

Black Mountain Mining

BMM-HSE-VOH-SOP-002E Emergency Preparedness Procedure

VZI Doc #	SBU Doc #	Document Type	Review Status
BMM-HSE-VOH-SOP-0023	BMM-HSE-VOH-SOP-002E	Standard Operating Procedure	Approved
Version	Confidentiality Level	Audit Standard	HOD
1.0	Internal (C3)	ISO 45001:2018	Catharina Kotze

Effective Date	Review Date	Review Cycle	Next Review Date
10 March 2025	3-10-2025	2 Years	3-10-2027

Content Owner(s)

Werner Coetzer (Emergency Co Ordinator | BMM)

Content Reviewer(s)

Gerrie Eloff (occupational Hygienist | BMM)

Content Approver(s)

Catharina Kotze (Head of HSE | BMM)

❖ **Change History**

Modified Date	Version	Modified by	Description of change
10/03/2025	1.0	W. Coetzer	New Document

Table of Contents

❖	Change History.....	2
❖	Definitions and Abbreviations.....	5
1.	POLICY STATEMENT.....	7
2.	RELEVANT / RELATED COP'S, STANDARDS AND PROCEDURES:.....	7
3.	OBJECTIVES.....	7
4.	SCOPE.....	7
5.	ACTION TO BE TAKEN BY PERSONS INVOLVED IN AN UNDERGROUND EMERGENCY:.....	7
5.1.1	Fire underground:.....	7
5.1.2	Accumulation of Flammable or Noxious Gases - Underground:.....	9
5.1.3	Gas Explosion:.....	9
5.1.4	Flooding - Underground.....	9
5.1.5	Power Failure – Underground.....	10
5.1.6	Major Falls of Ground Underground.....	10
5.1.7	Multiple Injuries to Persons:.....	11
5.1.8	Control Room Operator:.....	11
5.2	Surface Emergency Situations.....	11
5.2.1	Fire.....	11
5.2.2	Flooding.....	12
5.2.3	Cyanide Spillage.....	12
5.2.4	Chlorine Spill (Pella Water Board).....	13
5.2.5	Slimes Dam Failure.....	13
5.2.6	Chemical Spills: (Eg. Diesel, Acids Or Fuels).....	13
5.2.7	Bomb Threat.....	14
5.2.8	Accident On the N 14.....	17
5.3	Action To Be Taken In The Event Of An Extended Emergency Situation.....	17
5.3.1	Most Senior Official in Deeps Control Room:.....	17
5.3.2	Duties Of Hod's And Section Heads.....	17
5.3.3	Union Representatives.....	17
6.	RESPONSIBILITIES.....	17
7.	VALIDITY AND DOCUMENT MANAGEMENT.....	18

7.1 Document Validity..... 18

7.2 Document Management..... 18

7.3 Violation of Sop..... 18

7.4 Disclaimer..... 19

8. Review and Approval..... 20

❖ Annexures / Appendix..... 21

❖ Definitions and Abbreviations

Word / Phrase / Abbreviation	Definition
PEME	PEME is an acronym used in Black Mountain Mining and has the following meaning: - People, - Equipment, - Materials, - Environment, The use of this in written documentation helps to comply with Resources Clause 7 – ISO 9001, ISO 14001 and ISO 45001. It is advisable to include in all written documentation.
EMERGENCY	Is An Incident, Which May Endanger Life, Health to People, The Environment Or Damage To Property.
EARLY WARNING DEVICES	In an underground working place the manager shall provide a device whereby all persons are warned against impending danger associated with a fire or explosion.
RES-Q-PAC PROCEDURES	All persons must be trained in the use of Res-Q-Pac before being allowed to proceed underground on Deeps or Swartberg Mines Visitors, new employees and workers absent for more than 30 days have to be trained in this procedure together with emergency escape procedure before being allowed to go underground. Training Department to keep accurate records reflecting that every employee has been subjected to this procedure once every six months.
REFUGE CHAMBERS (ESCAPE SHAFTS)	All excavations and shafts where workers can exit the workings to surface must be treated as escape shafts. All persons must know the emergency evacuation procedure before entering the underground workings.
EMERGENCY EVACUATION PROCEDURES	This document contains guidelines only for the most obvious or problem emergencies that could be encountered by employees in the execution of their normal work on Black Mountain Mining The situation will dictate which appropriate action is to be taken by the individuals in the given circumstances, under the guidance of the most senior person in charge. Drills required to be done as specified for different workplaces from time to time must identify weakness and the emergency evacuation procedure for each section or working place on the mine, must be revised accordingly. Drill Frequency:

