

CERTIFICATION REQUIREMENTS FOR ROPE ACCESS WORK



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1. PURPOSE

- 1.1. The intent of this document is to provide certification criteria for rope access personnel. This document is to be used in conjunction with the SPRAT *Safe Practices for Rope Access Work* document.

2. SCOPE

- 2.1. This document is intended for use by competent rope access personnel whose specific job requires knowledge and skill proficiency in rope access techniques.
- 2.2. The SPRAT certification process is intended to establish a minimum baseline of knowledge and skill that a successful candidate will possess. This document does not purport to address all criteria that may be applicable to all types of rope access work. Employers of rope access professionals must evaluate the job to be performed and provide for additional training as necessary. Additional evaluation should be taken as necessary by the employer to verify a rope access worker's suitability to a given job.
- 2.3. This document addresses minimum skills and certification requirements specific to rope access and does not address additional job specific skills (maintenance, construction, inspection).

3. DEFINITIONS

- 3.1. Classes of certification covered by this document include:
 - 3.1.1. Level I Technician (Rope Access Worker): An individual who performs rope access work. A Level I Technician may only work under the direct, on-site supervision of a Rope Access Lead Technician or Supervisor.
 - 3.1.2. Level II Technician (Rope Access Lead Technician): An individual who is responsible for physically conducting rope access operations and/or safety evaluations of rope access operations, including maintenance of associated access equipment and performs all Rope Access Lead Technician duties as assigned in the employer's rope access work program.
 - 3.1.3. Level III Technician (Rope Access Supervisor): An individual who is responsible for the overall rope access work site and performs all Rope Access Supervisor duties as assigned in the employer's rope access work program.
- 3.2. Other definitions used in this document are as follows:
 - 3.2.1. Access Permit (aka Job Hazard Analysis; JHA): A written statement prepared by the employer describing how a particular job (or types of jobs where these will be essentially identical) should be undertaken to ensure any risks to health and safety of the workers, or others who may be affected, are minimized.
 - 3.2.2. Access Zone: The area in which people are at risk of falling such as on-line or near a working edge. This area requires protective

- measures such as verbal warnings, signs, barriers, safety lines, or other devices designed to prevent or arrest a fall.
- 3.2.3. Anchor, Anchorage: A place, fixing or fixture that supports and to which the various ropes and rope systems are attached.
 - 3.2.4. Belay: An active system operated by another employee for the purpose of arresting the fall of a rope access worker.
 - 3.2.5. Carabiner: A type of connector, formed as a complete loop with a spring-loaded entry gate.
 - 3.2.6. Carabiner, Locking: A carabiner with a mechanism that reduces the possibility of a gate being opened inadvertently. A locking mechanism requires at least two different consecutive manual actions to open the gate.
 - 3.2.7. Competent Trainer: A person who, based on training, education, knowledge, and most importantly experience in rope access, can safely and effectively deliver a quantifiable educational program to others.
 - 3.2.8. Descender: A device that acts as a friction brake on a rope. It is normally attached to the operator and enables the operator to control the rate of descent.
 - 3.2.9. Hazard Zone: Any area where a person may be at risk as a result of the work being performed.
 - 3.2.10. Main Line: The primary rope used for descending, ascending or positioning.
 - 3.2.11. On Line: The condition of being suspended from or attached to a rope.
 - 3.2.12. Proctor: Individual who oversees students for test taking purposes. Proctor must be approved by SPRAT and submit a signed affidavit.
 - 3.2.13. Rescuer: An individual who is designated by the employer to perform rescue of rope access workers as a member of the rescue service.
 - 3.2.14. Rescue Service: Organization determined by the employer to be capable of safe and effective rescue of rope access workers.
 - 3.2.15. Retrieval: Procedure for rescuing rope access workers without placing a rescuer on-line.
 - 3.2.16. Retrieval System: The equipment (including a retrieval line, harness, lifting device, and anchor) used for rescue of rope access workers without placing a rescuer on-line. The safety line may be used as the retrieval line in a retrieval system.
 - 3.2.17. Rope Access: Techniques by which access is gained to buildings, other structures (on or offshore), geological features (such as cliff faces), or manmade features (such as dams) by means of ropes. It applies to all cases where ropes are used as:
 - a. the primary means of support.
 - b. as means of primary protection or positioning, and
 - c. where people descend or ascend on a rope or traverse along horizontal rope.

