

Black Mountain Mining

BMM-HSE-VOH-SOP-0098 Medical Emergency Response

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❖ Change History

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❖ 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.
AAWR	As and when required
ALS Paramedic	Advanced Life Support Paramedic
BLS Paramedic	Basic Life Support Paramedic
ISOS – International SOS	The service provider for Paramedics &/or medical evacuation relating to Injury on Duty.
SA Paramedics	The service provider responsible for medical evacuation relating to personal medical evacuations.

1. OBJECTIVES

The objective of this policy is to define roles and responsibilities of persons responsible for responding to medical emergencies, and to provide a detailed procedure according to which such medical emergencies are handled.

2. SCOPE.

This policy applies to:

- All employees, business partners and their nominated dependents residing in Aggeneys.
- All Aggeneys medical facility personal
- Medical service providers

3. PLANNING & CONTROL.

3.1. Designated Person In Charge Of Emergencies.

The designated emergency co-ordinator is the Ventilation and Occupational Hygiene Manager (Occupational Hygienist)

3.2. Response Plan.

3.2.1. Communication

All medical emergencies must be reported to the Deeps control room at telephone number 9999 (internal) and 054 983 9999 (external), or with the mine's two-way radio system. The control room operator will call out / notify the necessary medical emergency assistance.

Note: Medical emergency numbers are displayed as part of the standby list which is updated on a weekly basis. In addition, the mine's emergency number is displayed on the toolbox talk and in various locations throughout the mine and town.

3.2.2. Provision of Emergency Medical Care

No	Facility	Medical Personnel	Emergency Medical Equipment	Response Times
1	Aggeneys Clinic: Located in Aggeneys town (± 7 km from Deeps shaft & plant)	• Medical Practitioner (MP) – on site during office hours, but on 24 hour standby • General Medical staff – medical sisters on 24 hour standby • 24 hour Medical Emergency Services	• Clinic equipment – Advanced Life Support Medical equipment • Equipped Ambulance	• Deeps Shaft: 10 Minutes • Plant area: 10 Minutes • Gamsberg: 30 Minutes • Pella: 40 Minutes
2	Resus Bay: Located at Deeps Shaft	• 1 x Advanced Life Support Paramedic (ALSP) – on 24 hour standby • 2 x Basic Life Support	• Resuscitation Room / Emergency Medical Response Vehicle – Advanced Life	• Deeps Shaft: Immediate by trained First Aiders, followed by Paramedics depending of the location

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		Paramedic (BLSP) – the BLSP's is on a 12 hour shift rotation resulting in 24 hour site coverage	Support Medical equipment • Equipped Ambulances	of the incident • Plant area: 5 minutes • Gamsberg: 30 Minutes • Pella: 40 Minutes
3	Plant Medical Bays: Located at the Plant Cyanide Yard and Mil Areas	• First response will be trained First aiders employed in the Plant area • Paramedics and (if necessary) Life Health care personnel will be called to site should circumstances require	• First aid equipment – At demarcated areas in plant • Oxygen • Medication for Cyanide Poisoning	• Immediate by trained first aiders • Paramedic and (if necessary) Life Health care personnel response times as above

3.2.3. Additional Emergency Medical Equipment

In addition to the above facilities and equipment, the following is also available:

First aid equipment is situated as follows:

- Underground workings: In all Refuge bays, at shaft station areas, workshops and near entrances to stopes.
- Plant: Control Room, SO₂ Plant and Plant Workshops
- General Surface Areas: Stores, workshop areas, offices and at contractor facilities

3.2.4. Evacuation to Advanced Medical Care

In cases where more advanced medical care are required than that available at Black Mountain the following are in place:

3.2.4.1. Injury on Duty – Employees & Business Partners

- Ambulance: A dedicated ambulance is available for the transport of injured or ill persons. In addition, a further two ambulances can be mobilized from Gamsberg Mine if required.
- Air Evacuation: Black Mountain is contracted with a service provider for the provision of air evacuation with the necessary medical care should the need arise. Contact details for the alarm centre are included in the Black Mountain standby list.

3.2.4.2. Personal Medical Emergencies

Black Mountain Employees:

- Ambulance: A dedicated ambulance is available for the transport of injured or ill persons. Should the need arise a further two ambulances can be mobilized from Gamsberg Mine. In addition, the provincial ambulance can also be called from either Pofadder or Springbok.

- b) Air Evacuation: The service provider contracted by the medical aid schemes used by Black Mountain employees will be contacted by the treating Medical Professional. However, this is dependant on the terms and conditions as stipulated by the relevant medical aid schemes.

Business Partners:

Please Note – A great number of business partners do not belong to a medical aid scheme but make use of state facilities.

- a) Ambulance: A dedicated ambulance is available for the transport of injured or ill persons. Should the need arise a further two ambulances can be mobilized from Gamsberg Mine. In addition, the provincial ambulance can also be called from either Pofadder or Springbok.
- b) Air Evacuation: The decision for air evacuation will be as per state protocols for state patients.

3.2.5. Multiple Casualties

As the possibility for multiple casualties exists, the handling there-of will be as follows:

- a) Office Hours.
 - The doctor will take overall charge and assess (triage) the required medical attention to be provided. Should the ALS paramedic be at the emergency scene before the doctor, he/she will take charge in the interim until doctor arrive at scene.
- b) After Hours
 - The ALS paramedic will take charge and assess (triage) the required medical attention to be provided. Should a doctor be on site after hours the ALS paramedic will hand over to the doctor when he/she arrive at scene.

