MNM Fatal 2015-13

- Falling, Rolling, or Sliding Rock or Material
- August 03, 2015 (North Dakota)
- Construction Sand and Gravel
- Loader Operator
- 64 years old
- 44 weeks of experience

Overview

- William G. Makela, front-end loader operator, age 64, was killed on August 3, 2015, when he was engulfed by a slide of material from the stockpile. Makela had exited the front-end loader and was standing beside the loader prior to the slide.

- The accident occurred due to management's failure to identify possible hazards and establish safe procedures associated with work or travel near stockpiles. The stockpile ground conditions created a fall of material hazard from lack of maintenance and trimming. Failure to recognize the hazard of working near the stockpile face contributed to the accident.


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Root Causes

A root cause analysis was conducted and the following causal factors were identified.

- Root Cause: Management failed to correct the hazardous stockpile ground conditions. The stockpile was constructed 39 feet high, and the slope was greater than the angle of repose despite not having equipment able to safely trim the pile to the angle of repose. The stockpile ground conditions created a fall of material hazard from a lack of trimming or maintenance.

- Corrective action: The stockpile was trimmed to the angle of repose. Management retrained miners in identifying and controlling areas of the stockpile where hazardous slips can occur. Additionally, a Standard Operating Procedure was adopted that load out is only allowed when equipment is on site that is able to trim the 35 foot high stockpile to the angle of repose.

Root Causes(Conti.)

Root Cause: Management failed to ensure that all persons could recognize the fall of material hazards associated with working near the stockpile and traveling between the stockpile and equipment. Makela did not recognize the hazard imposed by the stockpile and exited the front-end loader between the loader and the stockpile, hindering escape.

Corrective action: Miners were trained to evaluate the potential hazards of falling material and the dangers of work or travel between stockpiles and equipment.

Best Practices

- Ensure that miners are adequately trained in determining the stability of a stockpile. Any unconsolidated material sloped above its natural angle of repose is, by definition, UNSTABLE and potentially DANGEROUS.
- Ensure that equipment on site has the capability to trim stockpiles safely.
- Ensure that equipment is parked in a safe location before exiting the vehicle.
- Ensure adequate work place examinations are performed and promptly correct hazardous conditions that adversely affect safety and health.