

In the matter of
Twentymile Coal Company
Foidel Creek Mine
ID No.05-03836

Petition for Modification

Docket No. M-1999-142-C

PROPOSED DECISION AND ORDER

On November 29, 1999, Twentymile Coal Company (Twentymile) filed a petition for modification of the application of 30 CFR 75.1908(a)(5) to its Foidel Creek Mine located in Routt County, Colorado. On April 11, 2000 Twentymile filed an amendment to the petition to seek modification of 30 CFR 75.1909(c) rather than 75.1908(a)(5). On May 18, 2001, Twentymile amended the petition a second time to seek modification once again of 30 CFR 75.1908(a)(5) rather than 75.1909(c). Finally, on June 3, 2002, Twentymile amended the petition to include additional provisions to the proposed alternative method.

The Petitioner alleges that the alternative method outlined in the petition and its amendments will at all times guarantee no less than the same measure of protection afforded by the standard.

MSHA personnel conducted two investigations of the petition and amended petition and filed reports of their findings and recommendations with the Administrator for Coal Mine Safety and Health. After a careful review of the entire record, including the petition and MSHA's investigative reports and recommendations, this Proposed Decision and Order is issued.

Finding of Fact and Conclusion of Law

Twentymile's petition initially sought modification of 30 CFR 75.1908(a)(5) to permit use of diesel-powered pickup trucks to tow diesel fuel transportation units. The diesel equipment standard at 30 CFR 75.1908 categorizes diesel powered equipment according to its use. If pickup trucks are used to tow fuel transportation units, they are categorized as heavy duty equipment. As heavy duty equipment they must comply with the design and performance standards for nonpermissible diesel powered equipment at 30 CFR 75.1909. Section 75.1908(a)(5) defines non-permissible heavy duty diesel equipment by function. Because the alternative method alleged in Twentymile's petition concerns the design and performance standards which apply to diesel equipment performing heavy duty functions, the petition is

being treated as a request for modification of the mandatory safety standard at 30 CFR 75.1909(c).

Machines used to transport portable diesel fuel transportation units are classified as heavy duty equipment because they pull heavy loads and usually move with frequency around the section. When transporting large quantities of diesel fuel any collision or accident has the potential to create a major fire hazard. Such movement also places a high load on the equipment for extended periods of time. This heavy use can place a burden on the brakes and can result in high exhaust system temperatures which create an ignition hazard. For these reasons, MSHA requires heavy duty non-permissible equipment to have a supplemental braking system as required by Section 75.1909(c), a fire suppression system as required by Section 75.1911, and a weekly repeatable loaded engine emission test as required by Section 75.1914(g). The diesel powered pickup trucks are equipped with a fire suppression system pursuant to Section 75.1911. Twentymile agreed to perform the weekly repeatable loaded emission test as required by Sections 75.1914(g) should the modification be granted. Finally, heavy duty non-permissible equipment must comply with the emission limits for diesel particulate matter required by 30 CFR 72.501 which, as a health standard, can not be modified through the petition for modification process.

Section 75.1909(c) of 30 CFR requires self-propelled nonpermissible diesel-powered equipment as defined under 30 CFR 75.1908(a) to be provided with a supplemental braking system that:

- a) Engages automatically within 5 seconds of shutdown of the engine;
- b) Safely brings the equipment when fully loaded to a complete stop on the maximum grade on which it is operated;
- c) Holds the equipment stationary, despite any contraction of brake parts, exhaustion of any nonmechanical source of energy, or leakage;
- d) Releases only by a manual control that does not operate any other equipment function;

- e) Has a means in the equipment operator's compartment to apply the brakes manually without shutting down the engine, and a means to release and reengage the brakes without the engine operating; and,
- f) Has a means to ensure that the supplemental braking system is released before the equipment can be trammed, and is designed to ensure the brake is fully released at all times while the equipment is trammed.

MSHA's investigations determined that the mine's haulage roads extend 5.5 to 6 miles to the face areas and have extended sections with up to a 16 percent grade. There are 30 heavy duty diesel units at the mine used for utility, cleanup and mine supply. Currently, fuel trailers are towed from the surface to the section areas by permissible heavy duty diesel powered equipment.

Twentymile's proposed alternative method is to allow light duty diesel-powered pickup trucks to tow fuel transportation units. There are four diesel fuel transportation units at the mine which are all equipped with an automatic fire suppression system. The diesel-powered pickup trucks are delivered from the manufacturer with no bed. A flat bed, bumper and a pintle hitch are then installed. The pickup trucks are equipped with an automatic fire suppression system and they comply with all Part 75 light duty equipment requirements. The trucks are equipped with the standard OEM braking system which does not comply with the supplemental braking requirements of Section 1909(c) of 30 CFR.

