WEST VIRGINIA CODE: §22A-2-70

§22A-2-70. Shafts and slopes.

(a) When mine examiner to be employed; qualifications. — During the sinking of a shaft or the driving of a slope to a coal bed or while engaged in underground construction work, or relating thereto, the operator shall assign a mine examiner to such project areas. Such mine examiner shall have a certificate of competency valid only for the type of work stipulated thereon and issued to him or her by the Office of Miners' Health, Safety, and Training after he or she has passed an examination given by the Office of Miners' Health, Safety, and Training. He or she or she shall, at the time he or she takes the examination, have a minimum of five years' experience in shaft sinking, slope driving and underground construction; moreover, he or she shall be able to detect methane with an approved gas detector and have a thorough knowledge of the ventilation of shafts, slopes, and mines, and the machinery connected therewith, and finally, he or she shall be a person of good moral character with temperate habits.

(b) Mine examiner or certified person acting as such; duties generally; records open for inspection. — In all shafts and slopes within three hours immediately preceding the beginning of a work shift and before any workmen in such shift, other than those who may be designated to make the examinations, enter the underground areas of such shafts or slopes, a certified foreman or mine examiner, designated by the operator of such shaft or slope to do so, shall make an examination of such areas. Each person designated to make such examinations shall make tests with an approved gas detector for accumulations of methane and oxygen deficiency, and examine sides of shafts and ribs and roof of all slopes. Should he or she find a condition which he or she considers dangerous to persons, he or she shall place a conspicuous danger sign at all entrances to such places. He or she shall record the results of his or her examination with ink or indelible pencil in a book prescribed by the director, kept at a place on the surface designated by mine management. All records as prescribed herein shall be open for inspection by interested persons.

(c) Approvals and permits. — An approval shall be obtained from the office before work is started. A permit shall be obtained from the office: (1) To stop fan when miners are in shafts or slopes; (2) to use electrical machinery in shafts or slopes; (3) to use electric lights in shafts or slopes; (4) to use welders, torches, and like equipment in shafts or slopes; (5) to hoist more than four miners at one time in buckets or cars; (6) to shoot more than 15 shots in one series.

(d) Records. — The foreman in charge on each shift shall keep a daily report of conditions and practices. The foreman in charge on each shift shall read and countersign the reports of the previous shift. Unsatisfactory conditions and practices reported shall be repeated on daily reports until corrected. Hoists, buckets, cars, ropes, and appliances thereto shall be examined by a qualified person before the start of each shift and a written record kept. Deaths from accidents or previous injuries shall be reported immediately by wire to the

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office of the director and to the district mine inspector or the inspector-at-large. A written report of all injuries and deaths shall be mailed to the Office of Miners' Health, Safety, and Training and district mine inspector promptly. Immediate notice shall be given the office of the director, the district mine inspector and the inspector-at-large in the event of an ignition of gas, or serious accident to miners or equipment. All permits and approvals must be available for inspection by all interested persons.

(e) General. — The foreman on shift shall have at least five years' experience in shafts or slopes. New employees shall be instructed in the dangers and rules incident to their work. Conspicuous bulletin boards and warning signs shall be maintained. Unauthorized persons shall not be permitted around shafts or slopes. First-aid material shall be maintained at the operation as required by §22A-2-59 of this code. The scene of a fatal accident shall be left unchanged until an investigation is made by all interested persons. All employees and others around the operation shall wear hard-toe shoes and hard-top hats. Goggles or other eye protection shall be worn when cutting, welding, or striking where particles may fly. Gears, belts, and revolving parts of machinery shall be properly guarded. Hand tools shall be in good condition. Sides of shafts, ribs, and roof of all slopes shall be closely observed for loose and dangerous conditions. Loose brows, ribs, and top in slopes shall be taken down or supported; loose ribs in shafts shall be scaled. Miners shall be hoisted and lowered under power in shafts and slopes. All hoists must have two positive breaking devices. At least three wraps of rope shall remain on the hoist drum at all times. Wire ropes shall not be less than three-fourths inches in diameter, and of a design to prevent excessive spinning or turning when hoisting.

When heavy materials are hoisted, a large rope shall be used if necessary. A hoisting engineer shall be in constant attendance while men are in shaft. Head frames shall be constructed substantially. Noise from machinery shall not interfere with signals. The standard signal code, whistle or bell shall be used for hoisting:

One signal ..... Hoist

One signal ..... Stop

Two signals ..... Lower

Three signals ..... Man cage

One signal from hoisting engineer ..... Miners board cage

Hoist signals shall be posted in front of the hoisting engineer. The shaft opening shall be enclosed by a fence five feet high. Buckets shall not be loaded within six inches of the top rim. Buckets shall have a positive lock on the handle or bale to prevent bucket from crumpling while being hoisted. Positive coupling devices shall be used on buckets or cars (hooks with safety catches or threaded clevis). Emergency devices for escape shall be provided while shafts are under construction. Miners shall not ride on or work from rims of

buckets. Buckets or cars shall not be lowered without a signal from working area. Only sober and competent engineers shall be permitted to operate hoists. No intoxicating liquors or intoxicated persons shall be permitted in or around any shaft, slope, or machinery. Lattice type platforms shall be used.

