

A detailed 3D rendering of an industrial refinery or chemical plant at night. The scene is dominated by tall, cylindrical distillation columns and a complex network of pipes, walkways, and structural beams. The entire facility is illuminated with a vibrant green light, creating a futuristic and high-tech atmosphere. The sky is dark, and the foreground shows a field of tall grass.

IPS ★ **ITCS**
Industrial Performance Services Industrial Tubular Catalyst Services

RESCUE OPERATIONS PROCEDURE

V:2023.1

Rescue Operations Procedure

January 2023

Table of Contents

<u>Overview</u>	5
<u>Rescue Mission</u>	5
<u>Rescue Team Policies</u>	5
<u>Fitness for Duty Policy</u>	5
<u>Implementation of Fitness for Duty</u>	6
<u>Drug/Chemical Testing</u>	6
<u>Basic Rescue Team Standard Operating Procedures (Basic SOP)</u>	9
<u>Communication Plan</u>	9
<u>Disputes:</u>	9
<u>Considerations:</u>	9
<u>Confined Space Rescue Equipment</u>	10
<u>Rescuer Training</u>	10
<u>Confined Space Rescue -Immediate Assessments:</u>	11
<u>Plan of Action</u>	12
<u>Safety Risks vs. Time to Rescue a Victim</u>	13
<u>Additional Operational Concerns</u>	14
<u>Monitoring (Air and Site)</u>	15
<u>Means of Egress</u>	16
<u>Lighting/Electrical/Mechanical Hazards</u>	17
<u>Entrapping Materials</u>	17
<u>Stabilization of the victim</u>	18
<u>Rescue Tech Levels</u>	18
<u>Performance Level Ranking</u>	18
<u>Requirements & Skills</u>	19
I. <u>Technical Rescue Skills</u>	19
I.A. <u>Awareness Level</u>	20

<u>I.A.1. Awareness – Rope Rescue</u>	20
<u>I.A.2. Awareness – Confined Space Rescue</u>	23
<u>I.B. Operations Level</u>	24
<u>I.B.1. Operations – Rope Rescue</u>	24
<u>I.B.2. Operations – Confined Space Rescue</u>	28
<u>I.C. Technician Level</u>	30
<u>I.C.1. Technician – Rope Rescue</u>	30
<u>I.C.2. Technician – Confined Space Rescue</u>	34
<u>I.D. Senior Technician Level</u>	35
<u>II. Roles & Responsibilities</u>	40
<u>Rescue Operations Manager</u>	40
<u>Lead Person</u>	41
<u>Rescue Team Members</u>	42
<u>Rescuer Qualifications</u>	43
<u>Level 5: Trainee</u>	43
<u>Level 4: Awareness</u>	43
<u>Level 3: Operations</u>	44
<u>Level 2: Technician I</u>	45
<u>Level 1: Senior Technician</u>	46
<u>Trainer Qualifications</u>	48
<u>FORMS</u>	49
<u>Rescue Tech Evaluation Form v01</u>	49
<u>SCBA Checklist</u>	50
<u>Belay Evaluation</u>	51
<u>Anchoring Evaluation</u>	52
<u>Haul Evaluation</u>	53
<u>High Angle Lowering Evaluation</u>	54
<u>Ascending Evaluation</u>	55
<u>Reppeling Evaluation</u>	56

<u>Knots Evaluation</u>	57
<u>High Angle Rescue / Confined Space Entry</u>	58
<u>Rescue Course Outline</u>	58
<u>High Angle Rope Rescue Course Outline</u>	68

Overview

Rescue Mission

Our mission in providing rescue services to our customers is to ensure we offer rescue teams that are experienced, well trained, and able to meet the varied demands of the job to which they are assigned.

Rescue Team Policies

Fitness for Duty Policy

This Policy is established by IPS★ITCS to comply with Client policies and contractual Requirements. Failure to comply with this policy will result in a review by Company's designated Contract Administrator with the possibility of disciplinary action initiated by Company as stated within the appropriate sections of this policy.

All sub-contractors/employees are expected to be fit for duty (FFD) by being neither mentally nor physically impaired from any cause that could adversely affect safe, competent job performance. These impairments may result of physical illness, mental illness, improper diet, substance abuse or fatigue.

IPS★ITCS's Fitness for Duty Policy states that you shall:

- A. Report to work fit for duty unimpaired from Alcohol or drugs.
- B. Abstain from alcohol for at least Eight hours before scheduled work.
 - a. The consumption of alcohol within five hours of reporting to work may cause a blood alcohol concentration (BAC)»0.04 percent, depending on factors such as the quantity consumed and the size of the individual. In some instances, an abstinence period of greater than 5 hours may be necessary for some individuals to attain a BAC of 0.04%.
 - b. An individual with a BAC > 0.04 % would NOT be considered fit for duty.
- C. NOTIFY your supervisor/lead of any problems such as mental stress, fatigue or illness that may affect your fitness for duty.
- D. Seek ASSISTANCE for any problems such as mental stress, fatigue or illness that may affect your ability to safely and competently perform your duties.
- E. REPORT the use of any prescription or over-the-counter drugs that may adversely affect your performance to your immediate supervisor/lead.
- F. PREVENT and REPORT actions that could threaten yourself, client personnel, or coworkers. (This includes reporting personnel with symptoms of substance abuse).
- G. Report any previous DENIAL of unescorted access, positive chemical test or involuntary participation in a substance abuse treatment program.
- H. NOTIFY supervision if arrested, taken into custody by law enforcement officials or any other incident that may impact upon your trustworthiness.
- I. COOPERATE with the chemical testing program. Failure to do so will result in discharge and or contract termination.
- J. NOT use, sell or possess illegal substances.
- K. Report immediately to your supervisor if you detect the odor of alcohol on the breath of a coworker.

Implementation of Fitness for Duty

The primary tools used to implement FFD program include (see also Employee and Contractor Manuals):

1. Drug/chemical testing
2. Behavior observation

Drug/Chemical Testing

There are several different categories describing when chemical testing will be performed:

- **For Cause Testing**
 - Performed as soon as possible following any observed behavior where there is a reasonable suspicion that the person was under the influence of drugs or alcohol.
 - After receiving credible information that an individual is abusing drugs or alcohol.
- **Follow Up Testing**
 - Used for any sub-contractor/employee, if reinstated, after testing positive for drugs or alcohol to verify continued abstention from the use of such substances.
 - Will normally last for a three-year period.
- **Post-Accident**
 - Performed after any on duty accident or potential accident involving failure of an individual's performance that may have been due to being under the influence of drugs or alcohol.
- **Call-Ins**
 - Sub-contractors/ employees who are called in for work during off normal working hours are required to inform their supervisor of their fitness for duty. This includes informing the supervisor of any alcohol consumed within the last 5 hours or any other reason that they may be unfit for duty.

Substances tested for:

- Alcohol
- Marijuana
- Cocaine
- Opiates
- Phencyclidine
- Amphetamines

Consequences, Rights and Responsibilities

1. A first confirmed positive drug/alcohol test of an employee or sub-contractor shall result in a company review meeting with the individual with possible termination of employment or contract.
2. A second confirmed positive drug/alcohol test shall result in termination of employment or contract.

Use of Alcohol

On Site:

- Possession, sale, or use of alcohol on the Client site will result in immediate termination of employment or contract.

Off Site:

- No consumption for at least five (5) hours preceding any scheduled working hour
- Legal off-site use that exhibits a pattern of excessive use such as repeated alcohol related arrest may result in review by company's contract Administrator
- If off site for a meal, no alcohol may be consumed if employee intends to return to work at a client site

Illegal Drugs (Use, Possession, or Sale)

On Site:

- Confirmed use, possession, or sale of illegal drugs on a client site will result in immediate termination of employment or contract. In addition, confirmation of this situation will result in notification of the proper legal authorities.

Offsite:

- Incident will be investigated
- May result in same as for onsite illegal use of drugs

Behavioral

There are several different instances when an assessment will be made to evaluate the person's ability to perform rescue work as part of a team:

- **For Cause Testing**
 - Performed as soon as possible following any observed behavior where there is a reasonable suspicion that the person is not acting normally or unprofessionally on the job.

Individuals Rights & Responsibilities

Individual Rights

- If you test positive, you have the right to appeal the test results and any sanctions taken against you. This applies to permanent employees and sub-contractors.
- You also have the right to privacy at the collection site unless there are reasons to believe that you will tamper, alter, or substitute a specimen.
- Personal information collected for the fitness for duty program will be protected and will not be disclosed except as required by the appropriate procedure.

Individual Responsibilities

- You are the responsible for keeping your supervisor informed of any medication or other substance or problems that could affect your performance.
- You should also talk to your supervisor if you notice unusual behavior or suspect drug use by any of your co-workers.

Basic Rescue Team Standard Operating Procedures

Communication Plan

In most cases a communication plan must be developed for each job based upon the unique or individual aspects of the job and personnel involved.

Where there is no specific need for a Communication Plan, the following hierarchy will be established.

Disputes:

If a dispute cannot be settled by the Lead person, the following is the chain of command regarding the settlement of issues and is not to be circumvented. Disciplinary action will be taken for not following the chain of command by unauthorized contact. The Lead person or their designee shall make the initial contact.

- ✓ Rescue Operations Manager
- ✓ Health, Safety, Environmental, Quality & Training Manager
- ✓ Operations Manager

Considerations:

Before entry is initiated the following information is to be considered:

- Is there a victim?
- Are the actions to be taken, for a rescue or a recovery?
- Monitor the atmosphere for both current and possibly changing conditions.
- Proper ventilation
- What occurred to cause the entrant to become a victim?
- Develop or initiate a rescue plan to meet the situation prior to start of work.
- Use of a pre-entry briefing to update the rescue plan as needed to overcome any changing conditions or unexpected hazards.
- If conditions change (hazards encountered), in that a rescue crew is no longer equipped properly, return to entry point, re-evaluate, and re-enter when crew is properly equipped or manned.

Confined Space Rescue Equipment

(REQUIRED EQUIPMENT FOR RESCUE JOBS)

All rescue equipment and systems are to be 'rescue' rated.

- Tripod
- Anchor Devices
- Rope and Rigging Systems (Both software and hardware components)
- Supplied Air Systems (Including SCBAs)
- Helmets (with Chin Straps) and Gloves
- Proper Protective Clothing
- Tools (non-sparking)
- Communication Equipment
- Air Monitoring Equipment
- First Aid/CPR Equipment
- Stretchers – SKED; Stokes; Yates Halfback, ETC.
- Full Body Harness (Type III – Rescue Rated)
- Explosion Proof Lighting
- Fire Extinguishers (As needed per Job Description)

Rescuer Training Requirements

Training will be conducted for the following:

- Training prior to initial assignment
 - Theoretical and Practical
- Training prior to a change in assigned duties
- If a new hazard has been created and/or if special deviations have occurred (Job Scope Change - Safety Meeting)
 - Theoretical and Practical and/or OJT
 - Every time the scope of the job changes because of unforeseeable events, a Job Scope Change safety meeting is required.
 - The same form used for toolbox safety meetings can be used for job scope change safety meetings.
 - Every job scope change safety meeting needs to be documented with at least the following information:
 - Instructor(s) and/or Conductor(s)
 - Specific Topics Covered
 - Duration
 - Attendance
- Annual Training
 - New Curriculum/Equipment/Policies/Procedures
 - Lessons Learned
 - Refresher
- Advanced Training
 - Theoretical and Practical

All Training must be documented. Documents include rosters, certifications and/or cards as well as evaluations for personnel and teams.

Rescuers will be trained in the following:

- Confined Space Rescue
- High Angle Rescue

- Rope Rescue
- Water Rescue
- Cave Rescue
- Hazardous Materials Technician (40-Hour)
- First Aid/CPR
- IPS★ITCS Operations Training
 - Equipment
 - Personnel Responsibilities
 - Plans and Procedures
 - Emergency Procedures
 - Documentation

IPS★ITCS will perform at minimum annual evaluations on rescue personnel utilizing:
Form Rescue Tech Evaluation Form v01 (pg49)

These evaluations will include simulated rescues as required by OSHA 29 CFR 1910.146 (k)(2)(iv)

For the purpose of replicating real life emergencies, scenarios should utilize the rescue intervention plan and other documentation to practice identifying and mitigating common hazards when performing rescues in permitted confined spaces (atmospheric, engulfment, configuration, all other hazards) and elevated work/high angle rescue.