Twentymile alleged that the pickup trucks were used to haul the fuel transportation units without incident prior to November 25, 1999, the effective date of the standard. However, MSHA's investigation found that the pickup trucks sustain considerable body damage on the front, back, and on both sides. Maintenance records confirmed that the pickup trucks sustain much damage. Even though the trucks might have been used only on occasion for towing fuel trailers, the vehicles have sustained extraordinary wear and tear and are rarely serviceable for the anticipated 5-year service life according to the maintenance records. Because motor vehicle accidents may not need to be reported under Part 50 requirements, MSHA cannot conclude that pickup trucks can safely transport fuel transportation units based upon the allegation that no accidents have been reported at the mine.

Twentymile's original proposed alternative method provided "that diesel-powered pickup trucks utilized to tow diesel fuel transportation units will be only so utilized if the rated capacity of the truck exceeds the load by a fraction of 50 percent." Twentymile later explained that this meant that the rated load capacity of the diesel powered pickup trucks capable

of handling a minimum of 150 percent of the fuel trailer weight. For example, if the load of the fuel transportation unit is 6500 pounds, the towing capacity of the truck must be greater than 9750 pounds (6500 + 50% of 6500). Limiting the maximum trailer weight significantly below the operating capacity of the towing vehicle might ensure that the suspension and braking capacity are not exceeded. However, this would not provide protection from the potential fire and explosion hazards associated with transporting large quantities of diesel fuel 5 to 6 miles, in and out of the mine, over grades of up to 16 percent. In this same regard, limiting the diesel fuel trailer weight might reduce the possibility of exceeding the capabilities of the vehicle's service braking system; however, it does not eliminate the potential for a fire resulting from service brake failure.

The standard braking system on the pickup truck is not designed to be a secondary or supplemental braking system capable of safely bringing the fully loaded vehicle to a complete stop on its maximum allowable grade. The standard requires a supplemental braking system on vehicles used to transport diesel fuel to ensure that the vehicle is provided with a primary service brake system and a secondary or supplemental braking system. The supplementary or secondary braking system must be capable of stopping and holding the fully loaded vehicle on the maximum grade. It must have a means of ensuring that the system is released before the equipment can be trammed. This serves to address the hazard of dragging brakes which were the cause of numerous fires reported in the Ontario fire data. In the course of developing this standard, MSHA reviewed accident data from the Province of Ontario Canada. The data detailed fires on diesel powered equipment in underground mines from 1984 to 1992. Of 289 fires during this period, one fire involved a fuel trailer, 13 fires involved utility trucks, and 5 fires involved personnel carriers. Diesel fuel was the source for 25 of the 289 fires. The excessive heat from dragging brakes is a potential ignition source. The standard provides protection from fire and explosion hazards associated with transporting large quantities of diesel fuel. Limiting the load capacity of the diesel powered pickup trucks does not provide at all times the same measure of protection as the supplemental braking system required by the standard.

Twentymile also proposed as an alternative method "that diesel fuel transportation units towed by a pickup truck will be equipped with automatic fire suppression devices pursuant to 30 CFR Section 75.1911." A fire suppression device is not required on a fuel transportation unit unless it has an ignition device such as electric power for a dispensing pump. The fuel transportation units at this mine do not have an ignition source of this type and are not required to have a fire suppression device. However, adding a fire suppression device would not increase fire protection. A fire suppression device would not offer the same measure of protection as a supplemental braking system. The supplemental braking system reduces the potential for catastrophic accidents or fire due to service brake malfunctioning. A runaway fuel transportation unit on the significant grades at this mine could result in diesel fuel being spilled in areas of the mine where other potential ignition sources are present. A supplemental braking system could also eliminate a potential ignition source caused by a dragging park brake. A fuel trailer's fire suppression system would be ineffective in extinguishing or suppressing a fire caused by this type of accident. For these reasons, the addition of an automatic fire suppression device to the fuel transportation unit does not at all times provide the same measure of protection as the supplemental braking system required by the standard.

Twentymile amended the proposed alternative method to provide "that the diesel-powered pickup trucks utilized to tow diesel fuel transportation units shall be equipped with an automatic fire suppression system meeting the requirements of 30 CFR 75.1911." Diesel-powered pickup trucks categorized as light duty equipment are required to be equipped with a manual or automatic fire suppression system. The pickup trucks at this mine are already equipped with an automatic fire suppression system. This provision does not provide additional protection, nor does it provide at all times the same measure of protection as the supplemental braking system required by the standard.

