DOCUMENT APPROVAL

	Name	Designation	Signature	Date
Author	G Booyens	Stds Co-ordinator	G Booyens	27/11/2019
Approved	M Mkhwanazi	Vice President Beatrix		27/11/2019
Approved	JJ Barnard	Vice President Driefontein		27/11/2019
Approved	K Stead	Vice President Kloof Upper		27/11/2019
Approved	G Webber	Vice President Kloof Lower		02/12/2019
Approved	V Nundlall	Group Environmental Engineering Consultant		28/11/2019

Assigned To	Title	Due Date	Status	Related Content	Outcome
Vijay Nundlall	Please approve 2.1.13.1.1-Mandatory COP-Emergency Preparedness (Sibanye)	2016-10-05	Completed	2.1.13.1.1-Mandatory COP-Emergency Preparedness (Sibanye)	Approved by Vijay Nundlall

EE Standards Review meeting – Attendance Registers
16 September & 25 November 2021
REVIEW COMMITTEE

Full Name	Occupation	User Action	Timestamp
Johan Maass	EE Group Fire Master	Joined	9/16/2021, 8:56:20 AM 11/25/2021, 8:54:40 AM
Lebohang Chere	EE Manager Beatrix	Joined	9/16/2021, 8:54:20 AM 11/25/2021, 8:54:40 AM
Dave Farlam	EE Manager Burnstone	Joined	9/16/2021, 8:55:20 AM 11/25/2021, 10:04:04 AM
Andre du Plessis	EE Manager Driefontein	Joined	9/16/2021, 8:55:20 AM 11/25/2021, 9:01:06 AM
Mervin van Rooyen	EE Superintendent Cooke And Kloof Surface	Joined	8/26/2021, 8:52:38 AM 11/25/2021, 8:54:58 AM
Niekie Pieters	Safety Standards Officer	Joined	9/16/2021, 8:55:11 AM 11/25/2021, 8:54:40 AM
Jaco Papenfus	Safety Superintendent	Joined	11/25/2021, 8:54:40 AM

MANDATORY CODE OF PRACTICE FOR EMERGENCY PREPAREDNESS AND RESPONSE

This document is relevant to the following Operations and has been approved by the Respective Employers (4.1 Appointee) and Technical Specialists

Operations	Applicable		Mine Code
	Yes	No	
Beatrix	✓		**11178**
Burnstone	✓		**14840**
Cooke	✓		**14600**
Driefontein	✓		**10172**
Kloof	✓		**10344**

Covid-19

In view of the COVID-19 pandemic that struck the country and also impacted the mining industry significantly in March 2020, various protocols were developed in line with world and national health guidelines. These guidelines deal with amongst other issues, the promotion of awareness, screening and isolation of potentially infected persons and prevention of the spread of infection, all of which are contained in a Code of Practice that has been developed and adopted by the mines. Through the risk assessment process key risks that impact employees in the workplace were identified and minimum measures implemented to protect employees against the spread of infection. These measures include frequent sanitizing or washing of hands, maintaining social distancing, limiting of persons permitted to gather and the use of PPE in the form of gloves, masks and eye protection / face shields. This PPE forms the last line of defence and will be worn by persons when close contact is unavoidable between persons when a specific task may normally require two or more persons to conduct the work in a safe manner. As with the continual learning taking place world-wide with regards to improvements in combatting COVID-19, so too will the measures outlined, be adapted or improved on a continual basis

MINE HEALTH AND SAFETY ACT 29 OF 1996

[Assented to: 30 May 1996]

[Commencement Date: 15 January 1997- unless otherwise indicated]

9. Codes of practice

(1) Any employer may prepare and implement a code of practice on any matter affecting the health or safety of employees and other persons who may be directly affected by activities at the mine.

(2) An employer must prepare and implement a code of practice on any matter affecting the health or safety of employees and other persons who may be directly affected by activities at the mine if the Chief Inspector of Mines requires it.

(3) A code of practice required by the Chief Inspector of Mines must comply with guidelines issued by the Chief Inspector of Mines.

(4) The employer must consult with the health and safety committee on the preparation, implementation or revision of any code of practice.

(5) The employer must deliver a copy of every code of practice prepared in terms of subsection (2) to the Chief Inspector of Mines.

(6) The Chief Inspector of Mines must review a code of practice of a mine if requested to do so by a registered trade union with members at the mine, or a health and safety committee or a health and safety representative at the mine.

(7) At any time, an inspector may instruct an employer to review any code of practice within a specified period if that code of practice –

(a) Does not comply with a guideline of the Chief Inspector; or

(b) Is inadequate to protect the health or safety of employees.

Sibanye Stillwater Health & Safety Policy Statement

we are one Sibanye Stillwater

POLICY STATEMENT

SAFETY AND HEALTH

Prepared in terms of Section 8 of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) as amended. This policy is aligned to the group policy and is applicable to Sibanye-Stillwater South Africa Gold operations.

Sibanye-Stillwater strives for zero harm at its operations. The Company aims to eliminate the potential for fatalities, accidents and injury at the workplace and strives to minimise hazards inherent in the working environment in a reasonably practicable manner through implementation of the Health, Safety and Wellbeing strategy and embracing the CARES values.

The risks associated with mining as per section 5(2) of the MHSA are identified and dealt with as part of the overall risk management process. This process culminates in various control measures that are incorporated within management systems and includes establishing Codes of Practice, Standards and Procedures to which employee training programmes are aligned.

Description of the organisation of work (MHSA section 8. (1)(a)):
The Sibanye-Stillwater Gold operations use conventional mining methods in shallow to deep tabular ore bodies. The extraction and processing of underground ore, surface tailings and rock dumps is carried out on-site in metallurgical plants. The Gold operations are located in the West Witwatersrand region (Cooke, Driefontein and Kloof operations) of Gauteng, the Northern Free State (Beatrix operation) and in the Mpumalanga Province (Burnstone operation).

Sibanye-Stillwater is committed to the protection of all employee's health and safety (MHSA section 8. (1)(b)) and any person who is not an employee who may be affected by the activities of the mine (MHSA section 8. (1)(c)), through the implementation of it's strategy, which amongst other focusses on:

- Environment
  - Providing a workplace that is conducive to safe production.
  - Risk management in the workplace and surveillance of workplaces and employees.
- People
  - Fostering a strong safety culture by providing solid safe production leadership.
  - Ensuring that appropriate resources, training and personal protective equipment are provided to improve occupational health and safety.
  - Ensuring that employees and contractors have the relevant skills to perform work related tasks in a safe manner and that they are aware of their individual occupational health and safety obligations and rights.
  - Applying a consultative and constructive approach in interactions with stakeholders.
- Systems
  - Continually improving occupational health and safety performance through the setting and assessment of goals and taking into account stakeholder expectations, best practices, scientific knowledge and available new technology.
  - Complying with applicable legal requirements and with other requirements to which the organization subscribes.
  - Maintain strong safety systems, standards, procedures and critical controls.
  - Making this policy and its revisions, objectives and targets available to employees, contractors and other stakeholders.

Employees and contractors working on Sibanye-Stillwater operations play a fundamental role in achieving occupational health and safety objectives through:
- Their right to work in an environment where health risks are reduced and their duty to withdraw from and report an unreasonably unhealthy or dangerous situation.
- Taking ownership of occupational health and safety management programmes and initiatives and complying with documented standards and procedures.

Signed by RICHARD ALLEN COX
Signed at 2021-06-28 15:07:54 +02:00
Reason I approve this document

Richard Cox
EVP – South Africa Gold Operations

June 2021

COMMITMENT ACCOUNTABILITY RESPECT ENABLING SAFETY

1. TITLE PAGE

1.1 ***Name of Mine:*** Sibanye Stillwater Gold Segment

The Heading: *Mandatory Code of Practice for Emergency Preparedness and Response*

1.2 ***Statement:*** This Code of Practice was drawn up in accordance with the DMRE Guideline for the Compilation of a Mandatory Code of Practice for Emergency Preparedness and Response, reference number DMR 16/3/2/1-A5 issued by the Chief Inspector of Mines, dated 31 January 2011.

1.3 ***Mine Ref no:*** Document No: SER.EE.2.4B COP

1.4 ***Effective date:*** 31 January 2011

1.5 ***Revision Dates:***

Revision Dates	Revision Information
Revision 2 – November 2021	Item 5.3 – Specify shaft numbers per operation. Item 6 – Add definitions for CO, IOM, OEL, SRD and TWA. Item 8.1.1.1 – SPG: Gas Measuring Instruments. Item 8.1.1.3 – SPG: FPS 27 Fire Detection Systems. Item 8.1.1.3.1.2 – SPG: Recce Investigation Procedure. Item 8.1.1.3.1.1 – SPG: Duties of Control Room Operators. Item 8.1.2 – SPG: Rules of Life. Item 8.1.2 – SPG: Emergency Prep (Power and Flooding). Item 8.1.3 – SPG: Response for Treating Injured Persons. Item 8.1.4 – COP: Management of SCSRs. Item 8.1.4 – SPG: FPS 29 Refuge Bays. Item 8.1.4.1.1.2 – SPG: Emergency Control Room Admin. Item 8.1.4.2 – SPG: Procedure in the Event of a Surface Fire. Item 8.1.4.3 – SPG: Procedure with a Flammable Gas Explosion. Item 8.1.4.4 – SPG: Conducting Risk Assessments. Item 8.1.4.5.3 – SPG: Exploration Cover Drilling. Item 8.1.4.6 – COP: Prevent Flammable Gas Explosions. Item 8.1.4.7 – SPG: Shaft safe Declaration and Clearance. Item 8.1.4.9 – COP: OH Program on Thermal Stress. Item 8.1.4.10 – SPG: in the Event of a Fatal Accident. Item 8.1.4.12 – COP: Combat Rock Fall and Accidents. Item 8.1.4.12 – SPG: Seismic Withdrawal Procedure. Item 8.1.4.13 – SPG: Environmental Clean-up Hydrocarbons. Item 8.1.4.13 – SPG: Environmental Clean-up of Haz Chem. Item 8.1.4.13.4 – SPG: Catastrophic Release of HCN. Item 8.1.4.13.4 – SPG: Clean-up Spillage Reagent Cyanide. Item 8.1.4.13.4 – SPG: Clean-up Spillage Process Cyanide. Item 8.1.4.13.4 – SPG: Response Plan Sodium Cyanide.

	Item 8.1.4.13.5 – SPG: Offloading Caustic Soda. Item 8.1.4.13.5 – SPG: Offloading Milk of Lime. Item 8.1.4.13.6 – SPG: Emergency Chemical Laboratory. Item 8.1.4.14 – SPG: Radiation Emergency Preparedness. Item 8.2.1 – SPG: FPS 31 Fire Fighting Car (Proto). Item 8.2.1 – SPG: Management of Mines Rescue Proto Teams. Item 8.2.2 – SPG: Surface Fire Team Organization.
Revision 1 – March 2018	Routine revision of Mandatory Code of Practice following an Underground Fire Incident at Driefontein 1# Masakhane.
New COP – January 2011	Compiled in accordance with DMRE Guideline.

Note! *All sections in italic font are copied directly from the DMRE Guideline; the COP items are therefore in the same item sequence than the DMRE Guideline.*

Note! Ensure a copy of all SPG's referred to in this COP are available in the Emergency Preparedness file kept in the Emergency Control room. The file must be available on request from an IOM, Health and Safety committee member or Senior Manager. The Emergency Preparedness file may not be removed from the Emergency Control room.

2. TABLE OF CONTENTS

3. STATUS OF THE MANDATORY CODE OF PRACTICE

3.1 *This Code of Practice was drawn up in accordance with Guideline Reference Number DMRE 16/3/2/1-A5 issued by the Chief Inspector of Mines*.

3.2 *This Code of Practice is a Mandatory Code of Practice in terms of sections 9(2) and 9(3) of the Mine Health and Safety Act*,

3.3 *This Code of Practice may be used in an accident investigation or inquiry to ascertain compliance and also to establish if this Code of Practice is effective and fit for purpose*,

3.4 *This Code of Practice supersedes all previous relevant Codes of Practices, and*

3.5 *All managerial instructions, recommended procedures (voluntary COPs) including all standards on relevant topics, must comply with this Code of Practice and must be reviewed to ensure compliance*.

4. MEMBERS OF THE DRAFTING COMMITTEE

4.1 *In terms of section 9(4) of the MHSA the employer consulted with the health and safety committee on the preparation, implementation and revision of this COP*.

4.2 *As recommended the employer, after consultation with the employees in terms of the MHSA, appointed a committee responsible for the drafting of this COP*.

4.3 *The members of the drafting committee assisting the employer in drafting the COP should be listed giving their full names, designations, affiliations and experience. This committee should include competent persons sufficient in number to draft the COP*.

COP COMPILED BY:

The following people were appointed by Sibanye Gold Section 4 (1) Appointees in terms of the MHSA as required by DMRE documents reference number DMRE 16/3/2/1-A5.

Initial Committee – January 2011

FULL NAMES	DESIGNATION	QUALIFICATION	AFFILIATION	EXPERIENCE
Frank Haupt	Risk & Standards Superintendent Sibanye Gold	▪ Blasting & MO Certificates ▪ MRS – 20 years ▪ Loss Control Management ▪ IRCA Risk Management ▪ MQA & Mentorship	None	35 years
Vijay Nundlall	Head of EE – Sibanye Gold	▪ Blasting Certificate ▪ Certificate in MEC ▪ MPH (Occ. Hygiene) ▪ MSc Eng. (Mining)	MVSSA, SAIOH, ACGIH, SAIMM	31 years
Marthinus van der Bank	EE Manager Beatrix	▪ Certificate in MEC	MVSSA	19 years
Enver Hoosen	EE Manager Kloof	▪ Certificate in MEC ▪ Occupational Hygiene	MVSSA SAIOSH	22 years
Cassius Malebanye	EE Manager Driefontein	▪ Certificate in MEC	MVSSA	30 years

Mervin van Rooyen	EE Manager Cooke	▪ Certificate in MEC	MVSSA	30 years
Dirk van Greuning	OH Manager Sibanye Gold	▪ Certificate in MEC ▪ Diploma in Business Engineering Management ▪ BIOH Certificate in OH	MVSSA	40 years
Ramanku Cohen Tjale	Occupational Medical Practitioner	▪ MBChB (MEDUNSA) ▪ DOM &H (UP) ▪ PG-DIP Health (UCT) ▪ Certificate in Occ Health	SAMA	4 years
Israel Ngonyama	Occupational Medical Practitioner	▪ MBChB ▪ Diploma in Occupational Medicine and Health	HPCSA MMPA	22 years
James Blair Mwesigwa	Occupational Medical Practitioner	▪ MB ChB, DTM&H, ▪ Dip for Med FCF or Path ▪ MMed, MPH & DOH	HPCSA	3 years
Jameson Malemela	VP Health and Wellness	▪ MBChB, Medunsa; ▪ Diploma in Health (UP) ▪ Executive Leadership, ▪ Business Science (GIBS), ▪ Certificate in Fin Man (UJ)	HPCSA, SAMA, SASOM	23 years
Andy Ellis Cole	Consultant Health	▪ BSc, MBchB ▪ MBA, Dip OH		25 years

Review Committee – November 2021

FULL NAMES	DESIGNATION	QUALIFICATION	AFFILIATION	EXPERIENCE
Niekie Pieters	Risk & Standards Supervisor Beatrix	▪ Trade Fitter & Turner ▪ COMSOC 1 & 2 ▪ FMDP	None	29 years
Andre du Plessis	EE Manager Driefontein	▪ Blasting Certificate ▪ Manager's Certificate ▪ Certificate in MEC ▪ MRS – 15 years	SAIMM, MVSSA	34 years
Dave Farlam	EE Manager Central & Burnstone	▪ Blasting Certificate ▪ Certificate in MEC ▪ MAP (WITS) ▪ RPO Certificate	MVSSA	39 years
Lebohang Chere	EE Manager Beatrix	▪ Certificate in MEC ▪ RPO Certificate	MVSSA	36 years
Mervin van Rooyen	EE Superintendent Surface & Cooke	▪ Certificate in MEC ▪ RPO Certificate	MVSSA	38 years
Johan Maass	Group Fire Master Sibanye Gold	▪ Certificate in MEC ▪ L3 Certificate in Fire Science and Safety ▪ MAP (WITS) ▪ MRS – 4.5 years	MVSSA IFE SA	34 years

5. GENERAL INFORMATION

General information relevant to the mine must be stated in this section of the COP.

