

EXPRESS TERMS

CALIFORNIA CODE OF REGULATIONS TITLE 8. INDUSTRIAL RELATIONS DIVISION 1. DEPARTMENT OF INDUSTRIAL RELATIONS

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Legend:

Text in single underline is proposed new text.

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**** means there is existing text in the section that is not being amended nor repealed; therefore, it is not being included

CHAPTER 4. DIVISION OF INDUSTRIAL SAFETY ARTICLE 121. SNOW AVALANCHE BLASTING

1. Amend Section 5349.

§ 5349. Scope.

The provisions found in Article 121, Snow Avalanche Blasting, shall only pertain to snow avalanche control ~~operations~~ activities, and shall take precedence when in conflict with other applicable safety orders. The intent of avalanche control activities such as blasting is to reduce the hazards created by uncontrolled snow avalanches.

Note:

Authority cited: Section 142.3, Labor Code.

Reference: Section 142.3, Labor Code.

2. Adopt Section 5349.1.

§ 5349.1. Definitions.

(a) The following definitions in addition to the definitions in section 5237 shall apply to the orders in Article 121.

Avalanche Blasting Crewmembers. Employees assigned to an avalanche blasting crew, including the blaster in charge, any licensed blaster(s), and any trained assistant(s) or blaster(s) in training in accordance with section 5351.

Avalanche Path. The area of land that is or may be affected by the movement of snow, ice, debris, or rock during an avalanche.

Blast. Destructive wave of highly compressed air spreading outward from an explosion.

Deploy. The act of throwing, placing, dropping, tethering or propelling a charge into position for detonation with the intent of producing a blast to reduce avalanche hazards.

Essential Personnel. Those individuals directly involved with the arming, the deployment of charges, transportation of personnel, equipment and materials, and site clearing to

facilitate avalanche hazard reduction. Essential personnel may include avalanche blasting crew members and other employees necessary to support avalanche control activities. Non-essential personnel are all other individuals.

Explosive Charge (also referred to as a “charge”). A measured quantity of explosive material with an initiation device that is designed to produce a blast for the purpose of reducing snow avalanche hazards.

Position of Safety. A location where an employee is isolated or protected from hazards of blasting or the ensuing avalanche.

Remote Avalanche Control Systems (RACS). Devices that are remotely initiated with the intent of reducing avalanche hazards. RACS typically use a combination of gasses or deploy one or more preinstalled charges to generate a blast at a predesignated location.

Terrain Barrier. A natural or constructed physical obstacle outside of the avalanche path that provides the blaster with protection from a blast and any related hazards (e.g. overpressure, fragments, and flying debris).

Note:

Authority cited: Section 142.3, Labor Code.

Reference: Section 142.3, Labor Code.

3. Amend 5350.

§ 5350. Training.

(a) The avalanche blasting crewmembers shall be adequately trained in the explosives and the deployment method(s) used.

(b) Training for members of the blasting crew shall ensure competence in the following areas:

(5) Deployment procedures for the type of charge(s) used including:

(C) Procedures for clearing and guarding the ski lifts, blasting areas, slopes, and ~~runout zones~~ the avalanche path pursuant to requirements in Section 5356(c)(5), Section 5357(a)(2)(3), Sections 5357(b)(4)(A) – (C), Section 5357(b)(6)(7), and Section 5357(e)(3) where applicable.

(e) Essential personnel, ~~as defined in the Note in Section 535549.1(a), other than avalanche blasting crewmembers,~~ shall be adequately trained and competent in their blasting related duties and in the following:

(2) Clearing adjacent areas pursuant to requirements in Sections 5355.1(a)(1) and (3), Section 5356(c)(5), 5357(a)(2)(3), Sections 5357(b)(4)(A) – (C), Section 5357(b)(6)(7) and Section 5357(e)(3) where applicable;

Note:

Authority cited: Section 142.3, Labor Code.

Reference: Section 142.3, Labor Code.

4. Amend Section 5355.1

§ 5355.1. Arming Room.

(a) Location of Arming Room.

(3) Only ~~authorized and essential personnel~~ authorized to the operation participate in the arming procedure shall be allowed within the arming room and within the equivalent distance to occupied structures required by the Table of Distances for the amount of explosives present. ~~NOTE: Essential personnel are those individuals directly involved with the arming, the deployment of charges, transportation and site clearing to facilitate transportation. Non-essential personnel are all other individuals.~~

Note:

Authority cited: Section 142.3, Labor Code.