Word / Phrase / Abbreviation	Definition
	1. Sectional drills – quarterly 2. Simulations – One simulation per year to cover all identified major emergency situations

1. POLICY STATEMENT.

Black Mountain's Standard Operating Procedure's (SOP's) shall be written in a clear concise manner, communicated to all employees and applied accordingly.

2. RELEVANT / RELATED COP'S, STANDARDS AND PROCEDURES:

- a) COP 002: Emergency Preparedness and Response
- b) BMF 034 Emergency Preparedness and Response Call-out Procedure

3. OBJECTIVES.

This SOP's (Standard Operating Procedure) is to be put into operation during the evacuation of any area, surface or underground, for any reason, e.g. fire, gas, water, ignition, explosion or major collapse.

Any unplanned events, with the potential for loss, shall be generally known as "incidents."

This procedure is intended to assist the General Manager in bringing into being in the case of emergency or serious incident, a pre-arranged plan of action, so that all activities are properly co-ordinated in the interest of safety, health and environment.

The mine must be kept in a state of readiness at all times and appropriate provisions must be made to cover the holiday periods (Emergency standby lists and equipment).

It is essential that IN THE EVENT OF AN EMERGENCY at least one Manager, i.e. the General Manager, Mining Manager, Metallurgical Manager, Engineering Manager, Safety Manager or Technical Services Manager shall be present on the property. At least one Senior Official shall at any time be available as per the Standby Roster.

Where Engineering Manager is mentioned, the Section Engineer and/ or Engineering Supervisors are to assist him in executing his duties. At least one Senior Engineering person to be available as per the Standby Roster at any time.

4. SCOPE.

This procedure applies to all Black Mountain "Employees and Contractor Business Partners" as defined.

5. ACTION TO BE TAKEN BY PERSONS INVOLVED IN AN UNDERGROUND EMERGENCY:

Fire underground:

Action to be taken by Discoverer:

- 1) Inform nearest official and the control room and warn person's downwind of the situation by telephone or radio.
- 2) Attempt to extinguish, if fire is small.
- 3) If possible, isolate power supply

- 4) Withdraw all persons to a safe place and take a "Roll Call" to ascertain who is absent.
- 5) Conserve cap lamps
- 6) Do not attempt to enter smoke areas. Properly equipped Rescue Teams will attempt any rescue of persons trapped by the fire.
- 7) Barricade off affected area where practically possible.
- 8) If persons are exposed to smoke, fumes etc., they must "DON Res-Q-Pac's and proceed to a safe place.
- 9) WARN ALL OTHER SECTIONS that they may be affected, initially those on the return or "smoke" side of the fire, giving them such information as is available.

Action to be taken by Control Room Operator:

- 1) Notify the Paramedics
- 2) Notify the standby mining senior official
- 3) Notify the standby Safety Official
- 4) Notify the standby Ventilation Official

Fire Fighting:

- 1) If the fire is small and readily accessible from the intake side (fresh air side) the Manager may despatch a party to put it out.
- 2) An official will be in charge of the party, who will take with him a multi gas detector.
- 3) His duty will be to observe and record gas readings and to warn the working party if the readings show any signs of risk.
- 4) Should any persons be exposed to gas they must be withdrawn immediately to surface and report to the Medical Station.
- 5) These persons who have been gassed will then be sent to the Clinic for observation.
- 6) If it is a large fire, Rescue Teams may be called by the Manager to assess the situation

Subsequent Observation:

- 1) After the fire has been extinguished ventilation must be restored, and the site must be kept under continual observation for a period of at least 48 hours.
- 2) Patrols should be conducted under the supervision of Shift bosses, whose duty it will be to provide information to the VOH department.
- 3) Each Shift boss must have a multiple gas monitor and the necessary instrumentation in his possession at all times.

