



MATLA | COAL

MATLA COAL

## MANDATORY CODE OF PRACTICE ON EMERGENCY PREPAREDNESS & RESPONSE

This COP has been drawn up in accordance with:

**Guideline DMR ref no: DMR16/3/2/1 – A5 issued by the Chief  
Inspector of Mines.**

Mine reference number:

# COP 04

Effective Date:	November 1999
Revision Dates:	Refer to the next page – revision data

<b>DOCUMENT HISTORY</b>				
<b>Revision No.</b>	<b>Page</b>	<b>Revision Details</b>	<b>Reviewed/ Revised Date dd/mm/yyyy</b>	<b>Reviewed By</b>
1	All	First Formal Issue	15/02/99	I G Brown
2	All	Changes are highlighted in grey	25/11/99	I G Brown
3	All	Annual Revision (No changes)	12/9/2000	I G Brown
4	All	See typing in red	19.9.2001	Review Committee
5	All	See changes in blue	2003	IRCA Revision
6		See changes in blue	04/08/04	Review Committee
7		No changes	02/08/05	Review Committee
8		See changes in red	12/07/2006	Review Committee
8.1		See changes in blue	20/09/06	Review Committee
9		See changes in blue	22/05/09	Review Committee
10	All	See changes in olive	09/09/2010	Review Committee
11	Pd 7	See changes in red	18/05/2011	Review Committee
12	Full	Entire Document	1/10/2011	Review Committee
13		See changes in red	30/05/2012	Review Committee
14		See Changes in Blue	3.10.2012	Mine 1 Occ Hyg
15	PG 45	Changes in Red	22.05.2013	Review Committee
16	Pg 28, 32, 33, 34	Changes in Blue	31.03.2014	Review Committee
17	Pg, 6, 20 - 28	New Format Changes in Red	03.06.2014	Review Committee
18	All	Complete review	April 2016	Review Committee

The period of review of this COP shall not exceed 36 months providing that no cause to review at a lesser period occurs.

## DOCUMENT APPROVAL

No.	Position / role	Name	Date (yyyy-mm-dd)	Signature
1.	BU MANAGER	RH Chauke	2016-07-14	Approved
2.	MANAGER MINING	AK Botsheleng	2016-07-11	Approved
3.	MANAGER ENGINEERING	HA Lombard	2016-06-29	Approved
4.	MANAGER ENGINEERING	TG Nkwe	2016-06-24	Approved
5.	SUSTAINABILITY MANAGER	MA Geduldt	2016-06-24	Approved
6.	MANAGER MINE 1	WP Botha	2016-06-23	Approved
7.	MANAGER MINE 2	JT Sehloho	2016-07-06	Approved
8.	MANAGER MINE 3	JDJ Skosana	2016-06-24	Approved

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**3. STATUS OF MANDATORY COP**

1. This COP was drawn up in accordance with Guideline Reference Number DMR 16/3/2/1-A5 issued by the Chief Inspector of Mines
2. This is a mandatory COP in terms of section 9(2) and (3) of the MHSA
3. The COP may be used in an accident investigation/enquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose.
4. The COP supersedes all previous relevant COP
5. All managerial instructions, recommended procedures (voluntary COPs) and standards on the relevant topics must comply with the COP and must be reviewed to ensure compliance.
6. The period of review of this COP will not exceed 36 months if no cause to review at an earlier date occurs.
7. Cause for review may include administrative changes, system and equipment changes / improvements or physical occurrences

**4. MEMBERS OF DRAFTING COMMITTEE**

1. The Health and Safety Committee of MATLA COAL was consulted and involved in the preparation, implementation and/or revision of this COP. *[Committee established ITO MHSA Section 34]*
2. Following consultation with the employees in terms of the MHSA the following persons were appointed to serve as a drafting committee.