- 3.2.18. Rope Grab: A device used to grasp a rope for the purpose of supporting a load.
- 3.2.19. SPRAT: Society of Professional Rope Access Technicians
- 3.2.20. Safe Zone: Any area outside the Hazard Zone or the Access Zone.
- 3.2.21. Safety, Secondary, Belay or Backup Rope: Rope used to protect against falls if the user slips or the primary support, anchor or positioning mechanism fails.

**For additional definitions, consult
SPRAT SAFE PRACTICES FOR ROPE ACCESS WORK

4. GENERAL CERTIFICATION PROCEDURES OF ROPE ACCESS PERSONNEL

4.1. General Notes Regarding Evaluations

- 4.1.1. Certification host shall submit request for certification to SPRAT headquarters on the SPRAT Host Application form. Host shall be responsible for submitting all paperwork of applicants to SPRAT headquarters. A Certification Host information packet is available from the SPRAT office.
- 4.1.2. The SPRAT certification process is intended to establish a minimum baseline of knowledge and skill directly related to industrial rope access. The certification does not test industry-specific skills. Additional evaluation may be required by the employer to verify the rope access technician's suitability to a specific job.
- 4.1.3. Overall evaluation result is based on fulfillment of pre-evaluation requirements and successful completion of a written exam and field evaluation. Upon receipt of all paperwork and successful skills demonstration and written exam results, SPRAT will issue the final certification to the applicant. A certified Evaluator may issue a provisional result to the candidate immediately following the evaluation.
- 4.1.4. These certification requirements are intended to be a performance-based standard. Techniques are not specified as long as the required skills are performed safely and efficiently.
- 4.1.5. Equipment is not specified but should be appropriate for the application, meet relevant standards where applicable, and be used consistent with the manufacturer's instructions.
- 4.1.6. All candidates must maintain a two-rope system during the entire evaluation. A four-rope system may be required for some maneuvers.

4.2. Prior to certification all candidates must meet the following requirements

- 4.2.1. Minimum age of 18 years
- 4.2.2. Sign a liability release form and statement of physical and mental fitness to perform rope access work.
- 4.2.3. Complete a SPRAT Certification application.

4.3. Grading System for Field Evaluations

- 4.3.1. Each skill is graded on P/F/D – Pass/Fail/Discrepancy
 - 4.3.1.1. Pass (P) denotes satisfactory performance during the exercise
 - 4.3.1.2. One Fail (F) constitutes failure of evaluation
 - 4.3.1.3. Three Discrepancies (D) constitutes failure of evaluation
- 4.3.2. Fail (F) Examples: The following list is a non-exhaustive list of errors that constitute a Fail (F). One (1) Fail constitutes failure of evaluation.
 - 4.3.2.1. Relying on one rope system when that system is your primary means of support
 - 4.3.2.2. Ineffectively used back-up device (e.g. big loop; upside down)

- 4.3.2.3. Not capable of performing one or more of the tasks required
- 4.3.2.4. Unacceptably slow at completing one or more of the tasks required
- 4.3.2.5. Uncontrolled or dangerous descent or swing
- 4.3.2.6. Descender threaded incorrectly and used in that manner
- 4.3.2.7. No fall protection used when within 6 feet (1.8 meters) of an unprotected edge
- 4.3.2.8. Use of an inappropriate back-up device not designed to accept a shock-load (e.g. toothed ascender that does not slip when shock-loaded)
- 4.3.2.9. Unprofessional conduct
- 4.3.2.10. No helmet while working at height
- 4.3.3. Discrepancy (D) Examples: The following list is a non-exhaustive list of errors that constitute a Discrepancy (D). Three (3) Discrepancies constitutes failure of the evaluation.
 - 4.3.3.1. Unlocked carabiner in safety system
 - 4.3.3.2. Helmet unfastened
 - 4.3.3.3. Task is not completed in timely manner
 - 4.3.3.4. Not being attached to both ascender
 - 4.3.3.5. Not providing additional friction to descent control devices as required by manufacturer instructions in certain circumstances (e.g. rescue pick-offs with two-person loads)
- 4.4. Maintaining Experience Logbooks
 - 4.4.1. SPRAT logbooks will be issued to all new successful certification candidates by the SPRAT office with the technician's name, photo, and technician number on the first inside page. Logbooks are not issued to candidates renewing or upgrading their certification. New logbooks can be requested from the SPRAT office.
 - 4.4.2. The logbooks shall be maintained by the technician and signed by the Evaluator, Level III Supervisor, Rope Access Program Manager or client as applicable. The Level III Supervisor should add his SPRAT technician number in the signature field.
 - 4.4.3. Under the heading *Details of Work Tasks* the technician should note the type of rope access skills used as well as the application (e.g. aid climbing/inspection or descent/ascent/painting)
 - 4.4.4. *Hours worked* shall be the time actually spent carrying out rope access tasks including rigging, training, working on rope, and on-site safety management.
 - 4.4.5. Experience documentation can be presented in other formats provided the following information is presented:
 - 4.4.5.1. Date of Work
 - 4.4.5.2. The employer for which the work was done
 - 4.4.5.3. Details of rope access tasks and application

