

Dozer in the Water
January 21, 2017
Estevan Mine



WESTMORELAND COAL COMPANY



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At approx. 12:10 am Dozer pushed 1.5 times past the lines shown on GPS screen.

The Dozer came to a stop on a frozen pocket of water, the dozer operator was not aware that he had stopped on the ice over the water.

When the dozer operator proceeded to backup off the body of water the dozer broke through the ice landing flat on both tracks in approx. 2 meters of water. The operator was able to exit the dozer onto land.





Dozer In The Water Incident

Causal Factors

Root Causes

Corrective Actions





Dozer In The Water Incident

Causal Factors

1. Failure to identify hazards
2. Communication needs improvement - work instruction
3. Planning process needs improvement





Dozer In The Water Incident

Causal Factor 1: Water Hazard

- Water hazards not identified on recent map
- Lack of senior MGMT approval for maps
- Lack of quality control on mine plan development





Dozer In The Water Incident

Causal Factor 2: Communication Needs Improvement

- Inadequate work instruction
- Failure to review work plan
- Operator assumed instruction





Dozer In The Water Incident

Causal Factor 3: Planning Process Needs Improvement

- Junior employees updating maps
- Maps not updated prior to work commencing
- No formalized mine plan review standard process
- Failure to check mine plan prior to work execution





Dozer In The Water Incident

Incident Happens

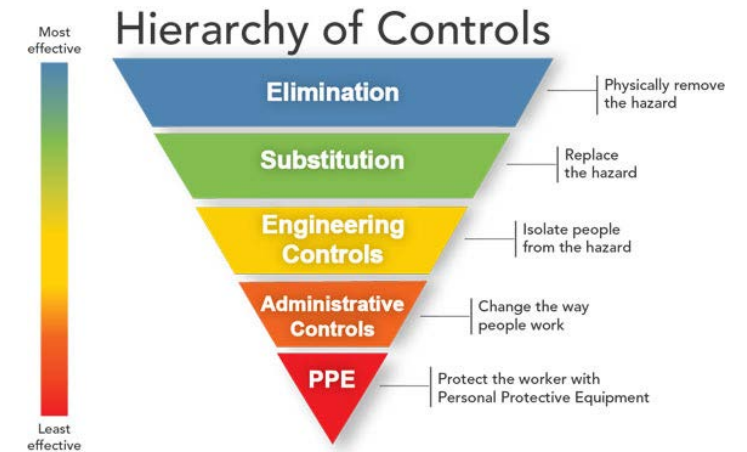




Dozer In The Water Incident

Corrective actions:

- Develop mine planning standard process identifying
 - Roles, responsibilities
 - Development, approval, implementation, review procedures
 - Develop QA/QC audit requirements
- Ensure work packages are updated and available for supervision
- Train supervision in communication – work instruction delivery
- Field verification – interaction check, QA/QC





Dozer In The Water Incident

Conclusion

Failure to apply Plan, Do, Check, Act
will lead to exposed hazards