Reference: Section 142.3, Labor Code.

5. Amend Section 5357.

§ 5357. Snow Avalanche Control Blasting.

(a) General Requirements.

(1) The employer shall develop and implement effective, written procedures for all avalanche control blasting activities to ensure the safety of avalanche blasting crewmembers.

(A) The procedures shall be reviewed and updated as often as necessary to reflect current industry practices.

(B) The procedures shall include at a minimum:

1. Recognition of avalanche and blasting hazards;

2. Methods used to determine when a safety fuse is lit and is burning to ensure compliance with subsection (a)(7) (e.g. smoke, heat, smell, and visual indicators);

3. Access to deployment areas;

4. Communication among avalanche blasting crewmembers;

4. Pre-selection of position(s) of safety and terrain barrier(s);

5. Handling, arming, and deploying of explosives; and

6. Emergency response and rescue and any required personal protective equipment (PPE).

(C) The employer shall allow avalanche control-blasting crewmembers the opportunity to effectively participate in the development of procedures for safe avalanche control blasting.

(D) The employer shall ensure that all avalanche control blasting crewmembers are competent in the avalanche control blasting procedures.

(E) The employer shall provide effective training on the avalanche control blasting procedures to avalanche blasting crew members at least annually.

1. The training shall be conducted prior to the first blasting operation of each avalanche control season.

2. The employer shall provide an opportunity for interactive questions and answers on avalanche blasting procedures with a licensed avalanche blaster knowledgeable and experienced with the procedures.

~~(1)~~(2) All avalanche blasting shall be conducted under the attended supervision of the blaster in charge who is a licensed avalanche blaster, certified by the Division to perform such blasting activities.

~~(2)~~(3) When avalanche blasting is deemed necessary, slopes and trails in the potential avalanche path (~~runout zone~~) and ski lifts shall be closed to the public and non-essential personnel and not be opened until the work is completed.

~~(3)~~(4) To ~~insure~~ ensure a dry powder train is exposed to the igniter, at least 1 inch of fuse shall be cut from the fuse prior to attaching the igniter. A cutter with sharp blades shall be used to prevent smearing of tar over the powder train.

~~(4)~~(5) Charges shall be deployed ~~placed, thrown or propelled to the desired location from a safe position of safety~~ by one of the following methods:

(E) Deployed from ~~such remote avalanche control devices~~ systems (RACS)

accepted by the Division as providing equivalent safety to the remote control devices allowed under pursuant to subsection (e)(f).

~~(5)~~(6) Avalanche blasting shall be conducted during daylight hours, except as provided in subsection (f) or during emergency operations procedures outlined pursuant to subsection (a)(1)(B)(6).

~~(6)~~(7) Avalanche blasting shall not be conducted during conditions where the blaster cannot determine whether the fuse is lit, or cannot clearly identify the location of the target area for the detonation of the charge, except as provided in subsection (f).

(b) Hand Deployed Charges (handcharges).

(3) The handcharge shall be lowered by rope, cord or a long pole to the designated location when there is danger that the charge may slide downhill.

(4) Before attaching the igniter, the blaster shall:

(A) Determine the ~~deployment target;~~ location where the handcharge is intended to land;

(B) ~~Check the runout zone for personnel;~~ Determine a pre-selected position of safety as follows:

1. A terrain barrier, or

2. If a terrain barrier is not available, a position of safety at least 100 feet from both the location where the handcharge is intended to land and the location from where the blaster deploys the charge.

Exception to subsection (b)(4)(B)2: If moving to the pre-selected position of safety creates a greater hazard, blasters may deploy charges from any position of safety that is 100 feet or more from the location of detonation.

(C) ~~Ensure there are no~~ Check the blast area for personnel; and in locations that could be affected by deployment of the handcharge, including but not limited to the blast area and the avalanche path.

(D) Orally alert all affected crewmembers each time a charge will be deployed.