Confined Space Rescue - Immediate Assessments:

- Immediately identify person in charge
- If available, assign someone to oversee safety
 - See that actions are performed in a safe manner
 - Check equipment, tools, air supplies
 - Monitor chemicals and reactions
 - Medical surveillance is available
- Determine:
 - Type of incident
 - What is occurring and may occur?
 - Resolutions to resolve the incident safely
 - What plans were developed to handle an incident at this site?
 - How much personnel assistance is on site?
 - Response time outside responders
 - Medical facility the victim is to be transported to (injury/contamination)
- The Scene:
 - Is there a victim?
 - Is the victim alive? (Recovery is *not* a rescue)
 - Number of victims
 - Type and extent of injuries
 - Amount of time victim has been in space
 - Are hazardous materials involved?
 - Call on-site personnel to identify hazardous material(s)
 - MSDS
 - Get an account of the events leading up to the incident
 - Interview personnel closest to the incident at the time it occurred

- Get thorough details
- Draw sketches of the incident area

During the size up phase of the operation all judgments are to be conservative. *Example: A worker is lying on the floor. Even though the floor is slippery, consider the possibility of a toxic or oxygen deficient atmosphere.*

For rescue in confined spaces the atmosphere is always to be considered hostile. Supplied air is to be worn by rescuers. Ventilation is to be started if it can be done safely.

Plan of Action

Actions are based on:

- A current understanding of the hazards involved with the operation
- Capabilities of on-scene personnel
- An understanding of the events that led up to the event
- Current status of the incident site
- Rational reasoning

Emergency Action Plan

As a part of the rescue teams Risk Management Plan for safety and rescue, the IPS★ITCS job supervisor (RIC/CI or HASS) is required to complete the 105 Communication Form. The form is comprised of three sections;

- Modes
- IPS★ITCS Alert System
- P.A.C.E

In the first section “modes”, the rescue teams standardized objectives and methods to achieve those specific objectives are detailed. In addition, the benchmarks for delivering situational reports is provided for team review during the tool box safety meeting.

The “IPS★ITCS Alert System” section explains how we categorize the scale of an emergency and IPS★ITCS automatic response expectations when an alert is initiated.

Section 3, “PACE” details the communication plan order of utilization to deliver information with equipment and skill set based on best practice. Within the section the rescue team is expected to discover from the client, host site, or through other means of research:

- Client point of contact name
- Client contact number
- Other responsible supervisors of hazard space occupants and their contact information
- Emergency site numbers to initiate local EMS response (ambulance, Life Flight)
- Site address
- Local medical facilities

Any deviation from standard practice or additional information to be utilized in the Emergency Action Plan may be documented on Form “801 addendum”

Rescue Intervention Plan

The IPS★ITCS rescue team shall be operationally ready (pre-rigged or staged for external rescue) prior to entrants entering into the hazard space. When staged for hazard space (confined space entry, IDLH, etc.) standby rescue services, the order of preference is upwind and uphill, then crosswind, and least desirable being downwind of the hazard area. The most appropriate distance is the pre-entry recognized distance based on hazards and designated as Warm Zone or outside of Initial Isolation Zone. In the event of an emergency an alert I, II or III is initiated.

Alert I, minor injuries or illness, ambulatory victims and other near misses/hits that result as a recordable. Consider exiting other confined spaces or limiting risk until resolved. If rescue plan is compromised due to personnel shortage, use stop work authority. Ensure hazard has been remedied so no repeat injury or illness occurs.

Alert II, (Rescue Plan or Updated Rescue Plan) Moderate to serious injuries or medical emergencies requiring extraction and or lower, resulting in a transport to the hospital. Request a safety stand down at all other confined spaces in unit. Utilize all rescue personnel on site to assist with rescue operations. Affected attendants remain at their post until the completion of their duties. Bring vehicle if used as the equipment resource pool or if incident is in a remote area. Isolate area for rescue operation essential personnel (See 214 Risk Management Plan for 'Barricading Plan' subsection). HASS can conduct an updated pre rescue hazard analysis, 'Size Up'. HASS (principal perspective from the Warm Zone observing activity in Hot Zone) or TED (rescuer that performs internal rescue, perspective from within the Hot Zone) may recommend an Updated Rescue Plan based on hazards. RIC/CI (generally managing from the Cold Zone) shall run the scene until properly relieved or rescue operation complete.

Alert III, Serious and large-scale events that result in evacuation or triage of mass casualties. All onsite personnel shall proceed to muster points upwind or crosswind immediately. Follow directions given by authorized safety or supervision when the site alarms sound. If host site expectations are for IPS★ITCS rescue team to assist with Alert III emergencies, or any other deviation of the IPS★ITCS Emergency Alert System, utilize and attach 801 Addendum to detail the specifics of responsibilities.

The IPS★ITCS order of operations is Self, External and Internal. Utilize form 224 Rescue Intervention Plan to detail the specifics of each operation.

Safety Risks vs. Time to Rescue a Victim

- Hazards, risks, and dangers are controlled
- Changing conditions
 - Conditions may change without warning
 - Use of supplied air until it is determined that the atmosphere is safe and will continue to be safe (Determined by monitoring results)
 - Just because a victim is breathing, does not mean that the atmosphere is safe.
 - Materials in the area may be disturbed causing an atmospheric hazard

- The time each rescuer is on live air will be documented
- PPE worn for the rescue will be determined by the hazards present, and documented.
- All unnecessary personnel are to be told to leave the area
- Establish a clear line of communication between all personnel involved with the rescue
- Other forms of dedicated communication are:
 - Hand signals
 - Radio communication (if it can be used safely)
 - Hard wire communication (If available)
- Any communication sent must be acknowledged by the receiver.

Permitting

The work permit system will vary from client to client.

Prior to the commencement of the work, valid permits are required in which all arrangements and special conditions are recorded. This should be approved and signed by all the necessary parties.

In some circumstances it is usual to have in place two or more permits, i.e;

- Confined Space entry permit
- Hot work permit
- Cold work
- Vehicle entry (ICE) Internal Combustion Engine

In all cases, there will have to be checks of the blinds list, etc, prior to issue.

Usually, the permit will be issued by the operations department or the contract engineer and be countersigned by the members of the crew undertaking the work. Required tests or inspections described have to be performed before the issue of the permits and at the stated intervals thereafter, should the need arise.

Depending on location, the Rescue team may also have to sign on the permit.

After any long breaks in the work schedule, the permits should be renewed. If the first monitoring result has proved acceptable for entry, it is probably not necessary to stop the work in anticipation of the results of the following tests.

All monitoring results should be noted on the permits.

Should any conditions in the vessel or area change, then all parties involved in the issue of the permits should be notified and conditions checked.

Permits should be cancelled during the following events but not limited to:

- Duration of permit has expired
- Work has be completed
- In the event of an emergency
- Weather events (such as lightning)

Additional Operational Concerns

- Modify the hazard to prevent existing or potential hazards from threatening rescue attempts and the safety of both rescuers and victims. Actions may include:
 - Ventilation
 - Covering of hot surfaces or holes in floors or walls
 - Barricading and coning and/or flagging to protect employees from external hazards including but not limited to
 - Pedestrians
 - Vehicles and or heavy machinery
 - Unauthorized personnel
 - Overhead work such as gantry(s) and cranes
 - Testing
 - Chemical/fire/radioactive exposure
 - Provisions for employee protection include Barricade Tape, Air horns, cones in the standard rescue kit.
 - Additional flags and whistles can be deployed as needed when multiple sound sources could confuse operations
 - Rescue teams shall barricade work areas to protect employees from external hazards.

Monitoring (Air and Site)

- Safety attendants are required for confined space entries including trenches that meet the requirement as well as area monitoring as required by site.
- Safety attendants could be provided by IPS★ITCS, Host (Client), or other third-party companies.
- All IPS★ITCS Safety attendants and their representatives are entitled to request additional monitoring at any time.
- Monitoring shall begin before entry, rescue entry, and continue for the duration of the entry and/or rescue
- All entrants and representatives have the right to participate in and/or review all documentation regarding air/gas monitoring equipment including but not limited to calibrations, bump tests, equipment inspections, and continuous/periodic logs for air/gas monitoring.
- Usually, A single attendant would be used per confined space as this is a best practice.
- The use of a single attendant to monitor several confined spaces could occur but is not recommended. In the event multiple spaces are being monitored by a single attendant, then the following must be met:
 - The attendant must be able to perform all duties required in this circumstance, such as but not limited to:

- Keeping unauthorized personnel from entering multiple spaces.
- Maintain continuous monitoring in multiple spaces
- Logging entrants and maintain accountability of multiple spaces
- Maintaining constant communication with personnel within multiple spaces.
- Be able to recognize hazards of multiple spaces and recognize the symptoms of potential over-exposure within those spaces
- In the event of an emergency be able to close all other active spaces until the emergency event is over
- Monitoring examples:
 - Atmospheric
 - Oxygen levels increasing/decreasing
 - Change in the LEL percentage
 - Change in toxicity levels
 - Other
 - Physical/Mechanical
 - Decrease in the height of piled materials (sinking)
 - Increase in the depth of the water level
 - Movement of belts, conveyors, shafts, etc.
 - Rescuers exhibiting signs and symptoms of exposure to hazards

Means of Egress

An entryway may not always be counted upon as an exit way.

- The exit must allow for the safe and efficient removal of victims
- Before creating an exit, the safety factors that apply to the incident must be evaluated
 - Must be done without structurally weakening or causing a wall or floor collapse
 - Controlling a flammable atmosphere must be done with intrinsically safe methods
 - Vapors must be vented to an area where they will not create a new hazard
 - Exit way must not expose rescuers or victims to toxins
 - Vapors must be vented to an area where they will not create a new hazard
 - Piled materials of soft flowing materials must not shift
 - Is time being saved by creating a new exit (other hazards may require a new exit being made which could require additional safety concerns for rescuers and the victim)
 - Safety is not to be compromised in any way by means of Risk/Benefit Analysis.

Lighting/Electrical/Mechanical Hazards

Before entry into space, Electrical, Power, Lock-out is to be performed.

- Explosion proof and/or Waterproof lighting
- Lighting should not produce much heat
- Electrical cords should only be used with a GFCI
- Electrical cord connectors should be taped together
- Connectors and cords are to be out of puddles, both inside and outside the space
- Power is to be shut off at the panel, or electrical disconnects
- All batteries are to be removed from unnecessary equipment
- Discharge electrical equipment capacitors that may store potential energy
- Release stored energy from mechanical hazards:
 - Belts
 - Motors
 - Gears
 - Shafts
- Drain temperature control devices, bringing them to an ambient temperature
 - High air temperature will require rescuers to use supplied air until the air temperature can be reduced by ventilation
- Lockout valves are to be in the 'off' or 'closed' position and secured by a IPS★ITCS Lock

Entrapping Materials

Confined Space Entrapment

- Isolate the space from material that may enter
- All valves are to be closed and locked out

Vessel Isolation

- Lock-out/Tag-out
- Double Block and Bleed
- Line Separation
- Blank/Blind

Ventilation

Use appropriate equipment and procedures to ventilate (as needed)

- Positive pressure
- Negative pressure
- Intrinsically safe
- Area of vapor dispersion
 - Flammable and toxic hazards

Stabilization of the victim

- Victim is breathing and airway is not compromised
- Position of victim during removal
- Victim(s) mouth and nose area does not become obstructed
- Provide breathing air as soon as possible
- Extent of victim(s) injuries
- If the victim is buried – dig; do not pull, the victim out
- Do not employ extrication techniques that may further injure the victim
- Provide basic life support as soon as possible
- Patient packaging systems
 - Full Backboard
 - Half Backboard
 - Stokes Basket
 - SKED Stretcher
 - Cervical Collar

Rescue Tech Levels

▪ *Performance Level Ranking*

Level	Rank	Performs As
5	Trainee	Not Active
4	Awareness	Second or third on a crew
3B	Operations Lead B	Lead, second or third on a crew
3A	Operations Lead A	Lead or second on a crew
2	Technician Lead	Lead on a crew or site (Five (5) years as a rescuer or equivalent industrial experience)
1	Sr. Technician	Supervises multiple rescue leads/sites
T	Trainer	Trains all levels of rescue

Medical Training

Awareness	First Aid / CPR
Operations Level B	First Aid / CPR
Operations Lead A	40 Hour Emergency Responder
Technician Lead B	Same as Ops Lead A
Technician Lead A	Same as Ops Lead A
Sr. Technician	EMT/A

Requirements & Skills¹

Technical Rescue Skills

Performance Levels

Multiple standards set forth the requirements to fill the performance levels. This list includes information from OSHA 29 CFR 1910 146 and NFPA 1006, 1670 and 1983. Other standards will be included as deemed necessary.

