This presentation is for illustrative and general educational purposes only and is not intended to substitute for the official MSHA Investigation Report analysis nor is it intended to provide the sole foundation, if any, for any related enforcement actions.

Coal Mine Fatal Accident 2004-14



- Operator: Mine: Accident Date: Classification: Location: Mine Type: Employment: Production
- Dags Branch Coal Co., Inc. No. 6 Mine June 17, 2004 Fall of Roof District 6, Pike County, KY Underground 14 350 Tons/Day



The victim, a utility man, was assisting the continuous miner operator with the miner cable after mining the crosscut between the No. 6 and No. 7 Entries. As the victim bent over to pick up the miner cable, a "slickensided" rock, measuring 38 feet long by 12 to 14 feet wide by 27 inches thick, fell from the unsupported area of the crosscut. The fall also pulled out two previously installed roof bolts, striking the victim.



The accident occurred when the victim was positioned inby the second row of permanent roof supports immediately after an extended cut had been mined. A warning device, which would have increased the likelihood that the victim would have recognized his proximity to the last row of bolts, had not been installed on the last row of permanent roof supports. An undetectable, slickensided section of roof rock fell in the unsupported area and extended to the second row of bolts in the No. 6 Entry, striking the victim and causing fatal injuries.

ROOT CAUSE ANALYSIS

<u>*Causal Factor:*</u> The standards, policies, and administrative controls in use at this mine did not ensure that persons would not position themselves inby the second row of undisturbed permanent roof supports (roof bolts), as is required by the approved roof control plan, when an extended cut was mined. A visible warning device, which would have alerted persons concerning the location of the last row of roof bolts, was not hung on the last row of permanent support as required by 30 CFR, 75.208. A procedure had not been established by mine management to assign responsibility for installing the warning devices. The victim was positioned between the first and second row of permanent supports outby the extended cut taken in the crosscut between the No. 6 and No. 7 Entries.

<u>Corrective Actions</u>: The roof control plan was reviewed and explained to each and every employee prior to mining being resumed. Special emphasis was placed on the importance of never positioning any part of the body inby the second row of undisturbed permanent roof supports (roof bolts).

ROOT CAUSE ANALYSIS

<u>Causal Factor</u>: A warning device was not installed at the end of permanent roof supports. A procedure had not been established by mine management to assign responsibility for installing the warning devices. A visible warning device would have alerted persons concerning the location of the last row of roof bolts, and served as a reminder that the plan required persons to remain outby the second row of permanent support.

<u>Corrective Actions</u>: The operator will have either the roof bolter operator or continuous miner operator install bright red reflectors on the last row of permanent supports prior to the continuous mining machine beginning a new cut.

ENFORCEMENT ACTIONS

104(a) Citation was issued for a violation of 30 CFR 75.220(a)(1).

The Approved Roof Control Plan was not being complied with on the 001 MMU. The approved plan states that "The continuous miner operator (remote-control station) and other persons in the area shall not expose any portion of their body inby the second row of undisturbed permanent supports." A fatal accident occurred on June 17, 2004, when a Utility Man was positioned inby the second row of undisturbed permanent roof supports and received fatal crushing injuries from a fall of roof that originated in the unsupported cut and extended to the second row of roof bolts.

ENFORCEMENT ACTIONS

104(d)(1) Citation was issued for a violation of 30 CFR 75.208.

A readily visible warning device or physical barrier to impede travel beyond permanent support was not installed at the end of permanent roof support at both approaches to the unsupported crosscut between the No. 6 and No. 7 Entries on the 001-0 MMU. A fatal accident occurred on June 17, 2004, when a Utility Man received crushing injuries from a fall of roof that originated in the unsupported area where no warning devices were installed.

BEST PRACTICES

- Conduct a thorough visual examination of the roof, face and ribs immediately before any work is started, and thereafter as conditions warrant.
- Know and follow the extended cut provisions of the approved roof control plan.
- Never travel inby the second row of permanent roof supports from an extended cut.
- Always hang reflectors or other warning devices prior to mining.
- Be alert for changing roof conditions.