- 4.4.5.4. Location and type of structure
- 4.4.5.5. Hours worked
- 4.4.5.6. Signature of supervisor, employer, or client verifying hours worked
- 4.4.6. It is recommended that technicians and employers maintain electronic records of hours worked in the event the logbook is destroyed or misplaced.

5. LEVEL I TECHNICIAN (ROPE ACCESS WORKER) CERTIFICATION PROCEDURES

A currently-certified SPRAT Level II or III Technician or SPRAT Evaluator will conduct the "skills demonstration" portion of the evaluation. The Technician, Supervisor, Evaluator, or an independent third party will proctor written tests for Rope Access Workers.

- 5.1.1. A written test and skills evaluation shall be administered consistent with procedures maintained by the SPRAT Evaluations Committee, a board-appointed committee.
- 5.1.2. The written test and skills evaluation shall be representative of the skills and knowledge required by this standard, *Certification Requirements for Rope Access Work*.
- 5.1.3. Upon receipt of all paperwork and successful skills demonstration and written exam results, SPRAT will issue the final certification to the applicant. A certified Evaluator will issue a provisional result to the candidate immediately following the evaluation.
- 5.1.4. Certification is valid for three (3) years from the date of Evaluation.

6. LEVEL II TECHNICIAN (ROPE ACCESS LEAD TECHNICIAN) CERTIFICATION PROCEDURES

A currently certified SPRAT Evaluator independent of the employer will conduct the "skills demonstration" portion of the evaluation. The SPRAT Evaluator, or an independent third party will proctor the written tests for Rope Access Technicians.

- 6.1.1. A written test and skills evaluation shall be administered consistent with procedures maintained by the SPRAT Evaluations Committee, a board-appointed committee.
- 6.1.2. The written test and skills evaluation shall be representative of the skills and knowledge required by this standard, *Certification Requirements for Rope Access Work*.
- 6.1.3. Upon receipt of all paperwork and successful skills demonstration and written exam results, SPRAT will issue the final certification to the applicant. A certified Evaluator will issue a provisional result to the candidate immediately following the evaluation.
- 6.1.4. Certification is valid for three (3) years from the date of Evaluation.

7. LEVEL III TECHNICIAN (ROPE ACCESS SUPERVISOR) CERTIFICATION PROCEDURES

A currently certified SPRAT Evaluator independent of the employer will conduct the "skills demonstration" portion of the evaluation. The SPRAT Evaluator or an independent third party will proctor written tests for Rope Access Supervisors.

- 7.1.1. A written test and skills evaluation shall be administered consistent with procedures maintained by the SPRAT Evaluations Committee, a board-appointed committee.
- 7.1.2. The written test and skills evaluation shall be representative of the skills and knowledge required by this standard, *Certification Requirements for Rope Access Work*.
- 7.1.3. Upon receipt of all paperwork and successful skills demonstration and written exam results, SPRAT will issue the final certification to the applicant. A certified Evaluator will issue a provisional result to the candidate immediately following the evaluation.
- 7.1.4. Certification is valid for three (3) years from the date of Evaluation.

8. LEVEL I TECHNICIAN (ROPE ACCESS WORKER) REQUIREMENTS

8.1. Roles and Responsibilities

- 8.1.1. Candidate must be able to demonstrate an understanding of the responsibilities of a Level I Technician and how these fit into the overall responsibilities of the rope access program.

8.2. Equipment Use and Inspection

- 8.2.1. Candidate must be able demonstrate understanding of proper use, inspection, and care of all equipment required for the technical skills. The candidate shall also understand the certification host's or employing company's equipment management program.

8.3. Job Safety

- 8.3.1. Candidate must be able to demonstrate an understanding of the employer's safety management program, relevant policies, work permits, work zones, and job safety analysis. Candidate should also be aware of course site hazards and emergency procedures.