As IPS★ITCS Safety commonly supplies personnel to facilities that require the use of both Rope Rescue and Confined Space Rescue guidelines, the following criteria sets the minimum standards for each performance level.

To be categorized, personnel must meet the requirements of both the Rope Rescue and Confined Space Rescue sections of the category level. All activities shall be completed in the safest possible manner.

¹ Based on NFPA Standards

Entrants Requirements

Technical rescuers shall comply with the following requirements before being assigned to a job site.

1. Have reached the age of 21.
2. Have passed a medical examination to ensure the rescuer is in good health to (1) perform their duties and (2) not be affected by materials that may be contacted at a job site.
3. Be physically fit to perform potentially strenuous activities in close quarters under stress.
4. Have the minimum of a high school diploma or GED certificate.
5. Have completed a First Aid / CPR course.
6. Have completed a Hazardous Materials Awareness course.

I.A. Awareness Level

I.A.1. Awareness – Rope Rescue

1. Recognize the need for a rope rescue
2. Identify resources necessary to conduct rope rescue operations
3. Tie various knots and understand their use in a system
4. Carrying out of the emergency response system where rope rescue is required
5. Carrying out of site control and scene management operations
6. Recognizing general hazards associated with rope rescue and the procedures to mitigate these hazards
7. Identifying and utilizing PPE assigned for use at a rope rescue incident

Specific Evaluation Guidelines

Task #1:

Tie knots, bends, and hitches, given ropes and webbing, so that the knots are dressed, recognizable, and backed up as required.

Required Knowledge - Knot efficiency, knot utilization, rope construction, and rope terminology

Required Skills - The ability to tie representative knots, bends, or hitches for the following purposes:

- (1) End-of-line loop
- (2) Midline loop
- (3) Securing rope around desired objects
- (4) Joining rope or webbing ends together
- (5) Gripping rope

Task #2:

Construct a single-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, meets or exceeds the expected load, and does not interfere with rescue operations, an efficient anchor point is chosen, the need for redundant anchor points is assessed and used as required, the anchor system is inspected and loaded prior to being placed into service, and the integrity of the system is maintained throughout the operation.

Required Knowledge - Application of knots, rigging principles, anchor selection criteria, system safety check procedures, rope construction, and rope rescue equipment applications and limitations

Required Skills - The ability to select rope and equipment; tie knots; rig systems; evaluate anchor points for required strength, location, and surface contour; and perform a system safety check

Task #3:

Place edge protection, given life safety rope or webbing traversing a sharp or abrasive edge, edge protection, and other auxiliary rope rescue equipment, so that the rope or webbing is protected from abrasion or cutting, the rescuer is safe from falling while placing the edge protection, the edge protection is secure, and the rope or webbing is securely placed on the edge protection.

Required Knowledge - Materials and devices that can be used to protect ropes or webbing from sharp or abrasive edges, fall protection measures, dangers associated with sharp or abrasive edges, and methods for negotiation of sharp or abrasive edges.

Required Skills - The ability to select protective devices for rope and webbing, provide personnel fall protection while working near edges, secure edge protection, and secure ropes or webbing in a specific location.

Task #4:

Construct a simple rope mechanical advantage system, given life safety rope, carabineers, pulleys, rope grab devices, and auxiliary rope rescue equipment, so that the system constructed can accommodate the load, is efficient, and is connected to an anchor system and the load.

Required Knowledge - Principles of mechanical advantage, capabilities and limitations of various simple rope mechanical advantage systems, application of knots, rigging principles, and system safety check procedures.

Required Skills - The ability to select rope and equipment, tie knots, choose and rig systems, attach the mechanical advantage system to the anchor system and load, and perform a system safety check.

Task #5:

Construct a lowering system, given an anchor system, life safety rope(s), descent control device, and auxiliary rope rescue equipment, so that the system can accommodate the load, is efficient, is capable of controlling the descent, is capable of holding the load in place or lowering with minimal effort over the required distance, and is connected to an anchor system and the load.

Required Knowledge - Capabilities and limitations of various descent control devices, capabilities and limitations of various lowering systems, application of knots, rigging principles, and system safety check procedures.

Required Skills - The ability to tie knots; perform rigging; attach to descent control device, anchor system, and load; and perform a system safety check.

Task #6:

Construct a belay system, given life safety rope, anchor systems, personal protective equipment, and rope rescue equipment, so that the system is capable of arresting a fall, a fall will not result in system failure, the system is not loaded unless actuated, actuation of the system will not injure or otherwise incapacitate the belayer, the belayer is not rigged into the equipment components of the system, and the system is suitable to the site and is connected to an anchor system and the load.

Required Knowledge - Principles of belay systems, capabilities and limitations of various belay devices, application of knots rigging principles, and system safety check procedures.

Required Skills - The ability to select a system, tie knots, perform rigging, attach to anchor system and load, don and use task-specific personal protective equipment, and perform a system safety check.

Task #7:

Operate a belay system during a lowering or raising operation in a high-angle environment, given an operating lowering or hauling system, a minimum load travel distance of 3 m(10 ft), a belay system, and a load, so that the belay line is not loaded during operation of the primary rope rescue system, the belay system is prepared for actuation at all times during the operation, the belayer is attentive at all times during the operation, the load's position is continually monitored, and the belayer moves rope through the belay device as designed.

Required Knowledge - Application and use of belay devices, proper operation of belay systems in conjunction with normal lowering and hauling operations, and operational commands.

Required Skills -The ability to tend a belay system as designed, tie approved knots, assess system effectiveness, properly attach a belay line to a belay device, don an use task-specific personal protective equipment, perform a system safety check, and manage and communicate belay system status effectively.

Task #8:

Belay a falling load in a high-angle environment, given a belay system and a dropped load, so that the belay line is not taut until the load is falling, the belay device is actuated when the load falls, the fall is arrested, the belayer utilizes the belay system as designed, and the belayer is not injured or otherwise incapacitated during actuation of the belay system.

Required Knowledge - Application and use of belay devices, effective emergency operation of belay devices to arrest falls, use of personal protective equipment, and operating procedures.

Required Skills - The ability to operate a belay system as designed, tie approved knots, use task-specific personal protective equipment, recognize, and arrest a falling load, and communicate belay system actuation.

I.A.2. Awareness – Confined Space Rescue

Specific Evaluation Guidelines

The job performance requirements defined in this section shall be met prior to Awareness Level qualification in rope rescue.

Personnel shall complete a Permit Required Confined Space Entry Program to become qualified entrants and attendants.

Duties of Authorized Entrants

1. Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
2. Properly use equipment as required.
3. Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required.
4. Alert the attendant whenever:
 - (a) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or
 - (b) The entrant detects a prohibited condition; and
5. Exit from the permit space as quickly as possible whenever:
 - (a) An order to evacuate is given by the attendant or the entry supervisor,
 - (b) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,
 - (c) The entrant detects a prohibited condition, or
 - (d) An evacuation alarm is activated.

Duties of Attendants

1. Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
2. Is aware of possible behavioral effects of hazard exposure in authorized entrants.
3. Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants accurately identifies who is in the permit space.

4. Remains outside the permit space during entry operations until relieved by another attendant.
 - (a) When the permit entry program allows attendant entry for rescue, attendants may enter a permit space to attempt a rescue if they have been trained and equipped for rescue operations and if they have been properly relieved.
5. Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
6. Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions.
 - (a) If the attendant detects a prohibited condition.
 - (b) If the attendant detects the behavioral effects of hazard exposure in an authorized entrant.
 - (c) If the attendant detects a situation outside the space that could endanger the authorized entrants.
 - (d) If the attendant cannot effectively and safely perform all their assigned duties.
7. Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.
8. Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:
 - (a) Warn the unauthorized persons that they must stay away from the permit space.
 - (b) Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and
 - (c) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space:
9. Performs non-entry rescues as specified by the employer's rescue procedure; and
10. Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

I.B. Operations Level

I.B.1. Operations – Rope Rescue

1. Use a rope rescue system to move the victim and rescuers from one stable location to another
2. Using both high – and low – angle rescue techniques that include accessing, managing, and packaging the patient in such a way as to keep all personnel safe and reduce the potential for further harm to the patient

Specific Evaluation Guidelines

The job performance requirements defined in this section shall be met prior to Operations Level qualification in rope rescue.

Task #1:

Construct a multiple-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, the system strength meets or exceeds the expected load and does not interfere with rescue operations, equipment is visually inspected prior to being put in service, the nearest anchor point that will support the load is chosen, the anchor system is system safety checked prior to being placed into service, the integrity of the system is maintained throughout the operation, and weight will be distributed between more than one anchor point.

Required Knowledge - Relationship of angles to forces created in the rigging of multiple-point anchor systems, safety issues in choosing anchor points, system safety check methods that allow for visual and physical assessment of system components, methods to evaluate the system during operations, integrity concerns, weight distribution issues and methods, knots and applications, selection and inspection criteria for hardware and software formulas needed to calculate safety factors for load distribution, and the concepts of static loads versus dynamic loads.

Required Skills - The ability to determine incident needs as related to choosing anchor systems, select effective knots, determine expected loads, evaluate incident operations as related to interference concerns and set-up, choose anchor points, perform a system safety check, and evaluate system components for compromised integrity.

Task #2:

Construct a compound rope mechanical advantage system, given a load, an anchor system, life safety rope, carabineers, pulleys, rope grab devices, and rope rescue equipment, so that the system constructed accommodates the load, reduces the force required to lift the load, operational interference is factored and minimized, the system is efficient, a system safety check is completed, and the system is connected to an anchor system and the load.

Required Knowledge - Determination of incident needs as related to choosing compound rope systems, the elements of efficient design for compound rope systems, knot selection, methods for reducing excessive force to system components, evaluation of incident operations as related to interference concerns and set-up, rope commands, rigging principles, system safety check procedures, and methods of evaluations system components for compromised integrity

Required Skills - The ability to determine incident needs as related to choosing compound rope systems, select effective knots, calculate expected loads, evaluate incident operations as related to interference concerns and set-up, perform a system safety check, and evaluate system components for compromised integrity.

Task #3:

Construct a fixed rope system, given an anchor system, life safety rope, and rope rescue equipment, so that the system constructed can accommodate the load, is efficient, and is connected to an anchor system and the load, and a system safety check is performed, and the results meet the incident requirements for descending or ascending operations.

Required Knowledge - Knot selection, calculating expected loads, incident evaluation operations as related to interference concerns and set-up, rigging principles, system safety check procedures, and methods of evaluating system components for compromised integrity.

Required Skills - The ability to select effective knots, calculate expected loads, use rigging principles, evaluate incident operations as related to interference concerns and set-up, perform a system safety check, and evaluate system components for compromised integrity.

