

On May 14, 2019, an underground equipment fire occurred on a diesel-powered water car. No miners were injured in the incident.



The mine operator converted a personnel carrier into a water transport vehicle that was used to apply water on the underground travel ways. The automatic and manually-activated fire suppression systems did not function properly to suppress the fire because the actuation hose was damaged as a result of routing through the engine compartment. The fire was extinguished using a fire hose from the water system near the conveyor belt drive after all available fire extinguishers were used unsuccessfully.

Best Practices:

MSHA urges mine operators and miners to be aware of fire hazards involving underground mine equipment and to follow the safety practices listed below:

- Conduct thorough pre-operational inspections and perform required maintenance. Identify and correct obvious fire hazards such as accumulations of combustible fluids or grease, leaking hydraulic and coolant hoses or fuel supply lines, cracked or blistered hydraulic and coolant hoses, damaged hydraulic hose flanges and connections at the hydraulic pump.
- Install audible and visible alarms in the cab to alert equipment operators to potential fires.
- Ensure that Manual and Automatic Fire Suppression Systems are properly designed, installed and maintained. Follow NFPA 17 and 17A and the manufacturer's recommendations.
- Route actuation and expellant gas hoses away from the engine compartment and heat generated sources of fire, electrical wires, and moving parts or ensure they have a heat resistant fire jacket.
- Ensure that actuation hoses mounted to removable covers are secured in such a manner to prevent damage from wear and potential contact with heat sources.
- Ensure that the automatic fire suppression system's linear detection wires are properly installed and routed away from heat sources and protected from mechanical damage.
- Inspect nozzles for blockage or presence of chemical residue and ensure that all nozzles have protective caps.
- Train miners in the proper inspection and maintenance of mining equipment and machinery, proper response to alarms or sensors and proper operation, maintenance and inspection of fire suppression systems.

Miners and mine operators can find [safety and health information](https://www.msha.gov) on [MSHA.gov](https://www.msha.gov).