual
- Audiovisual materials you'll display to employees during the training
- Hands-on equipment or exercises you'll have employees perform during the training
- Evaluation tools (quizzes, tests, questionnaires, role-playing scenarios, procedure demonstrations, etc.)

Trainer's guide - If your training will include a form of interpersonal instruction, whether it's formal instructor-led training in a classroom setting or on-the-job training, a trainer's guide is extremely helpful.¹¹

This guide should include:

- An outline
- The learning objectives
- Any necessary prerequisites
- Scheduled instruction time

⁹ ANSI/ASSE Z490.1 – 2016, section 4.4.2

¹⁰ ANSI/ASSE Z490.1 – 2016, section 4.4.3

¹¹ ANSI/ASSE Z490.1 – 2016, section 4.4.4

- Training aids and handouts
- Directions for running any demonstrations or activities that will occur during the training
- Requirements for the training environment
- Emergency evacuation procedures and route, the post-evacuation meeting area
- Tools for evaluating the learning of the employees
- A list of reference materials
- The date on which the training guide was published
- A revision date, if applicable

Training Event Location - You should also be sure that the training can be conducted in an environment that is: ¹²

- Safe - Example: don't bring in full bottles of hazardous chemicals to show labeling when the label themselves or an empty bottle will be as efficient.
- Appropriate for the delivery method chosen - Example: If your training is an online e-learning courses, you will want to make sure the trainees have access to a computer in a quite environment with proper computer ergonomics.

Training Schedule - Allocate Time Necessary to Complete Training ¹³

Provide an appropriate amount of time based on:

- The amount of material to cover
- The complexity of the material
- The learning objectives your employees must satisfy
- Regulatory or compliance factors

Your schedule shall include an: ¹⁴

- Estimated duration for the entire training session
- Estimated duration for each individual topic within the training session
- Time to address questions and concerns, and provide feedback

Trainer(s) Qualifications - Come up with a list of the minimum criteria a person must meet to be qualified to lead a training on the topic. This will help you identify appropriate trainers for the particular topic and help ensure the right trainer facilitates each training. ¹⁵

Criteria must include:

- Subject matter expertise
- Training delivery skills
- Specific regulatory requirements
- Desired ratio of trainers-to-trainees. If it is an interactive training a ratio of trainer to trainee shall be maintained so as to instruct the trainee.

¹² ANSI/ASSE Z490.1 – 2016, section 4.4.5

¹³ ANSI/ASSE Z490.1 – 2016, section 4.4.6

¹⁴ ANSI/ASSE Z490.1 – 2016, section 4.4.6.1

¹⁵ ANSI/ASSE Z490.1 – 2016, section 4.4.7

Evaluation Strategy:

While you are designing and creating the training materials, you will want to develop strategies for evaluating its effectiveness at the same time.¹⁶

The items to evaluate are:

- The training materials themselves –
 - What is the reaction from the trainees to the material?
 - Is the assessment/test too easy to difficult?
 - Was the behavior changed or are employees implementing the procedure learned in the training.

Criteria for Completion:

When you're creating that training evaluation, remember to determine what it means to "pass." This answer should be largely answered by your learning objectives, which states what the employee should be able to do after the training.¹⁷

However; the standard states that criteria for valid training completion criteria should:

- Be created before the training occurs
- Be applied in same consistent manner for all training sessions
- Indicate test score or similar qualitative measure of success
- Include standards for minimum attendance and participation

Your completion criteria may also include an alternative procedure that can be followed by an employee who fails to satisfy the primary completion criteria. This may mean completing a full retraining, getting some remedial help, or other similar actions.¹⁸

Continuous Training Improvement:

When the training program is rolled out, you need to periodically reviewed it to make sure it is up to date and effective. And to revise it when necessary. These reviews should be considered when developing the training.¹⁹

When the training is reviewed and updated, use the critiques and evolutions provided by the trainees and peers to make the training more effective and relevant for them.²⁰

Conclusion:

Utilizing this document will provide the frame work to ensure that all trainings are created in a consistent manner.

¹⁶ ANSI/ASSE Z490.1 – 2016, section 4.5

¹⁷ ANSI/ASSE Z490.1 – 2016, sections 4.6 and 4.6.1

¹⁸ ANSI/ASSE Z490.1 – 2016, section E4.6.1

¹⁹ ANSI/ASSE Z490.1 – 2016, section 4.7 and 4.7.1

²⁰ ANSI/ASSE Z490.1 – 2016, section 4.7.2