5.1 BRIEF DESCRIPTION OF THE MINES AND LOCATION

The Sibanye operations are situated in this unique and renowned sedimentary basin, which remains one of the world's largest gold producing regions.
Sibanye holds 100% of Beatrix, Kloof, Driefontein, Cooke and Burnstone Operations.

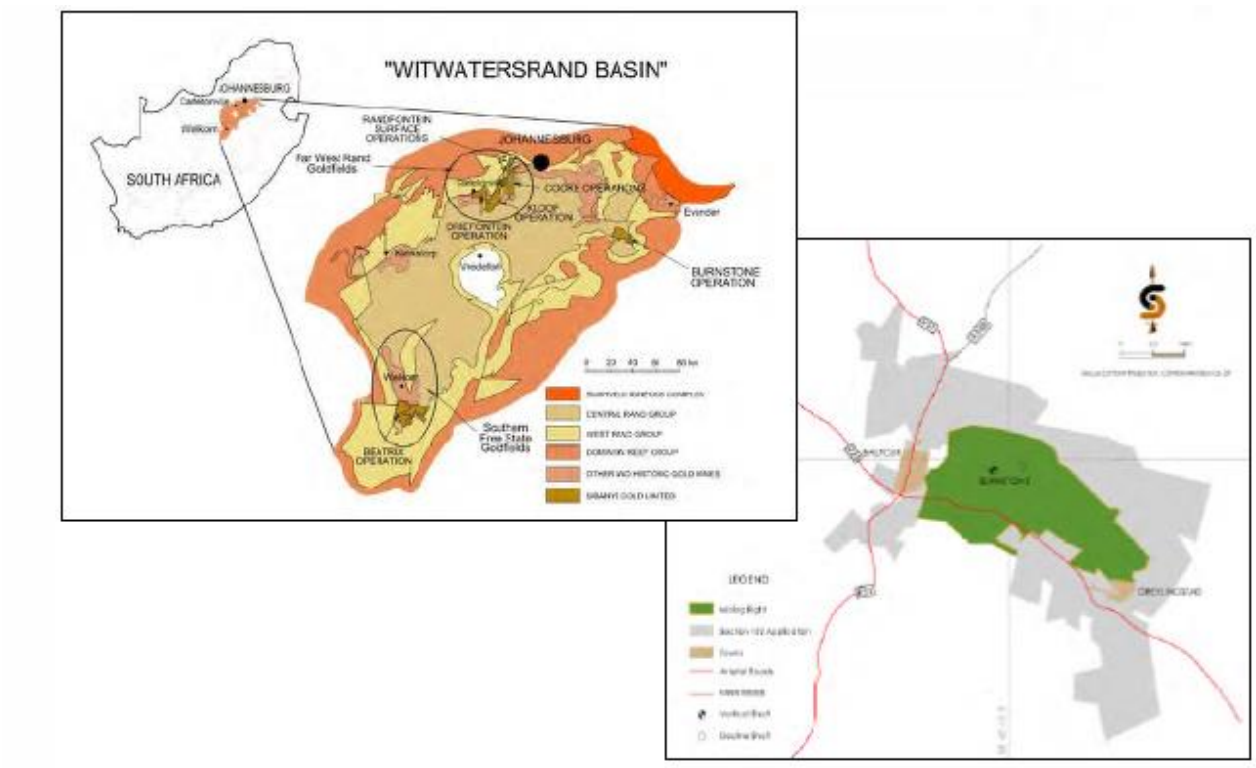
BEATRIX

Located in the Free State province of South Africa, some 240km south-west of Johannesburg, near Welkom and Virginia, Beatrix operates under new order mining rights covering a total area of 16,817ha. Beatrix is principally an underground mine with nominal surface reserves represented by surface rock dumps (SRDs) accumulated during the operating history of the mine.

BURNSTONE

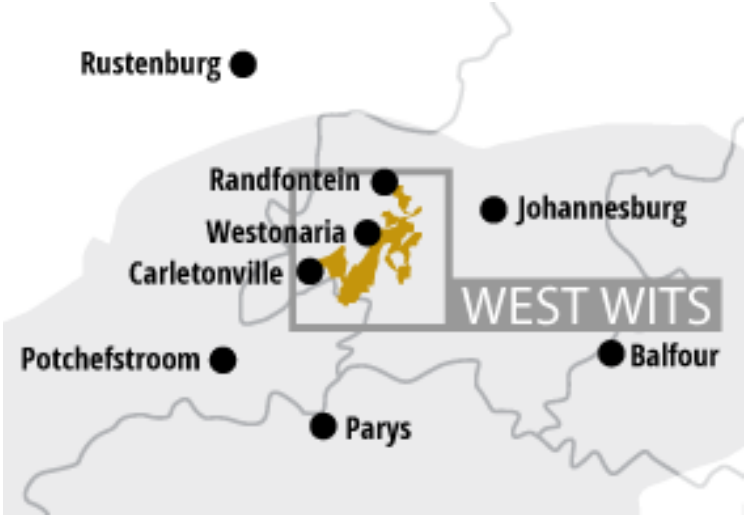
Burnstone is located in the South Rand Goldfield of the Witwatersrand Basin near the town of Balfour, approximately 75km east of Johannesburg in the Mpumalanga province of South Africa.
Sibanye acquired the Burnstone assets in April 2014, comprising two shaft complexes, namely the surface portal and mechanised vehicle access decline and the vertical shaft (shaft bottom at 495m below surface), as well as a 125,000tpm gold processing plant, the tailings storage facility and surface infrastructure to support a producing operation, albeit with areas still to be constructed.

First gold production is planned in the first half of 2022, only when sufficient reef bearing material has been stockpiled, will the metallurgical plant be started up.



COOKE

The underground mining activities at Cooke and the Randfontein Surface Operations (RSO) are located in the Randfontein district of Gauteng province, South Africa.
The current mine infrastructure comprises four care and maintenance shaft with the deepest operating level some 1,634m below surface (58 level at Cooke 4 SV Shaft).
Surface SRD material is treated at the Cooke and Ezulwini gold-uranium plant.



DRIEFONTEIN

Located on the Far West Rand, in the mining district of Oberholzer, some 70km south-west of Johannesburg in the province of Gauteng, South Africa, Driefontein was formed from the amalgamation of the East Driefontein and West Driefontein mines in 1999.

Driefontein has six operating shaft systems at depths of between 700m and 3,420m below surface and one metallurgical plant exploiting the Carbon Leader Reef, the Ventersdorp Contact Reef and the Middelvlei Reef.

KLOOF

Located in the Far West Rand mining district of Westonaria, some 60km south-west of Johannesburg in Gauteng province, South Africa, Kloof is the result of the consolidation of the Kloof, Libanon, Leeudoorn and Venterspost mines in 2000. Gold mining began in the area now covered by these operations in 1934.
The current mine infrastructure consists of five producing shaft complexes that mine open ground and pillars (white areas), with the deepest operating level some 3,347m below surface (45 Level at 4 Shaft), and two gold processing plants.

Note to operations: Each operation to include site specifics.

5.2 OPERATIONAL COMMODITIES PRODUCED

The main commodity produced at Sibanye Gold is Gold, with uranium as by-product.

- **Kloof & Driefontein**

  These 2 x Mines are licensed to Mine Gold bearing material.

- **Beatrix**

  The Mine is licensed to Mine Gold bearing material.

- **Burnstone**

  The Mine is licensed to Mine Gold bearing material.

- **Cooke Mine** (Gold & Uranium)

  The Mine is licensed to Mine Gold bearing material and Uranium.

5.3 MINING METHODS

The mining methods or combination of methods used at the mine must be listed. This section must discuss the degree of mechanisation, taking care to identify the potential and or sources that could give rise to an emergency.

- **Kloof Operation**

  The mine makes use of conventional mining at the majority of the shafts, mechanized mining at 4# Ikamva deepening section and SRD mining. The Operation consists of six shaft systems (1, 3, 4, 7, 8 & 10), six sub-shafts (SV1, SV2, 3, 4, 7 & 10) and two Metallurgical plants (KP1 & KP2).

- **Cooke Operation**

  The mine is in care and maintenance with SRD mining. The Operation consists of a four shaft systems (1, 2, 3 & 4), two Metallurgical plants (Cooke & Ezulwini) and one Uranium Plant (Ezulwini).

- **Driefontein Operation**

  The mine makes use of conventional mining and SRD mining. The Operation consists of six shaft systems (1, 2, 4, 5, 8 & 10), three sub-shafts (1, 4 & 5), one tertiary shaft (1) and one Metallurgical plant (DP1).

- **Beatrix Operation**

  The mine makes use of selective stoping methods for extracting the gold bearing reef using conventional mining methods and SRD mining. The North section makes use of hydropower in its lower stoping and development areas. The Operation consists of three shaft systems (1, 3 & 4), one sub-shaft (4) and one Metallurgical plant (BP1).

- **Burnstone Operation**

  The mine is designed for trackless mining consisting of a decline (single) mined to reef and connecting with a vertical shaft for through ventilation. Rock will also be hoisted up the vertical shaft. The operation consists of a vertical shaft system, decline from surface holed to the shaft and Metallurgical plant under construction.

5.4 *UNIQUE FEATURES OF THE MINE*

Unique features of the mine that have a bearing on this COP must be set out and cross-referenced to the risk assessment conducted.

No unique features exist at Sibanye Stillwater (Gold) that have a bearing influence on the COP.

5.5 OTHER RELATED CODES OF PRACTICES

Other related COP's and management standards must be reviewed concurrently in order to avoid conflict of requirements as laid down by the mine. The objective would be to have an integrated system.

CODES OF PRACTICES	DMRE Reference
Airborne Pollutants	DMR 16/3/2/4 – A1
Confined Spaces	DMR 16/3/2/4 – B4
Conveyor Belts	DMR 16/3/2/2 – B1
COVID 19	DMR 16/3/2/4 – B4
Cyanide Management	DMR 16/3/2/4 – A4
Emergency Preparedness	DMR 16/3/2/1 – A5
Fatigue Management	DMR 16/3/2/4 – B2
Fire Prevention at Mines	DMR 16/3/2/4 – B3
Flammable Gas	DME 16/3/2/1 – A2
Fall of Ground	DMR 16/3/2/1 – A3
Medical Incapacity	DMR 16/3/2/3 – A6
Mine Residue Deposits	DMR 16/3/2/2 – A1
Minimum Standard of Fitness	DME 16/3/2/3 – A3
Noise Occupational Hygiene	DME 16/3/2/3 – B8
Provision of PPE	DMR 16/3/2/5 – A2
Rail Bound Equipment	DMR 16/3/2/2 – B3
Right to Withdraw	DMR 16/3/2/1 – A6
Self-Contained Self-Rescuers	DMR 16/3/2/4 – A8
Thermal Stress	DME 16/3/2/4 – A2
Tipping and Draw Points	DME 16/3/2/2 – A6
Trackless Mobile Machinery	DMR 16/3/2/2 – B2

6. TERMS AND DEFINITIONS

Any word, phrase or term of which the meaning is not clear or which will have a specific meaning assigned to it in the COP, must be clearly defined. Existing and/or known definitions should be used as far as possible. The definition section should include acronyms and technical terms used.

6.1 ***COP*** *means Code of Practice*

6.2 ***Emergency*** *means a situation, event or set of circumstances at a mine that could threaten the health or safety of persons at or off the mine, and which requires immediate remedial action, such as evacuation, rescue or recovery of persons, to prevent serious injury or harm, or further serious injury or harm to persons.*

6.3 ***DMRE*** *means the Department of Mineral Resources and Energy*

6.4 ***MHSA*** *means Mine Health and Safety Act, 1996 (Act No. 29 of 1996)*

6.5 ***Place of safety*** *means any place, which, despite an emergency, can sustain life for the duration of the emergency and is adequate in size to accommodate the maximum amount of number of affected persons likely to be present in the area served by it.*

Such places can include, provide it remains safe despite an emergency, the following:

a) An intake airway commencing from surface of the Mine, which contains no combustible material or in which all combustible material in quantities sufficient to endanger or likely to endanger the safety of somebody is conveyed during the working shift; or

b) A selected place in the underground workings where additional self-rescuing devices (e.g. cache system) are stored ready for use, sufficient in number to provide for the number of persons likely to make use of such devices, and of adequate duration to reach any other place of safety; or

c) Refuge bays as stipulated in MHSA Regulation 16.6.

6.6 ASHAS means Automatic Seismic Hazard Assessment System

6.7 CO means Carbon Monoxide.

6.8 EE means Environmental Engineering

6.9 HazChem means Hazardous Chemicals

6.10 IOM means Inspector of Mines

6.11 MRS means Mines Rescue Services (Proto)

6.12 OEL means Occupational Exposure Limit, the TWA concentration for an 8-hour workday and 40-hour workweek to which nearly all workers can be repeatedly exposed to without adverse health effects (chapter 22 of MHSA).

6.13 OEL-C means OEL Ceiling limit, an instantaneous value, which may never be exceeded during any part of the working exposure (chapter 22 of MHSA).

6.14 OEL-STEL means Short Term Exposure Limit, a 15-minute TWA exposure, which should not be exceeded at any time during a workday even if the 8-hour is within the OEL-TWA (chapter 22 of MHSA).

6.15 SCSR means Self-Contained Self-Rescuer.

6.16 SDS means Safety Data Sheet

6.17 Sibanye Gold means Sibanye Stillwater Gold Segment.

6.18 SRD Surface Rock Dumps.

6.19 TWA means Time Weighted Average Exposure Limit

7. RISK MANAGEMENT

7.1 *Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work, and record the significant hazards identified and risk assessed.*

Significant hazards identified were risk assessed (Annexure A). *The risks identified in the risk assessment process are dealt with, having regard to the requirements of section 11(2) and (3) that, as far as reasonably practicable, attempts have been made to eliminate the risk, thereafter to control the risk at the source, thereafter to minimize the risk and thereafter, insofar as the risk remains, provide personal protective equipment and to institute a programme to monitor the risk.*

7.1.1 Risk Management requires the following to be considered:

a) Hazard Assessments (Identify the Hazards)

b) Risk Assessment (Assess the Risks)

c) Control Measures (Develop the Systems)

7.1.2 The Control Strategies:

a) Eliminate

b) Control

c) Minimise

This addresses the following:

- Competent on-going supervision
- Ensure Emergency Preparedness Safety Compliance
- Effective training of the workforce
- On-going awareness campaigns of Emergency Preparedness hazards

7.1.3 The Risk Assessment Process

A formal Base Line Risk Assessment process has been followed to identify all Emergency Preparedness and Response hazards.

The assessment has taken into account the following:

a) Refuge bays & Escape Routes in case of an Emergency
b) Identify the Geographic Working Place
c) Identify the Activities/Operations involved
d) Identify the Occupations involved
e) Identify the Hazard

In the risk assessment process all relevant information such as accident statistics, ergonomic studies, research reports, ventilation reports, occupational hygiene reports,

manufacturer's specification, approvals, design criteria and performance figures for all relevant equipment were considered.

Reference was made to Risk Management Protocols (RMP's) – Baseline Risk Assessment on Safety SharePoint.

7.2 *This COP considers all possible relevant information such as accident / incident statistics and analysis, locality of the mine and emergency services, ergonomic studies, research report, manufacturers' specifications, approvals, design criteria and performance figures for relevant equipment where applicable*.

Reference was made to Sibanye Risk Management Protocols (RMP's) – Accident / Incident statistics and analysis on Safety SharePoint.

Reference was made to Sibanye Gold Risk Management Protocols (RMP's) - Emergency Call-out Services procedures on Safety SharePoint.

7.3. *In addition to the revision required by section 11(4) of the MHSA, the COP will be reviewed and updated after every emergency (serious incident), altered circumstances, or if significant changes are introduced to the procedures, mining and ventilation layouts, mining methods, plant or equipment and material* or as per Document Control Procedure (5 Yearly).

7.4. All Revisions and updates of documentation will be done as per Sibanye Risk Management Protocols (RMP's) System on Safety SharePoint.

8. ASPECTS ADDRESSED IN THE CODE OF PRACTICE

The COP must set out how the significant risks, identified and assessed in terms of the risk assessment process referred to in paragraph 7.1, will be addressed. The COP must cover at least the aspects set out below, unless there is no significant risk associated with that aspect in relation to emergencies at the mine.

