



Mines Safety Significant Incident Report No. 193

Crush injuries sustained from movement of tailings pipe – fatal accident

Summary of incident

A worker was fatally injured in an accident at a tailings dam. Workers were installing a new section of poly pipe on to the end of the existing tailings header. The pipe has an outside diameter of 800 mm, and individual sections are 60 metres long. The accident occurred near the edge of the tailings dam embankment. A worker was positioned in a shallow trench that had been excavated to provide access to the bottom of the flange of the connected end of the pipe. He was tightening bolts on the flange. Preliminary enquiries indicate the worker was pinned between the pipe being installed and the walls of the shallow trench when the loose end of the pipe slid down the embankment.

Probable causes

Direct:

- The pipe was located near the edge of a slope.

Contributory:

- The hazard of the pipe moving was not identified or controlled in the operating procedure being followed.
- The 60 metre long pipe section was not secured.
- Workers were completing the connection of the pipe to a flange while independent actions were being taken 60 metres away at the unsecured end of the pipe.

Actions required

Managers and supervisors are reminded of the importance of detailed safe work instructions that identify hazards and controls for each job step. For an operating procedure or work instruction to be safe, it should identify hazards and controls for each job step. The description for each job step should provide sufficient detail to carry out the task.

While long sections of flanged poly pipe provide operational convenience, they create significant handling hazards when compared to shorter rigid pipes. In particular, the inherent flexibility of poly pipe limits the length that can be simply lifted, and dynamic movement of unsecured ends can lead to load instability. In addition, if a section of the pipe snags on an obstacle during handling, there is the potential for elastic energy to be stored in the flex of the pipe, which can lead to sudden uncontrolled movement ("pipe whip").

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