Task #4:

Ascent a fixed rope in a high-angle environment, given an anchored fixed rope system, a minimum ascending distance of 6.1 m (20 ft), a system to allow ascent of a fixed rope, a structure, a belay system, a life safety harness worn by the person ascending, and personal protective equipment, so that the person ascending is secured to the fixed rope in a manner that will not allow him or her to fall, the person ascending is attached to the rope by means of ascent control device(s) with at least two points of contact, injury to the person ascending is minimized, the person ascending can stop at any point on the fixed rope and rest suspended by his or her harness, the system will not be stressed to the point of failure, the person ascending can convert his or her ascending system to a descending system, obstacles are negotiated, the system is suitable for the site, and the objective is reached.

Required Knowledge - Task-specific selection criteria for life safety harnesses and systems for ascending a fixed rope, personal protective equipment selection criteria, design and intended purpose of ascent control devices utilized, rigging principles, techniques for high-angle environments, converting ascending systems to descending systems, and common hazards posed by maneuvering and harnessing.

Required Skills - The ability to select and use rescuer harness, a system for ascending a fixed rope, and personal protective equipment for common environments; attach the life safety harness to the rope rescue system; configure ascent control devices to for a system for ascending a fixed rope; make connections to the ascending system; maneuver around existing environment and system-specific obstacles; convert the ascending system to a descending system while suspended from the fixed rope; and evaluate surroundings for potential hazards.

Task #5:

Descent a fixed rope in a high-angle environment, given an anchored fixed-rope system, a minimum descent distance of 6.1 m (20 ft), a system to allow descent of a fixed rope, a belay system, a life safety harness worn by the person descending, and personal protective equipment, so that the person descending is attached to the fixed rope in a manner that will not allow him or her to fall, the person descending is attached to the rope by means of a descent control device, the speed of descent is controlled, injury to the person descending is minimized the person descending can stop at any point on the fixed rope and rest suspended by his or her harness, the system will not be stressed to the point of failure, the system is suitable for the site, and the objective is reached.

Required Knowledge - Task-specific selection criteria for life safety harnesses and systems for descending a fixed rope; personal protective equipment selection criteria; design, intended purpose, and operation of descent control devices utilized; safe rigging principles; techniques for high-angle environments; and common hazards posed by maneuvering and harnessing.

Required Skills - The ability to select and use rescuer harness, a system for descending a fixed rope, and personal protective equipment for common environments; attach the life safety harness to the rope rescue system; make attachment of the descent control device to the rope and life safety harness; operate the descent control device; maneuver around existing environment and system-specific obstacles; and evaluate surroundings for potential hazards.

Task #6:

Direct a team in the operation of a simple rope mechanical system in a low-angle raising operation, given rescue personnel, a minimum load haul distance of 3 m (10 ft), an established rope rescue system incorporating a simple rope mechanical system, a load to be moved, and an anchor system, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, commands are used to direct the operation, and potential problems are identified, communicated, and managed.

Required Knowledge - Principles of mechanical advantage, application and use of descent control devices, capabilities and limitations of various simple rope mechanical advantage systems and low-angle raising operations, correct operations of simple rope mechanical advantage systems, personnel assignments, and operational commands.

Required Skills - The ability to direct personnel effectively, use operational commands, analyze system efficiency, identify safety concerns, and perform a system safety check.

Task #7:

Direct a team in the operation of a simple rope mechanical advantage system in a high-angle raising operation, given rescue personnel, an established rope rescue system incorporating a simple rope mechanical advantage system, a minimum load haul distance of 3 m (10 ft), a load to be moved, and an anchor system, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, commands are used to direct the operations, and potential problems are identified, communicated, and managed.

Required Knowledge - Principles of mechanical advantage, capabilities and limitations of various simple rope mechanical advantage systems and high-angle raising operations, correct operation of simple rope mechanical advantage systems, personnel assignments, and operational commands

Required Skills - The ability to direct personnel effectively, use operational commands, analyze system efficiency, identify safety concerns, and perform a system safety check.

Task #8:

Function as a litter tender in a low-angle lowering or hauling operation, given a rope rescue system, a minimum lower or haul distance of 6.1 m (20 ft), life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, and the terrain is negotiated while minimizing risks to equipment or persons.

Required Knowledge - Task-specific selection criteria for life safety harnesses, personal protective equipment selection criteria, variations in litter design and intended purpose, low-angle litter attachment principles, techniques and practices for low-angle environments, and common hazards imposed by the terrain.

Required Skills - The ability to select and use rescuer harness and personal protective equipment for common environments, attach the life safety harness to the rope rescue system, maneuver across the terrain, manage the litter while suspended for the rope rescue system, and evaluate surroundings for potential hazards.

Task #9:

Direct a lowering operation in high-angle environment, given rescue personnel, an established lowering system, a minimum load travel distance of 3 m(10 ft), and load to be moved, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, rope commands are used to direct the operation, and potential problems are identified, communicated, and managed.

Required Knowledge - Application and use of descent control devices, capabilities, and limitations of various lowering systems in a high-angle environment, operations of lowering systems in a high-angle environment, personnel assignments, and operational commands.

Required Skills - The ability to direct personnel, use operational commands, analyze system efficiency, manage movement of the load in a high-angle environment, identify safety concerns in a high-angle environment, and perform a system safety check.

Task #10:

Conduct a system safety check, given rope rescue system and rescue personnel, so that a physical/ visual check of the system is made to ensure proper rigging, a load test is performed prior to life-loading the system, and verbal confirmation of these actions is announced and acknowledged before life-loading the rope rescue system.

Required Knowledge - System safety check procedures, construction and operation of rope rescue systems and their individual components, use of personal protective equipment, equipment inspection criteria, signs of equipment damage, principles of rigging, and equipment replacement criteria.

Required Skills - The ability to apply and use personal protective equipment, inspect rope rescue system components for damage, assess a rope rescue system for configuration, secure equipment components, inspect all rigging, and perform a system safety check.

I.B.2. Operations – Confined Space Rescue**Specific Evaluation Guidelines**

The defined job performance requirements shall be met prior to Operations Level qualification in confined space rescue.

Task #1:

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 of potential environmental hazards.

Required 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.

Required Skills - The ability to use and confirm calibration of detection and monitoring equipment and acquire representative samples of space.

Task #2:

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.

Required Knowledge - Effects of hazardous atmosphere on victims and rescuers, types and operation of required hazard-specific 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.

Required 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.

TASK #3:

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 conditions are further assessed, patient care is initiated, the patient is packaged to restrictions of the space, and patient removal can be initiated.

Required 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 space.

Required 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's needs; and reassess and confirm more of operation.

Task #4:

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.

Required 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 for other types of rescues.

Required 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.

Task #5:

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 victims and rescuers are decontaminated as necessary, and the victim is delivered to the EMS provider.

Required 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.

Required Skills - The ability to select and use personal protective equipment, select and operate rescue and retrieval systems use for victim removal, utilize medical equipment, and use equipment and procedures for decontamination.

I.C. Technician Level**I.C.1. Technician – Rope Rescue**

1. Accessing a patient using techniques that require rescuers to climb up or down natural or manmade structures, which can expose the climber to a significant fall hazard
2. Using rope rescue systems to move a rescuer and a patient along a horizontal path above an obstacle or projection
3. Performing a high – angle rope rescue of a person suspended from or stranded on a structure or landscape feature
4. Understanding and applying the principles of the physics involved in constructing rope rescue systems, including system safety factors, critical angles, and the causes and effects of force multipliers
5. Performing a high – angle rope rescue with a litter using tender(s) to negotiate obstacles, manipulate or position the patient, or provide medical care while being raised and lowered
6. Moving a patient packaged in a litter up and over an edge during a raising operation with a rope system
7. Selecting, constructing, and using a high – line rope system common to the needs of the work areas attended by personnel
8. Utilizing a high – line rope system to transport rescuers, equipment, and an occupied litter similar to work areas attended by personnel
9. Utilizing litter attendants within a high – line rope system

Specific Evaluation Guidelines

The job performance requirements shall be met prior to Technician Level qualification in rope rescue.

Task #1:

Complete an assignment while suspended from a rope rescue system in a high-angle environment, given a rope rescue system, a minimum working height of 6.1 m (20 ft), an assignment, life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, selected specialized equipment facilitates efficient rescuer movement, and specialized equipment does not unduly increase risks to rescuers or victims.

Required Knowledge - Task-specific selection criteria for life safety harnesses, personal protective equipment selection criteria, variations in litter design and intended purpose, rigging principles, techniques and practices for high-angle environments, and common hazards posed by improper maneuvering and harnessing.

Required Skills - The ability to select and use rescuer harness and personal protective equipment for common environments, attach the life safety harness to the rope rescue system, maneuver around existing environment and system-specific obstacles, perform work while suspended from the rope rescue system, and evaluate surroundings for potential hazards.

Task #2:

Move a victim in a high-angle environment, given a rope rescue system, a minimum vertical travel distance of 6.1 m (20 ft), victim transfer devices, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, undesirable victim movement within the transfer device is minimized, the means of attachment to the rope rescue system is maintained, the victim is removed from the hazard, selected specialized equipment facilitates efficient victim movement, and the victim can be transported to the local EMS provider.

Required Knowledge - Task-specific selection criteria for patient transfer devices, various carrying techniques personal protective equipment selection criteria, design characteristics and intended purpose of various transfer devices, rigging principles, methods to minimize common environmental hazards, and hazards created in high-angle environments.

Required Skills - The ability to choose patient transfer devices, select and use personal protective equipment appropriate to the conditions, attach a transfer device to the rope rescue system, reduce hazards for rescuers and victims, and determine specialized equipment needs for victim movement.

Task #3:

Function as a litter tender in a high-angle lowering or hauling operation, given a rope rescue system, a minimum lower or haul distance of 6.1 m (20 ft), life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, and the terrain is negotiated while minimizing risks to equipment or persons.

Required Knowledge - Task-specific selection criteria for life safety harnesses, personal protective equipment selection criteria, variations in litter design and intended purpose, high-angle litter attachment principles, techniques and practices for high-angle environments, and common hazards imposed by the various structures.

Required Skills - The ability to select and use rescuer harness and personal protective equipment for common environments, attach the life safety harness to the rope rescue system, maneuver the litter past obstacles or natural structural features, manage the litter while suspended from the rope rescue system, and evaluate surroundings for potential hazards.

Task #4:

Direct a team in the removal of a victim suspended from rope or webbing in a high-angle environment, given a victim suspended by a harness attached to anchored rope or webbing, devices for removal of the victim from the rope or webbing, and a means of removal of the victim to the ground or other safe area, so that risks to victims and rescuers are minimized, injury to the victim is minimized, the means of attachment to the rope rescue system is maintained, the victim is removed from the rope or webbing, and the victim is brought to a safe area for transfer to EMS.

Required Knowledge - Techniques and systems for safe transfer of suspended victims from an existing anchored rope or webbing to a rope rescue system, various techniques for handling suspended victims, and principles of suspension-induced injuries

Required Skills - Select and construct systems for rapid removal of victims from lanyards or rope or webbing, manage operation of the selected system, determine condition of the suspended victim, reduce hazards for rescuers and victims, and determine specialized needs for victim movement.

Task #5:

Direct a team in the construction of a highline system, given rescue personnel, life safety rope, rope rescue equipment, a minimum span of 6.1 m (20 ft), and suitable anchor system capable of supporting the load, so that personnel assignments are made and clearly communicated, the system constructed can accommodate the load, tension applied within the system will not exceed the rated capacity of any of its component parts, a system safety check is performed, movement on the system is efficient, and loads can be held in place or moved with minimal effort over the desired distance.

Required Knowledge - Determination of incident needs as related to operation of highline systems, capabilities, and imitations of various highline systems (including capacity ratings), incident site evaluation as related to interference concerns and obstacle negotiation, rigging principles, system safety check protocol, common personnel assignments and duties, common and critical operational commands, and common highline problems and ways to minimize these problems during construction.