Twentymile further amended the proposed alternative method to provide "that diesel fuel transportation units being towed by a pickup truck shall be equipped with an adequate electric braking system." The electric braking system would be capable of stopping and holding the fully loaded diesel fuel transportation unit on the maximum grade of the mine. MSHA's investigation determined that the diesel fuel trailers are already equipped with an electric braking system. Manufacturers recommend that these types of trailers be equipped with either a hydraulic or electric brake system. Also, the pickup truck manufacturer recommends that trailers weighing over 1000 pounds be equipped with brakes, and requires trailers weighing over 2000 pounds to be equipped with brakes. The manufacturer of the trailers used as fuel transportation units at the mine recommended that the

trailer axle be equipped with brakes unless the gross vehicle weight of the trailer axle is less than 3000 pounds. Brakes on trailers used in underground coal mines are not mandatory under MSHA regulations; however, it is recommended that trailers weighing over 3000 pounds be equipped with brakes. Trailer brakes are intended to assist the towing vehicles braking system and are not supplemental or secondary brakes. The standard service braking system on a pickup truck is not designed to handle the additional load of a trailer weighing over 1000 pounds.

MSHA's investigation found that the brakes for the diesel-powered pickup trucks at the mine require an inordinate amount of maintenance. These pickup trucks were not built for the mining environment. Brakes can wear out prematurely and overheat when towing the additional weight of a trailer. Trailer brakes can compensate for the additional wear to the brakes on the diesel-powered pickup trucks; however, they cannot provide at all times the same measure of protection as the supplemental braking system required by the standard.

Finally, Twentymile amended the alternative method to provide "that diesel-powered pickup trucks utilized to tow diesel fuel transportation units shall be equipped with an adequate trailer hitch and safety chains." MSHA's investigation determined that Twentymile's fuel transportation units use a long length of chain that has both ends welded to each side of the trailer tongue. The chain would be connected to the pickup truck by threading it through two straight clevises that are welded to the bumper on each side of the hitch. Both the pickup truck owner's manual and the industry standard (SAE J684; Trailer Coupling, Hitches, and Safety Chains - Automotive Type) specify a class IV trailer hitch when towing a trailer weighing more than 5000 pounds and the use of a safety chain. The use of a class IV hitch and safety chain is always recommended. MSHA determined that the safety chain rigging between the diesel fuel trailer and the towing vehicle were not in accordance with the SAE standard referenced above. Trailer hitches and safety chains are always recommended, but they do not provide at all times the same measure of protection as the supplemental braking system required by the standard.

Twentymile's proposed alternative method specifies initial and refresher training which would be provided prior to implementation of the alternative method as part of a revised Part 48 training plan for all diesel-powered pickup truck operators towing diesel fuel transportation units. In addition, the alternative method would not be implemented until MSHA had inspected the equipment. Twentymile is already required to provide initial and refresher training for all miners in accordance with Part 48 and MSHA already inspects the equipment at the mine. Consequently, these provisions would not provide additional protection.

MSHA has evaluated the potential safety benefits of each provision of Twentymile's proposed alternative as described above. MSHA has also considered the overall safety benefits for all of the provisions of the proposed alternative method and has concluded that they do not provide at all times the same measure of protection as the standard. The standard requires a supplemental braking system which would at all times provide protection from the fire and explosion hazards associated with transporting large quantities of diesel fuel 5 to 6 miles in and out of the mine and up and down grades of up to 16 percent. Limiting load capacity, installing fire suppression systems, installing electric trailer brakes on the fuel transportation unit, and utilizing trailer hitches and tow chains will not at all times provide the same measure of protection as would the supplemental braking system required by the standard.

On the basis of the petition and the findings of MSHA's investigations, Twentymile Coal Company is not granted a modification of the application of 30 CFR 75.1909(c) to its Foidel Creek Mine.

ORDER

Wherefore, pursuant to the authority delegated by the Secretary of Labor to the Administrator for Coal Mine Safety and Health, and pursuant to Section 101(c) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C., sec. 811(c), it is ordered that Twentymile Coal Company's Petition for Modification of the application of 30 CFR 1909(c) in the Foidel Creek Mine is hereby:

DENIED.

Any party to this action desiring a hearing on this matter must file in accordance with 30 CFR 44.14, within 30 days. The request for hearing must be filed with the Administrator for Coal Mine Safety and Health, 1100 Wilson Boulevard, Arlington, Virginia, 22209-3939.

If a hearing is requested, the request shall contain a concise summary of position on the issues of fact or law desired to be raised by the party requesting the hearing, including specific objections to the proposed decision. A party other than Petitioner who has requested a hearing shall also comment upon all issues of fact or law presented in the petition, and any party to this action requesting a hearing may indicate a desired hearing site. If no request for a hearing is filed within 30 days after service thereof, the Decision and Order will become final and must be posted by the operator on the mine bulletin board at the mine.

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John F. Langton
Deputy Administrator
for Coal Mine Safety and Health