

**WorkSafe Services**

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**Services de travail sécuritaire**

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March 14, 2006

**“The Employer”**

The Chief Compliance Officer is writing in response to the employer's letter dated March 7, 2006, informing the Chief Compliance Officer that, as a result of changes in the diesel products available in the Atlantic Provinces, that the employer is no longer able to fully comply with the provisions of subsection 89 of the New Brunswick Mining Regulations 96-105 in terms of closed cup flashpoint.

The employer indicates in the employer's letter that the supplier has informed the employer that they are no longer able to supply diesel fuel to meet the closed cup flashpoint of 52°C. The supplier has also indicated that the other suppliers in the Atlantic Region have been producing diesel at lower flashpoints for some time.

The employer also states in the employer's letter that the air ambient temperature is monitored at many locations throughout the employer's premises on a monthly basis, and have included ambient temperatures for the summer months (June, July, August and September).

Finally, the employer supports the proposed amendment to base the regulation on diesel flashpoint monitoring, air temperature monitoring and ventilation monitoring, in order to maintain a minimum 10°C differential between ambient air temperature and diesel flashpoint.

In response to the employer's request, the following information (in addition to the information the employer provided) was considered in making the Chief Compliance Officer's decision.

1. The results of an inter-jurisdictional scan of prescribed flash point limits for the use and storage of diesel fuel in an underground mine;
2. The maximum recorded ambient temperatures in areas where diesel fuel is used and stored in the employer's underground facility;
3. The flash point of diesel fuel provided by the employer's supplier.

According to the information gathered during the inter-jurisdictional scan (and confirmed by a 2002 review of Regulations to control diesel emissions in Canada Mines conducted by CANMET), a number of different Standards requiring flash points ranging from a minimum of 40°C to a minimum of 52°C are found in underground mining legislation across Canada. The most common standards cited in Regulation across Canada includes:

1. CAN/CGSB-3.16-M-86/M88 (Regular-minimum flash point 40°C)  
(Special-Minimum Flash Point 52°C)
2. CAN/CGSB-3.16-99, (Special-LS-minimum flash point 52°C)
3. CAN/CGSB-3.517-93, (A-LS minimum flash point 40°C)
4. CAN/CGSB-3.517-2000 (A-LS and B-LS- minimum flash point 40°C)

In addition, some jurisdictions have provisions that restrict the use of diesel fuel that meet Standards with a minimum flash point of 40°C provided that the ambient temperature in an underground mine does not exceed 30°C. Should the ambient temperature exceed 30°C then employers are required to use diesel fuel that meet the Standards which require a minimum flash point of 52°C.

The Chief Compliance Officer's understanding of this requirement is that, to minimize fires and explosions due to the use and storage of diesel fuel in an underground mine, at no time should there be less than 10°C difference between the ambient temperature in the mine and the flash point of the fuel.

Furthermore, some US OSH legislation for underground mining operations also allows the use of diesel fuels with a minimum flash point of 100°F (38°C).

Finally, according to information the employer has provided the ambient temperature in the employer's underground facility will not exceed 30°C during the period of September 1-April 30. In fact ambient temperature tests conducted by the employer indicate that ambient temperatures range from a low of 18.44°C to a high of 27.33°C.

## **Conclusion**

Based on the fact that:

1. The lowest flash point value of diesel fuel supplied to the employer during the winter months will not likely be below 45°C;
2. The ambient temperature in the employer's underground facility is not likely to exceed 30° C during the winter months;
3. There is likely to be an going difficulty in obtaining high flash point diesel fuel at certain times of the year; and
4. There is a proposed amendment to the Underground Mining Regulation that will address this issue.

A deviation from Section 89 of Regulation 96-105 is granted with the following conditions:

1. The employer will use higher flash point diesel fuel (greater than 52°C) during the season where this product is available;
2. The employer will monitor the flash point of the fuel provided by the supplier and will provide a report to the Health and Safety Officer and the JHSC upon request;
3. During the period where only lower flash point diesel fuel is available, the employer will monitor periodically (and record) the ambient temperatures in areas of the employer's facility where diesel fuel is used and stored for those areas which have recorded ambient temperatures greater than 25°C in recent tests; and

4. If the temperature difference between flash point and ambient temperature becomes less than 10°C, the employer will be required to take measures to lower temperatures or suspend operation until the 10°C difference is restored.

By copy of this letter, the Chief Compliance Officer has advised WHSCC staff and the JHSC of the decision.

Regards,

Chief Compliance Officer