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Rescue Plan Development: The Next Step in Your Managed Fall Protection Program

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Whenever fall protection methods are used, the employer must provide for prompt rescue (including self-rescue) of employees in the event of a fall. Such accidents are deemed reasonably foreseeable in the high-angle working environments. Wherever the likelihood of life threatening accidents is foreseeable, the employer is required to designate a rescue plan, provide appropriate rescue equipment, and train designated employees accordingly.

While OSHA Fall Protection guidelines do not specifically require that a fall rescue preplan be *written*, a written plan is the best way to develop and monitor procedures, ensure that appropriate equipment is available, and to provide consistent training to affected and involved personnel. Employers must also take appropriate precautions to assure that the rescuers themselves do not become victims.

It is often (erringly) assumed that OSHA will not cite employers for incidents incurred during rescues. This is not necessarily accurate. Although OSHA is usually quite forgiving when it comes to spontaneous rescue efforts, and often does not cite for accidents incurred by a co-worker trying to spontaneously rescue a fellow employee, they MAY cite the employer for failing to have a rescue plan in place for a given type of incident.

Although OSHA has clearly stated that they will not issue a citation to an employer for any

OSHA Standards that address Rescue Related Operations:

- **process safety management 29 CFR 1910.119(n)**
- **hazardous waste operations 29 CFR 1910.120(1), (p) and (q);**
- **confined spaces in general industry, 29 CFR 1910.146**
- **confined spaces in grain handling, 1910.272(d), (e), and (g)**
- **construction work near or over water, and excavation 29 CFR 1926.106, 1926.651(g)**

spontaneous rescue activity, this does not relieve the employer from the obligation to ensure safety to employees who may be *designated to respond* in the event of an emergency. Any employee who may be designated to rescue another must be provided with protection equivalent to the protection provided to the working employee, including PPE, communications, and any

other appropriate safety equipment. Further, where rescue is likely to be needed, the employer is obligated to prepare and provide for an appropriate response.

By following a few simple guidelines, an employer can evaluate specific rescue needs and make appropriate preparations in advance.

Evaluating Rescue Needs

This process can be initiated by first reviewing (or establishing) the Job Hazard Analysis for the jobsite. A Job Hazard Analysis should be performed as a part of work preparation for every worksite, and whenever conditions change. Because the JHA specifically examines hazards, it is also a useful tool in developing the rescue preplan.

Define the **area of responsibility** that each plan will encompass. A given worksite may develop a single plan for a wide variation of needs, or separate plans for specific areas of need. Worksites that are geographically separated, that are particularly large, or that involve limited access will be more likely to have different response plans for different aspects of the jobsite.

List all **known or foreseeable hazards** in each subdivided area. Include specific details as to number of workers that might be exposed at a given time, how frequently and at what time(s) of day exposure may occur, and the proximity of other workers. Other factors that might contribute to increasing the hazard should also be noted: environmental conditions (weather), surface contaminants (oils, fluids, chemicals, even water), work-tools being used, the experience level of worker(s), etc.

Developing Rescue Readiness

Examine **existing response protocols**. Describe how your organization would respond to each of the identified hazards if an incident were to occur today. Some of these responses may be appropriate, while others may have significant limitations. Examine the limitations of each of your existing response protocols, making note of where improvement is desired.

Adopt the existing response protocols that work into your new **emergency response preplan**. For those with which you are not satisfied, develop a new preplan. Every hazard identified should have a specific emergency response preplan. The preplan for each hazard should call out ***self-rescue*** protocols, ***assisted rescue*** protocols, and ***external response*** protocols. It is not necessary for all aspects of post-fall rescue capability to come from an in-house rescue team. It is, however, necessary for any organization employing workers at height to have a post fall rescue plan for each specific worksite where an employee might fall. This plan should include, at a minimum, notification of the incident, self-rescue techniques to be implemented by the fallen employee, assisted rescue techniques that can be implemented within just a few minutes, expanded technical rescue techniques for more complex scenarios, and medical/first aid provision.

Soliciting assistance from other safety/rescue professionals during this phase can help to prevent tunnel-vision and promote creative solutions. This plan can also change over time, as your response-team capabilities evolve.

4 STEPS
To Developing a Fall Rescue Response Plan

1. Define area of Responsibility
2. Identify Known or Foreseeable Fall Hazards. Consider
    a. # persons exposed
    b. contributory factors (environment, task, experience, etc)
    c. time to rescue
3. For Each Hazard, Develop a SELF-RESCUE protocol, an ASSISTED RESCUE protocol, and an EXTERNAL RESPONSE protocol, including methodologies at every level for:
    - notification of incident
    - individual responsibilities
    - equipment & systems to be used
    - criteria and means for activation of the 'next level' of response
4. Train, Practice, Assess, Re-Train

Developing and evaluating a rescue service for post-fall rescue can be a daunting task. Rescue of a subject who fell while using fall arrest equipment differs from a rescue of a subject who was using rope access techniques in that the rope access technician will likely be hanging directly off a rope, whereas a person who falls while using fall arrest equipment and techniques will likely be hanging from a lanyard, fall arrest block or some other device designed to lock off in the event of a fall. Most Rope Access Technicians, whether they employ techniques endorsed by SPRAT or IRATA, will be on two ropes for their work; a primary line and a backup line.

This paper provides some criteria that an employer can use as a starting point for this process. Additional criteria may also need to be added based on specific needs and environments, to supplement this information.

Worksite Considerations

Detailed consideration of the worksite is the beginning of a successful plan. Important questions to ask include: How remote is the worksite? What kind of work is taking place there? Does the plan cover a sub-division of a larger jobsite? How many employees might be in the area?