(5) When the blast area and ~~runout zone~~ avalanche path are clear of personnel, the ~~blaster igniter shall be attached to the igniter onto the safety fuse, and immediately activated it and the charge deployed~~ the charge within 20 seconds ~~of attaching the igniter onto the fuse.~~

~~(6) Avalanche blasting crewmembers shall seek a position of safety behind a pre-selected terrain barrier or a position not less than 100 feet from the ignited charge.~~

(6) Only a licensed avalanche blaster, certified by the Division to perform avalanche blasting activities, or a person trained in accordance with subsection (a)(1)(D) who is being directly supervised by a licensed avalanche blaster shall ignite or deploy a handcharge.

(7) Prior to any handcharge being ignited, avalanche blasting crewmembers not involved in igniting or deploying the handcharge shall be behind the pre-selected terrain barrier or remain in a position of safety as described in subsection (b)(4)(B). Each crewmember shall orally report to the blaster-in-charge the crewmember's position of safety, and the blaster-in-charge shall orally acknowledge the report or, when necessary, re-direct the crewmember to another position of safety.

(8) Immediately following the deployment of a charge, the avalanche blasting crewmember responsible for deploying the charge shall move behind the pre-selected terrain barrier or to the other position of safety described in subsection (b)(4)(B)

~~(7)(9)~~ At the completion of individual each avalanche control routes activity, any unused charges shall be deployed or disarmed pursuant to Section 5358(h)(1) and all components transported and returned to approved storage magazines pursuant to requirements in Article 121.

Exception to subsection (b)(9): Unused charges that are immediately required for deployment at another location.

(f) Remote avalanche control system (RACS) requirements.

(1) RACS shall only be operated by personnel authorized by the employer and trained accordance with the manufacturer's instructions.

(2) RACS with no possibility of exposing employees to explosive hazards from the handling, storage, or deployment of explosive materials shall be installed, maintained, serviced, and repaired according to manufacturer's instructions and shall be excluded from the requirements of subsection (f)(3), e.g., gas-based systems.

(3) RACS with any possibility of exposing employees to explosive hazards shall comply with the following requirements:

(A) The loading, arming, and deployment of explosives for a RACS shall be done by or under the direct supervision of an authorized, licensed avalanche blaster.

(B) All equipment and components shall be in good working condition, and shall be assembled, maintained, repaired and operated in accordance with the manufacturer's instructions.

(C) The explosives and related components shall be inspected by a licensed blaster before transport to the RACS site and again immediately prior to being loaded or installed into the RACS. These inspections shall ensure proper working

condition, and that they are free from damage, obstructions, dirt and debris. Defective RACS explosives and related components shall not be used and shall be properly disposed of or returned to the manufacturer.

(D) Deployment of charges using a RACS shall only be conducted when personnel are not in any area where they could be injured by avalanche control activities, including but not limited to the blast area, and the avalanche path.

(E) The RACS and its components shall be locked and secured without putting personnel at risk of injury, according to the manufacturer's instructions and the requirements of the appropriate Federal, State, or local regulatory authorities.

Exception to subsection 5357(f)(3)(E): A RACS and its components may be unlocked only while being loaded, serviced, or repaired by a qualified person. During these activities, all initiation and deployment functions shall be disabled in accordance with the manufacturer's instructions.

(F) The employer shall comply with the written procedures required by subsection (a)(1) and have a copy of the procedures along with the manufacturer's name and supplier of the RACS available onsite for Cal/OSHA to review and copy.

(G) Documentation identifying the minimum distance required to protect employees from the blast and fragmentation, as applicable, for each charge used shall be obtained by the employer and readily available to all affected employees. If such documentation is not available from the manufacturer or supplier, the employer shall obtain documentation of a blast analysis prepared by a licensed blaster or other qualified person to establish the minimum distance employees shall be from the blast.

(H) The blaster in charge shall designate an essential employee to be an observer during the handling and preparation of explosive charges with an initiation system attached, including but not limited to the following activities: loading such charges into or unloading such charges from a RACS, attaching, connecting, adjusting, or otherwise configuring explosive charge components. The observer's primary duty shall be to monitor for ignition of a fuse or other indication of initiation. The observer shall immediately notify the blaster in charge if ignition is observed or suspected.

(I) The employer's written procedures required by subsection (a)(1) shall include procedures addressing accidental or suspected initiation of an explosive charge with an initiation system attached, during the handling, preparation, or loading into or unloading from a RACS, in accordance with subsection (f)(3)(H).

Note:

Authority cited: Section 142.3, Labor Code.

Reference: Section 142.3, Labor Code and Section 6710, Labor Code.