



# Fire Protection

## Best Practice Series

### BP-90

Coal dust, loose coal, scrap paper, wood, plastic, spilled oil or diesel fuel, and oily rags are all examples of easily ignitable materials in a mine. Such materials can typically be ignited by small ignition sources and can rapidly grow into a dangerous and uncontrollable fire. Adequate control of these materials are necessary to reduce a mine's potential for fire. Good housekeeping and rock dusting are effective techniques in reducing these hazards.

- **ALWAYS** remove accumulations of loose coal and coal dust in belt entries, especially around moving equipment.
- **ALWAYS** remove combustible waste materials.
- **ALWAYS** store lubricating oil and grease used underground in fire resistant, closed containers.
- **ALWAYS** construct designated storage locations for oils and grease of fire resistant materials.
- **ALWAYS** apply sufficient rock dust in order to reach the desired concentration of inert materials.

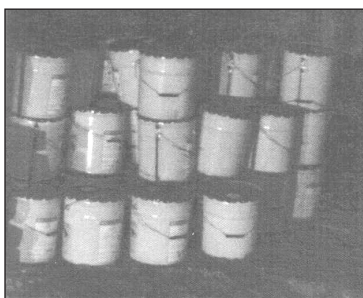
### REMEMBER:

Materials saturated with combustible liquids ignite easier.

The ignition potential of combustible materials increases in the presence of explosive gases.

## It Happened . . .

- A fire occurred on a coal feeder and caused extensive damage to the equipment. A contributing factor to the extensive damage was the excessive amounts of loose coal, coal dust and oil which were permitted to accumulate on and around the electrical and mechanical components of the coal feeder.
- An equipment fire occurred, caused by frictional heating due to a mechanical failure in the power train. The fire spread across the entire piece of equipment and was enhanced by combustible materials around the work area such as coal dust, loose coal, hydraulic oil and resin cartridges.
- Smoke was observed coming from a belt conveyor portal. The underground power was deenergized and the miners exited via the intake air course. The fire originated when a metal bearing became hot enough to ignite accumulations of grease around the roller.



***Example of a storage area for combustible materials***

***Arrive Home Alive***

***U.S. Department of Labor  
Mine Safety and Health Administration  
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