<b>Name</b>	<b>Designation</b>	<b>Qualifications</b>	<b>Experience</b>
<b>AK Botsheleng</b>	<b>Manager Mining Matla</b>	<b>Mine Manager Certificate</b>	<b>12 Years</b>
<b>W P Botha</b>	<b>Production Manager</b>	<b>Mine Manager Certificate</b>	<b>10 Years</b>
<b>A Coetzee</b>	<b>Sen. Ventilation Officer</b>	<b>Cert in Mine Env Control</b>	<b>12 Years</b>
<b>D Laing</b>	<b>Mining Systems Coordinator</b>	<b>Mine Overseers CC</b>	<b>38 Years</b>
<b>L Dzondzi</b>	<b>Full time H &amp; S Representative</b>	<b>COMSOC</b>	<b>12 Years</b>



## 5. GENERAL INFORMATION

### 5.1 LOCALITY

As depicted on the plan below, Matla Coal lies adjacent to Kriel Colliery and power station complex and is situated approximately 20 kilometres west from the town of Kriel and 35 kilometres north of Secunda town. Kriel town lies midway between the towns of Ogies and Bethal

Matla Coal is a captive colliery complex which supplies coal to Matla power station, comprising of three underground mines each with its own surface workshop, stores and office complex. The Central Area located adjacent to Matla 1 mine, consists of a coal processing plant, a central engineering workshop, central supply chain warehouse, hostel and training complex and main offices.



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## 5.2 COMMODITIES PRODUCED

Matla Coal produces thermal product for consumption by the 3600MW Matla Power Station as a 'captive colliery'.

The mine is owned by Exxaro Coal, a wholly owned subsidiary of the South African mining company Exxaro and has a workforce of over 3000 employees, which includes permanent as well as contracting personnel

Matla Coal currently produces around 9,0Mt of ROM coal per annum

Coal is supplied to Eskom's Matla Power Station in terms of a cost-plus agreement, with a variable return payable by Eskom for any excess tonnage produced

Future envisaged production tonnages on to the year 2049 are represented in the table below:

Years	2 016	2 017	2 018	2 019	2 020	2 021	2 022	2 023	2 024	2 025
Matla Tons	8 866 681	9 084 145	9 885 368	10 250 697	10 132 677	10 272 972	10 739 612	10 694 159	10 677 286	10 621 763
ASH	30.07	26.83	25.72	26.14	26.46	26.50	27.34	26.89	27.14	28.74
CV	19.35	20.32	20.60	20.47	20.50	20.28	20.06	20.18	20.28	19.74

Years	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Matla Tons	10 258 008	10 546 270	10 567 341	10 769 802	10 584 235	10 681 607	10 698 392	10 781 526	10 379 791	10 504 485	9 858 696	8 633 439
ASH	29.02	28.44	28.25	27.91	27.90	27.00	27.12	27.46	27.95	28.68	25.43	26.51
CV	19.57	19.62	19.70	19.87	19.85	20.00	20.14	20.07	19.71	19.54	20.63	20.12

Years	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049
Matla Tons	7 299 612	7 485 724	7 879 380	7 831 643	7 696 328	7 207 744	7 173 846	6 878 328	5 852 662	5 267 210	4 968 239	1 696 621
ASH	24.92	24.69	25.89	25.58	25.58	25.73	25.89	26.31	25.13	25.07	25.08	21.63
CV	20.73	20.99	20.52	20.68	20.73	20.61	20.60	20.46	20.66	20.87	20.81	22.03

### 5.3 MINING METHODS

Matla Coal is a fully mechanized underground mine, employing continuous mining and wall mining methods with conveyor belt transportation of the coal to surface.

Conventional drill and blasting mining methods are not currently employed as primary production methods. Drill and blasting is limited to advancing through doleritic intrusions (dykes) and floor and roof brushing for belt drives or other underground plant installations

Inherent to underground mining are the hazards and the associated risks of falls of ground, spontaneous combustion of coal, releases and accumulations of noxious and flammable gasses, fires and explosions associated with coal dust and inflammable gas, as well as the possibility of inundation of the underground workings with water or other intrushes.

In addition to the coal getting process, the transportation of product by means of conveyors poses a hazard resulting from long belt trajectories as well as the possibility of friction resulting in heat created by the machinery and equipment

Transportation of personnel and material is done by means of non – flameproof as well as flameproof diesel trackless mobile machinery, all of which have inherent hazards and associated risks

These hazards have been identified in the mine's base line risk assessment and the mitigation of the risks of the aforesaid as a preventative measure, have been addressed in the mandatory Codes of Practice pertaining to the specific entities. These Codes of Practice are listed in section 8.4 of this document

### 5.4 UNIQUE FEATURES

A unique feature of Matla Coal is that a high degree of mechanisation and automation is utilised throughout. As far as is practicably possible, the latest economically available technology is employed to ensure that employees are assured of a safe and healthy working environment. *[MHS Act Section 2.1.a)(i)]*

The above mentioned includes early detection and warning systems to detect and prevent extreme conditions from developing underground by means of telemetric sensors placed at strategic points in the workings *[Document EP38 Installation of environmental telemetry system underground]* .

