



DMM Safety Alert: **Flash Fire Hazards**

In August 2007, a driller at a Virginia quarry was severely burned by a flash fire while troubleshooting a maintenance problem. The fire occurred when a compressor oil hose separated causing oil to spray onto the drill's exhaust system. Flash fires are relatively short duration fires of 10 seconds or less that involve the ignition and combustion of a flammable atmosphere (dust, gas or vapors of an ignitable liquid). These fires are a potential hazard to miners in a variety of conditions.

Several Virginia mineral miners have been seriously injured in other accidents involving flash fires over the past 10 years. In one incident, an underground driller was severely burned when the compressed air tank of an air-track drill exploded as a result of a defective automatic high temperature shutoff switch. In another accident, several miners were burned when oil from a conveyor drive coupling was thrown towards a nearby portable heater causing a flash fire. The Virginia Division of Mineral Mining safety regulations require certain safeguards intended to prevent flash fires, including:

- Equipment must be maintained in accordance with the manufacturer's specifications (4VAC25-40-360).
- Miners must inspect their equipment to ensure safe operating condition prior to use (4VAC25-40-145).
- Prior to applying heat to any combustible or flammable liquid storage container, the container must be drained, cleaned, ventilated and filled with an inert material (4VAC25-40-660).
- Air compressors must be equipped with automatic temperature activated shutoff mechanisms (4VAC25-40-1110).



When fueling or working on equipment at operating temperatures, always be alert to potential flash fire hazards.