

# MNM Fatal 2012-02

- Fall of Highwall Accident
- February 14, 2012 (Alabama)
- Shale Operation
- Mine Owner
- 40 years old
- 8 years of experience

# Overview

The victim was killed when the excavator he was operating was covered by falling material from a highwall. He was using a rock breaker, attached to the excavator, to break and mine material from a near vertical wall when the face fell onto the cab of the excavator, crushing him.

The accident occurred due to management's failure to provide adequate procedures, mining methods, and training to protect persons from falling material. The mining methods employed by management failed to maintain wall, bank, and slope stability in places persons work or travel to perform their assigned tasks. The unconsolidated material was not sloped back to a safe angle and was excavated too steeply to maintain adequate stability. The victim had not received any required MSHA training.

Additionally, a person experienced in examining and testing for loose ground was not designated by the mine operator to examine and, where applicable, test ground conditions in areas where work was to be performed prior to work commencing and as ground conditions warrant during the work shift.



# Root Cause

- **Root Cause**: Management failed to provide adequate procedures that included safe mining methods, required examinations, and training to protect persons working near the vertical walls of unstable material.
- **Corrective Action**: Management established Standard Operating Procedures (SOP) for mining loose unconsolidated material at a safe slope angle. Before mining resumed, a blasting contractor was employed to drill and shoot the mounds of harder material to reduce the near vertical walls to a slope angle that was safe to mine. Safe mining methods were established for future mining. These methods include having a person conduct required examinations, and conducting required training for all persons working near the highwalls.

# Best Practices

- Operate excavators with the cab and tracks perpendicular to, and away from, the highwall.
- Bench or slope the material to maintain stability and to safely accommodate the type of equipment used. Do not undercut material on the face of a slope, bank, or highwall.
- Examine highwalls, slopes, and banks from as many perspectives as possible (bottom, sides, and top/crest) while maintaining the safety of the examiner(s). Look for signs of cracking, bulging, sliding, toppling or other signs of instability. Record the type and location of hazardous conditions.
- Use auxiliary lighting during non-daylight hours to conduct highwall examinations and to illuminate active work areas.

# Best Practices

- Perform supplemental examinations of highwalls, banks, benches, and sloping terrain in the working area.
- Immediately remove all personnel exposed to hazardous ground conditions and promptly correct the unsafe conditions. When the conditions can not be corrected, barricade and post signs to prevent entry.
- Remove loose or overhanging material from the face. Correct hazardous conditions by working from a safe location.