8.1 EMERGENCY PREPAREDNESS MEASURES

8.1.1 DETECTION AND EARLY WARNING SYSTEMS

In order to ensure that emergencies are detected as early practicably possible and persons are warned timeously of such emergency, the COP must cover at least:

a) Types and position of fixed detectors / early warning systems (localised alarms, stench gas, etc.) for the timeous detection and early warning of all identified possible emergencies e.g., fires, flooding / mud rushes, seismicity, gases, chemical / toxic / biological releases, lighting, power failures, etc.

b) Types and quantity, including back-up units, of personalised detectors / early warning systems, e.g. flammable gas measuring instruments, flammable gas warning devices, CO detectors, pagers, radios, etc.

c) Detailed procedures for personal issue of detectors / early warning systems (Guidance note for voluntary COP for Lamproom issued by Chief IOM).

d) Procedures to ensure actual settings of alarm levels remain effective.

e) Frequencies of maintenance, calibration and testing procedures.

8.1.1.1 Gas Measuring Instruments

Supervisory staff and predetermined occupations are issued with dual gas measuring instruments (flammable and CO gas) at all Sibanye Gold mines.

The gas measuring instruments are provided with the following alarm settings:

a) Flammable Gas 1.0%
b) CO gas first alarm 100 ppm
c) CO gas second alarm 300 ppm.

Refer to SPG: Control, Use and Maintenance of Gas Detection Instruments, SER.EE.2.4B, approved July 2021 or amended. The SPG cover the Control, Use and Maintenance of Gas Measuring Instruments. It also determines the persons required to be issued with an instrument.

8.1.1.2 Procedure in the event of a CO alarm by a hand held instrument

8.1.4.5.1 First response alarm at 100 ppm

When the CO concentration is more than 100 ppm, but below 300 ppm, an intermittent alarm is activated and the following must be done:

a) Immediately evacuate all persons. The alarm must be communicated to other workers by blowing on a whistle for 5 seconds with 5-second breaks.
b) Leave the working place in an orderly manner to the nearest refuge bay or fresh intake air area along the prescribed route. Do not panic.
c) Warn persons downstream of the affected area to ensure that all persons can withdraw safely.
d) Prevent persons from entering affected area by erecting a no entry barricade.
e) Once a place of safety is reached, immediately phone the Shaft Control Room Operator, giving him the following information:

- Who you are.
- Where you are and the telephone number.
- The nature of the emergency.
- Number of persons involved.
- Number of persons, if any, who are injured.

f) Remain at the telephone and await further instructions.
g) Take a roll call to ensure that all workers can be accounted for.

h) Ensure not more than 10% of available cap lamps are in use at a time.
i) Remain at the refuge bay or fresh air area until officially instructed, by the Manager in Control, that the area is safe or until rescued by a Team or Brigade.

8.1.4.5.2 Second response alarm at 300 ppm

Normally the alarm level at 100 ppm will be activated some time prior to the 300 ppm continuous alarm. Conditions could however arise where these alarms could be activated within a short period of one another.

When the 300 ppm continuous alarm level is reached, the following must be done:

a) Immediately instruct all workers to don their SCSRs according to the procedures to which they have been trained as per COP.
b) Prior to donning his/her self-rescuer, the supervisor can warn other workers to don their SCSRs. This cannot take place over an extended period as it may endanger the life of the supervisor should he be over exposed.
c) Proceed in a calm and orderly manner to the designated refuge chamber or fresh air intake.
d) On reaching a place of safety phone the Shaft Control room operator immediately, giving him the following information:

- Who you are.
- Where you are and the telephone number.
- The nature of the emergency.
- Number of personnel involved.
- How many persons, if any, are injured.

d) Remain at the telephone and await further instructions.
e) Take roll call to ensure that all workers can be accounted for.
f) All persons to remain calm in the refuge chamber and follow the instructions as indicated on the refuge chamber notice board.
g) Ensure not more than 10% of available cap lamps are in use at a time.
h) Remain at the refuge bay or fresh air area until officially instructed, by the Manager in Control, that the area is safe or until rescued by a Team or Brigade.

Note! Used SCSR's are not to be re-used and must be stored safely in a dry area. Do not allow them to lie around in drains or water. Try to keep all parts of SCSR together and bring to surface with you.

8.1.1.3 Procedure in the event of an alarm from underground fire detection system at the central control room

As far as practicable, all Sibanye Gold mines are equipped with an extensive electronic fire detection system with the following minimum coverage:

a) Workplace Cover: current working stopes or stoping lines (levels and lines for pin-pointing of fires),

b) Fire Zone Cover: general return air from workings or worked-out areas with safe access the heads.

c) High-risk Installation Cover: (e.g. hoist rooms, conveyor belts, main substations, pump chambers and underground refrigeration plants).

Refer to Fire Prevention SPG: Section 27 for Fire Detection Systems, SER.EE.2.4B, revised November 2019 or amended. This SPG cover the installation, maintenance and procedures related to Fire detection systems.

8.1.1.3.1 Action in the event of an alarm during the main shift

8.1.4.1.1.1 Central Control Room Operator:

In the event of an alarm the following must be carried out:

a) Note the source of the alarm from the fire detection system and determine whether it is carbon monoxide or flammable gas;
b) Record the analogue name, the locality, the value and the time of the alarm;
c) Contact the Shaft Control room operator and give the recorded information:
d) Continue to monitor the alarm values and keep the telephone line available for any calls concerning the alarm.

Central Control room operators are appointed at each operation, dedicated and responsible to monitor all underground fire detection systems for such operation.

Shaft Control room operators are appointed at each production shaft, responsible to monitor the underground fire detection system as part of his/her other duties.

Refer to SPG: Duties of Control Room Operators Responsible to Monitor Fire Detection Systems, SER.EE.2.4B, revised May 2019 or amended. The SPG deals with the general duties of Control Room Operators responsible to monitor Fire Detection systems and the call out procedure required in case of a Fire alarm.

8.1.4.1.1.2 Environmental Engineering Superintendent:

Carbon Monoxide Alarm

A CO alarm during the main shift will indicate the possible occurrence of a fire:

a) Confirm results by checking back-up fire detection heads and report to the EE Manager, Operations Manager or Shaft Manager.
b) Pinpoint most likely affected area, identify suitable inspection route/s and send a recce team/s to investigate with approval from the Manager in Control.
c) Immediate arrangements to be made to withdraw persons from affected area.
d) Proceed with firefighting procedure with approval from the Manager in Control.
e) Review the Fire Zone Contingency plan for the affected area, compile a sealing plan for the affected area, implement on approval from the Manager in Control.

Flammable Gas Alarm

a) Arrange for a methane survey in the affected area after which the necessary steps must be taken to clear it.

Refer to SPG: Recce Investigation Procedure, SER.EE.2.4B, revised October 2021 or amended. The SPG defines the procedures required for reconnaissance teams, when planning to enter abandoned areas or temporary / permanently stopped areas.

8.1.4.1.1.3 Shaft Control Room Operator:

Carbon Monoxide Alarm

a) After receiving the relevant information from the Central Control room operator or the person who reported the incident, contact the following persons and give them recorded information. The affected area must also be contacted and arrangements made to withdraw people:

- EE Superintendent or EE Manager
- Shaft Manager, Operations Manager and Safety Manager**.**

b) Contact Banksman to keep cages available for emergency transport.
c) Inform Banksman not to send anybody underground until further instruction.

Flammable Gas Alarm

Confirm whether the EE Superintendent / EE Manager has been contacted. If positive, no further arrangements are required.
If negative, locate the EE Official and Mine Overseer on duty who will be required to investigate the methane alarm.

8.1.1.3.2 Action in the event of an alarm during the off-shift period

8.1.1.3.2.1 Central Control Room Operator

In the event of an alarm, the following must be adhered to:

a) Note the source of the alarm from the fire detection system and determine whether it is carbon monoxide or flammable gas
b) Record the analogue name, the locality, the value and the time of the alarm.
c) Contact the following persons and give them the recorded information:

- Shaft Control Room Operator
- EE Superintendent on duty

d) Continue to monitor the alarm values and keep the telephone line available for any calls concerning the alarm.

Flammable Gas Alarm

a) Confirm with the Shaft Control room operator that the standby EE Official has been contacted.
b) Provide the shaft control room operator with any relevant information required.

Carbon Monoxide Alarm

a) Confirm with the Shaft Control room operator that the carbon monoxide alarm has been acknowledged.
b) Provide the shaft control room operator with any relevant information required.
c) Monitor the alarm level until such time when conditions again normalized.

8.1.1.3.2.2 Shaft Control Room Operator

Methane Alarm

a) After notified of the methane alarm: Call out the EE Official on standby and supply full details of the alarm condition. Contact the Mine Overseer on duty.

Carbon Monoxide Alarm

a) After being receiving the fire alarm from the Central Control room operator, or from the person who reported the fire alarm, call out the following personnel:

- EE Official on duty

- EE Superintendent on duty
- Mine Overseer on duty
- Shaft or Operations Manager on duty

b) Contact underground working places affected, ensure persons are withdrawn.
c) Keep cages available for emergency transport

8.1.2 COMMUNICATION SYSTEMS

Sibanye Gold mines are all equipped with the appropriate communication systems to deal with an emergency and must cover at least the following:

a) Type and position of a system to enable effective communication to deal with an emergency, including arrangements for a back-up system.
b) Arrangements for communications from the mine to private institutions.
c) The testing the effectiveness of communication systems on a frequent basis.

Extensive telephone networks are in place at all production shafts and are available between the shaft control room and the station telephones. Emergency telephone numbers are posted at the underground stations and behind shift gates.

All Refuge bays are equipped with telephones, which must be rectified within 24 hours if found faulty, included as minimum for life sustaining in the Rules of Life.

All telephone networks are dependent on the Engineering network down the mine to the respective levels, refuge bays, waiting places, etc. In the event of a major power failure, electrical power will be restored within an hour when emergency generators are started up.

Refer to SPG: Lomtheto Yena Phephisa Lo Msebenzi Kawena – Rules of Life, Serv.Gen.2.4A, revised June 2021 or amended. These Rules provide support to safety management system and may not be broken under any circumstances.

Refer to SPG: Emergency Preparedness (Power and Flooding), Eng.2.2C, revised July 2021 or amended. This SPG cover the minimum requirements for Emergency Preparedness during flooding and power failure by Eskom as well as the maintenance an inspection requirements of generators.

8.1.3 EMERGENCY MEDICAL CARE

In order to ensure that appropriate medical care and facilities are readily available to deal with an emergency, the COP must cover at least the following:

a) Arrangements for the provision of emergency medical care, including the locality of the facilities, provision of suitably trained medical persons, response times, capabilities to treat and evacuate multiple injured persons, etc.
b) Availability, locality, quantity and variety of emergency medical equipment.

Emergency Medical Services (EMS) are in place for all Sibanye Gold operations, any Control room operator can contact EMS on any time or any day. Paramedics will be called out with the relevant Emergency Medical practitioner if required.

Refer to SPG: Emergency Response for Treating Injured Persons, SurfGen.2.5G, revised May 2018 or amended. This standard provides for the minimum requirements in terms of the initial response, assessment and treatment of persons involved in mine accidents or medical emergencies on mine premises.

8.1.3.1 Procedure for Control Room Operators

Ensure that the following procedure are followed for effective record purposes.

a) Log emergency call.
b) Time.
c) Place.
d) Relevant Mine Official and contact number.
e) Nature of emergency.
f) Approximately the number of people involved.
g) Dispatch the nearest Emergency Service Provider (EMS) crew (e.g. ER24).
h) Inform the HOD of status.
i) Hospital Admin / Clinic
j) Casualty for preparation.
k) If the number of people involved is greater than capability, then summon help with authorisation of HOD / Case Managers.

8.1.4 MINE EVACUATION AND ESCAPE PROCEDURES

In order to ensure the safe evacuation and escape of affected persons to a place of safety in the event of an emergency, the COP must cover the following:

a) Procedures for the escape and/or rescue of persons from e.g. single and multiple entry working places, surface working places, confined spaces, elevated places, etc. and
b) Provision of places of safety, including the locality, quantity, distance in relation to working places and the provision of life-sustaining facilities, such as food, potable water, breathable air, etc. Consult the document issued by COMRO "ResQpacs; How to calculate safe travelling distances".

Only SCSR's that comply with the minimum performance duration tests at CSIR are used for the respective Sibanye Gold operations. SCSR's are tested annually as required in MHSA regulation 16.4(1), minimum duration is 30 minutes.
All employees and contractors are issued with his/her own SCSR with visitors issued for the specific day. No person may proceed underground without a SCSR.

Refer to COP: Management of Self-Contained Self-Rescuers, SER.EE.2.4B, revised June 2020 or amended. The COP address all aspects set out in this section unless there is no significant risk associated with that aspect in relation to deployment of SCSR's at the mine.

The distance from the furthest working to the nearest refuge bay may not exceed 500m (industry standard 750m) to cater for travelling in hard rock mining environment. No work may be conducted in a working place if the refuge bay is not life sustaining as stipulated in the Rules of Life.

Refer to SPG: Inter Shaft Underground Evacuation of Personnel, SER.EE.2.4B, revised November 2021 or amended. The SPG provide a framework to assist the mine in preparation for emergency response measures where inter-shaft escape ways are necessary, in order to reduce and control the risks that may arise in the event of an emergency.

Refer to Fire Prevention SPG: Section 29 for Refuge Bays, SER.EE.2.4B, revised February 2020 or amended. This SPG deals with the establishing, construction and equipping of Refuge bays. Refuge bays must comply with the Mine Health and Safety Regulation 16:6(2).

8.1.4.1 UNDERGROUND FIRES

8.1.4.1.1 Rescue Operations and Fire Fighting

8.1.4.1.1.1 Central and Shaft Control Room Operators

The following steps must be followed when a call from underground has been received, reporting a fire or incident where people are trapped underground in refuge chambers or other places of safety, which require rescue operations:

a) Action in the event of an alarm during the main shift, adhere to the duties and procedures detailed in item 8.1.1.3.1.
b) Action in the event of an alarm during off-shift period, adhere to the duties and procedures detailed in 8.1.1.3.2.

8.1.4.1.1.2 Duty Mine Overseer

On receiving a report of a fire or related incident, the following must be adhered to:

a) Contact the Operations Manager
b) Call out a Scribe and confirm that the EE Superintendent / EE Manager as well as the Proto Manager have been called out
c) Obtain as much information about the incident as possible and find out what action has already taken place to ensure the safety of persons underground
d) Proceed to the Emergency Control Room

Refer to SPG: Emergency Control Room Administration, EE.2.4B, revised March 2021 or amended. The SPG to stipulate all documents and equipment required to ensure emergencies are dealt with in a safe and efficient manner.

8.1.4.1.1.3 First Senior Official to arrive at control

a) Establish control and assume command until relieved by Mining or Operations Manager who will take control of the Emergency Control Room.
b) Obtain as much information as possible and determine what has been done.
c) Ensure that the following people have been called out:

- EE Superintendent / EE Manager
- Mining Manager / Operations Manager
- Engineering Manager / Engineer
- Proto Manager
- Scribe
- Stores
- Human Capital.
- Chief Safety Officer, ensure that this code is being adhered to.

8.1.4.1.1.4 Immediate action by the Manager in Control

a) Arrange for the Scribe to record the progress of operations.
b) Determine where persons are trapped underground and the approximate number of persons at each location.
c) The dispatch of MRS (Proto) teams underground to strategic locations shall be at the discretion of the Manager in control.
d) If the fire or incident is not located, Proto teams are to be sent underground to locate the fire or incident. These teams must:

- Travel on a defined route;
- Have means for the detection of gases;
- Make use of a telephone, radio or messengers to keep control informed;
- Do not take risks.

e) When it is determined that rescue teams cannot reach the fire/incident area, additional Proto teams are to be called out without delay.
f) The Proto teams are to rescue the trapped persons as per MRS Code of Recommendations and are the highest priority.
g) The persons who were trapped are to be brought to surface immediately after which a count must be made of all persons.
h) The Clinic / EMS will examine all rescued persons and take necessary action.

