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A&E TRAINING SOLUTIONS NEWS AND EVENTS

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Training and the requirements, needed to meet obligations?

CSA Z462 Electrical Safety in the Workplace, Outlines the requirements to provide training.

IS APPROPRIATE TRAINING BEING PROVIDED FOR YOUR EMPLOYEES?

RECENT STUDIES HAVE SHOWN:

Injuries in the work place that involve electrical accidents and arc flash burns have risen dramatically. The CSA Z462 has set the standard for training our electrical workers.

Contact A&E Training Solutions to learn more.

WHAT ABOUT TRAINING REQUIREMENTS:

The CSA Z462 Workplace Electrical Safety, Clause 4.1.6 Training, "The training requirements specified in Clause 4.1.6 shall apply to workers who face a risk of electrical hazards not adequately reduced. Full article starting on page 2 of this news letter.

Contact A&E Training Solutions to learn more

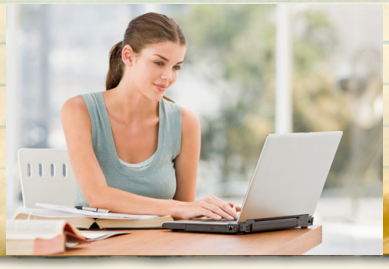
IS YOUR POWER SYSTEM PROTECTED

Have you completed a comprehensive analysis of the building power system to understand the flow of energy and the exposure to injury that your worker may be subject to?

Contact A&E Training Solutions to learn more

To maintain an appropriate level of skill, training and education must be provided on a regular basis.

A&E Training and Technical Solutions launches its online E-Learning Centre



CSA Z462, Clause 4.1.6, Training

The term training refers to the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies. It forms the core of apprenticeships and provides the backbone of content at institutes of technology (also known as technical colleges or polytechnics). Taken from Wikipedia, the free Encyclopedia. http://en.wikipedia.org/wiki/Training

In addition to the basic training required for a trade, occupation or profession, observers of the labor-market recognize as of 2008, the need to continue training beyond initial qualifications: to maintain, upgrade and update skills throughout working life. People within many professions and occupations may refer to this sort of training as professional development.

Some commentators use a similar term for workplace learning to improve performance: calling it "training and development". One can generally categorize such training as on-the-job or off-the-job:

- On-the-job training takes place in a normal working situation, using the actual tools, equipment, documents or materials that trainees will use when fully trained. On-the-job training has a general reputation as most effective for vocational work.
- Off-the-job training takes place away from normal work situations — implying that the employee does not count as a directly productive worker while such training takes place. Off-the-job training has the advantage that it allows people to get away from work and concentrate more thoroughly on the training itself. This type of training has proven to be more effective in communicating concepts and ideas.

What is the criteria for developing a good training package? Training, as with many other commodities, comes in all shapes and sizes. Let's start by taking a look at the rules and standards that come into play when discussing training and training requirements.

CSA Z462, Clause 4.1.6.1, Safety Training, " The training requirements specified in Clause 4.1.6 shall apply to workers who face a risk of electrical hazard not adequately reduced. Such workers shall be trained to understand the specific hazards associated with the electrical energy, as follows;

they shall be trained in the safety-related work practices and procedural requirements necessary to provide protection from the electrical hazards associated with their job or task assignments; and

they shall be trained to identify and understand the relationship between electrical hazards and possible injury.

When electrical equipment is in an electrically safe work condition, the hazard can then be considered as adequately reduced. Workers who face a risk of electrical hazard, means all workers, who through the course of their duties, interact with electrical equipment. This includes electricians, technicians or employees such as operators doing switching operations while the equipment is in the energized state. These workers shall be trained to understand the hazards associated with the electrical energy and trained in the safety-related work practices and procedural requirements necessary to perform their tasks. The hazards associated with the electrical energy can include shock, arc flash, burns, arc blast, etc. All of these hazards can cause minor or major injury, permanent loss of limbs or death. Electricity is a very dangerous source of energy.

CSA Z462, Clause 4.1.6, Training

We, as employers, have an obligation to train the employees in the safety related work practices and procedural requirements necessary to provide protection from the electrical hazards. With that said, are we to assume that these safety related work practices and procedural requirements exists somewhere, if so where can we find them? Safety related work practices and procedural requirements are documents, that are or should be developed in house. They should reflect the work practices and procedures that an employee must understand and follow to perform work on the electrical systems installed in the facility. Therefore, you must understand the electrical installation, operation, maintenance and hazards (such as arc flash and incident energy) prior to developing the safe work practices and procedures.

There are 11 simple steps to follow.