- 4) The time of re-entry of persons to areas that have been or may have been affected by the fire is to be fixed after consultation with the General Manager, and authorisation obtained in writing.

Accumulation of Flammable or Noxious Gases - Underground:

Action to be taken by the discoverer:

- 1) Remove all personnel to a safe area in fresh intake air or the nearest Refuge Chamber suspending ALL operations (in the affected area)
- 2) Notify Deeps Control Room giving as much detail as possible
- 3) Isolate all electric power and switches, if possible.
- 4) Barricade off affected area
- 5) Notify all persons downwind of the intersection to stop all operations and retreat to the nearest safe place or Refuge Chamber
- 6) Electrical power is not to be switched on until authorised to do so by the official in charge, after testing for gas.

Action by Control Room Operator:

- 1) Notify the Paramedics
- 2) Notify the standby mining Official
- 3) Notify the standby Safety Official
- 4) Notify the standby Ventilation Official

Gas Explosion:

In the event of an explosion of gas survivors shall:

- 1) Don their Res-Q-Pac's and escape to the nearest refuge chamber or escape shaft.
- 2) At all times remain calm and wait for Proto Teams to affect a rescue.
- 3) NO PERSONS TO BE ALLOWED TO GO INTO AREAS FILLED WITH SMOKE OR FUMES TO SEARCH FOR/OR RESCUE, PERSONS. (OTHER THAN RESCUE TEAMS)
- 4) TAKE ROLL CALL TO ASCERTAIN WHO IS PRESENT AND WHO IS MISSING
- 5) Attempt to inform surface if communication is intact.
- 6) Persons unaffected by explosion to evacuate mine as soon as possible in an orderly manner, according to the COP: Emergency & Response Plan.
- 7) As soon as POSSIBLE INFORM the control room of the Incident and the action taken.

Flooding - Underground

Action to be taken by the discoverer:

- 1) Raise alarm, and inform the nearest Official, giving as much detail as possible.
- 2) Inform the Deeps Control Room
- 3) Withdraw all persons from affected area, and areas in danger of being affected, to a safe area or the nearest Refuge Chamber
- 4) Take ROLL CALL to ascertain persons missing.
- 5) Initiate rescue operations for missing persons if safe to do so.
- 6) Institute removal of machinery wherever possible; to a safe place not likely to be affected by flooding.
- 7) Fence off danger area.

Control Room Operator:

- 1) Notify the Paramedics
- 2) Notify the standby Mining Official
- 3) Notify the standby Safety Official

Power Failure – Underground

Action to be taken by the discoverer:

- 1) Inform Deeps Control room.
- 2) Withdraw all personnel to place of safety or Refuge Bay.
- 3) Take ROLL CALL and ascertain if all persons are accounted for.

Control Room Operator:

- 1) Stop all operations underground and withdraw personnel to the Shaft Stations.
- 2) Notify the standby Engineering Official.
- 3) Notify the standby Mining Official.
- 4) Notify the standby Safety Official.

Major Falls of Ground Underground.

Action to be taken by the discoverer:

- 1) Remove persons from affected area to place of safety
- 2) Inform Deeps Control room giving as much detail as possible.
- 3) Do a Roll Call to ascertain those persons present or missing.
- 4) Fence off and secure affected area.
- 5) If escape route is blocked, and there is no means of exit: Remain calm

- 6) Get all personnel to a safe place or nearest Refuge Bay. Conserve Cap lamps.
- 7) Await rescue, doing only work necessary to support survival i.e.: treatment of injured and signalling to rescuers.

KEEP CALM, RESCUE IS IMMINENT.

Action by Control Room Operator:

- 1) Notify Paramedics
- 2) Notify standby Mining Official
- 3) Notify standby Safety Official.
- 4) Notify Rock Mechanics Engineer.

Multiple Injuries to Persons:

Action to be taken by the discoverer:

Should an accident occur where more than 1 person is injured:

- 1) Inform the Deeps Control room giving as much detail as possible.
- 2) Attempt rescue and treatment of injured
- 3) Arrange for delivery of extra first aid equipment, stretchers etc.
- 4) Arrange transport for injured to surface and then to the hospital.

