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PROGRAM INFORMATION BULLETIN NO. P12-03

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SUBJECT: Escape Capsules in Underground Coal Mines

Who needs this information?

Underground coal mine operators, miners' representatives, independent contractors, Mine Safety and Health Administration (MSHA) enforcement personnel, Technical Support personnel, and other interested parties should have this information.

What is the purpose of this Program Information Bulletin?

The purpose of this Program Information Bulletin (PIB) is to inform the underground coal mining community of MSHA's intent to evaluate emergency escape capsules for their capacity to carry a disabled miner on a stretcher and be accompanied by an attendant and to determine if escapeways are properly maintained to ensure the safe operation of such escape capsules during an emergency.

Information.

As part of an emergency evacuation and firefighting program under 30 C.F.R. § 75.1502, underground coal miners are instructed in the proper procedures they must follow if a mine emergency occurs, including consideration of different scenarios to determine the best option for evacuation under various mine emergency situations. Differing scenarios may include conditions and situations that use escape capsules to evacuate miners to the surface.

With the passage of the MINER Act in 2006, MSHA considers the use of such capsules as part of an Emergency Response Plan (ERP) to evacuate miners to the surface in the event of an emergency. MSHA intends to evaluate the carrying capacity of these escape capsules to determine if all miners underground could be evacuated in a swift and timely manner, including disabled miners. MSHA will also determine if each escapeway is maintained in a safe condition to always assure passage of miners and

disabled miners using an escape capsule to evacuate to the surface. Accordingly, MSHA may conduct a stretcher test of any escape capsule to insure that a disabled person, secured on a stretcher, could fit inside the capsule and be accompanied by another person during transport.

MSHA standards at 30 C.F.R § 75.382 contain requirements for mechanical escape facilities. MSHA recommends the following best practices be considered for use in mechanical escape facility design:

- The conveyance should have a minimum floor area of 10 square feet and be large enough to accommodate an injured person on a stretcher with at least one other person in attendance.
- The conveyance should be fully enclosed and covered with a substantial steel roof (1/8 inch thick minimum recommended) and any opening in the closed conveyance should be small enough to prevent falling material from entering the conveyance (recommended that a 3/8 inch diameter rod should not pass through any opening in the closed conveyance).
- The conveyance door should be provided with a latch; and be operable from the inside and the outside.
- The top and bottom edges of the conveyance should be tapered or beveled to prevent the conveyance from becoming caught or wedged in the shaft (a taper of 45 degree for a minimum of 6 inches of vertical height recommended).
- Handholds for the occupants should be provided.
- The hoist should have a rated line pull of at least 150 percent of the maximum load based on the conveyance floor area using 2½ square feet per person at 200 pounds per person, the weight of the conveyance and the weight of the wire rope. Partitioning off the conveyance to reduce the floor area in order to reduce the rated capacity should not be permitted.
- Wire rope used for emergency hoists should have a safety factor of 10, based on the static load.

What is the background for this PIB?

MSHA is aware that escape capsules are being used by some mine operators as part of their emergency evacuation and firefighting program of instruction. MSHA intends to evaluate these escape capsules to determine if they are suitable to be included within an ERP.

What is MSHA's authority for this PIB?

The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. § 801 et. seq.; 30 C.F.R. §§ 75.380 (d) (1), 75.381 (c) (1), 75.382, and 75.1502.

Where Is this PIB on the Internet?

This PIB may be viewed on the World Wide Web by accessing MSHA's home page at (www.msha.gov), choosing "Compliance Info" and "Program Information Bulletins."

Who are the MSHA contact persons for this PIB?

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Who will receive this PIB?

MSHA Program Policy Manual Holders

Underground Coal Mine Operators

Miners' Representatives

Independent Contractors

Special Interest Groups