3.2.6. Simulation Exercises

Simulation exercises are carried out for various medical emergencies as determined by the mine's risk profile. This is logged and improvements as determined through the analysis of the simulations are incorporated in the medical response plan in order to improve response.

3.2.7. Application

This Medical Emergency Response Plan applies to employees, business partners and their designated dependants residing with them in Aggeneys.

4.1. First Aid.

Black Mountain's objective is to have all employees and full-time business partners trained and certificated to First Aid Level 1.

4.1.1. First Aid Skills

Certificates are valid for a period of three years. Retraining and certification will be done before the expiry date to ensure certificates are always current.

4.2. Advanced Life Support (als).

A contract has been entered between Black Mountain and SA Paramedics for the services of an ALS Paramedic and two Basic Life Support (BLS) Paramedics.

The Paramedics are stationed at Deeps shaft. The ALS Paramedic works during normal office hours, and is on 24 hour standby. The BLS Paramedics are on a 12 hour shift rotation.

4.3. Medical Facilities.

4.3.1. Personnel

The site doctor has a current Advanced Trauma Life Support (ATLS) qualification.

4.3.2. Equipment

Equipment &/or services are available as follows:

a) Aggeneys Clinic:

- The clinic is equipped to stabilize and maintain 10 casualties for up to 8 hours pending transfer to a specialist facility.
- An ambulance is available for the transport of casualties if necessary.
- Should the need arise a further two ambulances can be mobilized from Gamsberg Mine.
- Currently no laboratory facilities are established at the clinic.

b) Deeps Shaft Resus Bay:

- The Resus Bay is equipped with advanced life support equipment for stabilizing casualties (if necessary) before being transferred to the Aggeneys Medical Facility.
- The ALS Paramedic has a dedicated equipped emergency response vehicle.
- An ambulance are also stationed at the Resus Bay for response to and transport of casualties during emergencies.
- Should the need arise a further two ambulances can be mobilized from Gamsberg Mine.

c) Plant First Aid Stations:

- The first aid stations is equipped with first aid equipment, cyanide antidote kits and oxygen.

4.3.3. Blood & Intravenous Fluids

The following supplies are normally available:

4.3.3.1. Blood

- Clinic - 4 units of blood

4.3.3.2. Artificial Blood

- Clinic – 10 units Hemopure & 4 units Colloids (Hemacel)
- Resus Bay – 2 units Colloids (Hemacel)

4.3.3.3. Frozen Plasma (Platelets)

- Clinic – 0

4.3.3.4. Blood Donors

- No pool of blood donors is identified as no laboratory facility exists at Black Mountain

4.3.3.5. Other Intravenous Fluids

- Clinic – 20 units Normal Saline, 10 units Half-Normal Saline, 10 units of 5% Dextrose & 20 Ringers Lactate
- Resus Bay: Crystalloids – Normal Saline & Ringers Lactate.

4.3.4. Blood Grouping of Employees

All employees and permanent contractors are blood typed as part of the occupational medical surveillance. Record is kept in a person's occupational medical file.

4.3.5. Audit

Emergency medical response procedures are audited at least annually by the emergency co-coordinator and persons with appropriate medical expertise. Record of such audits will be kept in the VOH offices. In addition, it is also audited / assessed through simulations and audits by 2nd and 3rd party auditors, e.g: Peer reviews, Mines Rescue Services and International SOS.

Review of the emergency medical response also forms part of the annual Management Review process.

5. EVACUATION OF CASUALTIES.

5.1. Decision On Evacuation.

The decision to evacuate an injured or ill person(s) will be made by the most senior medical person on site, the receiving hospital and the ambulance / evacuation service. The following will be taken into account in making the decision:

- a) Consideration of severity of the condition
- b) Treatment capabilities of local facilities
- c) The referral centers
- d) The fitness of the patient to travel
- e) The availability of the necessary medical equipment or resources to enable a successful transfer

5.2. Ambulance Evacuation.

In order to transport patients to facilities with higher medical care than can be provided locally, the following is in place / are taken into account:

- a) Three ambulances are available for transport of patients to higher care facilities
- b) The level of care needed during transport will be assessed and the necessary medically qualified person will be send with the patient.
- c) Road conditions in general are good but care must be taken when driving, especially during night time, as wild animals do stray onto the roads.

5.3. Aircraft Evacuation.

Black Mountain is contracted with a professional service provider for air evacuation should the need arise, but the decision to transport by aircraft of injured or ill person will only be done for critical patients on recommendation of the most senior medical person on site:

- a) The type of aircraft will be determined by the service provider based on circumstances.
- b) As a minimum, aircraft will comply with the requirements of the guidelines issued by the Civil Aviation Act..

5.4. Service Contract.

A service contract is in place between Black Mountain and its medical service providers.

5.5. Accompaniment.

All patients being transported between Aggeneys & off-site facilities will be accompanied by a person with an appropriate level of medical training, e.g:

- a) Nurse or Paramedic during short trips
- b) Doctor with flight medicine training for air travel

6. VALIDITY AND DOCUMENT MANAGEMENT

6.1 Document Validity

This SOP is effective from 2009/06/30 and was last reviewed on 11-06-2024. This SOP will be reviewed every 2 Years.

6.2 Document Management

- 6.2.1 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.
- 6.2.2 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.
- 6.2.3 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.
- 6.2.4 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.
- 6.2.5 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.
- 6.2.6 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.

6.3 Violation of Sop

- 6.3.1 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.
- 6.3.2 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.

- 6.3.3 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.

6.4 Disclaimer

- 6.4.1 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.
- 6.4.2 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.

7. REVIEW AND APPROVAL

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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**