

Chapter 9 Confined Space Rescue

9.1 General Requirements. The job performance requirements defined in 9.1.1 through 9.1.9 shall be met prior to certification in confined space rescue.

9.1.1 Preplan a confined space incident, given applicable guidelines and regulations and a preplan form, so that a standard approach is used during a confined space rescue emergency, hazards are recognized and documented, isolation methods are identified and documented, all accesses to the location of the entry opening are identified and documented, all types of entry openings are identified and documented, and internal configurations and special resource needs are documented for future rescuer use.

(A) Requisite Knowledge: Operational protocols, specific preplan forms, types of hazards common to jurisdictional boundaries, hazards that should and must be identified on preplans, isolation methods and issues related to preplanning, issues and constraints relating to the types of confined space openings, internal configuration special resource needs of a confined space, and applicable legal issues.

(B) Requisite Skills: The ability to select a specific preplan form; draft or draw a sketch of confined spaces; complete supplied forms; identify and evaluate various configurations of confined spaces, access points, entry openings, isolation procedures, and energy control locations; recognize general and site-specific hazards; document all data; and apply all regulatory compliance references.

9.1.2* Assess the incident, given a preplan of the space or size-up information, information from technical resources, monitoring equipment, and personal protective equipment required to perform the assessment, so that general area and space-specific hazards are identified, bystanders and victims are interviewed, immediate and ongoing monitoring of the space is performed, the victims' conditions and location are determined, a risk-benefit analysis is performed, methods of ingress and egress for rescuer and victims are identified, rescue systems for victim removal are determined, and an emergency means of retrieval for rescue entrants is established.

(A) Requisite Knowledge: Use of preplans, size-up, and interviewing techniques; types of personal protective equipment; monitoring equipment protocols, rescue and retrieval systems; permit programs; types of and uses for available resources; risk-benefit analysis methods; common hazards and their influence on the assessment; methods to identify egress from and ingress into the space; and processes to identify size, type, and configuration of the opening(s) and internal configuration of the space.

(B) Requisite Skills: The ability to select and interpret preplan and size-up information, conduct interviews, choose and utilize personal protective equipment, operate monitoring equipment, identify hazard mitigation options, identify probable victim location, perform risk-benefit analysis, recognize characteristics and hazards of confined spaces, and evaluate specific rescue systems for entry and retrieval of rescuers and victims during confined space incidents.

9.1.3* Conduct monitoring of the environment, given monitoring equipment reference material, personal protective equipment, accurately calibrated detection and monitoring equipment, and size-up information, so that a representative sample of the space is obtained, accurate readings are made, readings are documented, and effects of ventilation in determining atmospheric conditions and the conditions of the space have been determined for exposures to existing or potential environmental hazards.

(A) Requisite Knowledge: Capabilities and limitations of detection and monitoring equipment, ways to confirm

calibration, defining confined space configuration as it applies to obtaining a representative sample of space, basic physical properties of contaminants, and how to determine contents of a confined space.

(B) Requisite Skills: The ability to use and confirm calibration of detection and monitoring equipment and acquire representative sample of space.

9.1.4 Control hazards, given personal protective equipment and a confined space tool kit, so that the rescue area is established; access to the incident scene is controlled; rescuers are protected from exposure to hazardous materials and atmospheres, all forms of harmful energy releases, and physical hazards; and victims are protected from further harm.

(A) Requisite Knowledge: Proper personal protective equipment; safety protocols; monitoring equipment and procedures; ventilation equipment and procedures; incident hazards; types of hazardous materials exposure risks; forms, sources, and control of harmful energy and physical hazards in the confined space.

(B) Requisite Skills: The ability to utilize personal protective equipment, place scene control barriers, operate atmospheric monitoring equipment, isolate dangerous forms of energy, and mitigate physical and atmospheric hazards.

9.1.5 Prepare for entry into the confined space, given a confined space and a confined space rescue tool kit, so that victim communication is established when possible, continuous atmospheric monitoring is initiated, rescuer readiness is verified, rescuers' limitations are identified and evaluated, rescuers unsuitable to entry operations are reassigned and replaced, route and methods of entry are determined, and rescuer evacuation is planned.

(A) Requisite Knowledge: Effects of hazardous atmospheres on victims and rescuers, types and operation of required hazardspecific monitoring equipment, organization protocol for medical and psychological evaluation related to entry, methods of entry into confined space in accordance with operational protocols, and rescuer evaluation methods.

(B) Requisite Skills: The ability to operate monitoring equipment, perform rescuer pre-entry medical exam, evaluate rescuer capabilities and limitations, identify victim communication needs, evaluate for point and route of entry, and select evacuation methods.

9.1.6 Enter a confined space, given personal protective equipment; safety, communication, and operational protocols; and a confined space rescue tool kit, so that the victim is contacted, controlled entry is established and maintained, atmosphere is continuously monitored, the victim's mental and physical condition is further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.

(A) Requisite Knowledge: Principles of operation for atmospheric monitoring equipment; methods for patient care in confined spaces; safety, communication, medical, and operational protocols; and controlled entry and egress procedures for confined spaces.

(B) Requisite Skills: The ability to use and apply personal protective equipment and rescue-related systems and equipment; implement safety, communication, and operational protocols; use medical protocols to determine treatment priorities; use medical equipment specific to confined space victim needs; and reassess and confirm mode of operation.

9.1.7* Package the victim for removal from a confined space, given a confined space rescue tool kit, so that damage to the rescue/retrieval equipment is prevented, the victim is given the smallest possible profile, and further harm to the victim is minimized.

(A) Requisite Knowledge: Spinal management techniques, victim packaging techniques, how to use low-profile packaging devices and equipment, methods to reduce or avoid damage to equipment, and the similarities and differences between packaging for confined spaces and other types of rescue.

(B) Requisite Skills: The ability to immobilize a victim's spine; package victims in harnesses, low-profile devices, and litters; recognize and perform basic management of various traumatic injuries and medical conditions; support respiratory efforts; and perform cardiopulmonary resuscitation as required based on the environment.

9.1.8 Remove all entrants from a confined space, given personal protective equipment, rope and related rescue and retrieval systems, personnel to operate rescue and retrieval systems, and a confined space rescue tool kit, so that internal obstacles and hazards are negotiated, all persons are extricated from a space in the selected transfer device, the victim and rescuers are decontaminated as necessary, and the victim is delivered to the emergency medical services (EMS) provider.

(A) Requisite Knowledge: Personnel and equipment resource lists, specific personal protective equipment, types of confined spaces and their internal obstacles and hazards, rescue and retrieval systems and equipment, operational protocols, medical protocols, EMS providers, and decontamination procedures.

(B) Requisite Skills: The ability to select and use personal protective equipment, select and operate rescue and retrieval systems used for victim removal, utilize medical equipment, and use equipment and procedures for decontamination.

9.1.9 Terminate the confined space incident, given isolation barriers, documentation forms, and a confined space rescue tool kit, so that all personnel are accounted for and removed from the space, injuries are avoided, further entry into the space is denied, and the scene is secure.

(A) Requisite Knowledge: Methods to secure a scene, forms for documentation, tools for securing space access points, accountability protocols, and methods for denying further entry.

(B) Requisite Skills: The ability to apply regulations as needed, use tools, complete reporting documentation of the incident, and apply protocols.