

SAFETY ALERT

Operator suffers broken arm while operating high pressure hose

INCIDENT

A contract operator's forearm was broken when he was struck by a pressurised 25 mm hose while unclogging a 900 mm (diameter) drainage pipeline at a coal handling and preparation plant near Newcastle.

CIRCUMSTANCES

Two people were performing the task on 21 September 2016. The operator of the pump was "walking" a jet hose into the drainage pipeline through a surface pit, while an assistant held a rope (tiger tail) attached to a sheath protecting the hose as it was inserted into the pipe.

The hose was pressurised to approximately 1500psi. The pressure in the hose caused energy to store. It had been inserted about 20 metres into the pipe when a loop in the hose caused it to "whip" towards the assistant and hit his left forearm.

Figure 1: High vacuum pump (left) and Figure 2: The drainage sump (right). Photos by a Mine Safety inspector



INVESTIGATION

Best practice for managing an uninserted hose requires that the hose is stored within the retraction system.

The investigation identified that the process of “walking” the hose into the drainage pipe was a significant contributing factor to the hose looping and releasing the stored energy in a violent manner.

RECOMMENDATIONS

1. A risk assessment and safe work method statement must address all aspects of tasks involving high pressure hoses, including the working environment and the potential for hose loop occurring.
2. Placing a high pressure hose on the ground poses a significant “looping” hazard and should not be normal practice.
3. The “walking in” of a hose poses a significant risk to people and should not be normal practice. Eliminate uncontrolled feeding of a pressurised hose.
4. Effective and understood exclusion zones are to be established before work activities commence. These zones should be physically delineated.
5. Review the publication [Managing risks from high pressure water jetting](#), prepared by SafeWork Australia, December 2013.

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 mine’s information and communication process. It should also be placed on the mine’s notice board.

Issued by

Dave McLean

Chief Inspector of Mines

Appointed pursuant to Work Health & Safety (Mines and Petroleum Sites) Act 2013

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