Required Skills - The ability to determine incident needs as relate4d to construction of highline systems, evaluate an incident site as related to interference concerns and set-up, identify the obstacles or voids to be negotiated with the highline, select a highline system for defined task, perform system safety check, use rigging principles, and communicate with personnel effectively.

Task #6:

Direct the operation of a compound rope mechanical advantage system in a high-angle environment, given a rope rescue system incorporating a compound rope mechanical advantage system and a load to be moved, and a minimum load haul distance of 6.1 m (20 ft), so that a system safety check is performed; the movement is controlled; the load can be held in place when needed; operating methods do not stress the system to the point of failure; operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

Required Knowledge - Methods to determine incident needs, types of interference concerns, rope commands, system safety check protocol, procedures for continued evaluation of system components for compromised integrity, common personnel assignments and duties, common and critical commands, methods for controlling a load's movement, system stress issues during operations, and management methods for common problems

Required Skills - The ability to determine incident needs, evaluate incident operations as related to interference concerns, complete a system safety check, continually evaluate system components for compromised integrity, direct personnel effectively, communicate commands, analyze system efficiency, manage load movement, and identify concerns.

Task #7:

Direct a team in the operation of a highline system, given rescue personnel, an established highline system with a minimum span of 6.1 m (20 ft), a load to be moved, and personal protective equipment, so that the movement is controlled, the load is held in place when needed, operating methods do not stress the system to the point of failure, personnel assignments are made and tasks are communicated, and potential problems are identified, communicated, and managed.

Required Knowledge - Ways to determine incident needs as related to the operation of highline systems, capabilities, and limitations of various highline systems, incident site evaluation, system safety check protocol, procedures to evaluate system components for compromised integrity common personnel assignments and duties, common and critical operational commands, common highline problems and ways to minimize or manage those problems, and ways to increase the efficiency of load movement.

Required Skills - The ability to determine incident needs, complete a system safety check, evaluate system components for compromised integrity, select personnel, communicate with personnel effectively, manage movement of the load, and evaluate for any potential problems.

I.C.2. Technician – Confined Space Rescue

Specific Evaluation Guidelines

The defined job performance requirements shall be met prior to Technician Level qualification in confined space rescue.

Task #1:

Preplan a confined space incident, given applicable guidelines and regulations and a preplan form so that a standard approach 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.

Required 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.

Required 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.

Task #2:

Assess the incident, given a preplan of the space of 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 victims removal are determined, and an emergency means of retrieval for rescue entrants is established.

Required 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 an 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.

Required 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.

Task #3:

Control hazards, given personal protective equipment and ac 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.

Required Knowledge - 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.

Required Skills - The ability to utilize personal protective equipment, space scene control barriers, operate atmospheric monitoring equipment, isolate dangerous forms of energy, and mitigate physical and atmospheric hazards.

I.D. Senior Technician Level

Evaluations for this level are directed toward coordination and managing rescue activities, rather than focusing on skill sets related to Rope Rescue vs. Confined Space Rescue.

Specific Evaluation Guidelines

The defined job performance requirements shall be met prior to being qualified as a Senior Technical rescuer.

Task #1:

Identify the needed support resources, given a specific type of rescue incident, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operations facilitates rescue operational objectives.

Required Knowledge - Equipment organization and tracking methods, lighting resource type(s), shelter and thermal control options, and rehab criteria

Required Skills - The ability to track equipment inventory, identify lighting resources and structures for shelter and thermal protection, select rehab areas, and manage personnel rotations.

Task #2:

Size up a rescue incident, given background information and applicable reference materials, so that the type of rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.

Required Knowledge - Types of reference materials and their uses, availability and capability of the resources, elements of an action plan and related information, relationship of size-up to the incident management system, and information gathering techniques and how that information is used in the size-up process.

Required Skills - The ability to read technical rescue reference materials, gather information, relay information, and use information gathering sources.

Task #3:

Manage incident hazards, given scene control barriers, personal protective equipment, request site equipment, and available specialized resources, so that all hazards are identified, resource application fits the operational requirements, hazard isolation is considered, risks to rescuers and victims are minimized, and rescue time constraints are taken into account.

Required Knowledge - Resource capabilities and laminations, types and nature of incident hazards, equipment types and their use, isolation terminology, methods, equipment and implementation, operational requirements, concerns, common types of rescuer and victim risk, risk-benefit analysis methods and practices, and types of technical references.

Required Skills - The ability to identify resource capabilities and limitations, identify incident hazards, assess victim viability (risk-benefit), utilize technical references, place scene control barriers, and operate control and mitigation equipment.

Task #4:

Manage resources in a rescue incident, given incident information, a means of communication, resources, tactical worksheets, personnel accountability protocol, applicable references, and standard operating procedures, so that references are utilized, personnel are accounted for, deployed resources achieve desired objectives, incident actions are documented, rescue efforts are coordinated, the command structure is established, task assignments are communicated and monitored, and actions are consistent with applicable regulations.

Required Knowledge - Incident management system; tactical worksheet application and purposes; accountability protocols; resource types and deployment methods; documentation methods and requirements; availability, capabilities, and limitations of rescuers and other resources; communication problems and needs; communications requirements, methods, and means; types of tasks and assignment responsibilities; policies and procedures of the agency and technical references related to the type of rescue incident.

Required Skills - The ability to implement an incident management system, complete tactical worksheets, use reference materials, evaluate incident information, match resources to operational needs, operate communications equipment, manage incident communications, and communicate in a manner so that objectives are met.

Task #5:

Conduct a search, given hazard-specific personal protective equipment, equipment pertinent to search mission, an incident location, and victim investigative information, so that search parameters are established, victim profile is established, the entry and exit of all people either involved in the search or already within the search are questioned and the information is updated and relayed to command, the personnel assignments match their expertise, all victims are located as quickly as possible, applicable technical rescue concerns are managed, risks to searchers are minimized, and all searchers are accounted for.

Required Knowledge - Local policies and procedures and how to operate in the site-specific search environment.

Required Skills - The ability to enter, maneuver in, and exit the search environment and provide for and perform self-escape/ self-rescue.

Task #6:

Perform ground support operations for helicopter activities, given a rescue scenario/incident, helicopter, operational plans, personal protective equipment, requisite equipment, and available specialized resources, so that rescue personnel are aware of the operational characteristics of the aircraft and demonstrate operational proficiency in establishing and securing landing zones and communications with aircraft personnel until the assignment is complete.

Required Knowledge - Ground support operations relating to helicopter use and deployment, operation plans for helicopter service activities, type-specific personal protective equipment, aircraft familiarization and hazard areas specific to helicopters, scene control and landing zone requirements, aircraft safety systems, and communication protocols.

Required Skills - The ability to provide ground support operations, review standard operating procedures for helicopter operations, use personal protective equipment, establish, and control landing zones, and communicate with aircrews.

Task #7:

Terminate a technical rescue operation, given an incident scenario, assigned resources, and site safety data, so that rescuer risk and site safety are managed, scene security is maintained, and custody transferred to a responsible party, personnel and resources are returned to a state of readiness, record keeping, and documentation occur, and post event analysis is conducted.

Required Knowledge - Incident Command functions and resources, hazard identification and risk management strategies, logistics and resource management, personnel accountability systems, and AHJ-specific procedures or protocols related to personnel rehab.

Required Skills - Hazard recognition, risk analysis, use of site control equipment and methods, use of data collection and management systems, and use of asset and personnel tracking systems.

Task #8:

Triage victims, given triage tags and local protocol, so that rescue versus recovery factors are assessed, triage decisions reflects resource capabilities, severity of injuries is determined, and victim care and rescue priorities are established in accordance with local protocol.

Required Knowledge - Types and systems of triage according to local protocol, resource availability, methods to determine injury severity, ways to manage resources, and prioritization requirements

Required Skills - The ability to use triage materials, techniques, and resources and to categorize victims correctly.

Task #9:

Move a victim in a low-angle environment, given victims transport equipment, litters, other specialized equipment, and victim removal systems specific to the rescue environment, so that the victim is moved without undue further injuries, risks to rescuers are minimized, the integrity of the victim's securement within the transfer device is established and maintained, the means of attachment to the rope rescue system is maintained, and the victim is removed from the hazard.

Required Knowledge - Types of transport equipment and removal systems, selection factors with regard to specific rescue environments, methods to reduce and prevent further injuries, types of risks to rescuers, ways to establish and maintain victim securement, transport techniques, rope rigging applications and methods, and types of specialized equipment and their uses.

Required Skills - The ability to secure a victim to transport equipment, assembles and operates environment-specific victim removal systems, and chooses an incident-specific transport device.

Task #10:

Transfer a victim to emergency medical services (EMS), given local medical protocols, so that all pertinent information is passed from rescuer to EMS provider, and the victim can be transported to a medical care facility.

Required Knowledge - Medical protocols for victim transfer; uses for checklists, triage tags, or report forms utilized for this purpose; risks, laws, and liabilities related to victim transfer; and information needed by the EMS provider.

Required Skills - The ability to report victim condition and history to the EMS provider and to complete reports and checklists, and verbal communication skills.

Task #11:

Inspect and maintain hazard-specific personal protective equipment, given clothing or equipment for the protection of the rescuers, including respiratory protection, cleaning and sanitation supplies, maintenance logs or records, and such tools and resources as are indicated by the manufacturer's guidelines for assembly or disassembly of components during repair or maintenance, so that damage, defects, and wear are identified and reported or repaired, equipment functions as designed, and preventive maintenance has been performed and documented consistent with the manufacturer's recommendations.

Required Knowledge - Functions, construction, and operation of personal protective equipment, use of record keeping systems; requirements and procedures for cleaning, sanitizing, and infectious disease control; use of provided assembly and disassembly tools; manufacturer and department recommendations; pre-use inspection procedures; and ways to determine operational readiness.

Required Skills - The ability to identify wear and damage indicators for personal protective equipment; evaluate operational readiness of personal protective equipment; complete logs and records; use cleaning equipment, supplies, and reference materials; and select and use tools specific to the task.

Task #12:

Inspect and maintain rescue equipment, given maintenance logs and records, tools, and resources as indicated by the manufacturer's guidelines, equipment replacement protocol, and organizational standard operating procedure, so that the operational status of equipment is verified and documented, all components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed.

Required Knowledge - Functions and operations of rescue equipment, use of record-keeping systems, manufacturer and organizational care and maintenance requirements, selection and use of maintenance tools, replacement protocol and procedures, disposal methods, and organizational standard operating procedures.

Required Skills - The ability to identify wear and damage indicators for rescue equipment, evaluate operation readiness of equipment, complete logs, and records, and select and use maintenance tools.

I. Roles & Responsibilities

Rescue Operations Manager

Responsibilities

- To develop and enforce operational policies and procedures
- To initiate disciplinary actions for violations of rescue protocols and corporate policies
- To audit sites where rescue teams are deployed
- To investigate incidents, accidents and near-misses
- To visit sites to preplan and coordinate rescue activities
- To ensure that all paperwork associated with a job is completed and submitted
- To maintain discipline and harmony amongst rescue team members

Health, Safety Environmental, Quality & Training Manager

Responsibilities

- To assist the rescue manager in the performance of his/her duties
- To visit job sites and oversee the installation of complex retrieval systems
- To be the Lead person at a job site
- To physically check equipment storage areas to ensure equipment is kept in proper working order
- To be an instructor of rescue techniques
- To ensure training requirements of the NFPA (2500; 1006; 1670; 1983; 1858; 1072; 475), OSHA and ANSI are met
- To maintain personnel training records of
 - Written tests
 - Hands-on evolutions
 - Evaluations
-
- To report personnel disputes and dissatisfactions to the rescue manager
- To evaluate the capabilities of field service personnel on site

Lead Person

Responsibilities

- Will vary depending on the level of Lead (1,2,3,4 with 4 being the highest level)
A breakdown of the levels will be posted in the near future.
- Is the person responsible for communicating with the clients representative on-site
- Is the person responsible for the final decision in the retrieval system set-up at a site
- Is responsible for the completion of all paperwork associated with a job
- To make the determination of actions necessary to retrieve a victim
- To confirm what other personnel on-site will respond to assist in the retrieval of a victim as needed
- To confirm the response of outside agencies to assist in a rescue (example: fire department)
- To see that all necessary equipment to perform the rescue is brought to the site and is in proper working order
- To see that all equipment is properly stowed after returning to the shop at the end of a job day or completion of a job
- To ensure that the members of the on-site team act in a professional manner and observe all the regulations of the NFPA, OSHA and ANSI Standards along with client and corporate policies
- To take appropriate action(s) to settle disputes amongst team members

- To be responsible for equipment evaluation prior to AND after each job. (Inventory lists will be available pre- and post-job.)
 - Team leader will ensure that the complete list of equipment, per standard list, is taken to each jobsite.
- To communicate broken equipment to Management.
- Ensuring that IPS★ITCS Standard Attire is worn at all times while on a work site.
- Ensure the completion of the Rescue Pre-plan prior to beginning of scheduled work.
 - One copy of pre-plan will remain with the customer.
 - One copy will be attached to regular paperwork and returned to office.
- Ensure the completion of Rope Logs each time rope is used.
 - Rope logs will stay with each rope bag.
- Hold the Pre-Job Briefings on each site prior to beginning of work.