Realizing that OSHA interprets "prompt care" being up to about 15 minutes, response plans should take into consideration how quickly "assisted rescue" can reach any given individual in the area covered by the plan. Clear identification of the physical boundaries of a response plan will help in planning resources.

In determining response time of those providing "assisted rescue" consider the type of work that they are likely to be involved in at the time of an incident and how long it will take them to disengage from their own work and reach the incident site.

Finally, consider what employees are covered by the plan in relation to what employees are actually on site. It is in the best interest of all employers on a given site to engage in open dialog regarding this subject, and to have a plan for coordinated response.

Contributing Factors

The potential hazards, as well as appropriate response protocols, will vary at a given worksite depending upon various other considerations for any site. Whenever an employee falls, consideration must be given to why that fall might have occurred in the first place. A simple "slip" or "trip" is one thing, but what if the fall was the result of a medical condition? Or, what if an environmental condition, such as toxic air, was the cause? Consider the probability of each, and be prepared to evaluate the situation adequately before exposing additional employees or responders.

Self-rescue Plan

Self-rescue is the first line of response for any person working at height. Any individual using fall protection / fall arrest equipment should be equipped and prepared to extricate themselves in the event that they fall and are caught by their safety system. Knowing and practicing appropriate self-rescue techniques in advance, using equipment at hand, is essential. In order to be proficient at such skills during a true emergency, a worker must be very familiar with those skills in non-emergent conditions.

Any time an employee takes a fall and must utilize self-rescue skills, the next level of response capability identified in the preplan should be notified and initiated.

Assisted Rescue Plan

Assisted Rescue involves using limited techniques to remove a subject from harm quickly by personnel with limited training but who can make contact with the fallen subject within a short period of time. This differs from Advanced Rescue Techniques in that the responders may simply be fellow-employees trained to employ certain procedures.

Assisted Rescue is intended as an intermediary step; any time Assisted Rescue is called into action, the next level of response capability identified in the preplan should be notified and initiated.

Notification of Assisted Rescue responders should be addressed in the preplan. Assuming that no employee at height is working alone, notification might take the form of a verbal or radio call from a co-worker or other similar method.

Assisted Rescue Responders should be selected carefully in terms of both technical ability and psychological resistance. Responders should be selected from those in proximity to a potential subject, and should receive special training as well as frequent opportunity to practice their Assisted Rescue skills.

Assisted Rescue may be as simple as turning a crank or pulling on a rope, or as complicated as providing advanced extrication and medical care to the subject. The level of care rendered should be based on what Assisted Rescue responders are properly trained and prepared to do. Responders should never render care beyond their level of training.

What level of training Assisted Rescue Responders receive is up to the “authority having jurisdiction”, in this case the employer, and will be determined based on anticipated need, and the amount of time it will take to connect a subject with more advanced care capabilities.

Provision for Assisted Rescue should be clearly outlined in the preplan, including information on equipment, anchorages, techniques and expectations for extent of medical intervention.

Professional Rescue

Don’t overlook making provision for Self-Rescue and Assisted-Rescue and expect Advanced/Professional Rescuers to make up for the deficit. This is a grave mistake and has caused many a simple fall to become a more serious predicament due to delayed/inadequate response.

Advanced/Professional Rescue care is usually not provided by the employer, but is the role of privatized and/or municipal rescue agencies. At this level of response, rescuers are generally capable of rendering more advanced medical care and a broader spectrum of technical rescue capability. What cannot necessarily be guaranteed at this level of care is rescuer’s familiarity with a specific worksite, or their technical capacity to adequately resolve an incident.

While Advanced/Professional Rescue should be activated any time Assisted Rescue is called into action, the pre-plan should clearly explore what this truly brings to the table, including anticipated response times (best/worst case), technical capabilities, medical care, etc

Preparing the Team

Once a preplan is firmly in place, it is time to begin preparing the rescue team itself. Developing true teamwork within the context of a rescue team involves a combination of appropriate equipment for the intended task, proper training of personnel in skills and systems, and appropriate incident management.

The aspect of **proper training** involves first developing a *plan*, and then establishing a *process* to ensure that all personnel know, understand, and can work to the plan. Training is an ongoing need, and involves more than just the initial introduction. Initial training generally takes an initial commitment of at least 40 hours for each individual who has a role, and at least another 8-16 hours quarterly to maintain those skills.

Training and re-training should include a review of relevant concepts, skills reviews, practical sessions including 'mock' scenarios, and an evaluation. It is prudent to document not only the training itself, but who attends each training and the results of skills evaluations for each person. Contracting with an outside rescue training organization to help you develop your plan, determine your response protocols, and maintain personnel skills is an excellent way to maintain perspective and avoid a myopic view. Don't change external resources too often, however, as different rescuers have different preferences, and this can lead to inconsistency and potential confusion.

The importance of **re-training** cannot be over emphasized. Some research suggests that as much of 70% of a person's knowledge is lost within 2-3 weeks of acquiring that knowledge *if it is not used.* Put another way, the average level of retention for a given topic is approximately 30 percent as little as one month after training! Training more often for shorter periods of time is one way to help ensure maximum success with the minimal investment in training and retraining. Be sure your training includes all aspects of rescue response, including management protocols, technical skills, medical considerations, and psychological preparation.

Summary

Organizations that employ workers at height have an obligation to prepare effectively for rescue in the event that one of those workers should fall into their safety system or become somehow incapacitated. These simple, effective guidelines can help employers to analyze the unique concerns related to a given environment and establish a process for an appropriate response.

Many employers will find it useful to consult with experts from outside their own company in order to ensure broader perspective in establishing and evaluating their plan. An outside expert who specializes in industrial rescue can be instrumental in evaluating the capability of both a plan and personnel to perform to the necessary levels in the event of a real emergency. All rescue plans should be tested through mock exercises and drills that emulate realistic conditions.