1. Evaluate your electrical system,
2. Analyze the findings of your evaluation,
3. Develop an inventory of tasks to be performed on the electrical system,
4. Perform a hazard assessment and risk evaluation of each task,
5. Develop the safe work practices and procedures required to perform the work,
6. Create a training standard that outlines the standard to which the employees will be trained,
7. Create a training program, that meets the standard, which the employees will attend and participate.
8. Train the employees to be able to understand and implement the safe work practices and procedures,
9. Verify that the employees understand the materials using a testing method,
10. Have the employees demonstrate proficiency in the field, and
11. Document your results.

Continue on with Clause 4.1.6.4.1, Qualified Persons. "Qualified persons shall be trained in and knowledgeable about the construction and operation of the equipment or a specific work method and trained to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method. The following requirements shall also apply: Such persons shall be familiar with the proper use of the applicable special precautionary techniques and personal protective equipment, including arc flash, insulating and shielding materials, and insulated tools and test equipment.

Note: A person can be qualified for certain tasks and in the use of certain equipment and the methods and yet be unqualified for other tasks and in the use of other equipment and materials.
Such persons to work within the limited approach boundary of exposed energized electrical conductors and circuit parts operating at 50V or more shall, at a minimum, be additionally trained in the following;

(a) the skills and techniques necessary to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment,

(b) the skills and techniques necessary to determine the nominal voltage of exposed energized electrical conductors and circuit parts,

(c) the approach distances specified in Table 1 of the CSA Z462 Workplace Electrical Safety and the corresponding voltages to which the qualified person will be exposed, and

(d) the decision making process necessary to determine the degree and extend of the hazard and the personal protective equipment and the job planning necessary to perform the task safely."

Training and Training Requirements

Training to be provided to the qualified worker is much more involved and complexed than other training. You must remember that these are the workers that are interacting with the conductors and circuit parts on a regular basis. They must have a complete understanding of the work to be performed, including the hazards associated with the work and the environment. They must also have a complete understanding of the safe work practices and procedures to be employed. Training for the qualified worker can be developed in the same manner using the 11 step process discussed above.

Clause 4.1.6.4.3, Retraining, "Workers shall receive periodic training to maintain an appropriate level of awareness and skill.

When a task has not been performed by a worker for more than a year, the worker shall be retrained in the task before performing it again.

Workers shall receive additional training if;

(a) supervision or annual inspections indicate that the worker is not complying with the safety related work practices,

(b) new technology, new types of equipment, or changes in procedures necessitate the use of safety related work practices that are different from those that the worker would normally use, or

(c) the worker needs to employ safety related work practices that are not normally used during his or her regular job duties."

Clause 4.1.6.5 Training Documentation, "The employer shall document that each worker has received the training required by Clause 4.1.6.4. This documentation shall be created when the worker demonstrates proficiency in the work practices involved, and maintained for the duration of the worker's employment, and include the worker's name and dates of the training."

In addition to training and training requirements, we mentioned developing a training standard. A training standard consists of the employer developing and documenting a standard particular to the subject matter that the employees are to be trained on. The standard should contain the purpose of the training, requirements for qualified and affected employees, methods, assessment, program content, testing and evaluation, including any field proficiencies and evaluations.

Training of your staff is a very important part of ensuring worker safety. In addition, we can include increased production and proficiency in performance of their tasks. A lost time injury can cost a company thousands to hundreds of thousands of dollars, not to mention the fines and court costs if applicable.

Training your staff not only makes sense but is also the right thing to do. Make yourself aware of the regulations and standards that you must adhere to, understand the intent of the regulations and standards and work diligently towards incorporating them into your day to day activities.

Training and Training Requirements. Are you meeting your obligations?

If you were asked this question about training and its, requirements how would you answer? Are you meeting your obligations? If you answered yes, can you prove it if needed? One last thing to mention is the need to be able to provide proof of training when required. In the event of an accident or incident that may require investigation, could you provide the investigator with the documentation of training? This is very important. Keeping good records of the necessary training is a requirement of the standard. Don't forget to record the date and time that the employees proficiency was verified in the class room and in the field. If an employee fails to make the grade established in the training standard, make allowances for a re-test.

Earlier we mentioned that training comes in all shapes and sizes. There is a move in the industry towards E-Learning or on-line training. This is an effective way to keep your employees up to date with subject matter and of course, is a way to assist you the employer, in meeting your training obligations. When purchasing on-line training, make sure that you evaluate the program to ensure that it meets with your needs. Ensure that you can effectively have your employees take the training and allow them the time to participate while at work.

Instructor lead classroom training remains the most effective training that you can provide. This type of training has the advantage of being face to face with an expert trainer, class room participation and allows for questions and answers.
We recommend that you structure your training in a way that combines with both classroom and on- line courses. A balanced combination will depend on your needs.