8.1.4.1.1.5 Duties of the Operations Manager

When it has been established that there is an emergency:

a) Check to what extent duties and rescue operations have been carried out
b) Take charge of control
c) Notify the Mine Rescue Service
d) Check that the Engineering Manager/ Engineer has notified ESKOM in order to prevent possible power cuts involving the main surface fans
e) Arrange that all materials are ordered against a special emergency number and appoint a senior official to countersign all requisitions
f) Appoint a person in the control room to arrange material transport
g) Arrange surface transport helpers
h) Establish teams on different levels under the supervision of mining official to assist rescue teams when necessary
i) Draw up a roster to ensure the continuous availability of the above personnel Ensure that the following persons are called out:

- EE Superintendent / EE Manager
- Clinic Superintendent
- Mine Overseer
- Chief Surveyor
- Stores Controller
- Human Capital Manager / Superintendent
- Engineering Manager
- Security Manager
- Safety Manager

j) Ensure that each Head of Department compiles a duty roster for their personnel, in consultation with control

8.1.4.1.1.6 Duties of the MRS Liaison Officer (if required)

a) Call out Mine Rescue teams (Proto)
b) Liaise between Management and Rescue Teams
c) Arrange for outside rescue equipment where necessary

8.1.4.1.1.7 Duties of the Scribe

a) Maintain a written record, in a duplicate book, of the progress of the operations
b) Record all instructions given. Note down the time and to whom given
c) Record all messages received. Note down the time and from whom
d) Record all materials ordered for the emergency operations
e) Record the names of persons or their mine number who are involved in all rescue, search or working parties, with the times

of dispatch, routes assigned, tasks allotted and time limits for returning or reporting to control

8.1.4.1.1.8 Duties of the EE Superintendent

a) Call out staff required
b) Provide rescue plans, furnished with all the necessary information
c) Check that the main and booster fans are in operation and arrange with the Engineer to have an Electrician available on standby
d) In the event of a fire, arrange for gas testing equipment to be available
e) Arrange with Mine Overseer's to place guards at strategic areas underground to prevent inadvertent entry into affected areas
f) Firefighting equipment available

8.1.4.1.1.9 Duties of the Shaft Engineer / Engineering Manager

a) Call out the required engineering staff
b) Arrange for radio communication sets to be available, where required
c) Check all underground and surface telephones
d) Arrange for artisans to be available for any necessary construction work
e) Arrange for transport of equipment as required

8.1.4.1.1.10 Duties of the Human Capital Manager / Superintendent

a) Arrange for a Security Officer to direct and guard cars of visiting rescue teams
b) Arrange for sufficient food and refreshments for all rescue teams when arriving at the mine as well as when coming out from underground. Refreshments should be made available to persons working in control
c) Arrange for change house facilities to be available to visiting teams
d) Arrange for the Clinic Superintendent to be available
e) Notify the Unions and ensure the labour force is kept informed
f) Arrange for crush supervision
g) Arrange for a Human Capital Officer to be on duty
h) Keep a record of all employees sent underground
i) When the rescue operations are complete, check if all employees have been accounted for and notify the senior official in charge of control

8.1.4.1.1.11 Duties of the Stores Controller

Keep main store open on a 24-hour basis.

8.1.4.1.1.12 Duties of the MRS Proto Captains

Ensure that all firefighting / rescue operations preparations and actions are done in accordance with the MRS Code of Recommendations.

8.1.4.2 SURFACE FIRE FIGHTING PROCEDURES

Refer to SPG: Procedure in the event of a Surface Fire, SER.EE.2.4B, revised March 2017 or amended. The SPGs deal with the procedures in the event of a surface fire and the surface fire drill inspection list.

8.1.4.3 FLAMMABLE GAS EXPLOSIONS

Refer to SPG: Procedure to follow with a Flammable Gas Explosion, SER.EE.2.4B, revised May 2019 or amended. The SPG deals with the procedures and actions required when a flammable gas explosion occurs during or between shifts, and the duties of relevant persons.

8.1.4.4 TOTAL POWER FAILURES

The definition of a total power failure is when the Mine loses all power from ESKOM.
Indications of this are:

a) All power to lights and plugs on surface go out,
b) All Winders, Compressors, Refrigeration Plant and Main Fans trip.

Refer to SPG: Emergency Preparedness (Power and Flooding), Eng.2.2C, revised July 2021 or amended. This SPG cover the minimum requirements for Emergency Preparedness during flooding and power failure by Eskom as well as the maintenance an inspection requirements of generators.

Refer to SPG: Conducting Risk Assessments, Gen.Surf.2.4A revised February 2021 or amended. Take full control and responsibility for all HT switching operations as per Shaft or Site Specific Procedures and adhere to risk assessment.

8.1.4.5 FLOODING OR INTERSECTION OF EXCESSIVE WATER

8.1.4.5.1 Intersections of Excessive water

Every shaft shall have a water shutdown procedure approved by the shaft Engineer and kept in the control rooms. The valves and their positions need to be clearly indicated on a plan, procedure and demarcated on site.

a) The following sources of water need to be taken into account:
b) Service water supply valves.
c) Cascade dam valves on all stations.
d) Controllable fissure water.

e) Inrush service water from section.
f) Monitor dam levels
g) Build cofferdams and block off drain holes if needed
h) Monitor water levels in shaft bottoms and withdraw people when necessary
i) Close water doors if applicable
j) Ensure as far as possible, availability of conveyance's for personnel involved in implementing emergency controls
k) All operations (shafts) need to implement controls to mitigate the effects of flooding these are:

- Keep all dams at a suitable level, as determined by the engineer, to ensure that 24 hours can be achieved without normal operating dams overflowing
- As a further measure an additional 24 hours needs to be achieved by allowing shaft bottom to flood before the main pumps are flooded
- Install duel dam level monitoring on every critical dam.

Refer to SPG: Emergency Preparedness (Power and Flooding), Eng.2.2C, revised July 2021 or amended. This SPG cover the minimum requirements for Emergency Preparedness during flooding and power failure by Eskom as well as the maintenance an inspection requirements of generators.

Note! Engineers are advised to conduct wet tests to confirm compliance to the above requirement. Records of these tests need to be kept as proof of compliance. Plans need to be provided if there is non-compliance to the above. The Engineer / Chief Electrician will take Full Control and Responsibility for all MV Switching Operations as per the Shaft or Site Specific Procedures.

8.1.4.5.2 Intersections of Uncontrolled Water

a) Log the names of the persons to whom the emergency was reported to and the time the emergency was reported.
b) Do not allow persons to go underground unless authorised by the Operations Manager / Manager in Control.
c) Arrangements to be made to get all people to safe, ventilated areas and where necessary withdraw to surface.
d) Have a cage or cages on standby at all times.
e) Arrange with the Main Sub Vertical Banksman to have cages available (on operations having Sub Vertical shafts)
f) In consultation with the Engineering Manager or Shaft Mine Overseer and the EE Superintendent / Manager, close water valves as per shaft specific procedure. Monitor dam levels.
g) Build cofferdams and block off drain holes where applicable.
h) Monitor water levels in shaft bottoms and withdraw people when necessary.
i) Close water doors if deemed necessary.

j) EE Department to monitor ventilation and methane build-ups where practical.

8.1.4.5.3 Action on intersecting water whilst doing cover drilling

The procedure to be followed is:

a) Test for Methane.

- If more than 1% of methane in the atmosphere, 150 mm above the hole is detected, stop all work and withdraw all persons from the end. Erect a barricade to prevent persons entering the end, place a methane sign and guard at the barricade. Inform the Shift Boss / Miner / EE Department.
- If no methane is detected proceed with casing-off of the intersection.

b) Notify the Shiftboss and EE Superintendent of:

- Name and type of end
- Approximate quantity intersected
- Hole in which intersected
- Result of methane test and actions taken
- If any help is required

c) Drill two (2) eyebolt holes 45cm on either side of hole that intersected water.

Refer to SPG: Exploration Cover Drilling and Cementation, EE.2.4B, revised May 2019 or amended. This SPG deals with the duties of mine and drilling crews and the procedure for the intersection of water or any gas.

8.1.4.6 METHANE ACCUMULATION

Adhere to the standards and procedures as detailed in the Flammable gas COP.

Refer to COP: The Prevention of Flammable Gas Explosions in Mines other than Coal Mine, SER.EE.2.4B, revised July 2021 or amended. Item 8.1, Identification of flammable gas sources, occurrences and composition.

8.1.4.7 MISSING PERSON UNDERGROUND

If a Team Leader / Miner or Crush Supervisor reports a worker is “NOT UP”, indicating there may be a problem in clearing the shift, he / she must notify the Shaft Control room immediately, who will notify the Mine Overseer on duty.

Refer to SPG: Shaft safe Declaration and Clearance, EE.2.4B, revised October 2021 or amended. Items 6 and 7 refer to the procedures to be followed to search for missing persons and when the person is confirmed missing.

8.1.4.8 EXPOSURE TO BLASTING FUMES

a) Any person exposed to blasting fumes must be sent to Hospital immediately.
b) Procedure to be followed by the Shift boss on duty or responsible official.

- Telephone the Clinic and arrange transport by Ambulance to the Hospital
- Contact the Hospital and advise the number of persons being sent to Hospital and estimated time of arrival
- Personally satisfy yourself the person/s were dispatched to the Hospital

c) Notify the following persons:

- Duty or responsible Mine Overseer
- EE Superintendent / EE Manager
- Safety Manager
- Labour Superintendents

d) Notify family of person(s) admitted to Hospital with the Labour Superintendent
e) Arrange for a ventilation survey, if necessary
f) Safety Superintendent / Manager

- Contact the Hospital and ensure that the person(s) have been admitted.
- Notify the Inspector of Mines.

8.1.4.9 HEAT DISORDERS

Adhere to the standards and procedures as detailed in the Thermal Stress COP.

Refer to COP: Occupational Health Programme on Thermal Stress, SER.EE.2.4B, revised August 2018 or amended. Item 8.1.1 Heat Stress. The COP ensure persons are not exposed to an unacceptable working environment.

8.1.4.10 FATAL ACCIDENTS

Refer to SPG: Guidelines in Terms of Procedure to be Followed, In the Event of a Fatal Accident, Serv.Saf.2.4A, revised June 2017 or amended. The SPG give guidance in Preparation for in Loco Investigation, Post Investigation, Internal Investigation & Presentation and the Fatal Enquiry.

8.1.4.11 INDUSTRIAL ACTION

The following steps need to be taken by the operations:

8.1.4.11.1 Strike Action Team

a) Appoint a strike action team of ± 5 members
b) Define the tasks members are expected to perform, following portfolios:

- Security

- Communication (internal by operation assisted by

c) Corporate Office if necessary, and external to be handled exclusively by Corporate Affairs)

- Contingency plans and operational issues
- Liaison with unions
- Record of events
- Catering

d) Inform key operational and administrative staff of the role of the strike action team and what functions it will be expected to perform.
e) Ensure the strike action team has a control room which is manned 24 hours per day.
f) Ensure the control room has telephone facilities, two-way radios, and if possible recording, video and photographic equipment.
g) Ensure that catering is arranged for strike action team members.

8.1.4.11.2 Strike Rules and Picketing

a) An attempt should be made to secure from the union an undertaking that they will not engage in violence, and the draft strike rules attached hereto need to be negotiated with the union.
b) The CCMA should be placed on standby to intervene and establish picketing rules should agreement not be reached.
c) In the event of no agreement being reached on picketing rules, the CCMA should be approached immediately in terms of section 69 (4) of the LRA.

8.1.4.11.3 Security

a) Arrange security patrols in and around hostels.
b) Arrange security presence at main offices.
c) Security to secure main gate.
d) Security to monitor the conduct of union members and union leadership and gather evidence in the event of disciplinary transgressions and illegal acts, by using videos and photographs.
e) Security personnel of neighbouring mines to be on standby.
f) Ensure police are aware of the strike but will not intervene except on instruction of the strike action team.
g) Ensure the protection of non-strikers and priority employees going to work.
h) Security personnel should be thoroughly briefed to avoid confrontation with striking workers wherever possible, as they may be provoked by strikers in an attempt to create confrontation. Displays of militancy by the union such as blocking the mine gate should be defused peacefully.
i) The mine should have a second exit, in case of blockage of main gate.

8.1.4.11.4 Communication

a) The following (if not already informed) must be notified of the date of commencement of the strike:

- Head Office (i.e. MD, HR and Corporate Affairs);
- Security;
- Police;
- Department of Labour – (LRA 9.2);
- Caterers – (Explain section 67 of LRA);
- Independent Contractors;
- Neighbouring mines;
- Staff, particularly those who are not union members;
- Legal advisers;
- Other unions and associations;
- All suppliers;
- Other mines in the Group;
- Medical and hospital services;
- The provincial premier's office.

b) In addition to the notification provided for above, on-going communication is required with the following to ensure that an appropriate perspective is effectively communicated and that misinformation is corrected:

- Head Office (i.e. MD, HR and Corporate Affairs);
- Managers and Department Heads;
- Strikers (briefs and posters – ensure they understand the no work no pay rule, what the strike is costing them on a daily basis, and that they will be liable for food, accommodation and other basic necessities);
- The unions representing striking employees (It is essential that reliable communication systems, telephones, etc. are available for immediate communication between management and the branch committee.
- Transport should also be made available to the branch committee to meet with management and union regional and head offices. Meetings with the union should be held daily if possible);
- Non-strikers (they should be kept abreast of developments by briefs and meetings and thanked for their support. They should have a contact number for queries and their role during the strike should be clarified);
- Warn employees against violence;
- Display posters showing loss of earnings;
- Advise non-striking employees not to confront strikers;
- Press (ensure press releases are brief and factual, to avoid editing and selective use of information by the press. Use the press to convey an appropriate perspective. See guidelines above and remember that only Corporate Affairs may deal with the press);

- Once the strike is over or suspended, management must assist in communicating this fact to employees and all other relevant persons, including those set out in above, by use of briefs, telephone, radio, the press and loudhailers, etc. This helps to reduce absenteeism.

8.1.4.11.5 Contingency Plans

a) Contingency plans will be required in respect of:

- Priority (essential and maintenance) services (Ensure that all employees, and in particular priority service employees are informed that they may not strike. Develop a contingency plan for priority services, and ensure the security of such persons).
- Underground production
- Transport
- Met plant
- Ensure that there are shut down procedures where required
- Manual crushing system should the crush strike
- The issue of underground lamps and gas measuring instruments
- Mine stores (personnel on standby for petrol etc.)
- Monitoring of shifts and
- The compilation of a duty roster
- The details of contingency plans related to production must be worked out at mine level. A contingency plan manager must be appointed to effectively use the labour of non-striking workers, either to maintain production or carry out maintenance or both.
- Monitoring systems are required, to check who is at work and where.

8.1.4.11.6 Liaison with Unions

a) Organize ongoing meetings to try to end the strike.
b) Meet with regional and head office personnel of the union to try and ensure a resolution of the dispute.
c) Involve independent mediators in the process of dispute resolution.
d) Meet with recognised unions, which are not participating in the strike.

8.1.4.11.7 Record Keeping

a) Records must be kept on a daily basis and all relevant documentation must be filed in date order.
b) All events must be recorded with time, date, venue and persons involved.
c) Minutes must be kept of each meeting and tape recorded if possible.

8.1.4.11.8 Catering

a) Management is not obliged to provide food, accommodation and other basic amenities of life during a protected strike, but may elect to do so where requested to do so by the union/company employees.
b) If food is to be provided, management must ensure that a formal and if possible written request is made by the union/employees, for the provision of food and accommodation, and it is made clear that management is authorised to reclaim the cost of food and accommodation.
c) Management at mine level should ensure that a system is in place to monitor who eats in the canteen during the strike.
d) Management should ensure that the agreements concluded with caterers (where outsourcing has taken place) provide for them to continue to provide food during industrial action. Where food is provided and prepared by in-house staff, management should ensure that catering staffs are deemed to be priority service employees who may not engage in strike action.

