**Section 220.100 Ground Control**

a) Highwalls, pits and spoil banks; plans; filing of plan.

1) Each operator shall establish and follow a ground control plan for the safe control of all highwalls, pits and spoil banks which shall be consistent with prudent engineering design and will insure safe working conditions. The mining methods employed by the operator shall be selected to insure highwall and spoil bank stability.

2) The operator shall file a copy of such plan, and revisions thereof, with the Department, shall identify the name and location of the mine, and the name and address of the mine operator.

b) Stripping; loose material.

 Loose hazardous material shall be stripped for a safe distance from the top of pit or highwalls, and the loose unconsolidated material shall be sloped to the angle of repose, or barriers, baffle boards, screens, or other devices be provided that afford equivalent protection; or a combination of the preceding be used to assure the safety of the workmen.

c) Box cuts; spoil material placement.

 When box cuts are made, necessary precautions shall be taken to minimize the possibility of spoil material rolling into the pit.

d) Benches.

 To insure safe operation, the width and height of benches shall be governed by the type of equipment to be used and the operation to be performed.

e) Ground control; inspection and maintenance; general.

1) Highwalls, banks, benches, and terrain sloping into the working areas shall be examined by a certified person at least once each working shift, and additionally after every rain, freeze, or thaw before men work in such areas. The examination of highwalls shall include the checking for cracks which may develop into slides. Such examinations shall be made and recorded in a book supplied by the operator and signed by the person making the examination in ink or indelible pencil. Such books shall be kept in a secure place and shall remain at the mine for a period of three (3) years.

2) Overhanging highwalls and banks shall be taken down and other observed unsafe ground conditions shall be corrected promptly and no persons shall enter the hazardous area except those engaged in making the corrections. Adequate barricades or posting shall be used to keep all other persons out.

3) Men shall examine their working places before starting work and frequently thereafter and any unsafe condition shall be reported immediately to the supervisor.

f) Scaling highwalls; general.

 Hazardous areas shall be scaled before any other work is performed in the hazardous area. When scaling of highwalls is necessary to correct conditions that are hazardous to persons in the area, a safe means shall be provided for performing such work.

g) Highwalls; men working.

1) Men, other than those necessary to correct unsafe conditions, shall not work near or under dangerous highwalls or banks.

2) Except as provided in subparagraph (g)(3) of this Section, persons shall not work between equipment and the highwall or spoil bank where the equipment may hinder escape from falls or slides.

3) Special safety precautions shall be taken when persons are required to perform repair work between immobilized equipment and the highwall or spoil bank and such equipment may hinder escape from falls or slides.

4) Should a slide occur, a certified person with knowledge of highwalls, will examine the area of the slide for danger of more slides, and no person will work in the area until the examination is complete and declared safe by the certified person conducting the examination. Areas on top of highwalls where persons are required to work shall be sufficiently cleared to assure safe working conditions and adequate visibility.

h) Drilling; general.

1) Equipment that is to be used during a shift shall be inspected each shift by a competent person. Equipment defects affecting safety shall be reported.

2) Equipment defects affecting safety shall be corrected before the equipment is used.

i) Relocation of drills; safeguards.

1) When a drill is being moved from one drilling area to another, drill steel, tools, and other equipment shall be secured and the mast placed in a safe position.

2) When a drill helper is used, his location shall be made known to the operator at all times when the drill is being moved.

j) Drill; operation.

1) While in operation, drills shall be attended at all times.

2) Persons shall not drill from positions that hinder their access to the control levers, or from insecure footing or staging or from atop equipment not designed for this purpose.

3) Persons shall not be on a mast while the drill bit is in operation unless a safe platform is provided and safety belts are used.

4) Drill crews and others shall stay clear of augers or drill stems that are in motion. Persons shall not pass under or step over a moving stem or auger.

5) When churn drills or vertical rotary drills are used, drillers shall not be permitted to work under suspended tools, and when collaring holes, inspecting, or during any operation in which tools are removed from the hole, all tools shall be lowered to the ground or platform.

6) Where horizontal holes are drilled in the overburden, a certified person shall make a careful inspection of the face of the highwall before drilling operations begin, and all loose hazardous material shall be removed before other work is done, or the area shall be vacated and posted.

7) In the event of power failure, drill controls shall be placed in the neutral position until the power is restored.

8) Receptacles or racks shall be provided for drill steel stored on drills.

9) Tools and other objects shall not be left loose on the mast or mast platform.

10) Bit wrenches or bit knockers shall be used to remove detachable bits from drill steel.

k) Collaring holes.

1) Starter steels shall be used when collaring holes with hand held drills.

2) Men shall not hold the drill steel while collaring holes or rest their hands on the chuck or centralizer while drilling.

l) Drill holes; guarding.

 Drill holes large enough to constitute a hazard shall be covered or guarded.

m) Jackhammers; operation; safeguards.

 Men operating or working near jackhammers or jackleg drills, or other drilling machines shall position themselves so that they will not be struck or lose their balance if the drill steel breaks or sticks.

n) Air drills; safeguards.

 Air shall be turned off and bled from the air hoses before hand-held air drills are moved from one working area to another.