



Standard Operating Procedure Highwall Mining Flooding (inrush outrush)



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1. PURPOSE

The purpose of this procedure is to effectively manage the risks associated with flooding of the highwall mining operations area as required by Section 125(2)(e) of the Coal Mining Safety and Health Regulation, (2) The system must include standard operating procedures for the following—

(e) working safely in areas where there is a potential for flooding from any source

(4) The procedure mentioned in subsection (2)(e) must provide for ongoing risk assessment of the potential for inrush, outrush and flooding.

2. SCOPE

This procedure applies to all Coal Mine Workers and visitors entering the Highwall mining operations area

3. PROCEDURE

An inrush or outrush hazard involves the existence of significant quantities of water or other fluid material, any material that flows when wet or flammable or noxious gases, all possibly under pressure, that can swiftly flow or release highwall mining operations area.

An inrush can arise from four sources

1. Current drive being mined
2. Adjacent mined areas
3. Surface runoff
4. Man made structure failures such as turkeys nests, water tanks

4. POTENTIAL FOR INRUSH OUTRUSH

Inrush hazards from existing workings on the surface, including hazards such as;

- inaccessible areas of the mine (surface),
- areas of accumulated water or liquid materials in accessible areas (drives and surface) ,
- storage areas including dams,

Inrush hazards from other seams or strata, either above or below the working seams, including hazards such as;

- aquifers, buried channels and other natural sources of ground water,
- workings in seams above or below the seam being mined.

These hazards can be affected by faults, geological structures, bore wells or drainage holes, acting as conduits.

Inrush hazards due to surface sources including hazards such as;

- surface creeks, rivers,
- surface dams or reservoirs, or
- natural unconsolidated material that could flow when wet.

These hazards can be affected by faults, geological structures or active drainage holes, acting as conduits. Percolation should also be considered, as well as the magnitude of hazards affected by rainfall using a 1-in-100-year event as a guide

5. CONTROLS

Seams or Strata Hazards:

- Install drainage.
- Maintaining a septum of at least 50 metres of solid strata between the workplace and the assessed worst case position.

Surface Hazards:

- draining or diverting drains.
- Isolating surface openings, including subsidence cracks and other types of fissures, from potential water inrush.
- Sealing or otherwise isolating potential geological conduits.
- Sealing or otherwise isolating potential boreholes.



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- Maintaining adequate thickness of solid strata of at least 50 metres between the workplace and the assessed worst-case position.
- Designing and justifying any mine plan to work within the 50 metre solid strata cover which then becomes the control zone as per the regulations.

Manmade hazards

- Draining where appropriate.
- Detection and isolation of man-made potential conduits.
- Sealing or otherwise isolating potential geological conduits.
- Maintaining a septum / barrier of at least 50 metres of solid strata between the workplace and the assessed worst-case position.

Weather

Weather conditions and predictions shall be monitored via various web sites to assist in strategies for preventing flooding of the highwall mining operations due to a weather event.

The Highwall Mining Supervisor shall decide when to start, pull out or re-enter a drive due to existing or approaching weather conditions. Reference should be made to the VUL-TAR-004-Weather and VUL-TAR-005-Lightning.

6. MONITORING

While the mining process water ingress must be monitored and the VUL-TAR-HWM-125(2)(e)-Highwall Mining Water TARP activated if the following conditions occur.

Level 1 – Coal appears wet on the conveyor

Level 2 – Water observed on the cameras

Level 3 – Water detected above shovel of the Hog miner

7. DEFINITIONS

Authorised Person	A person who has the required competencies and has been appointed by the Site Senior Executive or delegate to carry out a designated scope of duties.
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.
Positive Communication	Communication between operators where unit numbers are utilized to communicate intentions. Personal names and/or hand gestures must not be used. For example: “Haul Truck 702 wishes to pass behind Dozer 028” “Dozer 028 copies that Haul Truck 702, you are cleared to pass” “Haul Truck 702 passing now”
Recognised Competency	A competency recognised by the committee as appropriate for the position or task.
SOP	Standard Operating Procedure.
SSE	Site Senior Executive.



8. ROLES AND RESPONSIBILITIES

SSE	Shall review and approve this procedure.
Highwall Mining Manager	Shall Establish & maintain this standard operating procedure
Superintendents	Shall Implement this standard operating procedure
Supervisors	Shall apply and monitor this standard operating procedure
All CMWs	Shall comply with the requirements of this procedure.

9. REFERENCES

- Coal Mining Safety and Health Act 1999 (Qld)
- Coal Mining Safety and Health Regulation 2017 (Qld)
- Recognised Standard 02: Control of risk management practices
- MDG 1024 Guideline for inrush hazard management

10. MONITORING and REVIEW

A review of this Procedure can be triggered by:

- A site or external event directly related to the document contents.
- A legislated change directly related to the document contents.
- A change of method, technology and/or operation change that may affect the accuracy of this document;
- Outcomes from inspections, audits, hazard identification, risk assessment, or other processes where the actions recommended are directly related to the document contents.
- A change required by the site SSE directly related to the document contents.

11. AMENDMENTS

Version	Date	Description	Document Controller
01	10/02/2025	Development and implementation	Kelly Jensen