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PROGRAM INFORMATION BULLETIN NO. P10-18

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SUBJECT: Accumulation of Combustible Materials and Rock Dust

#### Scope

Operators of underground bituminous coal mines, miners' representatives, Mine Safety and Health Administration (MSHA) enforcement personnel and other interested parties should have this information.

#### Purpose

This Program Information Bulletin (PIB) provides important information regarding accumulation of combustible materials and rock dust requirements.

#### Information

Under MSHA's existing standards, it is the mine operator's responsibility to regularly clean up and remove accumulations of coal dust, including float coal dust, loose coal, and other combustible materials. Also, mine operators must apply rock dust in areas of underground bituminous coal mines to inert coal and float coal dust, loose coal, and other combustible materials. As little as 0.005 inches (the thickness of a sheet of paper) of coal and float coal dust on top of rock dust is capable of propagating an explosion. Therefore, removal of coal dust, including float coal dust, loose coal, and other combustible materials, and the effective application of rock dust is essential to protect miners from the potential of a coal dust explosion; or if one occurs, to reduce its severity and prevent loss of life. Mine operators must comply with the Agency's combustible materials and rock dusting standards under 30 C.F.R. Part 75, Subpart E.

MSHA's accumulation of combustible materials standard at 30 C.F.R. § 75.400 requires that coal dust, including float coal dust, loose coal and other combustible materials are cleaned up and not permitted to accumulate in active workings, or on diesel-powered equipment and electric equipment therein. In addition, 30 C.F.R. § 75.400-2 requires that mine operators establish and maintain a program for regular cleanup and removal of accumulations of coal and float coal dusts, loose coal, and other combustibles. Both standards are designed to prevent accumulations of combustible materials and reduce the danger of a mine fire or explosion.

MSHA's rock dusting standard at 30 C.F.R. § 75.402 requires that all underground areas of a coal mine be rock dusted to within 40 feet of all working faces and that all crosscuts that are less than 40 feet from a working face be rock dusted. Exceptions to the rock dusting requirement include areas that are too wet or too high in incombustible content to propagate an explosion, areas that are inaccessible or unsafe to enter, or a finding by MSHA that an exception to rock dusting does not pose a hazard to miners.

On September 23, 2010, MSHA published an emergency temporary standard (ETS) on Maintenance of Incombustible Content of Rock Dust. The ETS revises existing 30 C.F.R. § 75.403 and is effective upon publication. Each mine operator must comply with the ETS by October 7, 2010, for newly mined areas, and November 22, 2010, for all other areas of the mine. The ETS is based on MSHA's accident investigation reports of mine explosions in intake air courses that involved coal dust (Dubaniewicz 2009); the National Institute for Occupational Safety and Health's (NIOSH) Report of Investigations 9679 (Cashdollar et al. 2010), "Recommendations for a New Rock Dusting Standard to Prevent Coal Dust Explosions in Intake Airways;" and MSHA's experience and data. The ETS requires mine operators to increase the incombustible content of combined coal dust, rock dust, and other dust to at least 80 percent in all areas of underground bituminous coal mines. The ETS further requires that the incombustible content of such combined dust be raised 0.4 percent for each 0.1 percent of methane. The ETS strengthens the protection for miners in underground bituminous mines.

Water tends to collect in active mining areas but, historically, information on mining disasters has shown that many wet areas of an active mine tend to dry out, particularly during winter months. The areas downwind of belt transfers, the returns of active sections, the tailgates of longwalls, and the bleeder entries often require continuous rock dusting with bulk dusters, trickle dusters or high-pressure rock dusting machines to maintain the required incombustible content levels and suppress float coal dust accumulations. Mine operators should use mechanical rock dusters on the working sections and in the return entries of these sections to maintain compliance with the ETS. Also, mine operators should use bulk dusters on a regular basis in other areas of the mine to assure compliance with the ETS and maintain the required incombustible content of total dust in all accessible areas.

### Background

According to MSHA's analyses of rock dust samples, sampling records, and enforcement data, underground bituminous coal mine operators are allowing combustible materials or coal dust to accumulate, are not applying rock dust in all required areas, and are not maintaining the required levels of rock dust applications in compliance with 30 C.F.R. §§ 75.400, 75.400-2, 75.402 and 75.403. From January 1, 2008, to August 30, 2010, MSHA issued 25,824 citations and 779 orders for violations of § 75.400; 529 citations and 24 orders for violations of § 75.402; and 3,445 citations and 42 orders for violations of § 75.403.

Authority

The Federal Mine Safety and Health Act of 1977, as amended, 30 U.S.C. § 801 et seq.; and 30 C.F.R. §§ 75.400, 75.400-2, 75.402 and 75.403.

Internet Availability

This PIB may be viewed on the Internet by accessing the MSHA home page (www.msha.gov) then choosing “Compliance Info” and “Program Information Bulletins.”

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