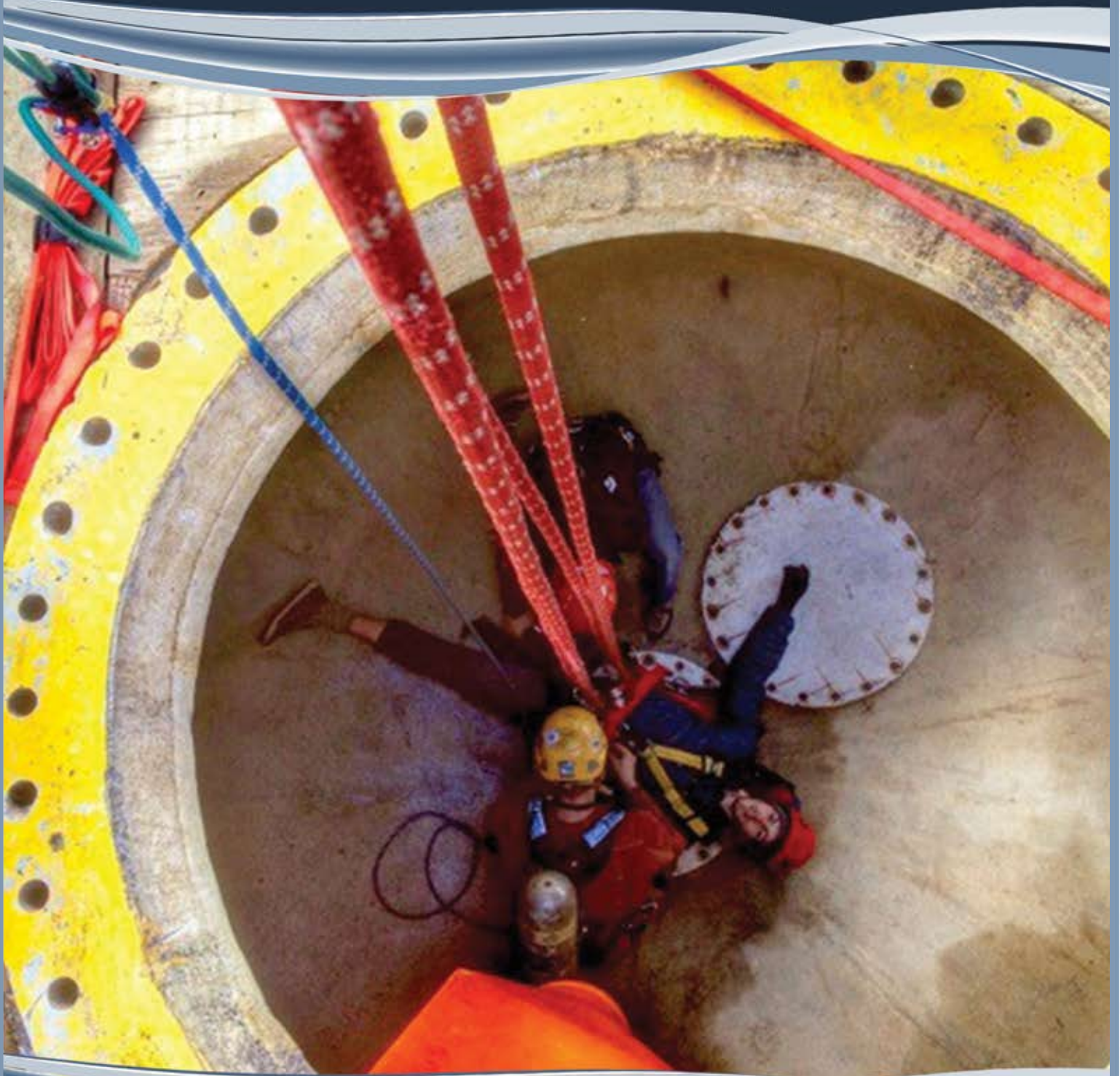


Rescue 3 International Confined Space Training Standard



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Rescue 3 International

Confined Space Training Standard

1. Rescue 3 Philosophy

- 1.1 Recall the steps required in order to develop judgment.
- 1.2 Explain the order of priorities at a confined space rescue scene

2. Training Standards

- 2.1 Recognize the different training courses within the Rescue 3 scheme
- 2.2 Recall the remit and role of an individual trained to this level
- 2.3 State how the Rescue 3 scheme fits within national and international standards
- 2.4 State how the Rescue 3 scheme fits within agency policy and agency standard operating guidelines

