



Division of Mineral Mining

## Accident Investigation: Pump Accident June 6, 2002

A plant superintendent received first and second degree burns to his face and parts of his body when he was exposed to a mixture of hot water and vermiculite that was released under pressure from a slurry pump during repairs. The pump, which transports milled material in the wet processing plant at the mine, had become clogged/plugged during normal operations. The victim had removed three of the four flange connection bolts of the pump to access the pump housing and remove the clogged material when hot material was suddenly expelled from the pump and injured the victim. The pump apparently became super heated immediately prior to the attempted maintenance activity, after it continued to operate for approximately 15 minutes after it had become clogged. The victim was transported by rescue squad to a nearby hospital where he was treated and released. The victim later required skin graft surgery to help heal the burn injuries.

**RECOMMENDATIONS:** To prevent a similar accident from occurring, DMM recommends that mine operators and contractors ensure that task training for pump repairs is frequently conducted and includes:

- Potential hazards associated with over heated pumps;
- Safe work procedures for lock-out and tag-out;
- Releasing built-up pressure/energy in pump stations
- and piping;
- Removal of clogged/plugged material.

In addition, persons conducting pump repairs/maintenance should be provided with and instructed in the proper use of personal protective equipment (PPE) such as safety glasses, goggles, or face shields (4 VAC 25-40-1730), and protective gloves (4 VAC 25-40-1770).