Control Room Operator:

- 1) Notify Paramedics
- 2) Notify Standby Safety Official
- 3) Notify Senior Mining Official on standby
- 4) Notify Life Clinic

5.1 Surface Emergency Situations

5.1.1 Fire

Action to be taken by the discoverer:

- 1) If fire is small, attempt to extinguish.
- 2) If unable to contain the blaze, ensure all persons in building or in place endangered by the fire are evacuated to the Emergency assembly points.
- 3) All doors and windows to be closed and strongroom locked on evacuation.
- 4) Sound the alarm and inform the nearest official of relevant details.
- 5) Inform Deeps Control room of the fire giving as much details as possible.
- 6) Deeps control room to inform Plant control room of emergency
- 7) Do "Roll Call" so as to ascertain safety of all persons.

- 8) Do not enter smoke filled places to attempt rescue of persons, documents etc., unless properly equipped with breathing apparatus, and trained in the use of lifelines etc.
- 9) Barricade off affected area.

Action to be taken by Control Room Operator:

- 1) Notify the HOD on standby
- 2) Notify the standby Fire Team.
- 3) Notify the standby Safety Official
- 4) Notify the standby Township Official.

5.1.2 Flooding

Action to be taken by the discoverer:

- 1) Inform Deeps Control Room giving as much detail as possible.
- 2) Arrange for evacuation of persons endangered by flooding situation to place of Safety.
- 3) Do" Roll Call to ascertain those persons missing.
- 4) Should any Buildings, Stores, Offices, etc., - be in danger of flooding, arrange for evacuation of persons, vital equipment, documents or materials.
- 5) Fence off danger area.
- 6) Instigate isolation of power, and shutdown of operations other than those required to cope with the emergency.
- 7) If labour is available organise attempts for the damming and diversion of water - filling sandbags etc.
- 8) DO NOT ATTEMPT TO BLOCK ANY BOREHOLES, UNLESS AUTHORISED TO DO SO BY THE SENIOR OFFICIAL. (Danger of whirlpool action)

Action to be taken by Control Room Operator:

- 1) Notify the HOD on standby
- 2) Notify the standby Fire Team.
- 3) Notify the standby Safety Official
- 4) Notify the standby Township Official.

5.1.3 Cyanide Spillage

Action to be taken by the discoverer:

- 1) Withdraw all persons downwind of the spill
- 2) Notify the Control Room.

Action to be taken by the Control Room Operator:

- 1) Notify Paramedics
- 2) Notify Life Clinic
- 3) Notify Standby Safety official
- 4) Notify the Metallurgical Manager
- 5) Notify VOH Manager

5.1.4 Chlorine Spill (Pella Water Board)

Action to be taken by the discoverer:

- 1) Make alarm
- 2) Withdraw all personnel to a position up wind of the spill
- 3) Notify Deeps Control Room

Action to be taken by the Control Room Operator:

- 1) Notify Paramedics
- 2) Notify Pofadder Hospital
- 3) Notify the HOD on duty
- 4) Notify the Safety Official on duty

5.1.5 Slimes Dam Failure

Action to be taken by discoverer:

- 1) Notify Deeps Control Room
- 2) Withdraw all persons downstream of the dam wall failure.

Action to be taken by the Control Room Operator:

- 1) Notify the Paramedics
- 2) Notify Plant control room
- 3) Notify the Metallurgical Manager (Plant Official on duty)
- 4) Notify the standby Safety Official

5.1.6 Chemical Spills: (Eg. Diesel, Acids Or Fuels)

Action to be taken by the discoverer:

- 1) Stop the activity immediately
- 2) Remove all personnel from affected area to place of safety.
- 3) Ensure affected area and/or source is closed off and limit access to the affected area.
- 4) Take Roll Call to ascertain if all persons are safe and accounted for.
- 5) Inform Deeps Control giving as much details as possible.