8.4. Knots:

- 8.4.1. The candidate shall demonstrate the tying of the following knots and have an awareness of their applications, strengths, and limitations:
 - 8.4.1.1. end or termination knot (e.g. Figure 8, Figure 9, Bowline)
 - 8.4.1.2. knot to join two ropes (e.g. Double Fisherman's, Flemish Bend)
 - 8.4.1.3. middle knot (e.g. butterfly)
 - 8.4.1.4. stopper knot to prevent descending off end of ropes (e.g. barrel knot)

8.5. Back-up Devices and Use of two-rope system:

- 8.5.1. Candidate shall demonstrate the use of an appropriate back-up device attached to a secondary safety rope in accordance with industry best practice. Maintaining a sound connection to two independently anchored ropes at all times is expected. Some technical maneuvers require a connection to up to four ropes at a time. Candidate and trainer should pay particular attention to the following:
 - 8.5.1.1. Positioning the device to prevent excessive falls
 - 8.5.1.2. Connecting to it with an appropriate lanyard type and length
 - 8.5.1.3. Pairing the device to an appropriate rope type and diameter
 - 8.5.1.4. Paying attention to not incapacitating the device through improper handling
 - 8.5.1.5. Following all manufacturer recommendations in the proper use of the device
- 8.6. Use of Descenders (descent control devices):
 - 8.6.1. Candidate shall demonstrate the proper use of a descender attached to the main working line. A variety of systems will be accepted if used consistent with industry best practice and manufacturer's recommendations. Some considerations include:
 - 8.6.1.1. Candidate must demonstrate controlled descent, stopping, and locking or tying off as appropriate.
 - 8.6.1.2. Failing to lock-off the device properly when the candidate is stopped and not in control of the slack end of the rope will constitute a discrepancy.
 - 8.6.1.3. Operating or triggering a descender without proper control of the slack end of the rope will result in a discrepancy or failure depending on the severity of the error.
 - 8.6.1.4. Use of an auto-stop descender is not required, however, candidates must know how to add a friction device to create a fail-to-stop mechanism without relying on the secondary safety rope.
 - 8.6.1.5. If the descender can be used to ascend, the candidate will be asked to ascend at least 2 meters (6.6 feet) using the descender.
- 8.7. Use of Ascenders
 - 8.7.1. Candidate shall demonstrate the proper use of an appropriate ascending system connected to the main working line. A variety of systems will be accepted if used consistent with industry best practice and manufacturer's recommendations. Some considerations include:
 - 8.7.2. Candidate can climb 10 meters (33 feet) efficiently and without physical duress.
 - 8.7.3. Candidate can climb down 2 meters (6.6 feet) using the ascenders.
 - 8.7.4. The ascenders should be properly attached to the candidate to increase safety and prevent equipment from being inadvertently dropped.

- 8.7.5. Since most ascenders with teeth are not designed to withstand a dynamic one-person load, candidates should always use ascenders in such a way to eliminate a dynamic fall onto the ascenders.
- 8.7.6. A single ascender connection to the working rope is acceptable as long as the dynamic fall potential is limited to less than 30 cm (1 foot) or eliminated entirely.
- 8.8. Switching from Ascent to Descent (Change-over)
 - 8.8.1. Candidate shall demonstrate switching from ascent to descent and descent to ascent. Candidate should pay attention to careful handling of equipment and proper loading of carabiners during the maneuver.
- 8.9. Use of work seat
 - 8.9.1. The candidate shall demonstrate the safe use of a work seat while maintaining a solid connection to both the working and safety rope.
- 8.10. Passing Knots
 - 8.10.1. The candidate shall demonstrate ascending and descending past a knot tied into the middle of the rope that has been placed there temporarily to isolate a damaged section of rope. The damaged section of rope shall not be used as a connection point. Two back-up devices can be used, however, the candidate must be aware of how to use an appropriate knot as a secondary back-up.
- 8.11. Rope-to-Rope Transfers
 - 8.11.1. Candidate shall demonstrate transferring from one pair of ropes to another pair of ropes anchored more than 2 meters (6.6 feet) apart. Some considerations include:
 - 8.11.2. A proper connection to 4 ropes is expected to control the swing potential if one rope failed during the maneuver.
 - 8.11.3. Two back-up devices can be used, however, the candidate must be aware of how to use an appropriate knot as a secondary back-up.
 - 8.11.4. The candidate may be required to approach the rope-to-rope transfer from above or below, however, it is recommended that the maneuver is started in descent mode.
- 8.12. Deviation (redirect)
 - 8.12.1. Candidate shall demonstrate ascending and descending past an anchor that deviates the rope by no more than 20 degrees. Some considerations include:
 - 8.12.1.1. A single deviation anchor point is acceptable if there is no safety consequence of its failure.
 - 8.12.1.2. Trainer and candidate should be aware that many appropriate field anchors for deviations may not be appropriate for taking the load of a technician in the vertical plane and should not be relied upon as a point of connection.
 - 8.12.1.3. Provision for returning to the anchor from above and facilitating a rescue or repeated use from below should be considered.
- 8.13. Short Reelay (passing an intermediate anchor)

