Safety alert

MINES

Mines Inspectorate
www.dme.qld.gov.au

Safety alert 209
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Contamination of Fresh / Potable Water Supply

Mine Type: All Mine Types

Incident: An incident occurred recently where the fresh / potable water system in a processing plant was connected to the final product line. At some stage the water has flowed back through the hose line and contaminated the fresh / potable water system with process water and residual process chemicals.

Equipment: Fresh water outlets, general 1" mine hose, process lines.

Hazard: Potential exposure of workers to chemical and possible biological (microbial) hazards.

Cause: Fresh water lines were run through the process area to a number of hose points without any separation from the main feed line into the plant. Some attempt had been made to delineate these as fresh water outlets by changing the fittings from minsup couplings (as were fitted to all recycled process water hose outlets) to camloks (see photo 1). However, the hose outlet used at the time of the incident (see photo 2) had not been changed to a camlok and was not marked in any other way to state that it contained fresh water and not recycled process water.

Photo 1 - Process water on the left, fresh on the right

Photo 2 - The fresh water outlet from incident

Comments:

The risk of backflow and subsequent contamination of drinking water supplies was not identified in the plant modification process. A second change to the plant (changing the fittings) was not fully implemented, nor did it identify this risk.

Recommendations:

- **All mines and process plants** review procedures for installation, upgrade and maintenance of water reticulation services where there is an interface between process and potable water.
- Ensure that any fresh water supply for mining / process purposes is separated from the drinking

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water supply, or that backflow cannot otherwise occur.

- Review pipe identification and identification of water outlets where applicable.
- Recycled process water should be coloured black as per AS 1345-1995 Identification of the contents of pipes, conduits and ducts

Rob O'Sullivan
Manager, Safety and Health - North

Contact: Damian Lee, Inspector of Mines, +61 7 4747 2157

Please ensure all relevant people in your organisation receive a copy of this Safety alert. Any such advice supplied to site should reach those who require it, and it should also be placed on the mine notice boards.

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