

4123:1-5-29 Explosives and blasting.

(A) Specific requirements for all blasting operations.

- (1) No explosives shall be abandoned.
- (2) Smoking, firearms, (except firearms carried by guards), matches, open flame lamps, and other fire, flame, heat or spark-producing devices are prohibited in or within fifty feet of explosive magazines or while explosives are being handled, transported or used.
- (3) Persons authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution, including, but not limited to, warning signals, flags, barricades, or woven wire mats to protect employees.
- (4) Before a charge is detonated, employees shall be instructed to leave the blasting area.
- (5) Blasting operations in the proximity of overhead power lines, communications lines, utility services, or other services and structures, the blaster shall notify the appropriate representatives of such utilities at least twenty-four hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notice shall be confirmed with written notice.
- (6) Signs shall be posted warning against the use of mobile radio transmitters on all roads within three hundred fifty feet of blasting operations where electric blasting caps are used.
- (7) All blasting operations shall be suspended and employees removed from the blasting area during the approach and progress of an electrical storm.
- (8) Empty boxes, paper, and fiber packing materials which have previously contained explosive materials shall be disposed of in a safe manner, or reused in accordance with the department of transportation's hazardous materials regulations (49 CFR parts 177-180).
- (9) Containers of explosives shall not be opened in any magazine or within fifty feet of any magazine. In opening kegs or wooden cases, no sparking metal tools shall be used; wooden wedges and either wood, fiber or rubber mallets shall be used. Nonsparking metallic slitters may be used for opening fiberboard cases.
- (10) Explosive materials that are obviously deteriorated or damaged shall not be used and shall be disposed of in accordance with the manufacturer's recommendation.

(B) Transportation of explosives.

Any vehicle used to transport explosives on the job site shall have a nonsparking floor and side members and shall carry at least two fire extinguishers, each having a rating of at least ten BC. Blasting caps or electric blasting caps shall not be transported over the highways on the same vehicles with other explosives, unless packaged, segregated, and transported in accordance with the department of transportation's hazardous materials regulations (49 CFR parts 177-180).

(C) Storage of explosives and blasting agents.

- (1) Blasting caps, electric blasting caps, or other detonating devices shall not be stored in the same magazine with other explosives or blasting agents.
- (2) Primed cartridges shall not be stored.
- (3) All explosives stored on the job site shall be stored in approved storage facilities. All brush and combustible materials shall be kept clear of the magazine to a distance of no less than twenty-five feet.

(D) Loading of explosives or blasting agents.

- (1) All drill holes shall be sufficiently large to admit freely the insertion of the packages of explosive materials.
- (2) Tamping shall be done only with wooden rods without exposed metal parts, except that nonsparking metal connectors may be used for jointed poles. Violent tamping is prohibited. Primed cartridges shall not be tamped.
- (3) No holes shall be loaded except those to be fired in the next round of blasting. After loading, all remaining explosives shall be immediately returned to the magazine.
- (4) Drilling shall not be started until all remaining butts of old holes are examined with a wooden rod for unexploded charges, and, if any are found, they shall be refired before work proceeds.
- (5) Drill holes which have contained explosives or blasting agents shall not be made deeper.
- (6) No loaded holes shall be left unattended.

(E) Initiation of explosive charges.

- (1) General.

- (a) When fuse is used, the blasting cap shall be securely attached to it with a standard ring type cap crimper. All primers shall be assembled no less than fifty feet from any magazine.
 - (b) Primers for use in blasting shall be made up only as required for each round of blasting.
 - (c) No blasting cap shall be inserted in the explosive materials without first making a hole in the cartridge for the cap with a wooden punch of proper size or standard cap crimper.
 - (d) If there are any misfires while using cap and fuse, all employees shall be required to remain away from the charge for at least an hour. If electric blasting caps are used and a misfire occurs, this waiting period may be reduced to thirty minutes.
- (2) Electric blasting caps.
- (a) Blasters, when testing circuits to loaded holes, shall use only blasting galvanometers or other instruments which have been designed and approved for the purpose.
 - (b) Only the employee making the final check on the wire connections shall fire the shot. All connections shall be made from bore hole back to the source of firing current, and the leading wires shall remain shorted and not be connected to the blasting machine or other source of current until the charge is to be fired.

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