DEPARTMENT OF LABOR

Mine Safety and Health Administration

30 CFR Parts 56, 57, and 77

Safety Standards for Surface Haulage

AGENCY: Mine Safety and Health Administration (MSHA), Labor.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: MSHA is considering rulemaking to address factors believed to cause or contribute to the occurrence or severity of surface haulage accidents. Surface haulage equipment accidents are a leading safety concern in the mining industry. MSHA is sharing its ideas and seeking suggestions to reduce these accidents.

DATES: Submit comments and requests for meetings on or before August 31, 1998.

ADDRESSES: A copy of this notice may be obtained from the Office of Standards, Regulations and Variances, Mine Safety and Health Administration, 4015 Wilson Boulevard, Room 627, Arlington, Virginia 22203 and from any MSHA district office. Send mail comments to MSHA, Office of Standards, Regulations, and Variances, at the above address. Commenters are encouraged to submit comments on a computer disk along with an original hard copy. Send comments by electronic mail to comments@msha.gov or by facsimile to 703–235–5551.

FOR FURTHER INFORMATION CONTACT:
Patricia W. Silvey, Director; MSHA, Office of Standards, Regulations, and Variances; 703–235-1910.

SUPPLEMENTARY INFORMATION:

I. Background

Thirty percent of fatal mining accidents at surface mines and surface areas of underground mines over the past three years involved surface haulage equipment. Further, this equipment was cited as the primary cause in 40 percent of the fatalities last year in the metal and nonmetal mining industry.

MSHA examined approximately 8,000 surface accidents (from 1987 to 1996) involving powered haulage equipment which resulted in either fatalities or lost work days. During that time, 120 miners were killed and 1,377 were injured due to three causes or contributing factors: unused or inadequate occupant restraint systems on the equipment; blind areas on self-propelled mobile equipment; and lack of adequate illumination.

II. Discussion of the Contributing Factors

Restraint Systems

The Agency is considering a requirement for all vehicles to have restraint systems for the lower torso (seat belts) for both equipment operators and passengers, whether or not the vehicle has Roll Over Protective Structures (ROPS).

For newly manufactured equipment, except for on-highway trucks, the Agency is considering requiring upper torso restraint systems (e.g., harnesses or equivalent) and an interlock system to prevent movement of the vehicle unless the equipment operator's restraint system is engaged. As an added safety feature, a light on the cab exterior could indicate when the equipment operator's restraint system is engaged. The Agency is also considering whether to extend the metal/nonmetal requirement that grader operators wear safety lines and a harness when operating the grader from a standing position to coal mines, instead of a restraint system with interlock.

Issues to be considered include (1) requiring use of an interlock system together with a mandated seat belt rule; (2) whether it is safe to use restraint systems on vehicles not equipped with ROPS; (3) whether there is a need to require restraint systems for passenger seats; and (4) whether upper torso restraints would result in more neck injuries. Specific examples, including documented evidence, if available, would be useful.

Illumination

Illumination deficiencies contributed to a number of surface haulage accidents because of problems associated with inability to see victims, judge distances, clearly see berms and slope edges, and restricted vision during inclement weather such as fog.

MSHA is considering the following requirements for illumination:

• Permanently mounted lighting for pre-operational examination of equipment;
• Automatic backup lights that illuminate the rear-tire-to-ground contact area;
• Ground surface lighting for certain excavating equipment operating in areas with uneven or irregular surfaces;
• Lighting necessary to see the road ahead and objects in blind areas; and
• For off-highway equipment only, lighting on steps and hand grip areas used to get in and out of the operator's compartment, and to illuminate the ground area at the base of the steps.

Blind Areas

Surface haulage equipment involved in most fatal accidents include rear dump trucks and articulated front-end loaders; they are also the most used. The Agency is considering that this surface haulage equipment should: (1) Have a system, such as video cameras, to enable the operator to see blind areas; (2) have an automatic sensor to detect objects or people in the blind area; (3) have a signal to alert people that they are in blind areas; and (4) provide a signal to the operator when objects or people have been sensed. The sensor could use infrared, radio frequency, Doppler radar, or equivalent technology, so long as it emits a signal. In order to be effective, object sensors would have to automatically activate a viewing device (such as a video camera) and monitor when an object is sensed. When a spotter is used to assist a rear dump truck operator, two-way electronic communication between the spotter and the operator is necessary for adequate protection.

MSHA is considering a performance approach where mine operators would be required to eliminate left, right, and front blind areas on all rear dump trucks and articulated front-end loaders. The Agency is considering a requirement that all blind areas, including the rear, must be eliminated on off-highway rear dump trucks and articulated front-end loaders.

To enhance the visibility of smaller vehicles, such as service trucks, pick-ups, and other vehicles that may operate in close proximity to large surface haulage equipment, MSHA is considering a requirement for flashing lights and pole or antenna-mounted flags on these vehicles. Experience has shown that these smaller vehicles are often obscured from the field of view of operators of larger equipment.

List of Subjects in 30 CFR Parts 56, 57, and 77

Mine safety and health, Surface mining.


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