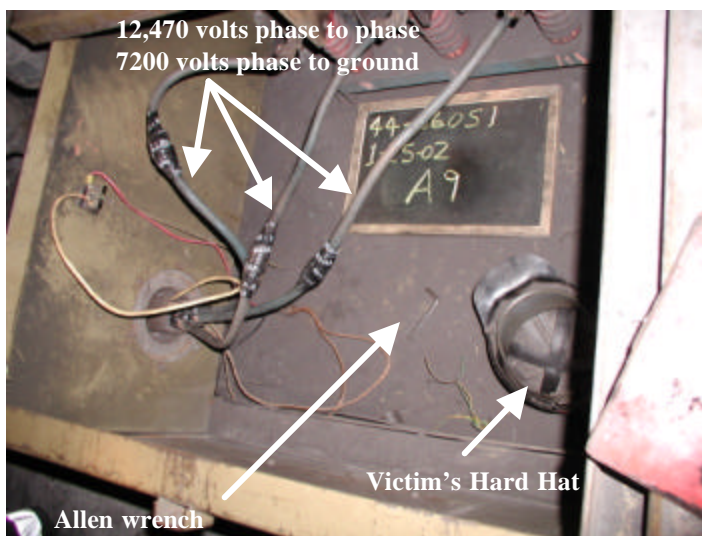
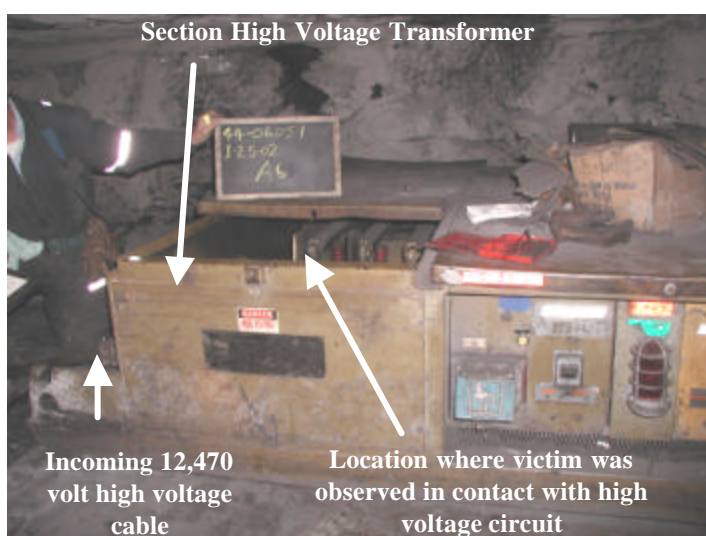


Virginia Department of Mines, Minerals and Energy

HAZARD **A**LERT **L**IVE **T**OMORROW

LOCK-OUT, TAG-OUT AND GROUND HIGH VOLTAGE CIRCUITS...IT'S A LAW YOU CAN LIVE WITH!!

On Thursday, January 24, 2002, at approximately 10:30 p.m., a Buchanan County miner was performing electrical work on the 12,470 volt power center located on the active working section which was retreat mining. The section power was being moved back and a length of high voltage cable had been removed. During the course of events to restore power to the section, the victim was electrocuted and found slumped into the power center.



LET'S REVIEW SAFE PROCEDURES FOR MOVING SECTION HIGH VOLTAGE

- On the day of the power move, all affected personnel should be thoroughly briefed on planned work procedures and their assigned duties.
- Any equipment affected by the move should be repositioned out of the way of the move.
- An authorized person must de-energize the power center being moved at its source of power. Normally this can be done by activating the emergency stop on the power center.
- If any electrical work is required during the move, such as adding or removing cable and/or reversing phase polarity, this work must be done by a Virginia certified electrical repairman.
- The certified electrical repairman performing the work must tag and lock-out the high voltage circuit on the surface or at the closest "load break switch or splitter box".
- The certified electrical repairman must effectively ground out the high voltage circuit at the closest point to the power center being moved prior to performing any work on the de-energized circuit.

LOCK-OUT, TAG-OUT AND GROUND HIGH VOLTAGE CIRCUITS...IT'S A LAW YOU CAN LIVE WITH!! (Cont'd)

- The high voltage cable should be placed or positioned in a manner to prevent strain or damage when the power center is being moved.
- Upon completion of power move, excess high voltage cable should be looped in a figure eight pattern to prevent forming an electro-magnetic field.
- After electrical work is completed and the circuit energized, the high voltage ground monitoring system should be checked by activating the emergency stop switch on the transformer.
- After the certified electrical repairman is certain that the power center is safe, the equipment cables can be properly routed to the power center, hung and anchored at the proper places.
- Insulating mats and fire extinguishers should be properly located.
- The high voltage cable should be hung on insulators or placed in a location to protect from mechanical damage, and from contact with low and medium voltage cables.
- Guard the high voltage cable where miners work and travel, unless hung at least six and one-half feet above the mine floor.

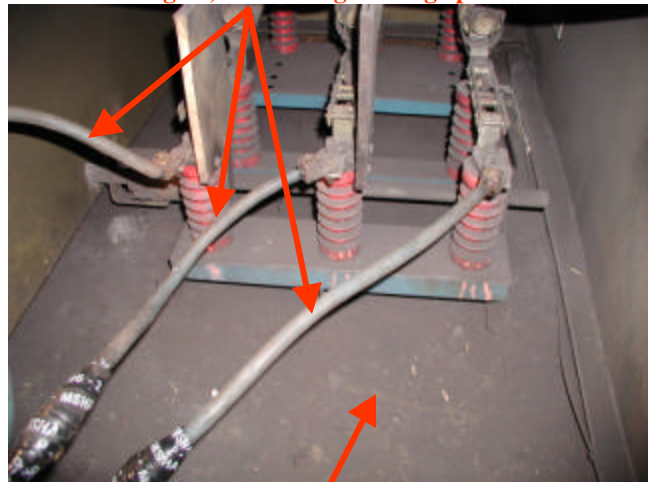
Incoming 12,470 volt high voltage cable



Location where victim was observed in contact with electrical circuit

Section high voltage transformer

Incoming 12,470 volt high voltage phase leads



Inside transformer where victim contacted high voltage circuit

High voltage power is essential for today's mining operations to be efficient and effective. If properly installed and maintained, it can be safely introduced and used in the work environment. **Always** respect high voltage electrical circuits for usefulness and the potential lethal hazard it can become! **Always** follow safe high voltage installations and maintenance procedures and practices!