- 6) Ensure safety of all persons, be aware of possible dangers - Acid, Toxic fumes etc., and take whatever precautions necessary to prevent inadvertent access, contamination, inhalation of fumes etc.
- 7) Ascertain which type of chemicals are involved and inform the Deeps Control Room.
- 8) As there are different procedures for different chemicals refer to the material safety data sheet.
- 9) If the spillage is within a bunded area ensure that the bund wall is able to maintain all spilt material and the lockout valve is closed
- 10) If the spillage is on uncovered soil ensure that the affected area is closed off or put in place some form of containment (sand walls etc.) to prevent any run-off or flow of petroleum or chemicals into the larger area.
- 11) Identify appropriate clean up measures and appoint relevant contractors to assist with the clean-up of the spillage.
- 12) Ensure that the spilt material has been removed, the area cleaned and rehabilitated and that the contaminated material has been disposed of correctly.

Action by Control Room Operator:

- 1) Notify out the HOD on standby
- 2) Notify the Environmental Department
- 3) Notify the standby Safety Official

5.1.7 Bomb Threat

Person taking the call:

Action on Threats:

- 1) The following proforma provide a checklist for actions carried out on receipt of a threat but, in addition to these, we need to be aware of our personal IA (Immediate Action).
- 2) The "local" search of our work station often reveals more than systematic organised searches, mainly due to the lack of adequate time and your knowledge of your own station
- 3) On receiving a threat, or to evacuate, carry out the following: -
 - Open all windows immediately (Draw curtains)
 - Switch off all electrical appliances (Computers, Air conditioners etc.)
 - Search your own workstation for anything unusual
 - Walk to your emergency assembly point, don't run
 - Do not re-enter the building unless the "all clear" is given.
- 4) Bomb threat checklist / telephone procedures and instructions

a) LISTEN - KEEP CALM - COURTEOUS - DO NOT INTERRUPT - DO NOT TRY TO TRANSFER CALL

b) MESSAGE (exact words if possible)

c) TIME _____

d) KEEP THE CALLER TALKING - AS QUESTIONS (SUCH AS)

- WHAT KIND OF BOMB IS IT? _____
- WHERE IS IT? _____ Building _____
Floor _____ other area _____
- DID YOU PUT IT HERE? _____ (If so)
- WHY? _____
- YOU KNOW PEOPLE WILL BE HURT WHEN IT GOES OFF? _____
- WHO ARE YOU? WHAT IS YOUR NAME? _____

e) ORIGIN OF CALL (Tick applicable item): Local/Long Distance/Call/ Box/ Internal/Other)____

f) CALLER: Male/Female Teenage/Young Adult/Mature _____

g) LANGUAGE USED: English/Afrikaans/Other _____

h) IDENTIFICATION CHECKLIST

ACCENT/	VOICE	CHARACTERS	SPEECH
English (SA)	Loud / Soft	intoxicated	Fast / Slow
English (UK)	High pitched / Deep	Distinct / Distorted	
Afrikaans	Pleasant / raspy	Stutter / Nasal	
Asian	Flat / Muffled	Lisp	
Black	Clear / Slurred		Educated/Uneducated
Other			

MANNER	BACKGROUND NOISES
Calm	Party atmosphere
Rational / Irrational	Quiet
Coherent / Incoherent	Trains
Deliberate	Aircraft
Laughing	Office machines
Abusive foul language	Music
Angry	Factory machines
Emotional	Voices
Agitated	Animal

i) Did the caller appear to be familiar with the buildings? Yes / No / Don't Know

j) IMMEDIATELY INFORM THE FOLLOWING PERSONS

- Security Manager
- General Manager
- Mining Manager
- Proto Manager
- Chief Safety Officer
- Fire Master

k) AS SOON AS YOU ARE RELIEVED COMPLETE THIS FORM TO THE BEST OF YOUR RECOLLECTION AND ABILITY. WRITE DOWN ANYTHING ELSE YOU CAN THINK OF. GIVE YOUR OPINION, IF POSSIBLE, AS TO WHETHER OR NOT IT WAS A HOAX CALL, AND ANY GENERAL IMPRESSIONS.

SIGNATURE

DATE

5.1.8 Accident On the N 14

Action to be taken by the Control Room Operator on receiving a call:

- 1) Notify the Paramedics
- 2) Notify the Head of Department on Standby.
- 3) Notify the VOH Manager

5.2 Action To Be Taken In The Event Of An Extended Emergency Situation

5.2.1 Most Senior Official in Deeps Control Room:

- 1) Establish control Centre at the Deeps Ventilation Offices.
- 2) Call out all Heads of Departments.
- 3) Call out all Section Heads.

