Training

Info Sheet 11 a

The CSA Z1006 Standard "Managing Work in Confined Spaces" identifies eight roles (non necessarily eight people) that have specific duties that must be carried out within an organization if you work in Confined Spaces. Each of these roles require training. Traditional training has the student sit at a desk and absorb information and then complete a written test. However, this training actually is to develop job skills which requires a different approach. You need to develop theoretical knowledge but also skill sets. Students undertaking skills training need time to practice the skill and also need to be evaluated on the demonstration of that skill. Your training must include significant amount of time for skills proficiency (e.g. 50% of course time). As pointed out in Info Sheet #5 "training should be intended to be one time only and the upkeep of the skill is from using the skills". Renewal of your certificate should be based on an audit of how well the job is run or if there is an upgrade/changes in your program, equipment or processes, not a fixed time period.

In addition to renewal training, one other aspect that needs discussing is competency. Competency is defined in a variety of documents as a combination of knowledge, training and experience. This automatically sets us up for problems as experience is sometimes hard to measure to determine how much is sufficient. For the record, competency enables better decision making. There have been a number of studies done about decision making.

A study funded by the US military was implemented in an attempt to develop ways to train combat field commanders to make better decisions. Fire commanders were among the groups studied, specifically how they make decisions at fires and emergencies. At an emergency scene, the person in charge has only a short time to absorb all the various audio and visual details from the situation, interpret the varied details, and decide on a strategy and tactics that will safely mitigate the emergency.

If you think that this process takes an Emergency/Incident Commander (IC) a long time, you are wrong. In his book *"Sources of Power: How People Make Decisions"*, Gary Klein estimates that ICs make 80 percent of their decisions in less than one minute. Even though ICs do not have all of the relevant information they would like to have before making these decisions, they must still make them, and make them quickly. In fact, you can honestly say that one of the jobs of the IC is to make quick life-and-death decisions based on incomplete information. Klein, who participated in the military study, found that fireground commanders do not compare various options, nor do they try to find the best possible option at a fire or an emergency scene. Instead, they choose the first workable solution they consider and subsequently alter this decision as needed to successfully conclude the incident.

They do not consider all possible solutions and ramifications, nor do they consult with others on the scene. There is no committee formed to come up with an acceptable group decision. There is no time for that on the fireground. Decisions must be made immediately. Amazingly, these decisions are usually good. Klein points out that experienced ICs make better decisions than inexperienced ones. This is no surprise, but why is it so? How do experienced ICs come up with a workable solution quickly? One reason offered is they compare the present situation with situations they have experienced in the past. When an experienced IC sees a particular type of structural fire or emergency incident, he quickly relates the present situation with one previously experienced. He recalls the strategy and tactics that worked for him on that occasion, applies them to the current problem, and carefully watches for an expected outcome. If this expected outcome is not forthcoming, he re-evaluates what is occurring and may try another tactic. This new tactic, again, is based on what worked for a previous incident with conditions similar to the current conditions facing him. It is as if he has a slide tray full of experiences he can quickly compare with the current fire or emergency. If one matches or is close, he applies the strategy and tactics that worked for him in the past. He does not have to come up with a new course of action for each incident. He makes his decisions seemingly without consideration.

The slide tray theory of decision making sheds some light on why experienced personnel make better decisions than inexperienced ones. They have more slides in their tray; as a result, they can quickly come up with workable strategies and tactics, because they do not need to invent them anew for each incident. The inexperienced person, on the other hand, has a slide tray that is almost empty; as a result, he does not have many readily available options. Until such time as his tray fills up with useful slides, he has to invent a solution for each new incident instead of applying one that has been successfully applied in the past. He has a built-in handicap. Assuming that the slide tray analogy is accurate, how do we help the new, inexperienced person make better decisions? We must find a way to add slides to their empty slide tray! This seemingly daunting task can be accomplished by simulation training.

Simulation training is a play depicting a problem in which the instructor, using a prepared but flexible script, participates in a training play with a script-less student. The goal of the play is to allow personnel a chance to gain experience without encountering the associated risks of a live job (eg. rescue). The simulation should have defined training goals and create a certain amount of pressure or tension so that the student's decisions are made under pressure. In addition to decision making, the student is given the opportunity to practice communication skills and use his knowledge of company procedures and systems. In other words your training must not only be practical or hands on, you must include simulations that provide the student the opportunity to make decisions.

In summary, your initial training must include:

a) theory component (presentation)

b) skills proficiency development (demonstration and practice)

c) scenarios (decision making practice)

d) written, skill proficiency and scenario evaluations

Confined Space Training Competencies

The table below highlights the modules that should be completed for each role (each colour represents one role) that is involved when working in confined spaces.

Legend:

Level	Colour Code	Level	Colour Code
1. Introduction		5. Rescuer (Non Entry)	
2. Entrant		6. Rescuer (Entry)	
3. Attendant		7. Entry Supervisor	
4. Air Supply Attendant		8. Rescue Team Leader	

Training Course Modules	Levels							
	1	2	3	4	5	6	7	8
Introduction to Confined Spaces								
Confined Space Identification								
Confined Space Hazards								
Hazard Evaluation								
Job Planning								
Confined Space Program		2	2					
Entry Supervisor Role								
Attendant Role				2				
Entrant Role			2	2				
Air Supply Attendant Role								
Dispatcher								
Rescue Team Leader							2	
Rescuer Role					2		2	
Administrative Practices			1				1	
Toxicology								
Traffic Control			1				1	
Entry Point Operations								
Hazardous Energy Control (Lockout Systems)			1			1	1	
Tool Guarding			1				1	
Fire Watch/Hot Work Precautions			1				1	
Working at Heights			1	1		1	1	
Ventilation			1	2			1	
Atmospheric Monitoring Equipment				2		2		
Personal Protective Devices				2				
Supplied Air Respiratory Devices							1	
Communication Systems		2		2				
Lighting		3				3		

Training Course Modules	Levels							
	1	2	3	4	5	6	7	8
Electrical Safety			1			3	1	
Heat Stress Management		3	1	2			1	
Engulfment Prevention		3	1				1	1
Decontamination		3	1	1		1	1	1
Commercial Retrieval System and Winches						1		
Ropes, Knots, Bends and Hitches								
Rope Based Mechanical Advantage Systems								
Rope Based Raising Systems								
Rope Based Belaying Techniques								
Engulfment Retrieval						1		
Packaging Techniques								
Emergency Procedures Development								
Managing an Emergency Response Incident								
Confined Space Rescue Operation					2			
Scenarios/Simulations								

Notes:

1- Optional Module
2- Condensed Module
3- Optional using Condensed Module

Each Level has pre-requisites as follows:

Pre-requisites	Levels							
	1	2	3	4	5	6	7	8
Entrant Training								
8 hour First Aid (including CPR)								
Rescuer Training								
Advanced First Aid Training								
Entry Supervisor Training								

Refresher Training:

Rescuer Level – Semi-annual rescue practice

All Levels- As skills deteriorate or changes in equipment, processes or space inventory occur.