3. Confined Space definitions and hazards

- 3.1 Recall the definition of a confined space
- 3.2 Identify hazards and control measures associated with confined spaces
- 3.3 Identify differences between horizontal, diagonal and vertical entries to confined spaces, their hazards and control measures
- 3.4 Identify hazards and control measures associated with confined spaces within confined spaces

4. Air monitoring and confined space ventilation

- 4.1 Recall when a confined space would be ventilated
- 4.2 Recall ventilation methods
- 4.3 Use appropriate ventilation equipment to ventilate a confined space
- 4.4 Recall how a 4-gas meter is used to monitor the air in a confined space, and procedures in the event of an alarm
- 4.5 Use a 4-gas meter to monitor the air in a confined space
- 4.6 Use a PID meter to monitor the air in a confined space

5. Lock-out, tag-out, try-out

- 5.1 Recall appropriate use of lock-out, tag-out, try-out procedures
- 5.2 Check the placement of lock-out, tag-out, try-out for a given confined space
- 5.3 Place lock-out, tag-out, try-out for a given confined space, if used by agency

6. Medical considerations

- 6.1 Identify signs/symptoms and treatment for common medical issues found in confined spaces
- 6.2 Identify individuals at risk for common medical issues found in confined spaces and control measures to minimize these

7. Personal Equipment

- 7.1 Identify personal protective equipment (PPE) for working in confined spaces
- 7.2 Recall national and international standards for PPE
- 7.3 Select appropriate PPE for working in confined spaces, perform pre-use checks, donning and buddy checks
- 7.4 Recall post-use care and inspection procedures for personal equipment

8. Technical Equipment

- 8.1 Identify technical equipment used for working in confined spaces
- 8.2 Identify technical equipment used for performing rescues in confined spaces
- 8.3 Recall national and international standards for technical and team equipment
- 8.4 Recall post-use care and inspection procedures for technical and team equipment

9. Breathing Apparatus

- 9.1 Identify when personal escape sets are used, their hazards and control measures
- 9.2 Use a personal escape set in a confined space, if used by agency
- 9.3 Identify when self-contained breathing apparatus is used, its hazards and control measures
- 9.4 Use self-contained breathing apparatus in a confined space
- 9.5 Identify when supplied air systems/airline systems are used, their hazards and control measures
- 9.6 Use supplied air systems/airline systems in a confined space

10. Pre-planning

- 10.1 List the four components of a generic pre-plan
- 10.2 Identify sources of information useful for generic and task-/location-specific pre-planning
- 10.3 Describe key information that should be included within a pre-plan

11. Risk Assessments

- 11.1 Identify the elements of an effective generic and site-specific risk assessment
- 11.2 Perform a generic or site-specific risk assessment
- 11.3 Identify the elements of an effective dynamic risk assessment
- 11.4 Perform a dynamic risk assessment of a confined space rescue scenario
- 11.5 Perform a dynamic risk assessment of a working area in a confined space

12. Work permits and work procedures

- 12.1 Recall correct use of a safe system of work
- 12.2 Recall correct use of permits-to-work

13. Incident size-up

- 13.1 Demonstrate use of size-up models
- 13.2 Explain the phases of a successful rescue
- 13.3 Perform an on-site safety brief based on risk assessments
- 13.4 Identify basic rescue options and their limitations
- 13.5 List rescue options
- 13.6 Select and brief an appropriate plan of action for a given incident

14. Incident management and site control

- 14.1 Based on hazard recognition, apply appropriate control measures to protect personnel and bystanders
- 14.2 Install and mark site zones
- 14.3 Identify issues and hazards of bystanders in the cold zone
- 14.4 Identify how and when to contact the emergency services in the event of an incident
- 14.5 Identify the role and responsibilities of an incident commander (IC)
- 14.6 Operate as a safety officer
- 14.7 Provide information for use in an incident management system
- 14.8 Operate as a technical rescue team leader in a small 2-3 person team
- 14.9 Operate as a technical rescue team leader in a team of 4 or more people
- 14.10 Operate as a technical rescue team leader in a team of 6 or more people
- 14.11 For a given task, appoint different roles (including safety officer) for the personnel and casualty present
- 14.12 For a given task, place appropriate markings for rigging the main line, safety line, artificial high directional, change of direction

15. Loads and forces

- 15.1 Apply the worst case event and maximum arrest force to minimum breaking strength of equipment and system design
- 15.2 Differentiate between mass and force
- 15.3 Identify SI base units and derived units used in confined space rescue
- 15.4 Describe the differences between static and dynamic forces
- 15.5 Recall the permissible maximum arrest force (MAF)
- 15.6 Recall the parameters of a worst case event (WCE)
- 15.7 Apply the worst case event and maximum arrest force to minimum breaking strength of equipment and system design
- 15.8 Calculate the effect of a change of direction on system force
- 15.9 Recall appropriate system safety factors
- 15.10 Recall the use of leverage in confined space rescue systems, its merits and limitations
- 15.11 Recall the difference between ideal, theoretical and actual mechanical advantage
- 15.12 Calculate the ideal mechanical advantage of a system
- 15.13 Calculate the theoretical mechanical advantage of a system