5.2.2 Duties Of Hod's And Section Heads

- 1) Collect the red file applicable to your section, move to a separate office and follow instructions in the red file.
- 2) On completion of the red file, report to the Manager in Control.
- 3) Await further instructions.

5.2.3 Union Representatives

- 1) Notify Union representatives. We have an underground emergency due to an explosion/fire/flooding and require your attendance at the time.
- 2) On arrival at the mine, you should report to the Manager in Control at the Control Centre where you will be given all known facts pertaining to the incident.
- 3) Your attendance is required on a compassionate basis on behalf of the members of your Unions who are involved in the incident

6. RESPONSIBILITIES.

- The designated Custodian shall implement and maintain this Document.
- Department Heads shall ensure that this SOP is applied with due diligence.
- Deviations from this SOP shall be effected via approved "Deviations from Standard" documentation.
- Should additional precautions, due to special circumstances unique to that Department/Section, over-and-above the requirements of the Procedure be necessary, then the Department Head shall ensure that, in consultation with the relevant specialists, such requirements are specified in writing, conveyed over to the end users and recorded

7.1 Document Validity

This SOP is effective from 2025/03/10 and was last reviewed on 10-03-2025. This SOP will be reviewed every 2 Years.

7.2 Document Management

- 7.2.1 This SOP replaces any other SOP issued earlier by BMM to the extent specifically covered here. This SOP should be followed in letter and spirit.
- 7.2.2 BMM is committed to continuously reviewing and updating policies and procedures, based on the Entity's risk assessment and shall incorporate for any regulatory requirement which is required to do so.
- 7.2.3 Any amendment to this SOP or issue of any guidance or circular etc. under this procedure must be approved in writing by the approving authority as listed in this document.
- 7.2.4 BMM reserves the right to withdraw, modify or revise the SOP as a whole / partial without providing any justification for the same. On revision, it should be duly communicated to the personnel involved.
- 7.2.5 If compliance with this SOP ever conflicts with the applicable law, regulation, directives issued by the statutory and or regulatory authority, then compliance must be ensured with the law.
- 7.2.6 In order to ensure compliance or to address any known conflicts with the law or to address any specific local requirements, BMM may adopt local sub-procedures which shall be by way of addendum to this SOP and which shall be approved by the approver of this SOP. Proposing of such addendum shall be the responsibility of the respective Entity's competent authority who is at an equivalent level with the SOP owner as set out in this document.

7.3 Violation of Sop

- 7.3.1 BMM follow a "Zero Tolerance Policy" with respect to non-compliance with this SOP and/or any other SOP / guidance issued by BMM and its constituent Entities.
- 7.3.2 Violation of this SOP is subject to appropriate disciplinary actions which may include but not limited to termination of employment. This determination will be based on the facts and circumstances of each situation. Any accused of violation of this SOP will be given an opportunity to present their case prior to any determination of appropriate disciplinary actions. Violation of this SOP may also be subject to substantial civil damages, criminal fines and prison terms.
- 7.3.3 Each employee is responsible for ensuring that their conduct and the conduct of anyone reporting to them shall fully comply with this SOP. Compliances, both personal and by subordinates, will be a factor in periodic performance appraisals.

7.4 Disclaimer

- 7.4.1 This SOP issued by BMM is for internal compliance and does not create, nor shall it be construed to create, directly or implicitly, any rights, duties or obligations of BMM to any person, body or legal Entity.
- 7.4.2 This document and its contents are the copyright property of BMM. The release of this document to any third party outside BMM is strictly prohibited without prior consent.

8. Review and Approval

Content Owner(s)

Werner Coetzer (Emergency Co Ordinator | BMM) TimeStamp: 2025/03/10 3:34:24 PM ||

Content Reviewer(s)

Gerrie Eloff (occupational Hygienist | BMM) TimeStamp: 2025/03/11 7:28:44 AM ||

Content Approver(s)

Catharina Kotze (Head of HSE | BMM) TimeStamp: 2025/03/11 9:47:35 AM ||

This document was approved (in sequence) by the individuals above using electronic approval in our Document Control System.

Final approval status: **Approved**

Approvals were done electronically.

❖ **Annexures / Appendix**