8.1.4.11.9 Getting the Employees Back to Work

a) Briefs should be issued to employees advising them that the strike is unprotected and that the services of those who participate could be terminated.
b) A communication strategy involving briefs, posters and the press is consequently required, which on a daily basis advises employees as to what it is costing them to remain out on strike and how much they have lost in wages. The negative impact on job creation and the mines' future should be stressed. Employees should be encouraged to return to work, briefs will be circulated.
c) On many occasions, union leadership and more militant elements try to obstruct the distribution of management briefs once the strike has commenced. It is important that before the strike commence, briefs are sent out advising employees of the costs to themselves of going on strike, including lost wages, lost bonuses, as well as the daily cost of food, accommodation and basic amenities for which striking employees will be liable. This should be set out in a table, which shows what the losses will be per job grade per day in a way that is legible and easy to understand.
d) The brief could also indicate that if they strike for e.g. a 5-day period, how long it would take them to make up the money they have lost as a result of the strike, even if management were to agree to their demands, as often it can take years before the losses incurred by the employees are made up by the increase in wages secured as a result of strike action.

8.1.4.11.10 Discipline

a) Disciplinary action, including, where appropriate, dismissal hearings, must be taken in appropriate circumstances where incidents occur.

The LRA (section 67) recognizes the employer's right to take such action, provided the requirements of substantive and procedural fairness are complied with.

b) Appropriate evidence is required, but the requirements of procedural fairness may be dispensed with in extreme circumstances where the employer could not reasonably be expected to comply with the provisions of the LRA in this regard. Each such case must be dealt with on its merits and guidance should be sought from head office/attorneys where the mine intends dispensing with disciplinary procedures (Item 4(4) of Schedule 8 of the LRA).
c) Statements should be taken immediately after any event and criminal transgressions should be reported to the police.

8.1.4.11.11 Lock Out

a) An employer is entitled to lock out employees who are participating in a protected strike, as a way of inducing them to accept the terms of an agreement proposed by management.
b) Generally, a lock out is only used where the employees have indicated an intention to return to work and management is prepared to keep them out longer, in an attempt to induce them to accept the terms of an agreement proposed by management. It should not be used early on in the strike as it loses its value if introduced too early.

8.1.4.11.12 Training

a) The strike could be used as an opportunity for the training department to present courses on various issues to non-striking workers who are unable to participate in operational activities.
b) In the event of a protracted strike, consideration could be given to hiring a hall off mine property and holding seminars on relevant issues. This builds solidarity with these people and avoids conflict by having them off the mine.

8.1.4.11.13 Replacement Labour

a) The Labour Relations Act prohibits employers from engaging non-employees as replacement labour, where a maintenance service agreement is in place. The implications of utilizing replacement labour should be carefully considered due to the high potential for violence.

8.1.4.11.14 Minimizing Costs During the Strike

a) The Engineering department should put a plan in place to ensure that the minimum amount of power, water and compressed air is used during the strike.
b) The salaries and bonuses of striking workers would not have to be paid and the manager in charge of contingency plans should optimize cost minimization.

c) A further option is to allow / encourage people to take paid and / or unpaid leave during this period. Obviously, this would depend on the anticipated duration of the strike.

8.1.4.11.15 Medical Services

a) It is essential to ensure that medical services are maintained as priority services on the mine, to ensure that medical service employees do not participate in the strike.
b) Medical and ambulance personnel should accordingly be on hand during the strike, and the nearest hospital should be advised of the date of commencement of the strike.
c) Depending on the length of the strike, acclimatization procedures may be required, and the issue should be discussed with the Department of Mineral and Energy Affairs.

8.1.4.11.16 Administration and Miscellaneous

a) All relevant information which may be required by the legal advisers such as recognition agreements, agreements concluded with the union, minutes of meetings etc. should be kept in the control room for ease of access.
b) Meeting venues should be on mine property, but a venue for meetings off mine property should be arranged in case the need arises.
c) Computer systems should be safeguarded to prevent disruption of mine records and to allow normal administrative activities to continue. This may require moving all administration to another venue.

8.1.4.11.17 Media Liaison

a) In a crisis situation the media must be treated professionally and courteously and be given as much help as possible under the circumstances. They have a job to do and they will do it with or without management's co-operation. If they are denied access to information they will find it elsewhere and, invariably, this will not be to the company's advantage. The objective is to engage the media constructively and so to ensure that what they write or broadcast is at least factual.
b) Media liaison is the responsibility of the Corporate Affairs Manager and all media enquiries and requests for interviews and visits should be channelled to the Corporate Affairs department.
c) In order to ensure consistency in the messages, which are communicated, no employees other than the Corporate Affairs Manager should issue any information to the media.
d) The Corporate Affairs Manager, (in consultation with the Group and Divisional Managing Directors, the Operations Manager and the Human Capital Department) will draft all press releases and associated material. All press releases will be issued to all newswire services, analysts, directors and employees.

e) If journalists arrive at the mine unannounced or without an appointment, the mine's communication officer should welcome them and explain the above policy to them. They should be offered access to an office from where they can make contact with the Corporate Affairs Manager and, if so agreed, wait for his arrival. The mine should ensure that journalists are comfortable, have access to a telephone and offer them tea or refreshments while they wait.
f) Should a journalist want to enter the premises to make contact with the strikers or the Union they should only be allowed to do so at their own risk, after consultation with the Corporate Affairs Manager?
g) Whilst the company has the right to deny journalists access to its property, this measure should only be applied in extreme situations and after consultation with the Corporate Affairs Manager.
h) The Corporate Affairs Manager should be kept informed of all developments during the course of the strike so as to be prepared for media questions.
i) If the situation warrants it, the Corporate Affairs Manager in consultation with the Operations Manager will establish a Media Centre at the mine from where media liaison can be handled. This facility should be equipped with the following:

- Telephone lines;
- Fax machine;
- Computer and printer

j) The media Centre should be staffed with at least one additional person to answer phones, take messages and escort journalists on the mine property

8.1.4.12 SEISMIC EVENT

Adhere to the standards and procedures as detailed in the Fall of Ground COP.

Refer to COP: To Combat Rock Fall and Rock Burst Accidents in Tabular Metalliferous Mines, SER.RME.2.4D, revised Dec 2019 or amended. Items 8.1 to 8.11, Overall Mine Stability to Rock Engineering Support Service.

Refer to SPG: Seismic Withdrawal Procedure, Serv.2.4D, revised April 2021 or amended. This SPG create awareness and open communication channels for the workforce underground in case of seismic events, with specific reference to possible withdrawal of crews potentially exposed to the effects of a seismic event.

Refer to SPG: Seismic Daily Rating, Serv.2.4D, revised July 2018 or amended. This SPG ensure that seismic ratings are issued to mining personnel prior to start of shift. This procedure applies to both day shift and night shift personnel.

Refer to SPG: TARP – Triggered Action Response Plan, Serv.2.4D, revised June 2019 or amended. The aim of this SPG is to implement the TARP system on all Sibanye Au operations. The object of the TARP system is to implement prescribed responses to a list of known FOG hazards.

8.1.4.13 CHEMICAL SPILLAGE

8.1.4.13.1 Flammable Substances

a) Identification

Diesel, petrol, oil and water treatment chemicals are present on the mine premises, in the event of spillage occurring, the following action must be taken immediately:

- Immediate Response (3 C's = Control, Contain & Clean-up)
- If flammable substances are spilled, notify the Central Control Room who will contact the Fire Team Coordinator / Captain on duty.
- Try to control the spill if it can still be done i.e. close the valve, pick up the drum, try closing holes where possible, etc.
- Attempt to contain the spill by using brooms, sawdust, soil drip trays, etc.
- The incident should be reported to the supervisor as soon as possible
- Arrange to have the spillage cleared away as soon as possible to prevent fire or people slipping and injuring themselves
- Where immediate clean-up is not practical, a record is kept of areas that need to be cleaned up.

b) Contact Persons

- Environmental Manager
- Assistant Materials Accountant
- Surface Fire Team Coordinator / Captain on duty
- Surface Engineer
- EE Superintendent
- Surface Safety Officer / Safety Superintendent

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended. The SPG aim to ensure that corrective actions are implemented during spillages hydrocarbon, chemicals or any other infectious or potential contaminating materials.

8.1.4.13.2 Chlorine (Sewerage Plant)

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended, including Chemical SDS's.

8.1.4.13.3 Ammonia (Fridge Plant)

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended, including Chemical SDS's.

8.1.4.13.4 Cyanide (Metallurgical Plant)

Adhere to the following standards for Cyanide Spillage and Emergency Response.

Refer to SPG 1: Respond to Catastrophic Release of HCN Gas (Hydrogen Cyanide), MetHazChem.2.3C, revised February 2021 or amended. This SPG procedure guideline was drawn up to assist in the event that a Catastrophic Release of HCN Gas occurs and it is responded to efficiently and safely.

Refer to SPG25: Clean up Spillages – Reagent Strength Sodium Cyanide, MetHazChem.2.3D, revised December 2020 or amended. This SPG deals with the Clean-up Spillages for Sodium Cyanide. Clean up reagent strength sodium cyanide spillages on the on-site transportation route, bulk storage and offloading are.

Refer to SPG26: Clean up Spillages – Slimes and Carbon Containing Process Strength Sodium Cyanide, MetHazChem.2.3D, revised December 2020 or amended. This SPG deals with the Clean-up Spillages for Sodium Cyanide. Lash, hose and recover slime spillages in different sections of the Metallurgical process.

Refer to SPG50: Emergency response Plan – Sodium Cyanide, MetHazChem.2.3C, revised January 2021 or amended. This SPG deals with the Emergency Response Plan for Sodium Cyanide.

8.1.4.13.5 Caustic Soda Lime (Metallurgical Plant) (Sodium Hydroxide)

Adhere to the following standards for Caustic Soda Emergency Response.

Refer to SPG04: Offloading Caustic Soda, MetHazChem.2.3C, revised October 2019 or amended. This SPG deals with offloading caustic soda from delivery tanker into caustic soda bulk storage tank.

Refer to SPG05: Offloading Milk of Lime, MetHazChem.2.3C, revised October 2019 or amended. This SPG deals with offloading milk of lime from delivery tanker into milk of lime storage tank.

8.1.4.13.6 Acids (Chemical Laboratory)

Adhere to the following standard and MSDS for HazChem Emergency Response.

Refer to SPG: Chemical Laboratory Procedure for accidental spillage of Hazardous Chemicals, including setting up of an Emergency Control room**.**

8.1.4.13.7 Alkali's (Chemical Laboratory)

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended, including Chemical SDS's.

8.1.4.13.8 Cyanides (Chemical Laboratory)

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended, including Chemical SDS's.

8.1.4.13.9 Lead (Assay Laboratory)

Refer to SPG: Spillage response and Remedial Procedure by the Environmental Department, revised December 2017 or amended, including Chemical SDS's.

8.1.4.14 RADIATION SPILL / INCIDENT

Adhere to the following standards for Radiation Exposure Emergency Response.

Refer to SPG: Radiation Emergency Preparedness Procedure for the respective Operations (i.e. Beatrix COR 71, Burnstone COR 219, Cooke Ezulwini COR 190, Cooke Rand Uranium COR 226, Driefontein COR 69 and Kloof COR 70). The SPGs are compiled as required by the National Nuclear Regulator (NNR).

8.1.4.15 SHAFT ACCIDENT

a) The Banksman to notify the following personnel immediately, giving as much details of the accident as possible:

- Duty Shaft Foreman
- Duty Shaft Mine Overseer
- Duty Mine Overseer

b) The Banksman must then:

- Establish if there is power to the pump stations. If there is no power, then the water supply down the shaft must be closed off on surface.
- Establish the position of all the conveyances in the shaft and if persons are trapped in such conveyances.
- Find out if any persons are injured or are in danger.

c) If any of the following columns are damaged, then they have to be closed off as soon as possible:

- Main Air Column
- Main Pump Column
- Main Feed Column

d) The personnel in shaft bottom area to be notified to proceed to pump station.

e) An operations room will be set up in the Emergency Control Room and will be manned by the following:

- Engineering Manager
- Shaft Engineer

f) The persons Human Capital the Emergency Control Room will then draw up a detailed plan for the evacuation of the mine. Particular emphasis will be placed on those persons working on the Shaft Bottom and Pump Stations.

g) The persons in the Emergency Control Room must then determine how the necessary work required to recommission the shaft will be carried out and estimate the time to complete.

h) Notify the Department of Minerals and Energy.

8.1.4.16 COMPRESSED AIR FAILURE

a) The person noticing the compressed air fail or be interrupted, must contact the Shaft Control room as soon as possible.

b) Notify the relevant personnel to chain up the underground ore pass chutes and surface ore boxes.

c) Notify the following:

- Shaft Mine Overseer
- Shaft Engineer
- Shaft Foreman
- Surface Engineer
- EE Superintendent

d) After the above have completed their investigation and if the failure is of a serious nature, then the Operations Manager must be notified immediately.

8.1.4.16.1 Compressor Explosion

a) All compressors require oil to operate. It is possible, given the correct environment, to have an explosion inside the compressed air pipe.
b) Any person noticing the above must immediately notify the Shaft Control Room

c) No naked flame must be allowed near the area of the explosion until the pipe has been cleaned and purged with an inert gas. No oxygen is to be taken to the site until this has been done.
d) If the damage is considered to be excessive and the repairs will be in excess of four hours, the must be notified.
e) The Senior Operations Manager and Engineering Manager will then draw up an action plan to address the incident.
f) All insurance claims are to be dealt with by the Financial Manager.

8.1.4.17 SLIMES DAM FAILURE

a) The following table contains the four levels regarding the emergency level situations and actions to be taken:

LEVEL	DESCRIPTION	POSSIBLE SITUATIONS	EMERGENCY ACTION	RESPONSIBLE PERSON
A	Evacuation	▪ Failure of deposit or return water dam outer wall ▪ Excessive movement of outer wall ▪ Storm water overtopping	▪ Evacuation of personnel/ in zone of influence ▪ Notification of emergency services ▪ Remedial measures to prevent further deterioration ▪ Implementation of monitoring programme for further deterioration ▪ Notify authorities	Engineering Manager
B	Preparedness	▪ Excessive movement in outer wall ▪ Piping through outer wall ▪ Possible overtopping during a storm event	▪ Notification personnel/public in zone influence ▪ Notification emergency services ▪ Notification authorities ▪ Remedial measures to prevent further deterioration	Engineering Manager
C	Warning	▪ Movement of outer wall ▪ Blockage of penstock decant ▪ Excessive storm (exceeding 1:50 year 24-hour event) ▪ Insufficient freeboard	▪ Obtain assistance from appointed professional engineer ▪ Remedial measures to prevent further deterioration	Engineering Manager Section Engineer
D	Caution	▪ Rising piezometer trends ▪ Reducing under drain flow ▪ Reducing freeboard ▪ Erosion/rat holing of outer slopes ▪ Deposition rates exceeding design rate	▪ Enhance monitoring programme	Engineering Manager Section Engineer

b) The following persons must be notified:

- Metallurgical Plant Standby Official, and Metallurgical Manager
- The Environmental Manager
- The Metallurgical Manager must notify the Engineering Manager and
- Notify adjacent property owners to be notified of the impending danger
- All personnel in the area that could be affected must be cleared

Refer to COP: Mine Residue Deposits (MRD), Met 2.3.A, revised June 209 or amended. The COP include a description of the management plan for managing the significant risks relating to MRDs identified by the risk assessment process.

Refer to SPG50: Emergency response Plan – Sodium Cyanide, MetHazChem.2.3C, revised January 2021 or amended. This SPG deals with the Emergency Response Plan for Sodium Cyanide.

8.1.4.18 SUPPLIER ON STRIKE

Many Supply Companies are instrumental to ensure continuous production for major mining companies in Gauteng. In the event of strike action by employees of these companies, the mine may be seriously affected.

The following action should be taken if the supplier is affected by strike action:

a) The Unit Manager Procurement, the SA Ops Procurement Manager, Materials Manager and Financial Manager must be notified immediately.
b) The Financial Manager must notify Heads of Department and Departmental Heads to inform employees to use materials and equipment sparingly.
c) Mine transport must be sent to obtain the necessary supplies directly from the major suppliers, if needed.
d) If necessary, materials and goods can be obtained from other group mines in the West Rand or any other available source.

8.1.4.19 WATER SHORTAGE

a) The person discovering the service water shortage must immediately notify the Banksman, who will notify the following:

- Shaft Superintendent (if applicable)
- Electrical Foreman
- Mechanical Foreman
- Duty Mine Overseer
- Duty Engineer

b) The Engineer will assess the situation and take corrective action.
c) Should the water shortage be prolonged and of a serious nature, the Engineering Manager, and Operations Manager should be informed.
d) The person discovering the drinking water shortage must contact the Shaft Control room operator, who will notify following:

- Surface Mechanical Foreman
- The Foreman and Engineer on duty

e) If water shortage is prolonged and of a serious nature, the Engineering Manager, should be informed.
f) If the main drinking water supply has failed, then the Rand Water Board must be contacted to establish the delay.

