

SAFETY ALERT

Directional boring fatality

INCIDENT

A sub-contractor suffered fatal head injuries when he was apparently struck by recoiling polyethylene (PE) pipeline.

CIRCUMSTANCES

PE pipe was being installed beneath a creek using the 'directional boring' (horizontal directional drilling) method. A pilot hole was drilled then back-reaming began, pulling a line of 200mm PE pipe behind the reaming tool. During this operation a cross-over sub failed and the drill-string separated from the reamer assembly and PE pipeline.

Preparation commenced for recovery of the pipeline by pulling it back through the borehole from the entry-end. A chain was tied to the pipe and the other end connected to an excavator. During the pulling process the chain broke. It appears that the elastic strain in the pipe recovered violently. The deceased person was standing in the zone of pipeline recoil.



RECOMMENDATIONS

1. Systems for ensuring safe operation of directional boring activities should be developed using good practice risk management principles.
2. A safe system of work should be developed and implemented that includes fit-for-purpose equipment documented safe work procedures for handling and / or recovering pipe from the entry end and defined safe areas for people to stand that are outside potential danger areas in event the pulling system fails.
3. Consideration should be given to the measurement and understanding of loading forces when withdrawing pipe; defining safe loading forces; setting adequate safety factors; providing safeguards against the release of uncontrolled energy; and restricting people from entering danger zones using hard barriers.
4. A review should be undertaken of the use of chains for pulling / snigging – refer to Safety Bulletin *SB09-03 Broken pull chain results in fatality*.

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations. This Safety Alert should be processed in a systematic manner through the titleholder's / operator's information and communication process. It should also be placed on the workplace notice board.

Signed



Rob Regan
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