16. System safety checks

- 16.1 Identify the components of a system safety check
- 16.2 Perform a system safety check

17. Communications

- 17.1 Use whistle signals in confined space operations
- 17.2 Use verbal commands in confined space operations
- 17.3 Identify correct use of mobile radios in confined space operations
- 17.4 Use hand signals in confined space operations
- 17.5 Use rope pulling signals in confined space operations
- 17.6 Compare merits and limitations of communication methods in confined space operations
- 17.7 Use hardwire communication in confined space operations

18. Knots

- 18.1 Identify, tie and check appropriate knots for performing rescues in confined spaces, relative to the remit of someone trained to this level
- 18.2 Recall factors affecting knot choice for performing rescues in confined spaces

19. Anchor Systems

- 19.1 Identify use of anchor systems when performing rescues in confined spaces, relative to the remit of someone trained to this level
- 19.2 Identify, install and check appropriate anchor attachments for performing rescues in confined spaces, relative to the remit of someone trained to this level
- 19.3 Select an appropriate single anchor point
- 19.4 Identify, install and check load-sharing anchor systems, relative to the remit of someone trained to this level
- 19.5 Identify agency use or non-use of artificial anchor points
- 19.6 Identify, install and check temporary artificial anchor points, if used by agency.
- 19.7 Identify, install and check load-distributing anchor systems, relative to the remit of someone trained to this level.
- 19.8 Identify, install and check passive and active camming devices
- 19.9 Install and check mechanical bolts by drilling

20. Rope protection

- 20.1 Select, install and check appropriate rope protection

21. Work restraint

- 21.1 Identify when work restraint equipment is used, its merits and limitations
- 21.2 Select, install and check appropriate horizontal work restraint equipment

22. Fall arrest

- 22.1 Identify when fall arrest equipment is used, its merits and limitations
- 22.2 Use a fall arrest device using horizontal attachments
- 22.3 Use a fall arrest device using vertical attachments
- 22.4 Identify when combined work positioning and fall arrest equipment is used, its merits and limitations
- 22.5 Demonstrate resting during an ascent with a combined work positioning and fall arrest configuration

23. Connecting a casualty to a line using a telescopic pole

- 23.1 Identify when a casualty would be connected to a line using a telescopic pole, its merits and limitations
- 23.2 Connect a casualty to a line, using a telescopic pole

24. Lifting and lowering a casualty using a pre-installed device

- 24.1 Identify when a casualty would be lifted or lowered using a pre-installed device
- 24.2 Lift a casualty using a pre-installed device Use of brake system if not automatic.
- 24.3 Install, check and use an auto-locking lowering device with a single person load
- 24.4 Install, check and use an auto-locking lowering device with a rescue-sized load

25. Mechanical advantage

- 25.1 Identify the need for mechanical advantage systems within confined space rescue
- 25.2 Identify the hazards and control measures associated with mechanical advantage systems
- 25.3 Identify the different categories of mechanical advantage systems their merits and limitations
- 25.4 Build and check a variety of mechanical advantage systems relative to the remit of someone trained to this level

26. Casualty care

- 26.1 Identify personnel at risk to suspension-induced syncope, and control measures to minimise this
- 26.2 Demonstrate appropriate casualty care for suspected suspension-induced syncope
- 26.3 Identify patient needs, hazards and control measures associated with casualty care and packaging
- 26.4 Pack a casualty for horizontal transport
- 26.5 Pack a casualty for vertical transport

27. Emergency descending

- 27.1 Identify hazards and control measures associated with pre-installed escape devices
- 27.2 Perform an emergency descent using a pre-installed escape device if used by agency

28. Lead climbing with lanyards

- 28.1 Identify when lanyards are used, their hazards and control measures
- 28.2 Control measures: correct use of PPE, awareness of hazards, minimizing fall distance.
- 28.3 Demonstrate lead climbing with a lanyard
- 28.4 Demonstrate down-climbing with a lanyard

29. Personal ascending and descending

- 29.1 Identify hazards and control measures associated with personal ascending and descending
- 29.2 Demonstrate personal ascending in a variety of twin line systems
- 29.3 Demonstrate personal descending in a variety of twin line systems
- 29.4 Identify hazards and control measures associated with pre-installed escape devices
- 29.5 Perform an emergency descent using a pre-installed escape device if used by agency