8.1.5 TRAINING AND AWARENESS

In order to ensure that all potentially affected persons are educated, trained and made aware on how to deal with emergencies, the COP must cover at least:

a) The Content and frequency of such training (refer to section 10(2)(d) of MHSA).
b) The procedures and appropriate actions to be taken in the event of an emergency, including simulated exercises.
c) The correct procedures and applications on the use of emergency equipment.
d) The actions required relating to the location and description of shutdown controls / lockout devices.
e) Instructions in the use of belt-worn self-contained self-rescuers, and
f) The locality of copies of the emergency procedures and instructions.

Refer to the respective Training Manuals and Competency tests drawn up by the Training Department, to ensure all new employees and persons returning from leave (including contractors) have sufficient knowledge on what action must be taken in the event of any emergencies, which may arise.

a) Emergency Response Measures
b) Rescue and response capabilities
c) Management of emergencies
d) Radiation incidents
e) Reporting and Recording
f) Emergency Aspects Addressed in other Mandatory COP's
g) Implementation Plan

8.2 EMERGENCY RESPONSE MEASURES

8.2.1 EMERGENCY RESPONSE CAPABILITIES

In order to ensure that emergencies are reacted to timeously with adequate rescue and response capabilities, the COP must detail and describe the following:

a) The requirement, necessity, access to rescue, and response capabilities, e.g. number of rescue personnel, arrangement of mobilisation, variety and access to specialised rescue equipment, remoteness of mines, response times, etc.
b) The arrangements with a mines rescue provider, as contemplated in regulation 16.5. (1)(c) and/or with any other rescue provider, and
c) Additional instrumentation and equipment available to maintain rescue brigades, e.g. a means to detect carbon monoxide, carbon dioxide, flammable gas and oxygen, ancillary rescue equipment, etc.

The following response capabilities are in place for Sibanye Gold operations:

a) MRS Proto teams are located to the respective Sibanye Operations as follows:

- Beatrix - Two Proto teams, <50km from MRS Welkom,
- Burnstone - No teams at present, <150km from MRS Carletonville,
- Cooke - No teams at present, <50km from MRS Carletonville,

- Driefontein - Four Proto teams, <20km from MRS Carletonville,
- Kloof - Six Proto teams, <30km from MRS Carletonville.

All production shafts are equipped with Proto cars located near the shaft bank and can be sent underground at short notification when required.

Refer to Fire Prevention SPG 31: Fire Fighting Car (Proto), SER.EE.2.4B, revised February 2017 or amended. The SPG deal with the recommended equipment required for the Proto teams during an emergency.

b) Sibanye Gold operations are "Bona Fide" member mines of MRS and therefore has full access to MRS resources and facilities for emergency response.

A MRS Liaison officer will report to the Shaft Emergency Control room at short notification when multiple Proto teams are required and/or when Proto teams are required to work using breathing apparatus.

All persons who are or may be required to act as a Manager in Control in an Emergency Control Room are required to attend the MRS Emergency Control Room Management Course. A copy of the MRS Control Room Management Course Manual must be available in the Emergency Control room at all times.

c) All Sibanye Gold Proto teams are equipped with multi-gas measuring instruments as required. The respective Proto Captains are responsible to ensure the OEM services the instruments quarterly.

Proto teams are further equipped with Rope rescue as required by MRS, other rescue equipment is available from MRS on short notification.

Refer to SPG: Management of Mines Rescue Proto teams, Saf.2.4A, revised November 2021 as amended. The SPG deals with the deployment of Proto Teams for emergency and non-emergency activities and the limitations to be adhered to when Proto members are working in Abnormally Hot Environments.

8.2.2 MANAGEMENT OF EMERGENCIES

In order to ensure that emergencies can be managed and dealt with effectively the COP must cover the following:

a) Procedures for updating of emergency manuals, contacts of neighbouring mines, contacts of emergency services, internal and external telephones,
b) Establishment of Emergency Control Centres/s including locality, size, equipment required, plans, communication, etc. (refer to Annexure 2),
c) The duties and responsibilities of persons required during an emergency (refer to Annexure 3),
d) Procured to deal with adverse environmental conditions, which could be encountered during an emergency, e.g. flooding, gases, heat, etc.

8.2.2.1 Underground emergency preparedness and response

An Emergency Control room is strategically located at each Sibanye Gold production shafts. All required equipment, plans and procedures for potential emergency scenarios must be kept in the Emergency Control room.

Refer to SPG: Emergency Control Room Administration, SER.EE.2.4B, revised March 2021 or amended. The SPG stipulate all documents and equipment required to ensure emergencies are dealt with in a safe and efficient manner.

8.2.2.2 Surface emergency preparedness and response

Surface Fire Teams respond to surface Emergency conditions at all Sibanye Gold operations. Surface Fire Responders (SFR) training are conducted by MRS.

Surface Fire teams are located to the respective Sibanye Operations as follows:

- Beatrix - Two Surface Fire teams, <50km from MRS Welkom,
- Burnstone - One Surface Fire team, <150km from MRS Carletonville,
- Cooke - One Surface Fire team, <50km from MRS Carletonville,
- Driefontein - Two Surface Fire teams, <20km from MRS Carletonville,
- Kloof - Four Surface Fire teams, <30km from MRS Carletonville.

Refer to SPG: Surface Fire Team Organization, SER.EE.2.4B, revised July 2020 or amended. This SPG address the organisation, training and safety considerations for all Sibanye Gold Surface Fire Team Members.

8.3 REPORTING AND RECORDING

In order to ensure that the emergency preparedness and response measure and procedures remain effective, the COP must at least cover the following:

a) The procedure for the inspection, testing and maintenance of all equipment and facilities that may be sued in an emergency at appropriate intervals, and by persons designated by the employer for this purpose; and
b) The reporting, recording and archiving system, at appropriate intervals of those measures and procedures and the person/s responsible.

The following external and internal audits are conducted at Sibanye Gold:

a) Annual external Insurance Emergency Preparedness audits,
b) Annual internal Emergency Preparedness Audit by Internal Audit department,
c) Annual internal Emergency Control Room audits by Group Fire Master,
d) Annual internal Intake Airway Fire Prevention audits by Group Fire Master,
e) Quarterly internal Refuge bay compliance surveys by EE Department,
f) Quarterly internal Workplace compliance surveys by EE Department.

8.4 EMERGENCY ASPECTS ADDRESSED IN THE MANDATORY COP'S

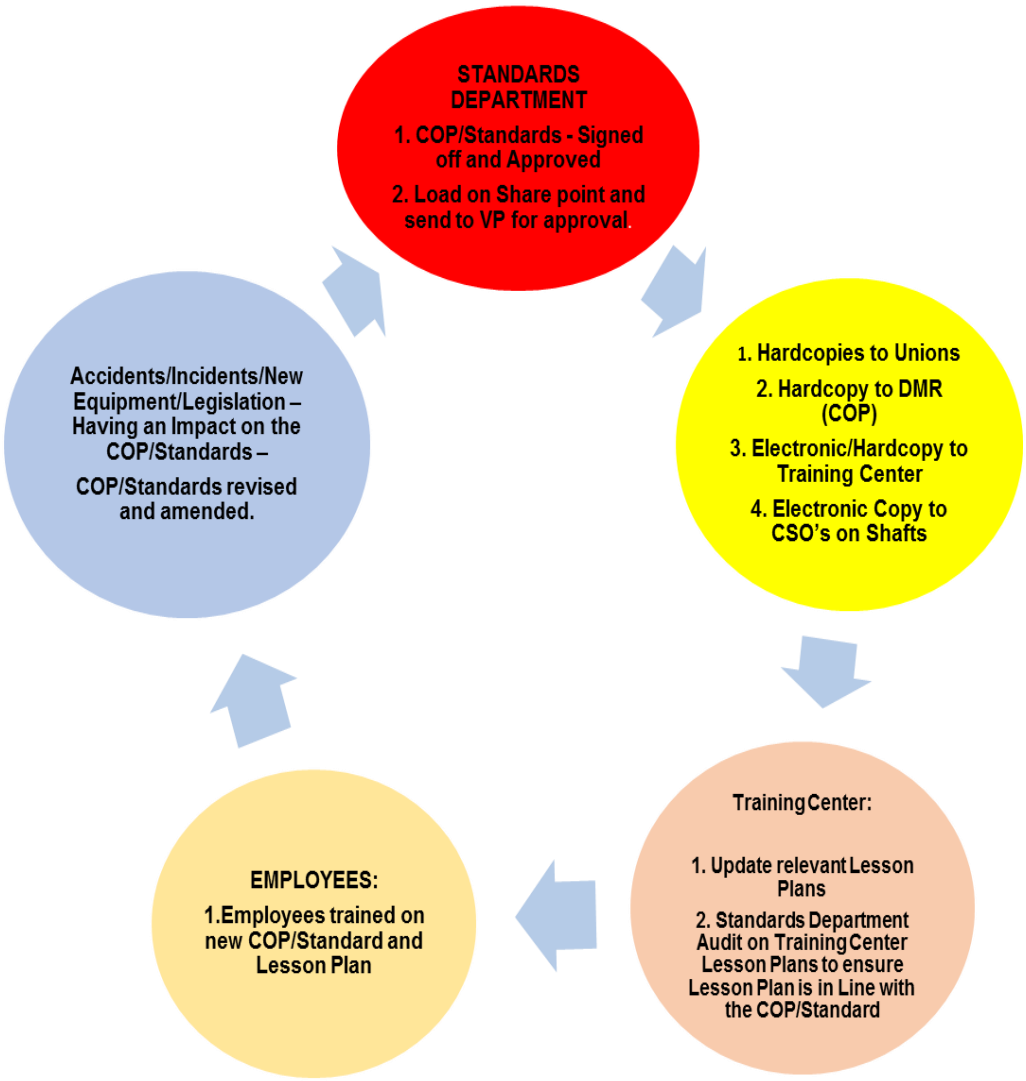
When an emergency aspect is addressed in any other COP it must be cross-referenced under this section.

All relevant COP's and SPG's referenced in the respective sections above.

PART D: IMPLEMENTATION

1. IMPLEMENTATION PLAN

1.1 The implementation plan for this **COP** makes provision for issues such as organisational structures, responsibilities of functionaries, programmes, and schedules that will enable proper implementation of the **COP.**



The implementation plan for this COP is done through training, lesson plans, standards and procedures, planned task observations and planned inspections.

1.2 Information may be graphically represented to facilitate easy interpretation of the data and to highlight trends for the purpose of risk assessment.

Refer to Safety / Communication posters and visual multi-media.

2. COMPLIANCE WITH THE COP

The employer must institute measures for monitoring and ensure compliance with this COP. Compliance with the COP is achieved through training lesson plans, standards and procedures, planned task observations and planned inspections. Multi-media such as posters and video material are part of the training and refreshing.

3. ACCESS TO THE COP AND RELATED DOCUMENTS

3.1. All persons on the operations who have access to a Personal Computer, can Access the COP on the SharePoint Safety Drive. Hard copies of the COP were issued to the organized labour unions and a set of files is available at the Safety Superintendents all over the Sibanye Operations and at the Training Centres.
3.2. A copy of this COP has been issued to the Unions on the Mine.

The operations must ensure all employees are fully conversant with the sections of the COP relevant to their respective areas of responsibility (refer to 1.1).

INFORMATION REQUIRED IN THE EVENT OF AN EMERGENCY

1. Call identity – Telephone number
2. Working place
3. Time of incident
4. What happened ?
5. Number of casualties & injuries sustained
6. Is further medical assistance required ?
7. Is transportation required for the patient/s ?
8. Are any of the patients on stretchers ?
9. Route out of mine
10. Any further information as requested from the Banksman / Emergency Control Room.

EMERGENCY CONTROL ROOM NO :

ALTERNATIVE NO :

Annexure A

RISK ASSESSMENT

CONDUCTED ON

Emergency Preparedness

SUBJECT

DATE : September 2021 (Rev01)

1) Introduction:

Emergencies and disasters are seen as separate, distinct problems that require a different interaction than normal. Due to the fact that the Emergency Management is a strategic process more than a tactical process the normal work functions and roles of management changes as the process resides at a more executive level to allow for the coordination and integration of all emergency plans, with the objective to reduce the potential impact of such an incident and limit the potential damage that could be caused by the hazardous incident.

2) Scope:

The scope of this assessment considered all operational / other failures that could result in a disaster.

3) Objective:

The objective of this assessment is therefore to identify, evaluate and assess the risks associated with the potential operational failures that could result in an emergency, assessing the current mitigating strategies in place to prevent and or limit the impact of such an event should it materialize and thirdly the mitigating strategies to recover from such an event.
Secondly it has the objective to ensure all reasonable precautions are taken to either eliminate or minimize identified hazards to an acceptable risk tolerance level.

4) Methods Applied:

A qualitative structured “what if” approach was used to determine the hazards, through a structured processed brainstorming method of determining what things can go wrong and judging the likelihood and consequences of those situations occurring. The answers to these questions form the basis for making judgments regarding the acceptability of those risks and determining a recommended course of action for those risks judged to be unacceptable.

An experienced review team can effectively and productively discern major issues concerning possible Emergency Preparedness Issues.

All current controls and suggested safeguards were evaluated and included as a residual risk rating.

The standard operational risk matrix was used to determine the risk ranking of identified hazards.

5) Legal Liability

a) According to the MHSA, Act 29 of 1996, Sect 5 – Employer to maintain H&S Mine Environment
b) According to the MHSA, Act 29 of 1996, Sect 6 – Employer to ensure adequate supply of H&S equipment
c) According to the MHSA, Act 29 of 1996, Sect 10 – Addresses Training
d) According to the MHSA, Act 29 of 1996, Sect 11.1-11.4 – Risk assessment
e) MHSA Chapter 2, Section 22 (Employees duty for health and safety)
f) MHSA Chapter 2, Section 23 (Employees' right to leave dangerous working place)
g) MHSA Chapter 3 – Electricity
h) MHSA Chapter 16 – Rescue, First Aid & Emergency Preparedness and Response

Therefore, ensure that we comply with the necessary legal requirements

6) The following aspects were addressed:

a) Operational hazards
b) Possible human behaviour / system failures
c) Likelihood of failures
d) Consequence of failures
e) Engineering and administrative controls and
f) All relevant legislation / procedures

7) The risk assessment was structured as follows:

a) Matrix
b) Work Sheets

EXECUTIVE SUMMARY

Due to the nature of the project, the risk assessment was broken down into the various possible emergency scenarios to ensure a comprehensive coverage of all possible hazards that might arise as a result of the activities required to be prepared in case of a possible emergency at a Sibanye Gold Mine.

If all the controls, which are currently in place, are adhered to and followed, the probability of the risks identified are minimized.

Recommendations and critical controls as indicated on the work sheets must be considered and incorporated in the various SPGs.

Note! This risk assessment is to be handled as a live document and needs to be amended where more risks / hazards are identified.