Rescue Team Members

- To follow directives given by the Rescue Lead for the job. This includes activities directly related to a rescue, training, on-site preparedness, and general work duties at a site.
- To follow company and client work policies.
- To be prepared and alert for an immediate response to an emergency call. It is company policy that personnel are not to sleep during their shift. Watching television, listening to music, playing games of any type (board or electronic), using a computer for other than company business, reading newspapers, books, magazines (other than job related reading material) during duty time is strictly prohibited. Disciplinary action will be taken. There may be exceptions during scheduled break and lunch periods at some job sites. The Lead person will verify with a client if and when exceptions can be made.
- To be on time for the start of a shift. Should there be an event where a person cannot be at work, they are to call a supervisor (company management and leave a message and the Rescue Lead) as soon as is feasibly possible.
- To bring all necessary equipment and PPE to the job site.
- To inspect all equipment on a site at the start of a shift to ensure proper operation.
- To present themselves in a professional manner. No use of vulgarities (swearing) or inferences of any type which may be considered degrading toward anyone.
- To maintain team morale.
- To follow the chain of command regarding site or co-worker issues. The initial contact is to be with the Rescue Leader.

Rescuer Qualifications

It is understood that to reach the next level, requirements of all previous levels must be met.

Training criteria will be consistent with the following:

- NFPA - 1006, 1670, 1983 and 472 guidelines
- OSHA – Applicable guidelines from Parts 1910 and 1926

Level 5: Trainee

Summary:

Experience: None

Training: Minimum: Rescue 40-hour

Attributes: None Specific

Other: None

Personnel at a site that are capable of rendering assistance during a rescue scenario. Personnel are able to identify hazards at a site and determine the necessary system(s) needed to retrieve a victim in the event of an incident. Will set up hardware and software retrieval systems and perform monitoring and rescue functions under the direct supervision of qualified safety/rescue personnel.

Position: Trainee may be a 3rd or lower on the rescue team in primarily a non-essential role.

Level 4: Awareness

Summary:

Experience: None

Training – Minimum: Level 5 Training, plus:

- Basic First Aid/CPR
- Hazmat Awareness
- Confined Space 16 hr.

Attributes: Must be able to:

- follow directions
- respond to an emergency situation
- be coached
- perform physical requirements of position

Other: None

Position: Awareness Level may be a 2nd or lower on the rescue team, depending on the nature of the rescue job.

Personnel at this level shall be capable of:

- A. Identifying confined spaces and permit required confined spaces (Industrial and Construction sites)
- B. Recognizing the need for rescue from work area involved
- C. Initiating and maintaining communications with victims as is possible
- D. Recognizing and identifying hazards associated with entry and non-entry rescues
- E. Initiating the emergency response system for confined space emergencies
- F. Performing entry and non-entry victim retrievals
- G. Implementing site control and scene management

Personnel at this level will have successfully completed courses in:

- A. Confined space entry for entrants, attendants, and entry supervisors – 16 Hours
- B. Rope rescue training following NFPA guidelines – 40 Hours
- C. Respiratory protection
- D. Air monitoring
- E. Hazardous Materials Awareness – 8 Hours
- F. Basic First Aid / CPR – 6 Hours

Level 3: Operations

Summary:

Experience: Greater than one year or equivalent as a rescuer

Training: Minimum: Level 4 Training, plus:

- Advanced First Aid/CPR
- Hazmat Operations
- Rope Rescue at Operations Level
- Advanced Confined Space 16 hr.

Attributes: Able to (In addition to Level 4 requirements)

- Handle technical aspects of rescue jobs
- Supervise a small team under stressful conditions
- Communicate effectively with customers and rescue team members
- React appropriately with a sense of urgency

Other: None

Position: Basic supervisory level. Personnel will make the decision as to what type of system will be set up to retrieve victim(s). Will be responsible for determining the perimeter of the rescue work zone; determining the need for additional on-site personnel that may be needed to assist in the rescue; verifies the communications system that will be used to contact outside emergency responders; has the communication skills to give directives that are clearly understood and trusted.

Personnel at this level shall be capable of:

- A. Sizing up existing and potential conditions at a site
- B. Protecting themselves and others from the hazards of the site
- C. Physically and psychologically fit to meet the challenges of the rescue
- D. Identify the duties of the rescue entrant, back-up entrant, attendant and team leader
- E. Monitor the atmosphere for oxygen levels, flammable limits and toxic atmospheres
- F. Perform entry rescues at incidents where:
 1. The internal configuration of the space is clear and unobstructed so retrieval systems can be utilized for rescuers without the possibility of entanglement.
 2. The victim(s) can easily be seen from outside the primary opening of the space.
 3. Rescuers can easily pass in and out of the space properly wearing necessary PPE.
 4. The space is large enough to accommodate two or more rescuers and the victim.
 5. All hazards in and around the space have been identified, isolated and controlled.
- G. Packaging a victim in a device for retrieval.
- H. A rope lowering and or raising system may have to be selected and constructed in the high angle environment.

Personnel at this level will have successfully completed courses in:

- A. Advanced training in the selection and utilization of confined space entry equipment
- B. Rope rescue training at the NFPA Operations Level – 24 Hours (includes A listed above)
- C. Advanced First Aid / CPR – 16 Hours
- D. Hazardous Materials Operations training – 24 Hours

Other

- Minimum level to be qualified to assist in training classes
- No specific industry experience required for a job

Level 2B: Technician I

Summary:

Experience: Greater than two years or equivalent industry experience including one year of supervisory rescue experience

Training: Minimum: Level 3 Training, plus:

- First Responder Level Medical training
- Hazmat Technicians
- Rope Rescue at Technician Level

Attributes: Able to (In addition to Level 3 requirements)

- Supervise a larger rescue team under stressful conditions
- Manage all aspects of job from conception through completion and reporting
- Be viewed as a leader within the rescue group

Other: None

Advanced supervisory level. Through additional training and experience these personnel are capable of developing and implementing complex retrieval systems for situations encountered at facilities. Examples include areas with structural obstacles, production processes, chemical and or petroleum product hazards; construction or demolition hazards.

Personnel at this level shall be capable of:

- A. Developing hazard isolation and control requirements.
- B. Develop rescue preplans for the site and implement the plan as prescribed.
- C. Constructing advanced rope lowering and raising systems for high angle rescue.
- D. Selecting and using of proper PPE at a site.

Personnel at this level will have successfully completed courses in:

- A. Rope rescue training at the NFPA Technician Level -16 Hours
- B. Medical training at the First Responder Level – 40 Hours (possible 60 depending on the course)
- C. Hazardous Materials Technician training – 16 Hours

Other - None

Level 2A: Technician II

Summary:

Experience: Greater than 4 years or equivalent with a minimum of two years supervisory rescue experience

- Training: Minimum: Level 2B Training, plus:
- Advanced medical training as determined by Safety management
- Advanced rescue specialization courses
- Rescue/safety degrees, certifications, etc., as approved by Safety management.

Attributes: Able to (In addition to Level 2B requirements)

- Manage the supervision of multiple rescue teams on site.
- Able to handle all management reporting and communication functions for the rescue department.

Other: Industry specialization and experience

This level is achieved by personnel that have through education, training and experience gained additional knowledge in multiple rescue disciplines.

Personnel at this level will have successfully completed courses in:

- A. Specialty topics related to job operations where a certificate or diploma was earned upon successful completion of training.
- B. Completed advanced training or work experience in the rescue disciplines related to rope rescue; confined spaces; construction; structural collapse; trench and excavation; machinery, production and processing operations.
- C. Medical First Responder
- D. Basic Project Management Skills training.

Other – Industry experience required

Level 1: Senior Technician

Summary:

Experience: Greater than 5years or equivalent with a minimum of two years supervisory rescue experience

Training: Minimum: Level 2A Training, plus:

- EMT training as determined by Safety management
- More advanced rescue specialization courses
- Rescue/safety degrees, certifications, etc., as approved by Safety management.

Attributes: Able to (In addition to Level 2A requirements)

- Manage multiple rescue leads on multiple sites.
- Able to handle all management reporting and communication functions for the rescue department, including communication with senior safety officers of customer on site.

Other: Industry specialization and experience

Highest field supervisory level. This level is achieved by personnel that have through education, training and experience gained additional knowledge in multiple rescue disciplines.

Personnel at this level shall be capable of:

Personnel at this level will have successfully completed courses in:

- E. Specialty topics related to job operations where a certificate or diploma was earned upon successful completion of training.
- F. Completed advanced training or work experience in the rescue disciplines related to rope rescue; confined spaces; construction; structural collapse; trench and excavation; machinery, production and processing operations.
- G. Medical First Responder
- H. Advanced Project Management and overall Supervisory Skills.

Other: Industry experience required

Trainer Qualifications

Position: Personnel in this position will be the lead instructor in a class. These personnel will be responsible for developing and/or selecting course material (written, video); developing programs; creating scenarios; developing evaluations (written tests; practical evaluations). Personnel must have a good working knowledge of safety regulations, instructional guidelines, and company policies.

Attributes

- Communicates well verbally and with written material
- Presents themselves as a professional
- Works well with others

Experience

- Five years in an industrial environment in a supervisory position

Training

- OSHA 500 and or 501
- Train the trainer course or equivalent:
 - Hazardous Materials
 - Rope Rescue Systems
 - Confined Space Entry Rescue
 - Other topics as they pertain to rescue and safety in the workplace

Other: As determined by management

FORMS

Rescue Tech Evaluation Form v01

Name: _____ Date: _____

21 years of age

Valid driver's license

High School Diploma or GED

Previous Employment

1. _____
2. _____
3. _____

Previous Training or Certifications

Medical

First Aid/CPR
 EMT Basic
 Paramedic
 First Responder (40 Hour)

Hazardous Materials (Documentation must state OSHAs 29FR, Part 1910.120, or list the same in a course description.)

Awareness
 Operations
 Technician
 Specialist
 Incident Commander

Rope Rescue Training (Documentation must state NFPA 1006, 1670, 1983, or list the same in a course description.)

Awareness
 Operations
 Technician

Other and Comments

Level 1
 Level 2
 Level 3A
 Level 3B
 Level 4
 Level 5

Evaluator Name: _____

Signature: _____

SCBA Checklist

Name: _____

Date: _____

SCBA Make: _____

As the masks are tight fitting to the face, personnel being evaluated are to be clean shaven where the mask touches the face.

	1 st Try	2 nd Try	Fail
Checks gauge to see that the bottle is full	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Checks straps to see they are fully extended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tightens shoulder straps so pack is sitting properly on the back	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tightens waist strap so pack is in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tightens chest strap if provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does a final tightening of face mask straps (chin, temple, top)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does a fit test (covers hole on mask or end of the hose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Completely opens the flow valve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Evaluator: _____

Belay Evaluation

Name: _____

Date: _____

1st Try 2nd Try No

Repeat from memory and in correct sequence the belay voice communication.

