VULCAN MINE

Mine Operating Procedure

Working Near Water or Other Liquid

Contents

1. PURPOSE

The purpose of this procedure is to describe requirements and to effectively manage the hazards and risks associated with working near water and other liquid at the Vulcan Mine.

2. SCOPE

This procedure is applicable to all persons at the Vulcan Mine including employees, contractors and visitors.

The controls within this procedure are mandatory.

3. DEFINITIONS

Authorised Person	A person who has the required competencies and who has been appointed by the Site Senior Executive to carry out a designated scope of duties.
CMSHA	Queensland Coal Mining Safety and Health Act (1999).
CMSHR	Queensland Coal Mining Safety and Health Regulation (2017).
CMW	Coal Mine Worker.
Competent Person	Competence for a task at a coal mine is the demonstrated skill and knowledge required to carry out the task to a standard necessary for the safety and health of persons.
JHA	Job Hazard Analysis.
PFD	Personal Flotation Device.
PPE	Personal Protective Equipment.
SHMS	Safety and Health Management System.
SOP	Standard Operating Procedure.
Take 5	Personal Risk Assessment.
WRAC	Workplace Risk Assessment Control.

4. PROCEDURE

4.1. General

Where practicable, a barricade shall be constructed between personnel working near water and the water source. If personnel are required to breach a barricade around a body of water or if there is no barrier in place, a risk assessment shall be completed.

The risk assessment shall identify the requirement and availability for PFDs for persons conducting work when a risk of drowning has been identified.

Where practicable, personnel shall avoid conducting work in, on or around water or other liquid unless the risk is assessed and deemed to be as low as reasonably achievable.

Emergency access shall be established and maintained where CMWs are required to carry out tasks near bodies water.

Working near a body of water may include, but is not limited to:

- dams, e.g. water storage dams, disposal dams, tailings dams, turkeys' nests.
- treatment plants.
- open tanks.
- slurry sumps.
- diesel tanks.
- enclosed tanks.
- water in surface pits.
- natural waterways.

- sumps; and
- places where there is a risk of drowning.

4.2. Requirements for Working Near Bodies of Water

Persons carrying out tasks near a body of water shall:

- be provided with necessary PPE (including PFDs); and
- have ready access to communications (two-way radio, etc.) at all times.

Rescue equipment (i.e. buoys) shall be available.

A minimum of two personnel shall be present at all times when working near a body of water.

Barriers (i.e. adequate windrow) shall be provided to prevent falls into a body of water (where practicable). Barricades shall be installed around all sumps and open tanks where there is a risk of persons falling in.

Where there is no effective barrier in place, operators will wear PFDs and have a rescue plan developed as part of a JHA.

If the risk assessment outcome shows there is a risk of falling into a body of water, a PFD shall be worn by the persons whilst carrying out the task, at all times.

When a vehicle is required to work in the vicinity of a body of water, barricades or berms shall be erected to prevent the vehicle from inadvertently entering the water.

Adequate lighting shall be provided for all areas where work is to be performed in the vicinity of a dam or water source.

Any task that requires someone to enter water at a level over the barrier height requires approval from the Supervisor, a JHA completed for the task and a PFD shall be worn.

If any substance with the potential to damage the environment is spilt into or near a body of water, it shall be promptly dealt with and reported as an environmental incident.

4.3. Creek Crossings

Pedestrians shall not cross flooded waterways where the creek bottom is unknown and/or depth is greater than 350 millimetres. Depth gauges shall be provided on all waterway vehicle crossings.

Vehicles must not be driven through water covering a roadway unless the roadway has been inspected and deemed safe for travel, the water depth and roadway condition are known, and the Open Cut Examiner (OCE) has assessed the hazards and determined that the residual risk is acceptable in accordance with the mine's Safety and Health Management System (SHMS).

4.4. Sumps

The ground around sumps shall be prepared to limit slips, trips and fall hazards.

A physical windrow barrier shall be placed around the sump along with delineation to identify the sump during nightshift operations.

No person shall work alone whilst setting up the sump pump.

When a sump is no longer required, the void shall be backfilled with competent material. If this is not practicable, the sump’s location shall be recorded via GPS and included in the mine plan.

Mud-pits used in drilling shall be no deeper than 1.5 metres. Where livestock are present and the pits are deeper than 0.5 metres, mud pits shall be ramped or have cattle panels installed.

When a sump is no longer required, the void shall be backfilled with competent material. If this is not practicable, the sump’s location shall be recorded via GPS and included in the mine plan.

4.5. Access to Pumps

Emergency access shall be established and maintained to all bodies of water to ensure the safety of workers who may be required to carry out tasks in the area.

4.6. Retrieving Flooded Equipment

A risk assessment (JHA) shall be completed prior to accessing, moving or retrieving flooded equipment, plant or vehicles. The JHA should consider:

- currents.
- likely depth of water.
- possible obstructions.
- sediments and underwater landslides.
- local flora and fauna; and
- use of boats, PFDs, rescue lines, restraint harnesses, communication devices and rescue plans (in JHA) to protect persons involved.

5. ROLES AND RESPONSIBILITIES

SSE	Shall review and approve this procedure.
HST Manager	Shall ensure that all provisions of this procedure are implemented, and that compliance is achieved.
Managers/Superintendents	Shall be responsible for their area of operations and the implementation and application of this procedure. Provide adequate training, information, structure and supervision to ensure that this procedure is implemented. Carry-out a periodic review of activities to ensure the appropriate application and understanding of this procedure; and Ensure immediate and appropriate steps are taken to investigate and rectify any risks to health and safety arising from these activities.
Supervisors	Ensure all CMWs are familiar with, have access to and comply with the requirements set out in this procedure.
All CMWs (including visitors and contactor)	Shall comply with the requirements of this procedure.

6. REFERENCES

- AS 1657: 2018 Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- Coal Mining Safety and Health Act 1999 (Qld)
- Coal Mining Safety and Health Regulation 2017 (Qld)
- DNRME Safety Bulletin 122 Drowning hazards at mines
- DNRME Safety Bulletin 140 Drowning hazards in open excavations
- DNRME Significant Incident Alert 34 Drill rig tips over into water ditch

7. DOCUMENT CONTROL

Version	Date	Description	Document Controller
01	21/05/2020	Initial draft	Rachael Dacker
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