

HAZARD ALERT BULLETIN

LARGE ELECTRICAL EQUIPMENT AT SURFACE MINES MAY HAVE AUXILIARY POWER SOURCES

COAL MINE FATALITY – An electrician, with 21 years of experience, was fatally injured while troubleshooting a dragline trailing cable at a surface coal mine. The electrician was working at an electrical junction box that supplied power to the dragline when he contacted two energized phase conductors. Incoming power to the junction box had been visually disconnected and locked out by the electrician. An onboard diesel powered generator was started and back fed 480 volts through on-board transformers connected to the dragline’s trailing cable and energized the phase conductors to 23,000 volts.



Best Practices

- Before performing electrical work on draglines, shovels, etc., lock out and tag auxiliary power sources with YOUR lock. These types of machines often have auxiliary power sources located on-board or positioned nearby.
- Install a failsafe mechanical interlock system that will prevent the auxiliary power source and normal power source from being connected to the same circuit at the same time.
- Always connect each phase conductor to the system ground prior to performing high voltage electrical work.
- Never enter electrical vaults, motor control centers, or other electrical enclosures unless you are an MSHA qualified electrician or under the direct supervision of an MSHA qualified electrician.
- Always wear proper safety equipment when performing electrical work.
- Never assume you understand a circuit. Thoroughly research how the circuit is wired.