30. Climbing over a 90 degree edge

- 30.1 Identify when a 90 degree edge would be encountered, its hazards and control measures
- 30.2 Lowering over a 90 degree edge

31. Lead climbing with lanyards

- 31.1 Identify when lanyards are used, their hazards and control measures
- 31.2 Demonstrate lead climbing with a lanyard
- 31.3 Demonstrate down-climbing with a lanyard

32. Team-based pick-offs

- 32.1 Identify when a team-based pick-off would be performed, its merits and limitations
- 32.2 Participate in a team-based pick-off, relative to the remit of someone trained to this level

33. Litter management - low angle

- 33.1 Identify hazards and control measures associated with low angle litter management
- 33.2 Participate in a variety of low angle litter management techniques

34. Litter management - high angle

- 34.1 Identify hazards and control measures associated with high angle litter management
- 34.2 Participate in a variety of high angle litter management techniques, relative to the remit of someone trained to this level

35. Team-based raising and lowering systems

- 35.1 Explain the importance of working with twin lines
- 35.2 Identify when team rope-based raising and lowering systems would be used, their merits and limitations
- 35.3 Identify the importance of using an auto-locking lowering device with team rope-based raising and lowering systems
- 35.4 Rig and check team rope-based raising and lowering systems
- 35.5 Identify considerations for a change of direction mainline raising and lowering system
- 35.6 Convert a lowering system to a raising system whilst unloaded

36. Mirrored team-based raising and lowering systems

- 36.1 Explain the importance of working with twin lines
- 36.2 Identify when team rope-based raising and lowering systems would be used, their merits and limitations
- 36.3 Identify the importance of using an auto-locking lowering device with team rope-based raising and lowering systems
- 36.4 Convert a lowering system to a raising system whilst loaded
- 36.5 Identify when mirrored systems are used, their merits and limitations
- 36.6 Rig, check and use a mirrored system
- 36.7 Identify when vertically oriented stretcher abrupt edge transitions without a high directional would be performed, their merits and limitations
- 36.8 Install and check systems for performing vertically oriented stretcher abrupt edge transitions without high directionals
- 36.9 Perform a vertically oriented stretcher abrupt edge transition without a high directional

37. High directional

- 37.1 Identify when fixed high directionals would be used, their merits and limitations
- 37.2 Install and check a fixed high directional
- 37.3 Install and check conventional and articulating artificial high directionals
- 37.4 Install and check a lazy leg A-frame
- 37.5 Install and check a sideways A-frame.
- 37.6 Demonstrate an edge transition with the use of a high directional

38. Offsets - tagline

- 38.1 Identify when tagline offsets would be used, their merits and limitations
- 38.2 Install, check and use a tagline offset

39. Offsets - deflection

- 39.1 Identify when deflected offsets would be used, their merits and limitations
- 39.2 Install, check and use a deflected offset without an artificial high directional.

40. Passing knots through a system

- 40.1 Identify when a knot would be passed through a system, its merits and limitations
- 40.2 Pass knots through systems

41. Vertically oriented stretcher abrupt edge transitions without a high directional

- 41.1 Identify when vertically oriented stretcher abrupt edge transitions without a high directional would be performed, their merits and limitations
- 41.2 Install and check systems for performing vertically oriented stretcher abrupt edge transitions without high directionals
- 41.3 Perform a vertically oriented stretcher abrupt edge transition without a high directional

42. Offsets - track/guideline, skateblock, deflection, two-rope

- 42.1 Identify when deflected offsets would be used, their merits and limitations
- 42.2 Install, check and use a deflected offset with an artificial high directional.
- 42.3 Identify when guiding line offsets would be used, their merits and limitations
- 42.4 Install, check and use guiding line offsets
- 42.5 Identify when skateblock offsets would be used, their merits and limitations
- 42.6 Install, check and use skateblock offsets
- 42.7 Identify when tracking line offsets would be used, their merits and limitations
- 42.8 Install, check and use tracking line offsets
- 42.9 Identify when two rope offsets would be used, their merits and limitations
- 42.10 Install, check and use a two rope offset

43. Night/poor visibility operations

- 43.1 Identify hazards associated with night/poor visibility operations, and apply suitable control measures
- 43.2 Perform a risk assessment and operate at night/in poor visibility

44. Highline rope system - Kootenay highline

- 44.1 Identify when a Kootenay highline would be used, its merits and limitations
- 44.2 Install, check and use a Kootenay highline

45. Scenarios

- 45.1 Complete confined space rescue scenarios, relative to the remit of someone trained to this level