On level ground, use a Munter Hitch to belay a person moving away from the belayer.

On level ground, use a Munter Hitch to belay a person moving toward the belayer.

On level ground, use a belay plate to belay a person moving away from the belayer.

On level ground, use a belay plate to belay a person moving toward the belayer.

Using a belay practice system, use a belay plate to catch a dropped weight as it is being raised.

Using a belay practice system, use a belay plate to catch a dropped weight as it is being lowered.

Comments:

Evaluator: _____

Anchoring Evaluation

Name: _____

Date: _____

	1 st Try	2 nd Try	No
Tie & Rig a Tensionless Hitch on Anchor Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tie & Rig figure 8 on a Bight on Anchor Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tie & Rig Figure 8 Follow Through on Anchor Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tie & Rig a Water Knot in Webbing on Anchor Point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tie & Rig Load Sharing Anchor on Two Anchor Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rig Self-Equalizing Anchor on Two Anchor Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rig Self-Equalizing Anchor on Three or More Anchor Points	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Evaluator: _____

Haul Evaluation

Name: _____

Date: _____

	1 st Try	2 nd Try	No
Repeat from memory the voice communications used in rescue hauling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Using a simulated rescue load, rig the following with appropriate anchors, pulley placement, haul cams, and safety cams:

- | | | | |
|-------------------------------------|--------------------------|--------------------------|--------------------------|
| 1. 2:1 haul system (Gun) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. 3:1 haul system (Luff) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. 3:1 haul system ("Z-Rig") | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. 3:1 haul system ("Piggy-Back") | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. 4:1 haul system (Block & Tackle) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. 4:1 haul system ("Piggy-Back") | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments:

Evaluator: _____

High Angle Lowering Evaluation

Name: _____

Date: _____

	1 st Try	2 nd Try	No
Repeat from memory the voice communications used in high angle lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correctly rig a litter for high angle lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Package a rescue subject for high angle lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using a litter rigged and with a simulated rescue load:			
1. Correctly anchor a brake bar rack for lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Correctly attach the litter to lowering rope.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Correctly rig and anchor a belay for litter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Correctly lace lowering rope to brake bar rack.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Correctly lower litter with simulated load, stop lowering, bring rack to full stop, tie off rack, then unlock rack to continue lower.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Correctly belay a simulated rescue load during a lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Perform a knot pass during a simulated lowering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Evaluator: _____

Ascending Evaluation

Name: _____

Date: _____

	1 st Try	2 nd Try	No
Correctly tie a Prusik Knot onto a fixed rope.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ascend a rope safely and efficiently with an ascending system using three ascenders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tie off short while ascending a fixed rope.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safely and efficiently change over from ascending to rappeling.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safely and effieiently change over from rappeling to ascending.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extricate oneself from a simulated jammed rappel device using ascenders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Evaluator: _____

Rappeling Evaluation

Name: _____

Date: _____

	1 st Try	2 nd Try	No
Rappel Using a Figure 8 with Ears, and:			
1. Attach it to harness and rope correctly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain control during the entire rappel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Partway down, come to a complete stop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Lock off the Figure 8 descender securely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Unlock the descender and complete the rappel.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rappel Using a Brake Bar Rach, and :			
1. Attach it to harness and rope correctly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain control during the entire rappel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Partway down, come to a complete stop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Lock off the Brake Bar Rack securely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Unlock the descender and complete the rappel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Evaluator: _____

Knots Evaluation

Name: _____

Date: _____

Properly Tied

	Yes	No
Overhand Knot	<input type="checkbox"/>	<input type="checkbox"/>
Square Knot	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8 Stopper	<input type="checkbox"/>	<input type="checkbox"/>
In Line Figure 8	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8 on a Bight	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8 Follow Thru	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8 Bend	<input type="checkbox"/>	<input type="checkbox"/>
Double Loop Figure 8	<input type="checkbox"/>	<input type="checkbox"/>
Clove Hitch	<input type="checkbox"/>	<input type="checkbox"/>
Bowline	<input type="checkbox"/>	<input type="checkbox"/>
Tensionless Anchor	<input type="checkbox"/>	<input type="checkbox"/>
Butterfly	<input type="checkbox"/>	<input type="checkbox"/>
Munter Hitch	<input type="checkbox"/>	<input type="checkbox"/>
Double Fisherman	<input type="checkbox"/>	<input type="checkbox"/>
Water Knot	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
Double Butterfly	<input type="checkbox"/>	<input type="checkbox"/>
Butterfly on a Bight	<input type="checkbox"/>	<input type="checkbox"/>
Sheet Bend	<input type="checkbox"/>	<input type="checkbox"/>
Water Bowline	<input type="checkbox"/>	<input type="checkbox"/>
Double Bowline	<input type="checkbox"/>	<input type="checkbox"/>
Bowline on a Bight	<input type="checkbox"/>	<input type="checkbox"/>
Girth Hitch	<input type="checkbox"/>	<input type="checkbox"/>
Prusik Hitch	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8 Stopper		

Comments:

Evaluator: _____

High Angle Rescue / Confined Space Entry

Rescue Course Outline

1. Course Description
 - A. Review of 29 CFR 1910.146
 1. Appendix F (Rescue)
 - B. Review of NFPA Standards 2500, 1006, 1670, 1983, 1858, and 470
 - C. Review of 29 CFR 1910.120 HAZWOPER
 - D. Identify confined spaces and permit spaces (OSHA definitions)
 1. Industrial sites
 2. Construction sites
 - E. Explain the need for diligent care and maintenance of equipment
2. OSHA regulations that also pertain to entries
 - A. Respiratory protection
 - B. PPE
 - C. Air monitoring
 - D. Lockout tag-out
 - E. Other
 - F. Space reclassification
 - G. Entry vs non-entry retrieval guidelines
3. Written Permit
 - A. Required sections
 1. How the permit, the permit program and permit system work together
 - B. Who has the right to view the permit
 - C. Complete a permit
 - D. Contractors' employees working in a confined space
 - E. Other permits that may be necessary
 1. Lockout and tag-out
 2. Hot work
 3. Other
4. Training Requirements
 - A. Entrant
 - B. Attendant
 - C. Supervisor
 - D. Rescuer

5. Hazards in and around work area
 - A. Identify properties and hazards of chemicals in the workplace
 - B. Identify and analyze physical hazards in the workplace
 1. Job Safety and Environmental Analysis (JSEA)
 - C. Energy hazards
 1. Electrical
 2. Mechanical
 3. Pneumatic
 4. Hydraulic
 5. Other
 - D. Hazards of grains in spaces
 - E. Work environmental hazards
 1. Noise
 2. Causing musculoskeletal injuries
 3. Temperature extremes
 - F. Oxygen deficient and enriched atmospheres
 - G. Health hazards
 - H. Flash point and flammable range
 - I. DOT Hazard classes
 1. Explosives
 2. Gases
 3. Liquids
 4. Flammable solids
 5. Oxidizers and organic peroxides
 6. Poisons
 7. Radioactive(s)
 8. Corrosives
 9. Other regulated materials
 - J. Labels identifying hazards
 1. NFPA 704 M
 2. Hazardous Materials Identification System (HMIS)
6. Air Monitors
 - A. Testing order
 1. Oxygen
 2. Flammables
 3. Toxics
 - B. Components of a monitoring system
 1. Monitors
 2. Pump
 3. Alarms
 4. Wand, hoses, and filters
 - C. Calibration Procedures
 1. Scheduled
 2. Field tests (Bump tests)
 - D. Types of Instruments
 1. Direct Reading Instruments (DRI)
 2. Calorimetric tubes
 3. Other

- E. Alarm levels
 - 1. Oxygen
 - 2. Flammables
 - 3. Toxics
 - a. Carbon Monoxide
 - b. Hydrogen Sulfide
 - c. Other
- F. Procedures to use equipment
 - 1. Area to monitor
 - 2. Response to atmospheric hazards
- 7. Lockout and Tagout
 - A. Equipment
 - 1. Padlocks and keys
 - 2. Lockout tags
 - 3. Group lockout devices
 - 4. Gate valve lockout hoods
 - 5. Ball valve lockout devices
 - 6. Blind flange
- 8. Hazard Isolation
 - A. Identify and control atmospheric hazards
 - 1. Positive and negative pressure
 - a. Advantages and disadvantages
 - 2. Mechanical ventilation
 - a. Techniques
 - b. Safety precautions
 - 1. Hazards of introduction and dispersion of air
 - 3. Hazardous energy
 - a. Electrical
 - b. Mechanical
 - c. Pneumatic
 - d. Hydraulic
 - B. Protect entry route to the work area
 - 1. Zones or barricades
 - 2. Vehicular traffic
 - 3. Identify hazards
 - 1. Remove
 - 2. Overcome

- 9. Respiratory Protection
 - A. Review of the OSHA Standard
 - B. Operations and features of respiratory equipment
 - 1. Supplied Airline Respirators (SAR)
 - 2. Self-Contained Breathing Apparatus (SCBA)
- 10. Protective Clothing
 - A. Chemical hazards
 - 1. EPA Level A
 - 2. EPA Level B
 - 3. EPA Level C
 - 4. EPA Level D
- 11. Rope Rescue Equipment
 - A. Rope (Kernmantle)
 - 1. Static
 - 2. Dynamic
 - B. Accessory cord
 - C. Webbing
 - D. Anchor straps
 - E. Edge pads
 - F. Carabiner
 - 1. Screw Lock
 - 2. Auto-Lock
 - G. Tri Link
 - H. Swivel, Petzl
 - I. Rigging ring
 - J. Anchor plate
 - K. Pulley
 - 1. Single sheave
 - 2. Double sheave
 - L. Gibbs ascender
 - M. Industrial rope grab
 - N. Brake bar rack
 - O. Figure "8" descender with ears
 - P. Shock absorbers
 - Q. Load release hitch
 - R. Harnesses

12. Knots

- A. Bight
- B. Loop
- C. Round turn
- D. Figure 8 family
 - 1. Stopper knot
 - 2. Figure 8 on a bight
 - 3. Figure 8 bend
 - 4. Figure 8 follow through
 - 5. Double loop figure 8
- E. Overhand knot
- F. Barrel knot
- G. Bowline
- H. Square
- I. Double Fisherman's
- J. Butterfly
- K. Double loop butterfly
- L. Water knot
- M. Handcuff knot
- N. Hitches
 - 1. Munter
 - 2. Clove
 - 3. Prusik

13. Basic Rigging

- A. Determine suitability of an anchor point
- B. Advantages and limitations of a mechanical advantage system
- C. Deadman safety (ratchet cam)
- D. Use of directional pulleys
- E. Establish a safety belay line

14. Rescue Psychology

- A. Claustrophobia
 - 1. Symptoms
 - 2. Overcoming
- B. Pyramid of survivability
- C. Pyramid of priority
- D. Risk vs benefit

15. Types of Rescues

- A. Self-rescue
- B. Non-entry rescue
- C. Entry (internal rescue)
- D. Factors and considerations to perform a successful rescue
 - 1. Time
 - 2. Victim
 - 3. Space
 - 4. Rescuer
- E. Steps of the rescue process
- F. Pre-emergency planning
- G. Site zoning effectiveness

16. Rescue Team Organization and Management

- A. Systematic organized approach
- B. Incident Command System
 - 1. Unity of Command
 - 2. Span of Control
 - 3. Division of Labor
 - 4. Accountability
 - 5. Common Terminology
 - 6. Modular Organization
 - 7. Integrated Communication
 - 8. Unified Command Structure
 - 9. Consolidated Action Plans
 - 10. Predesignated Incident Facilities
 - 11. Comprehensive resource Management
- C. Incident Command Roles
 - 1. Incident Commander
 - 2. Public Information Person
 - 3. Safety Person
 - 4. Liaison Person
 - 5. Section Person
- D. Operations Areas
 - 1. Operations Section
 - 2. Staging Area
 - 3. Rescue Ops
 - 4. Medical Ops
 - 5. Rescue Group Supervisor
 - 6. Hazard Control Unit
 - 7. Air Supply Unit
 - 8. Rigging Unit
 - 9. Entry Unit
 - 10. Extrication Unit
 - 11. Support Personnel