RISK ASSESSMENT MATRIX

Sibanye-Stillwater Risk Matrix

					Severity
5 (Low)	10 (Medium)	15 (High)	20 (High)	25 (High)	5 Catastrophic
4 (Low)	8 (Medium)	12 (Medium)	16 (High)	20 (High)	4 Significant
3 (Low)	6 (Low)	9 (Medium)	12 (Medium)	15 (High)	3 Moderate
2 (Low)	4 (Low)	6 (Low)	8 (Medium)	10 (Medium)	2 Low
1 (Low)	2 (Low)	3 (Low)	4 (Low)	5 (Low)	1 Negligible
1 - Rare	2 - Unlikely	3 - Possible	4 - Likely	5 - Almost Certain	
Probability / Time Frequency / Likelihood					
>20 Years	5-19 Years	1-4 Years	Monthly	Weekly	
Could conceivably occur but would be extremely remote	Could possibly Occur but would be rare	Could occur but infrequently	Known to occur / would not be surprising	Occurs often / is to be expected	

General Description	Safety	Health	Corporate Image	Environment
Consequences are severe and could not be managed. The organisation may not recover	Multiple Fatalities	Irreversible impact on health with loss of quality of life of a numerous group / population or multiple fatalities	International media coverage / Prolonged international condemnation	Long term irreversible liability / Significant loss of biodiversity
Consequences are severe and manageable to some extent, but the organisation would recover.	Fatality	Irreversible impact on health with loss of quality of life or single fatality	Senior Executive prosecuted	Irreparable damage to a natural resource
Consequences would be significant, but manageable to a large extent.	Serious Injury	Reversible impact on health (with lost time) or permanent change with no disability or loss of quality of life	Significant fines / National media coverage	Medium to Serious reparable damage
Consequences would be visible yet fully managed.	Lost Time Injury	Symptoms requiring medical intervention and full recovery (no lost time)	Local media attention	Minor damage / Minor reversible effects
Consequences would be minimal.	Minor	Temporary discomfort	Minor local media coverage	Insignificant / Non Conformance

Score	Rating	Description
15-25	High (Catastrophic)	Risk with potential to lead to collapse of business and is fundamental to the achievement of objectives OR Risk which can be endured but which
7-14	Medium (Moderate and Significant)	The risk may harm the objectives and functions resulting in loss of effectiveness and reputation to the department/operation. Management responsibility must be specified and accountability defined.
1-6	Low (Low and Negligible)	Event which can be managed by routine processes and procedures.

RISK ASSESSMENT

Task / Issue : Emergency Preparedness **Ref. No** : 2.4B

Workplace : Sibanye Stillwater Operations **Date** : Sept 2021 - Revision

RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
1.	• **Emergency Preparedness -** Underground fires	• Human behaviour - Arson - Contraband - Sabotage - Lack of communication - Lack of training • Combustible materials • Spontaneous combustion • Explosives • Flammable gasses • Open flame cutting & welding • Electrical equipment failure - Battery charging - Improper cabling • Blasting operation(s) • Improper Diesel / fuel / oil / grease handling / storage • TMM • Conveyor belts - Friction • FOG	• Gassing • Injury • Multiple Fatal • Damage to equipment • Business interruptions	• Emergency preparedness - COP - Fire and emergency contingencies • Flammable Gas COP • Proto teams • Telemetry • Fire patrol • Sibanye Stillwater Fire guidelines • EPA equipment standards • Continuous flammable gas measuring instruments • Hazardous locations • Vent districts • Emergency drills • Refuge Chambers • Control rooms • Communication system • New Employee and annual refresher training	3	2	6(L)	•	• EE Supt. • EE Manager • Control Room • Fire Dept. • Banksman

RISK ASSESSMENT

Task / Issue : Emergency Preparedness **Ref. No** : 2.4B

Workplace : Sibanye Stillwater Operations **Date** : Sept 2021 - Revision

RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
2.	• **Emergency Preparedness -** Surface fires	• Human behaviour due to: - Arson - Smoking - Sabotage - Insufficient fire breaks - Lack of communication - Lack of training • Combustible materials • Spontaneous combustion • Explosives - Magazine - Demolition • Open flame cutting & welding • Electrical equipment failure: - Battery charging - Improper cabling • Blasting operation(s) - Demolitions • Improper Diesel / fuel / oil / grease handling / storage • TMM • Conveyor belts - Friction • Natural Phenomenon - Lightning	• Environmental damage • Property damage • Damage to equipment • Injury • Fatal • Business interruptions	• Emergency preparedness - COP - Fire and emergency contingencies • Flammable Gas COP • Fire Brigade • Proto teams • Sibanye Stillwater Fire guidelines • Communication system • Control room • New Employee and annual refresher training	3	2	6(L)	•	• EE Supt. • EE Manager • Control Room • Fire Dept.

RISK ASSESSMENT

Task / Issue : Emergency Preparedness **Ref. No** : 2.4B

Workplace : Sibanye Stillwater Operations **Date** : Sept 2021 - Revision

RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
3.	• **Emergency Preparedness -** Gas explosions	• Human behaviour - Arson - Contraband - Sabotage - Lack of communication - Lack of training • Combustible materials • Spontaneous combustion • Explosives • Flammable gasses • Open flame cutting & welding • Electrical equipment failure - Sub std EPA equipment - Battery charging - Improper cabling • Blasting operation(s) • Improper Diesel / fuel / oil / grease handling / storage • TMM • Conveyor belts - Friction • F.O.G • U/G Fire • Static Electricity • Recirculation of air • Unexpected / unplanned holing	• Damage to equipment • Business interruptions • Injury • Multiple Fatal	• Emergency preparedness - COP - Fire and emergency contingencies • Flammable Gas COP • Proto teams • Telemetry • Fire patrol • Sibanye Stillwater Fire guidelines • EPA equipment standards • Continuous flammable gas measuring instruments • Hazardous locations • Vent districts • Emergency drills • Communication system • Control room • New Employee and annual refresher training • Methane Extraction Project	1	5	5(L)	•	• EE Supt. • EE Manager • Control Room • Fire Dept. • Banksman

RISK ASSESSMENT

Task / Issue : Emergency Preparedness **Ref. No** : 2.4B

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
4.	• **Emergency Preparedness -** Power failures	• Human behaviour - Sabotage - Tampering - Theft - Lack of communication - Lack of training • Combustible materials • Spontaneous combustion • Explosions • Electrical equipment failure - Sub std installations • Blasting operation(s) • TMM • FOG • U/G Fire • Flooding • Eskom • Lightning • Seismicity • Planned / scheduled maintenance	• **No electricity** - Pumps - Shaft - Winders - Compressors - Plant - Communications - Fan failure • **Resulting in:** - Flooding - No conveyance - Persons stuck in conveyance - No compressed air - No production - No / poor communication - No ventilation • **Causing:** - Damage to shaft - Inundations - Panic / Chaos - No ventilation - No life sustainable refuge chambers - Heat / gas accumulations • Business interruptions • Fatal	• Electrical COP • Emergency preparedness - COP - Procedures • Statutory appointments • Backup Diesel Generators • Communication system • ESKOM ring feed • Control room • New Employee and annual refresher training	3	2	6(L)	•	• EE Supt. • EE Manager • Control Room • Banksman

RISK ASSESSMENT

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
5.	• **Emergency Preparedness -** Flooding or the intersection of excessive water	• Sub-std water intersection control - Inadequate telescopic • Power failures • Seismicity • Accident to shaft • Equipment failure – pumps / columns / Valves • Inadequate cover drilling / pilot holes • Improper planning (geology and geotechnical information) • Natural causes - Rain • Unexpected / unplanned holing	• Inundation • Damage to equipment • Damage to property • Power failures • Injury • Fatal • Business interruptions	• Communication system • Backup spare equipment • Emergency preparedness COP • Cover drilling - Water boards (Dev) • Control room • New Employee and annual refresher training • Emergency Spares inventory	2	3	6(L)	•	• Eng. Supt. • Eng. Manager • Control Room • Banksman

RISK ASSESSMENT

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
6.	• **Emergency Preparedness -** Methane accumulation	• Power failure • Hot spots • Ventilation interruptions • Human behaviour - Sabotage - Tampering - Theft - Lack of communication - Lack of training • Equipment failure • Instrumentation failure • Geological anomalies • Blasting • Methane blowers • Recirculation of air • Unexpected / unplanned holing	• Hot spots • Gassing • Stoppage of airflow • Fires • Injury • Damage to equipment • Explosion • Multiple fatal • Business interruption	• Non-negotiable • Communication system • Flammable Gas COP • Emergency preparedness COP • Telemetry • Methane Clearance Procedure • New Employee and annual refresher training • Methane SWIFT Risk assessment • Methane Extraction project • FGMI's	**3**	**2**	**6(L)**	•	• EE Supt. • EE Manager • Control Room • Banksman
7.	• **Emergency Preparedness -** Missing person underground	• Poor induction • Poor / No blasting schedule • Poor / No stay-on procedure • Poor / No shaft clearance procedure	• Missing person • Injury • Fatal • Business interruption	• Emergency Preparedness COP • Induction program. • Blasting schedules. • Stay on procedure. • Shaft clearance procedure	**2**	**3**	**6(L)**	•	• Duty Mine Overseer • Manager Operations • Control Room • Banksman

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
8.	• **Emergency Preparedness -** Exposure to blasting fumes	• Power failure • Ventilation interruptions • Human behaviour - Sabotage - Tampering - Lack of communication - Lack of training - Non adherence to blasting schedule - Non adherence to re-entry period • Equipment failure • Instrumentation failure • Blasting - Primary - Secondary • Recirculation of air • Unexpected / unplanned holing	• Gassing • Multiple fatal • Injury • Health illnesses • Business interruption	• Blasting schedules • Statutory appointments • Communication system • Emergency Preparedness COP • Telemetry	**3**	**2**	**6(L)**	•	• EE Supt. • EE Manager • Control Room • Banksman

RISK ASSESSMENT

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
9.	• **Emergency Preparedness -** Heat disorders	• Power failure • Ventilation interruptions • Human behaviour - Sabotage - Tampering - Lack of communication - Lack of training - HTS - Physical & mental incapability - Equipment failure • Instrumentation failure • Recirculation of air • Unexpected / unplanned holing • Fridge Plant / BAC / spot cooler failure • Virgin Rock Temp • TMM • Electrical equipment	• Heat illnesses • Fatal • Business interruption	• Communication system • HTS - Screening training - NAU • Ventilation arrangements - Ventilation audits - Action level temperature monitoring • Re-entry examination • New Employee and annual refresher training • Thermal Stress COP • Emergency Preparedness COP	**3**	**2**	**6(L)**	•	• EE Supt. • EE Manager • Control Room • Banksman

10.	• **Emergency Preparedness -** Fatal accidents	• Tramming - RBE - TMM - Mudrush - Fell down orepass - Fell into excavation • F.O.G - Sidewall - Hang wall - Gravity - Seismicity - Rock burst - Brow • Methane • Road Accidents • Ventilation - Heat stroke • Fire • Winches - Struck by Snatchblock - Winch Rope - Sub-std Rigging • Explosives • Drilling - Misfires • Hydropower • Conveyor Belt • Medical illnesses • Hi-jacking • Drowning • Chemical exposure • Electrocution • Shaft related accidents	• Fatal • Business interruption	• RBE COP • TMM COP • Flammable Gas COP • FOG COP • Emergency Preparedness COP • Cyanide COP • Thermal Stress COP • Safe production rules • Mine Residue Deposit COP	**3**	**4**	**12(M)**	•	• Safety Manager • VP Operation • Manager Operations • Mine Overseer • Control Room • Banksman

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
11.	• **Emergency Preparedness -** Industrial action	• Wage negotiations • Fatal • Irregular working arrangements • National strike • Organised labour strike • Illegal strike • Continued work dissatisfaction • Disputes • Attitude between Employees and Management • Retrenchments of company	• Depending on commodities supplied. If non critical it will not be a problem • If critical items, it could result in the operation either coming to a standstill or reduced production will take place • It could result in the Gold Plants not being able to produce gold • Employee could not be transported to and from work • Companies that have sole supply options could result in operation closure that could lead to closures and retrenchments • Possible loss of income • Loss of jobs • Disciplinary action • Injury • Fatal • Business interruption	• Emergency Preparedness COP • Organised Labour unions • Competent HR / IR relations resources • Legal teams • All our contracts for strategic commodities are so structured that we carry stock where applicable and the suppliers inform us of any potential strike to assist in carrying extra stock • For Explosive we arrange with the SA Police explosives division to carry stock in the explosives magazines to prevent production stoppages • For non-core commodities we will source from alternate suppliers or revert to importing commodities • We continuously monitor the market to be aware of potential strikes	**3**	**2**	**6(L)**	•	• HC Manager • VP Operations • Manager Operations • Control Room • Unions

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
12.	• **Emergency Preparedness -** Seismic event	• Worked out ground • Faults • Dykes • Large unsupported areas • Strain bursts • Ineffective aerial coverage support • Breaking into Virgin ground • Pillar mining • Highly stressed areas	• Multiple Fatal • FOG • Injury to persons • Business interruptions • Instability over large area • Loss of access ways • Risk to rescue teams	• Support standards and procedures • 2nd Escape ways • Support pillars • FOG COP • Training and awareness • Seismic monitoring system • TARP SPG • Seismic Daily Rating SPG • Seismic Withdrawal SPG • Communication system • Emergency Preparedness COP • Seven Golden rules of barring • First entry examination and safe declarations • Planning • Routine audits	**3**	**4**	**12(M)**	•	• Safety Manager • VP Operations • Manager Operations • Mine Overseer • Rock Engineer • Control Room • Banksman

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
13.	• **Emergency Preparedness -** Chemical spillage	• Improper chemical transportation/storage/ handling • Human behaviour - Sabotage - Tampering - Theft - Lack of communication - Lack of training	• Fatalities • Injuries • Damage to equipment • Environmental pollution • Clean-up /rectification cost • Fines and penalties • Litigation • Poor reputation	• EMP • ISO 14001 certification • OHSAS 45001 • Operational procedures • Emergency preparedness COP • Cyanide code compliance • SDS control system • New employee and annual refresher training • ESG Policy	**1**	**4**	**4(L)**	•	• Safety Manager • VP Operations • Manager Operations • Env. Manager • EE Manager • Control Room
14.	• **Emergency Preparedness -** Spill/Incident	• Natural causes - Excessive Rain • Water balance imbalance • Human behaviour - Sabotage - Tampering - Theft - Lack of communication - Lack of training	• Environmental pollution • Clean-up /rectification cost • Fines and penalties • Litigation • Poor reputation	• EMP • ISO 14001 certification • Cyanide code compliance • Emergency preparedness COP • Probabilistic water balance	**1**	**4**	**4(L)**	•	• Safety Manager • VP Operations • Manager Operations • Env. Manager • EE Manager • Control Room

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
15.	• **Emergency Preparedness -** Exposure to Radiation	• Over exposure to Radiation	• Chronic / Acute effects	• CoR / NNR Act and Regulations - Occupational Radiation Protection Programme • Ventilation Standards • Measuring & Monitoring • Investigation / Intervention when required	**2**	**3**	**6(L)**	•	• Safety Manager • VP Operations • Manager Operations • Env. Manager • Radiation Protection Officer • EE Manager • Control Room
16.	• **Emergency Preparedness -** Shaft accident	• Human Behaviour - Suicide - Poor communication - Use sub-std equipment - Poor supervision • Shaft Conveyance • Maintenance schedules not adhered to • Lack of Knowledge	• Persons trapped in conveyances • Injured / fatality inside conveyance • Fatal • Damage to stations • Damage to shaft envelope structure • Damaged services • Equipment falling down shaft. • Business interruptions	• Emergency Preparedness COP • Statutory appointments • Engineering SPG's • Competent workmen • Accident incident investigations (11.5 investigations)	**3**	**4**	**12(M)**	•	• Safety Manager • VP Operations • Snr. Eng. Manager • Eng. Manager • Engineer • Manager Operations • Control Room • Banksman

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
17.	• **Emergency Preparedness -** Compressed air failure	• Power failure • Human behaviour - Sabotage / Theft - Tampering - Lack of communication - Lack of training - Equipment failure • Instrumentation failure • Unexpected / unplanned holing • Blasting - Primary - Secondary • Maintenance on system • Compressor failure • Eskom - Power Clipping	• Methane accumulations • Hot spots not ventilated • Refuge chambers not life sustainable • Failure of pneumatic pumps • Fatal • Business interruption	• Communication system • Control room • SCADA system • Emergency Preparedness COP • PRAGMA • Spare Compressors • Emergency Diesel generators	2	3	6(L)	•	• Safety Manager • VP Operations • Snr. Eng. Manager • Eng. Manager • Engineer • Manager Operations • Control Room • Banksman

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
18.	• **Emergency Preparedness -** Slimes dam failure	• Damaged or blocked drain pipes • Improper maintenance • High phreatic water levels (water inside dam) • Excessive rain (floods) • Penstock failure • Overtopping • Insufficient freeboard	• Dam Failure • Residential flooding • Legal liability • Environmental damage • Damage to property • Production loss • Multiple fatalities • Business interruption • Ecological disaster	• Residue Deposit COP • Stefanutti Stocks Emergency Plan • Tailings dam emergency situational logic model • Emergency COP (BTX) • SHE management control system • Risk assessment • Task procedures • Planned task procedures • Job safety analysis • Continuous training • Qualified and trained personnel • Record inspections and reports • Installation of piezometers • Efficient draining system • Proper maintenance of tailing dams • Frequent Emergency drills • Fraser Alexander Hazard management system • Quarterly meetings and inspections with consulting engineers (Golder & Associates)	**1**	**5**	**5(L)**	•	• Safety Manager • VP Operations • Manager Operations • Env. Manager • EE Manager • Control Room