- 8.13.1. Candidate shall demonstrate ascending and descending past an intermediate anchor that is less than 2 meters (6.6 feet) horizontally from the anchors above. Due to some field circumstances the anchor itself may not always be relied upon as a point of connection (e.g. rope threaded through a grating or hole). The intermediate anchor and the top anchor can be used to maintain two points of attachment.
- 8.14. Long Rebelay
 - 8.14.1. Candidate shall demonstrate ascending and descending past an intermediate anchor that is greater than 2 meters (6.6 feet) horizontally from the anchors above. Due to some field circumstances the anchor itself may not always be relied upon as a point of connection (e.g. rope threaded through a grating or hole). The candidate should use 4-point technique similar to that used in a rope-to-rope transfer and should take care not to pull the rope from below across potential hazards or obstacles during the maneuver.
- 8.15. Negotiate Edge
 - 8.15.1. Candidate shall demonstrate safely negotiating an edge obstruction while on ascent and descent. This task should simulate field conditions experienced when negotiating the edge of a roof, cliff face, or parapet wall. Ideally the anchors should be at least 2 meters (6.6 feet) from an unprotected edge and be located on the horizontal surface or within 2 meters (6.6 feet) above the horizontal surface. If the edge is protected by a railing, the candidate may need to climb under the railing to demonstrate the edge negotiation. Proper edge protection, controlled movement, and avoidance of shock loads must be demonstrated.
- 8.16. Rope and Sling Protection
 - 8.16.1. Candidate shall demonstrate awareness and proper use of rope and sling protection as required by the training site. The candidate will be asked to pass a rope protector installed on both the working and safety lines.
- 8.17. Simple Structural Anchor
 - 8.17.1. Candidate shall demonstrate establishing a simple anchor for a two-rope system around a structural member (e.g. steel beam). Proper use of hardware, choice of sling material and appropriate sling protection will be considered.
- 8.18. General Anchor Inspection
 - 8.18.1. Candidate must know how to inspect and verify the integrity of more complex anchors that may be built in the field by Level II and III candidates.
- 8.19. Climbing with Shock-absorbing Lanyards
 - 8.19.1. Candidate must be aware of the limited shock-absorbing qualities of most lanyards (cow's tails) used in rope access. Candidate can demonstrate climbing vertically and/or horizontally on a structure using a shock-absorbing Y-lanyard system. Special attention should be paid to the proper use and compatibility of connectors,

awareness and management of fall clearance distances, and general use of the lanyard.

8.20. Belaying with Communication

8.20.1. Candidate will be asked to manage the safety rope of another worker. Consistent communication between belayer and worker is expected. The choice of belay device is not specified, however, the method should be accepted industry practice and/or consistent with the manufacturer's instructions. A self-braking device is not required as long as proper technique is demonstrated.

8.21. Lowering

8.21.1.1. Candidate shall demonstrate lowering another worker from a fixed anchor using an appropriate descent control device attached to a fixed anchor. Candidate may be asked to stop and lock-off the device. Additional friction may be required and should be consistent with the manufacturer's instructions.

8.22. Pick-off Casualty on Descent

8.22.1. Candidate will be asked to perform a pick-off rescue of an incapacitated casualty while in descent mode. A separate set of ropes is not required, however, candidate should understand when a separate set of ropes might be needed and how to perform the rescue. Conversely, a candidate demonstrating a pick-off from a separate set of ropes should understand when it might be appropriate to use the casualty's ropes and how to perform the rescue. Emphasis will be placed on maintaining two points of attachment to the casualty and the ropes. Consideration should be given to the effects of a two-person load on the descender and back-up device. Extra friction may be required for a two-person load. The candidate shall perform an initial scene safety survey before carrying out any rescues. Proper casualty management should be considered and demonstrated.

8.23. Awareness of Simple Mechanical Advantage Systems

8.23.1. Candidate should be aware of simple mechanical advantage systems in order to participate in building or operating systems for utility or rescue hauling under the direction of a Level II or III Technician.