(f) Explosives. — Explosives and blasting caps being taken into or removed from the operation shall be transported and kept in approved nonconducting receptacles (unopened cartons or cases are permissible). Explosives shall not be primed until ready to be inserted into holes. Handling of explosives and loading of holes shall be under the strict supervision of a qualified person or shotfirer. No more explosives or caps than are required to shoot one round shall be taken into shafts. Adobe, mudcapped, or unconfined shots shall not be fired. Holes shall be stemmed tightly and full into the mouth. Blasting caps shall be inserted in line with the explosive. Leg wires of blasting caps and buss wires shall be kept shunted until connected. Shooting cables shall be shunted at firing devices and before connecting to leg wires. Only approved shooting devices shall be used. Shots shall be fired promptly after the round of holes are charged. Warnings shall be given before shots are fired by shouting "Fire" three times slowly after those notified have withdrawn. The blasting circuit shall be wired in series or parallel series. All shooting circuits shall be tested with a galvanometer by a qualified person before shooting. A careful examination for misfires shall be made after each shot. Persons shall not return to the face until smoke and dust have cleared away. The shooting cable shall be adequately insulated and have a substantial covering; be connected by the person firing the shot; and be kept away from power circuits. Misfires shall be removed by firing separate holes or by washing; shall not be drilled out; and shall be removed under supervision of a foreman or qualified person. Separate magazines for the storage of explosives and detonators shall be located not less than 300 feet from openings or other structures. Magazines for the storage of explosives and detonators shall be separated at least 50 feet. Magazines shall be located behind barricades. The outside of magazines shall be constructed of incombustible material. Rubbish and combustible material shall not be permitted to accumulate around or in magazine. Warning signs, to be seen in all directions, shall be posted near magazines.

(g) Electrical. — Power cables installed in slopes shall be placed in conduit away from the belt as far as possible. Surface transformers shall be elevated at least eight feet from the ground or enclosed by a fence six feet high, grounded if metal; shall be properly grounded; shall be installed so that they will not present a fire hazard; and shall be guarded by sufficient danger signs.

Electric equipment shall be in good condition, clean and orderly; shall be equipped with guards around moving parts; and shall be grounded with effective frame grounds on motors and control boxes.

All electric wires shall be installed and supported on insulators. All electric equipment shall be protected by dual element fuse or circuit breakers.

(h) Ventilation. — Ventilating fans shall be offset from portal at least 15 feet; shall be

installed so that the ventilating current is not contaminated by dust, smoke or gases; shall be effectively frame grounded; and shall be provided with fire extinguishers.

All shafts and slopes shall be ventilated adequately and continuously with fresh air. Air tubing shall deliver not less than 9,000 feet per minute at the working area or as much more as the inspector may require.

(i) Gases. — A foreman shall be in attendance at all times in shafts and slopes who has passed an examination given by the office as to his or her competency in the use of an approved gas detector.

An examination shall be made before and after shooting by the foreman on shift. The foreman shall have no superior in the performance of his or her duties. An approved gas detector shall be carried at all times by the foreman when in the working area and weekly gas analysis made. In all shafts and slopes within three hours immediately preceding the beginning of a work shift and before any workmen in such shift, other than those who may be designated to make the examinations, enter the underground areas of such shafts or slopes, a certified mine foreman or mine examiner designated by the operator of such shaft or slope to do so, shall make an examination of such area. Evidence of official examination shall be left at the face by marking date and initials.

Gases should be removed under the supervision of the foreman in charge. Smoking shall not be permitted inside of shafts or slopes.

(j) Drilling. — Dust allaying or dust collecting devices shall be used while drilling.

(k) Lights to be used in shafts. — Only approved electric cap lights shall be used in shafts. Other lights shall be of explosive-proof type. Lights shall be suspended in shafts by cable or chain other than the power conductor. In slopes, lights must be substantially installed. Power cables shall be of an approved type. Power cables shall not be taut from shaft collar to light. Power cables shall be in good condition and free of improper splices. Lights shall be suspended not less than 20 feet above where miners are working. Lights shall be removed from shaft and power cut off when shooting. In slopes, lights must be removed a safe distance when shots are fired. Lights shall not be replaced in shafts or slopes until examination has been made for gas by the mine examiner and found clear. Front of light shall be protected by a substantial metal type guard. Lights shall be protected from falling objects from above by a metal hood. The lighting circuit shall be properly fused. Electric lights shall not be used in gaseous atmospheres. An approved gas detector shall be kept for use at the face while miners are at work.

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