17. Rappelling Field Exercise

- A. Select anchor point
- B. Establish anchor system
- C. Rig a fixed line
- D. Munter safety belay line
- E. Function as a rescue team leader
 - 1. Perform all safety checks
 - 2. Oversee safety of the operation
 - 3. Direct the operation
- F. Rappel using brake bar rack
- G. Rappel using figure 8
- H. Use Munter safety hitch in a belay line to provide a safety belay for rappeller
- I. Perform bottom belay for a rappeller

18. Rigging and Using Rescue Systems Field Exercise

- A. Rig a lifting/lowering system using a block and tackle system piggybacked to a mainline system
 - 1. Use the system to haul and lower a load
- B. Rig an inchworm system to move a load up a fixed line
- C. Convert a Z Rig hauling system to a lowering system under load
- D. Convert a lowering system to a Z Rig hauling system under load
- E. Function as a team member in the following positions
 - 1. Haul team leader
 - 2. Haul team member
 - 3. Load spotter
 - 4. Ratchet operator
 - 5. Lowering line operator
- F. Issue and follow haul team commands to safely operate a lifting/lowering system
- G. Establish, operate, and use safety belay systems during hauling and lowering operations

19. Patient Lowering Field Exercise

- A. Package Patient
 - 1. Backboard and Stokes litter or SKED stretcher
 - 2. Select and rig an appropriate lowering system
 - 3. Rig the litter to attach to the lowering system
 - 4. Safely lower patient to the ground

- B. Work as a member of a rescue team to build and operate the following
 - 1. Horizontal single line high point lowers using tag line
 - 2. Horizontal single line high point lowers using a litter tender
 - 3. Horizontal double line high point lowers using tag lines
 - 4. Horizontal double line high point lowers using one litter tender
 - 5. Horizontal double line high point lowers using two litter tenders
 - 6. Horizontal single line low point lowers using tag lines
 - 7. Horizontal single line low point lowers using a litter tender
 - 8. Horizontal double line low point lowers using tag lines
 - 9. Horizontal double line low point lowers using one litter tender
 - 10. Horizontal double line low point lowers using two litter tenders
 - 11. Vertical high point lowers using tag line
 - 12. Vertical high point lowers using a litter tender
 - 13. Vertical low point lowers using tag lines
 - 14. Vertical low point lowers using a litter tender
 - 15. Stairwell lower
 - C. Explain selection considerations, advantages, disadvantages and use considerations of the above listed systems
 - D. Function as a rescue team member in the following positions
 - 1. Rescue team leader
 - 2. Litter tender
 - 3. Descent control device operator
 - 4. Safety belay operator
 - 5. Tag line operator
 - 6. Lifting team member
 - E. Perform a safety check on all systems listed above
20. Patient Packaging
- A. Secure patient to a long backboard to maintain spinal immobilization during patient transfer
 - B. Package patient in a Stokes litter
 - 1. Rig litter to be lowered or lifted
 - a. Horizontal orientation
 - b. Vertical orientation
 - C. Package patient in a SKED stretcher
 - 1. Rig litter to be lowered or lifted
 - a. Horizontal orientation
 - b. Vertical orientation
 - D. Package a patient for transfer in a short spinal immobilization device
 - E. Rig improvised harnesses using ½ inch Kernmantle rope and 1 inch nylon webbing for rescuer escape or victim lowering or lifting operations
 - F. Explain advantages, disadvantages, and safety considerations for using devices and techniques for above listed operations

21. Confined Space Familiarization

- A. Perform within the training facility adapting to conditions of restricted mobility and poor visibility
- B. Work with a partner using the buddy system to monitor each other's safety, maximize communication and effectiveness performing tasks
- C. Work effectively utilizing SCBA and other restrictive gear that restricts movement, dexterity, and vision.
- D. Perform a systematic search under conditions that restrict visibility without becoming lost or disoriented.

22. Horizontal Rescue Field Exercise

- A. Work as a member of a rescue team to safely remove a patient from a horizontal type of confined space
- B. Select and rig rescue equipment required to complete a rescue from a horizontal type of confined space
- C. Function as a member of a rescue team in the following roles
 - 1. Rescue team leader
 - 2. Rescuer
 - 3. Attendant or hole watch
 - 4. Rigger
 - 5. Haul team member
 - 6. Team safety officer
- D. Identify, assess, and control hazards that are confronted during a rescue
- E. Perform a safety check of equipment and systems associated with a rescue

23. Rescue Pre-Plan

- A. Develop a plan for a confined space rescue
- B. Develop a plan for a high angle rescue

24. Tripod and Ladder Field Exercise

- A. Use of a tripod and a winch in a confined space entry and retrieval
- B. Use of a tripod and mechanical advantage system in a confined space entry and retrieval of
- C. Use A-frame ladders and a mechanical advantage system for confined space entry and retrieval
- D. List advantages and disadvantages of the above systems

25. Vertical Rescue Field Exercise

- A. Work as a member of a rescue team to safely remove a patient from a vertical type of confined space
- B. Select and rig a vertical rescue system
- C. Function in any of the following roles during a rescue
 - 1. Rescue team leader
 - 2. Rescuer
 - 3. Attendant or hole watch
 - 4. Rigger
 - 5. Haul team member
 - 6. Team safety officer
- D. Identify, assess, and control hazards associated with a rescue
- E. Perform a safety check of the equipment and system

High Angle Rope Rescue Course Outline

1. Rope Rescue Equipment
 - A. Rope (Kernmantle)
 1. Static
 2. Dynamic
 - B. Accessory cord
 - C. Webbing
 - D. Anchor straps
 - E. Edge pads
 - F. Carabiner
 1. Screw Lock
 2. Auto-Lock
 - G. Tri Link
 - H. Swivel, Petzl
 - I. Rigging ring
 - J. Anchor plate
 - K. Pulley
 1. Single sheave
 2. Double sheave
 - L. Gibbs ascender
 - M. Industrial rope grab
 - N. Brake bar rack
 - O. Figure "8" descender with ears
 - P. Shock absorbers
 - Q. Load release hitch
 - R. Harnesses

2. Knots

- A. Bight
- B. Loop
- C. Round turn
- D. Figure 8 Family
 - 1. Stopper knot
 - 2. Figure 8 on a Bight
 - 3. Figure 8 Bend
 - 4. Figure 8 follow-Through
 - 5. Double Loop Figure 8
- E. Overhand knot
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- K. Double Loop Butterfly
- L. Water Knot
- M. Handcuff Knot
- N. Hitches
 - 1. Munter
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3. Basic Rigging

- A. Determine suitability of an anchor point
- B. Advantages and limitations of a mechanical advantage system
- C. Deadman safety (ratchet cam)
- D. Use of directional pulleys
- E. Establish a safety belay line

4. Rescue Psychology

- A. Claustrophobia
 - 1. Symptoms
 - 2. Overcoming
- B. Pyramid of survivability
- C. Pyramid of priority
- D. Risk vs benefit

5. Types of Rescues
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 - C. Entry (Internal rescue)
 - D. Factors and considerations to perform a successful rescue
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 - E. Steps of the rescue process
 - F. Pre-emergency planning
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 - B. Use of a tripod and mechanical advantage system in a confined space entry and retrieval of
 - C. Use A-frame ladders and a mechanical advantage system for confined space entry and retrieval

Program Review

This program as well as the confined space program shall be reviewed annually and revised as necessary.

15. List advantages and disadvantages of the above systems Vertical Rescue Field

Exercise

- A. Work as a member of a rescue team to safely remove a patient from a vertical type of confined space
- B. Select and rig a vertical rescue system
- C. Function in any of the following roles during a rescue
 1. Rescue team leader
 2. Rescuer
 3. Attendant or hole watch
 4. Rigger
 5. Haul team member
 6. Team safety officer
- D. Identify, assess, and control hazards associated with a rescue
- E. Perform a safety check of the equipment and system

Competency Assessment

No.	Questionnaire	C/NYC
Q1		
A1		
Q2		
A2		
Q3		
A3		
Q4		
A4		
Q5		
A5		

Enclosed Attachments	
Risk Assessment	<input checked="" type="checkbox"/>
Environmental Aspect and Impact	<input checked="" type="checkbox"/>
Training and Competency	<input checked="" type="checkbox"/>
Measure and Evaluation Tools	<input checked="" type="checkbox"/>

Competency Checklist

To be filled out by Trainer and signed by Employee, Assessor and Supervisor before being returned to the HSEQT Manager for recording purposes.

Procedure	Competency	Date	Competent YES / NO	Employee Signature

(Please tick appropriate box)

This employee is competent in performing the job.

This employee has not attained the competency level.

*

* *If the employee has not attained all competency levels, the General Manager must assess the action to be taken, provide an extension of training or alternative action as listed below.*

Alternate action to be taken: _____

Signed By	Employee:	_____	Date:	_____
	Trainer:	_____	Date:	_____
	Assessor:	_____	Date:	_____
	Regional Manager:	_____	Date:	_____

Environmental Aspects and Impacts

Identified Environmental Aspects and Impacts

The following table is a summary of the likely environmental aspects and impacts that may be identified during site inspections. The significance of each impact needs to be assessed using the Risk Assessment Model.

Activity	Aspect	Impact
Purchasing & Administrative Work	Consumption of goods	Conservation of natural resources
	Consumption of energy (eg. Electrical equipment and facilities)	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of waste (eg. Paper)	Consumption of space for waste disposal; Habitat loss
Climate Control	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of noise	Disturbance to community; Habitat loss
Cleaning of – offices / vehicles	Storage, use and release of chemicals	Contamination of air, water or soil; Risk to human health
Transport (Fleet vehicles / staff travel)	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Loss of habitat at all stages of generation; Light pollution
	Consumption of goods (eg. Oil)	Consumption of natural resources; Generation of waste; Habitat loss; Biodiversity impacts
	Generation of waste (eg. Oil)	Consumption of space for waste disposal; Potential contamination of water or soil; Habitat loss
	Exhaust emission	Release of greenhouse gases and atmospheric pollution
	Use of dangerous goods (eg. Batteries)	Potential contamination of air, water or soil; Risk to human health
	Generation of noise	Disturbance to community; Habitat degradation
Operations		

Sample only.
To be filled in

Risk Assessment

Risk Assessment // insert name here

<p>Step No: Logical sequence</p>	<p>Sequence of Basic Job Steps documented in the Procedure, Work Instruction and project plans. Break down Job into steps.</p> <p>Each step should be logical and accomplish a major task.</p>	<p>Potential Safety & Environmental Hazards/Impacts at the site of the Job</p> <p>Identify the actual and potential health and safety hazards and the environmental impacts associated with each step of the job.</p>	<p>Risk Rating</p> <p>Refer to the risk matrix or HSEQT.PRO. Risk Mgt</p>	<p>Recommended Corrective Action or Procedure</p> <p><i>Determine the corrective actions necessary to reduce the risk to as low as reasonably practical (ALARP) refer to HSEQ.PRO.Risk Mgt. The risk must be reduced or controlled to ALARP before work commences.</i></p> <p>Document who is responsible for implementing the controls to manage each hazard identified.</p>	<p>Risk Rating refer to the risk matrix or HSEQT.PRO.Risk Mgt</p>
1.					
2.					
3.					
4.					
5.					

Audit



Process: insert// Procedure: Insert //			Date:	Audited by:	
			Location of Audit:	Area Mgr/Supervisor:	
Item	Question	Evidence Sited	Comments		Conformance Score 0,3,5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
AUDITOR'S SIGNATURE:		CONFORMANCE SCORE: / 25		0 – Non-Conformance	
SAFETY REP'S SIGNATURE:		CONFORMANCE %:		3 – Continuous Improvement Opportunity	
				5 – Total Conformance	