

# WEST VIRGINIA CODE: §22A-2-33

## **§22A-2-33. Preparation of shots; blasting practices.**

(a) Only a certified "shot firer" designated by mine management shall be permitted to handle explosives and do blasting. Only electric detonators of proper strength fired with permissible shot firing units shall be used except under special permits as hereinafter provided, and drillholes shall be stemmed with at least 24 inches of incombustible material, or at least one half of the length of the hole shall be stemmed if the hole is less than four feet in depth, unless other permissible stemming devices or methods are used. Drillholes shall not be drilled beyond the limits of the cut, and as far as practicable, cuttings and dust shall be cleaned from the holes before the charge is inserted. Charges of explosives exceeding one and one-half pounds, but not exceeding three pounds, shall be used only if drillholes are six feet or more in depth. Ample warning shall be given before shots are fired, and care shall be taken to determine that all persons are in the clear before firing. Miners shall be removed from adjoining places and other places when there is danger of shots blowing through. No shots shall be fired in any place known to liberate explosive gas, until such place has been properly examined by a competent person who is designated by mine management for that purpose, and no shots shall be fired in any place where gas is detected with an approved gas detecting device until such gas has been removed by means of ventilation. After firing any shot, or shots, the person firing the same shall not return to the working face until the smoke has been cleared away and then he or she shall make a careful examination of the working face before leaving the place or before performing any other work in the place.

(b) Multiple shooting in coal or rock or both is authorized only under permit issued by the director. Permission to shoot more than 10 shots simultaneously may be granted by the director only after consultation with interested persons, and such shooting will be performed by special methods and under precautions prescribed by the director. All multiple shooting in bottom or roof rock shall be performed in intake air, except by special permit from the director, after consultation with interested persons, as heretofore provided. Multiple blasting of more than 10 shots performed under any permit granted by the director under this section shall be done only on noncoal-producing shifts or idle days, except as may be provided as a condition of the permit granted.

(c) Regular or short-interval delay detonators may be used for blasting purposes with written permission from the director. Regular delay detonators shall not be used for blasting coal, but may be used for grading above or below coal seams and during shaft, slope, tunnel work and in faults or wants. Where short-interval delay detonators are permitted by said director to be used, the shot firing circuit must be tested with a blasting galvanometer before firing, and the leg wires connected in series. No instantaneous, regular, or zero-delay detonators are to be fired in conjunction with short-interval delay detonators. The delay interval between dependent rows must not be less than 25 milliseconds or more than 100 milliseconds, and the entire series of any one round shall not provide a delay of more than

500 milliseconds between the first and last shot. The total number of charged holes to be fired during any one round must not exceed the limit permitted by the director. Misfires must be tested with a blasting galvanometer before removing.

(d) Electrical equipment shall not be operated in the face areas, and only work in connection with timbering and general safety shall be performed while boreholes are being charged. Shots shall be fired promptly after charging. Mudcaps (adobes) or any other unconfined shots shall not be permitted in any coal mine. No solid shooting shall be permitted without written permission of the office.

(e) Blasting cables shall be well insulated and shall be as long as may be necessary to permit persons authorized to fire shots to get in a safe place out of the line of fire. The cable, when new, shall be at least 125 feet in length and never less than 100 feet. Shooting cables shall be kept away from power wires and all other sources of electric current, connected to the leg wires by the person who fires the shot, staggered as to length or well separated at the detonator leg wires, and shunted at the battery until ready to connect to the blasting unit.