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
19.	• **Emergency Preparedness** - Supplier on strike	• Payment not received for goods delivered • Removal of vendor from list • Inability to produce • Resources and supply to supplier • Industrial Action • Labour disputes • Retrenchments by the Company	• Depending on commodities supplied. If non critical it will not be a problem • If critical items, it could result in the operation either coming to a standstill or reduced production will take place. • It could result in the Gold Plants not being able to produce gold. • Employee could not be transported to and from work • Companies that have sole supply options could result in operation closure that could lead to closures and retrenchments	• Informational Memo • All our contracts for strategic commodities are so structured that we carry stock where applicable and the suppliers inform us of any potential strike to assist in carrying extra stock. • For Explosive we arrange with the SA Police explosives division to carry stock in the explosives magazines to prevent production stoppages. • For non-core commodities, we will source from alternate suppliers or revert to importing commodities. • We continuously monitor the market to be aware of potential strikes	**2**	**3**	**6(L)**	•	• VP Operations • Manager Operations • Financial Manager • Stores Controller

RISK ASSESSMENT

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RISK IDENTIFICATION AND ANALYSIS					RISK EVALUATION			RISK TREATMENT & TRACKING	
No	**Potential Hazard "What If"**	**Potential Causes**	**Potential Consequences/ Risk**	**Current control measures**	**L**	**S**	**RR**	**Further Controls Recommended**	**Responsible person / Due Date**
20.	• **Emergency Preparedness** - Water shortage	• Supplier on strike • Sabotage • Theft of pumps • PRV failure • Low gravity feeds • Blockages • Orifices • Unauthorised closure of valves • Ring feed failure • Non-payment of invoices • Dam failure • PRV Valve failure • Pipe column failures	• Water shortage • Drilling without water causing dust inhalation • Health issues - Toilets - Heat illness - Drinkwater - Service water • Fatal • Business interruptions	• Communication system • Control room • SCADA system • Emergency Preparedness COP • PRAGMA • Spare Columns • Additional pumps (Main pump station) • Rerouting drainage system	**2**	**3**	**6(L)**	•	• Safety Manager • VP Operations • Snr Eng. Manager • Eng. Manager • Engineer • Manager Operations • Control Room • Banksman
21.	• **Emergency Preparedness** - Training and Awareness	• Lack of awareness • Lack of discipline • Inappropriate training material • Inadequate training equipment • Inadequate resources • Incompetent training personnel • Lack of knowledge	• Legal liability i.t.o MHSA sect 10 • Improper training methods • Injury • Damage to equipment • Fatal • Business interruption	• New employee and annual refresher training • Training manuals • Training programmes • Competent staff • Proper HR selection criteria via flow sheets • Emergency preparedness COP • Ad-hoc training interventions	**2**	**3**	**6(L)**	•	• Safety Manager • VP Operations • Snr. Eng. Manager • Engineering Manager • Manager Operations • Training Manager

ANNEXURE 1 – REFUGE BAYS

Objective is to provide a general framework for the siting, construction, equipping and maintenance of refuge bays as required in MHSA regulation 16.5.
The distance from the furthest working to the nearest refuge bay may not exceed 500m (industry standard 750m) to cater for travelling in hard rock mining environment. No work may be conducted in a working place if the refuge bay is not life sustaining as stipulated in the Rules of Life.

Refer to Fire Prevention SPG: Section 29 for Refuge Bays, SER.EE.2.4B, revised February 2020 or amended. This SPG deals with the establishing, construction and equipping of Refuge bays. Refuge bays must comply with the Mine Health and Safety Regulation 16:6(2).

Refer to SPG: Lomtheto Yena Phephisa Lo Msebenzi Kawena – Rules of Life, Serv.Gen.2.4A, revised June 2021 or amended. These Rules provide support to safety management system and may not be broken under any circumstances.

ANNEXURE 2 – EMERGENCY CONTROL CENTRE; STRUCTURE AND PROCEDURE

1. Foreword

A well-designed and efficient control room is the key to success in controlling an emergency operation. The control room is the nerve centre during a crisis where information is gathered and analysed. From this analysis, a strategy emerges for translation into action plans.
The execution of planned action by clear and comprehensive briefing of rescue teams and personnel will greatly enhance operational efficiency and limit loss. Spontaneous “off the cuff” decision making leads to poor and often contradicting instructions, with result confusion and poor worker motivation and performance occur.

2. THE EMERGENCY CONTROL ROOM

2.1 Objectives

To ensure an orderly and efficient transition from routine operations to effective mine emergency response.

All persons who are or may be required to act as a Manager in Control in an Emergency Control Room are required to attend the MRS Emergency Control Room Management Course. A copy of the MRS Control Room Management Course Manual must be available in the Emergency Control room at all times.

Refer to SPG: Emergency Control Room Administration, EE.2.4B, revised March 2021 or amended. The SPG to stipulate all documents and equipment required to ensure emergencies are dealt with in a safe and efficient manner.

ANNEXURE 3 - DUTIES AND RESPONSIBILITIES IN THE CONTROL ROOM

1. THE MANAGER IN CONTROL (Competent Person)

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Only one legal technical qualified manager takes control.			
2	Establish a Record Logbook and appoint a Scribe.			
3	Notify Rescue Manager to arrange for “home” rescue teams to report to control.			
4	Notify Mines Rescue Services.			
5	Notify Department of Mineral Resources			
6	Notify SAPS / DMRE in event of any fatalities.			
7	Arrange for press liaison personnel if applicable.			
8	Gather information from responsible persons and ask relevant questions.			
9	Identify affected areas. Evacuate employees from affected areas and clear shift.			
10	Identify critical equipment needed and delegate arrangement of it.			
11	Identify services needs and ensure availability.			
12	Brief all responsible persons accordingly (include contractors).			
13	Ensure all applicable persons sign a declaration of non-disclosure of information			
14	Barricade areas off and plot on plans.			
15	Decide on strategies in conjunction with management team.			
16	Set objectives. (Minimise loss or exposure of men, material, environment, costs)			
17	Draw up a duty roster. (Be flexible – the situation will determine the need. Ideal is to have two manager’s on twelve hour shifts continuity)			
18	Set times for progress report meetings and re-assess strategies. Update pin board accordingly.			
19	Measure effectiveness of strategy plan to set objectives. Alternate plan if initial objectives cannot be met.			
20	Any changes to set objectives or entry to affected area must be approved by the Manager in Control.			
21	Determine labour requirements for the incident.			

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
22	Re-deploy other production labour.			
23	Notify other shafts or mines that may be affected.			
24	Brief and issue instructions to rescue teams.			
25	Ensure rescue teams documentation is in order.			
26	Record findings of teams in Record Logbook			
27	Debrief rescue teams.			
28	Brief management, service departments, DMRE, Union, Health and Safety Representatives on situation, planned objectives, progress and strategy.			
29	Ensure rescue teams sign a disclosure of information document.			
30	Brief medical personnel on potential assistance needed (possible number of casualties).			
31	Issue rescue teams with a body bags and body recovery document if applicable.			
32	Issue rescue teams with a “Rescue from Refuge Chamber” document – if applicable			
33	Obtain fire / incident cost code form Financial Department.			

Additional notes

Manager: _____ **Signature:** _____

2. THE ENGINEER / ENG. MANAGER

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Report to Control Centre frequently.			
2	Ensure preferential treatment from power supplier (ESCOM).			
3	Supply control room personnel with telephone numbers of affected area.			
4	Notify other shafts/mines regarding power supply problems.			
5	Prepare contingency plan in event of a surface fan breakdown.			
6	Ensure availability of shaft conveyances.			
7	Re-arrange scheduled shaft times if applicable			
8	Brief all responsible persons accordingly.			
9	Maintain dam levels (plus 80% if possible).			
10	Be aware that pH of water will change.			
11	Notify other affected shafts of Point. 10.			
12	Ensure clearance of persons from stations at affected levels.			
13	Ensure availability of transport where applicable.			
14	Ensure availability of equipment operators (Locos, Incline winches & Surface trucks).			
15	Arrange for applicable artisans to be placed on standby.			
16	Ensure availability of communication lines to Fresh Air Base.			
17	Ensure isolation of applicable services to affected area except water and compressed air			
18	Utilise and arrange necessary equipment/material from other shafts/mines.			
19	Ensure continuity of power supply to control room.			
20	Establish duty roster of applicable engineering personnel with sound knowledge of affected areas, detector heads where applicable.			

Manager: _____ **Signature:** _____

3. ENVIRONMENTAL ENGINEERING

No.	ACTION		RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	From detector heads available, define the probable location of the fire (affected area).				
2	Identify affected areas and affected shift workers.				
3	Locate fire vent districts.(fire zoning)				
4	Plan reconnaissance patrols if applicable.				
5	Identify safest escape routes to evacuate affected shift.				
6	Remind the Manager in control to notify adjoining shafts / mines.				
7	If available, supply previous master fire plans of affected area.				
8	Identify dedicated chimney (borne risk in mind, consider as high-risk area all the time).				
9	Schedule duty roster (shifts to overlap with manager in control. Do not change shift the same time as the manager).				
10	Provide / supply gas detectors, monitors, gas detector tubes.				
11	Interpret the fire behaviour and effectiveness of the total strategy. What effect will any changes have on the strategy?				
12	Advise management where work can continue without putting any employee at risk.				
13	Monitor	Status of main fans			
		Pressure of sealed off area			
		Fire chimney conditions			
		Gas concentration and temperature trends			

Manager: _____ **Signature:** _____

4. ORE RESERVE MANAGER

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Supply control centre with plans and always have at least 3 complete sets of plans available.			
2	Ensure plans are updated accordingly after monthly planning sessions.			
3	Supply updated locality plans as required of affected area for rescue team's usage.			
4	Update rescue plans and colour as per master plan.			
5	Identify and mark current workings on plans. Add "self-stick notes" on plans with work group names and number of employees in the area.			
6	Highlight fire districts on plans.			
7	Highlight natural barriers on plans.			
8	Highlight faults on plans.			
9	Highlight boundary pillars and any holings through them.			
10	Supply section plans for suspect areas.			
11	Identify reference pegs on plans.			
12	Schedule duty roster survey personnel conversant with affected area.			
13	Ensure access to and staffing of survey office after hours.			

Manager: _____ **Signature:** _____

5. HUMAN CAPITAL

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Ensure clearing of shift, report missing person(s).			
2	Supply updated telephone list of all related control personnel.			
3	Parade required employees needed for assistance.			
4	Ensure affected area personnel crush control.			
5	Arrange union and safety representatives.			
6	Arrange meetings when requested.			
7	Arrange update/progress meetings unions.			
8	Arrange/control media.			
9	Arrange security personnel when/where required (access control).			
10	Receive rescue teams and arrange change house accommodation.			
11	Supply meals and beverages to control personnel.			
12	Supply meals and beverages to rescue teams as required.			
13	Notify family member in cases of disaster.			
14	Arrange transport for family members when required.			
15	Arrange accommodation for family members when required.			
16	Arrange briefing times and area with family members.			
17	Arrange designated area for press releases if/when required (refreshment).			
18	Arrange necessary documentation in case of accidents or fatalities.			
19	Arrange guides/bearers for rescue teams if available.			
20	Arrange posttraumatic treatment for rescue teams if necessary.			

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
21	Arrange posttraumatic treatment for applicable employees involved with disaster if necessary.			
22	Arrange medical observation for employees and rescue teams being in contact with body fluids			
23	Arrange correspondence to management of assisting mines (thank you letters).			
24	Arrange parking and security for vehicles of rescue teams.			
25	Schedule duty roster to ensure continuity of service departments.			

Manager: _____ **Signature:** _____

6. SECURITY MANAGER

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Arrange access for mines rescue service provider and equipment.			
2	Arrange access for rescue teams, equipment and parking.			
3	Ensure access control of public.			
4	Ensure access control of press/media.			
5	Direct press/media to predetermine designated area (liaise with the Human Resource Department).			
6	Direct public to predetermined designated area (liaise with the Human Resource Department).			
7	Notify manger in control of press/public/media attendance.			
8	Barricade off area around shaft to ensure access for ambulance if applicable.			
9	Ensure crowd control.			
10	Ensure traffic control.			
11	Escort people into and out of mining area.			
12	Arrange investigation teams, if applicable (arson).			
13	Ensure equipment control from stores to underground.			

Manager: _____ **Signature:** _____

7. OCCUPATIONAL MEDICAL (OMP)

No.	ACTION	RESPONSIBLE PERSON	COMPLETED	SIGNATURE
1	Be available to conduct medical examination of mine rescue teams if required and enter findings on appropriate documents.			
2	Notify hospital(s) and other emergency medical personnel of incident magnitude, possible number of casualties, and type of injuries.			
3	Prepare medical facilities to be in state of readiness.			
4	Notify ambulance personnel to be on standby.			
5	Ensure readiness to proceed underground when required.			
6	Schedule medical staff for duration of incident.			
7	Supply manger in control with emergency telephone number of other emergency services available, if requested.			
8	Inform hospital(s) personnel in the event of rescue team members being in contact with body fluids.			

Manager: _____ **Signature:** _____

ANNEXURE 4 – SCHEDULE OF ADDITIONAL REFERENCES

(For information purposes only)

- Chamber of Mines Research Organization (COMRO) 'ResQpacs; How to calculate safe travelling distances';
- The Lamp Room Guidance Note issued by the Chief Inspector of Mines, OH-11-2003 dated 30-06-2003);
- Safety in Mines Research Advisory Committee, SIMRAC, research report COL 605 "A Manual for best practice for emergency response procedures";
- Safety in Mines Research Advisory Committee, SIMRAC, research report 801 "Analysis of Emergency Care Provided for Injured Miners in the South African Mining Industry, and Recommendations for the provision of Emergency Care";
- Disaster Management Act, Act No 57 of 2002;

Note: The above list is not exhaustive and it ids recommended that publications from Mine Professional Organisations, SIMRAC, DMRE, COM, CSIR etc. could be consulted.

The unions were invited to attend the drafting, were consulted and a copy of the COP is readily available if required to anyone who request a Hardcopy of the COP in writing

NUM
Designation: [illegible]
Name: M.S SEGAYISE Signature: M. S SEGAYISE

AMCU
Designation: I. L. Tom
Name: Chairperson Signature: [illegible]

UASA
Designation: UASA FTUR
Name: G-J. KALLWE Signature: [illegible]

ATTENDANCE REGISTER

Date of Meeting	06 July 2017	Title of Meeting	Emergency Preparedness COP
Time of Meeting	08h00	Venue	EE Department Boardroom

Name and Surname	Designation	Company/Operation	Industry No.	Cell /Landline No.	~~Email address~~ Sign.
J. Booyens	CSO R&Std	Sibanye Au.	P2848742	0797659405	Booyens.
Johan Matyss	Group Fire Master.	Sibanye	P3596205	0836533285	
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M van Rooyen	EE Manager	BTX	P8969226		
W. Jahn	CSO	BTX	P3497708	0823729774	
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Merwin van Rooyen	Env Eng Man	Cooke	P3313883	0836553792	

COP Adoption

Initials & Surname	Industry Number	Designation	Signature
G.J. Bayers	P2848742	Safety Risk/SIDS	
P. Ntshanga	Z1911357	Engineer	
N. Saba	Z1993628	Full Time	
T. Solomon	Z1903629	Engineer	
M. Mecado	Z5513889	Full-Time	
S. Diamini	c2035500	Mine Oversee	
A. Mabeni	24278282	Manager Ops	
J.E. Jurisi	Z1996452	Full-Time	
M. Madlebe	C1992480	Full time H&S	
N. Sigidi	Z1992110	Full Time H&S	

3.1 Appointee: .....

3.1 Appointee: .....

ADOPTION & IMPLEMENTATION

Document Title:

EE-Emergency Preparedness COP 2.4B

Operations:

_____

Adoption Date: ……

Initials & Surname	Industry Number	Designation	Signature

3.1 Appointee: ……