

## ABSTRACT OF INVESTIGATION

Date: July 21, 1996

Slide Number: 11 (Fatal Case Number: 30)

Accident Classification: Electrical

Type of Mine: Limestone - Surface

Location: Virginia

Age of Victim: 15

Total Mining Experience: Not Applicable

Job Classification: Not Applicable

Number Employed at Mine: 30

Time of Accident: 11:00 a.m.

A 15-year old, while fishing near a water pump that had a ground fault, was electrocuted. He was fishing with his brother and three friends. Three of the youths had fished this river the prior week and on both occasions they were given permission to enter the mine property. While fishing the prior week, one of the youths reported that when he stepped into the river, he received a sudden shock that caused him to fall in the water. The river current carried him downstream and out of the field of electricity. He stated that he went to report the incident to the company's security guard, but that no one was at the main gate and he did not pursue it further.

**Conclusion:** Electrical faults, resulting from improper installation of the 480 VAC water pump power cable and circuitry, were the primary cause of the accident. The faults had energized the ground conductor to the pump, and a path for current flow to earth existed through a wire rope which ran into the river at the site of the electrocution.

**Means of Prevention:** Circuits shall be protected against excessive overload by fuses or circuit breakers of the correct type and capacity. Permanent splices and repairs made in power cables, including the ground conductor where provided, shall be mechanically strong with electrical conductivity as near as possible to that of the original; insulated to a degree at least equal to that of the original, and sealed to exclude moisture; and provided with damage protection as near as possible to that of the original, including good bonding to the outer jacket. Electrical conductors shall be of