All continuous mining machines including longwall face shearers are equipped with methane detection sensors which will stop machinery and prevent coal cutting in the presence of methane.

Use is made of radio communication as well as fixed line communication to afford communication to practically every area of the workings underground as well as on surface. *[MHSa Section 2.1.a)(ii)]*

Fixed installation CCTV is provided at designated areas of trunk conveyors underground as well as on surface to relay images to the surface control rooms at each shaft, as well as at the plant control room.

Control rooms at every shaft are equipped with storm detection equipment to warn of thunderstorm and lightning approaching so that early evacuation of the underground can be arranged. Drop in barometric pressure is also recorded to alert the underground of the possibility of increased methane emission from the coal seams. *[Documents COP05 Risks associated with lightning hazards, COP15 sect.8.1.4. MP10 pnt.3.2 – Warning when barometric pressure falls]*

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## 6. TERMS AND DEFINITIONS

Unless the content otherwise indicates:

Breathing apparatus	means an apparatus, which renders the user independent from breathing from the atmosphere for a minimum of two (2) hours [MHSA Reg. 16.5]
Catastrophic	Means involving or causing sudden great damage or suffering
COP	shall mean Code of Practise
Code of Practise	refers to a set of rules issued by a professional association or an official body that explains how people working in a particular profession should behave [ <i>This COP is mandatory in terms of the MHSA Section 9(2) and has been drafted by an appointed team in consultation with the Health and Safety Committee of MATLA COAL</i> ]
Competent person	shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Minerals Act Reg.1
Control room coordinator	Shall refer to the person appointed to be in charge of the emergency control room as contemplated in MHSA Reg.16.5.1 e) and who has received training as referred to in MHSA Reg 16.5.1 c) (iii)
CCTV	Refers to closed circuit television monitoring device
DMR	Department of Mineral Resources
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 the evacuation, rescue or recovery of persons, to prevent serious injury or harm, or further serious injury or harm, to persons; [MHSA Reg. 16.5]

Flammable gas warning device

Shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Minerals Act Reg.1

Flammable gas measuring instrument

Shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Minerals Act Reg.1

Hazard

Means a source of exposure to danger. MHSA Sect. 102

Health and safety committee

Means a health and safety committee established in terms of MHSA Sect.34

Health hazard

means any physical, chemical, or biological hazard to health

IOM (inspector)

means an officer appointed in terms of MHSA. Sect.47.4 (b) and;

Key Personnel

Shall mean a person whose training, knowledge, experience and legal appointment, by the owner or manager, allows or entitles the person to make decisions in the interest of the employer

Manager

shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Minerals Act Reg.1

MHSA

Shall mean the Mine Health and Safety Act (Act 29 of 1996) and Regulations, as amended

Mine

shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Sect.102

Mining area

shall have the same meaning as assigned to it in the MHSA (Act 29 of 1996) as amended. Sect.102

Monitoring

shall refer to the continuous and repetitive observation, measurement and evaluation of technical and / or health data using internationally accepted methods, and includes monitor

Power supply	shall mean any electrical or mechanical power source feeding any plant or apparatus in or on a mining area and includes the meaning assigned to power supply in terms of MSHA Reg. 8.9
Reasonably practicable	shall have the same meaning as assigned to it in the MSHA (Act 29 of 1996) as amended. Sect.102
Risk	means the likelihood / possibility / probability that harm to persons will result from a hazard
Risk assessment	refers to hazard identification and risk assessment required in terms of the MSHA Sect. 11
SCSR	refers to a body worn Self Contained Self Rescue apparatus
Serious injury	means injury which is reportable in term of the MSHA Reg. 23
Shaft	shall have the same meaning as assigned to it in the MSHA (Act 29 of 1996) as amended. Minerals Act Reg.1
Shall and must	these words will indicate compulsory action or intent as in obligatory
Should	will allow for discretion although the action or intent is recommended
Working place	means any place at a mine where persons work or travel

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## **7. RISK MANAGEMENT**

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**SIGNIFICANT HAZARDS:**

7.1 The following have been identified as significant hazards pertaining to coal mining and are considered as having the potential to result in major emergency situations

- a) Underground fires which could result from  
Substations and electrical mishaps  
Belt drives and friction on belts  
Methane or other gas ignitions  
Spontaneous combustion from coal accumulation  
Surface lightning
  - b) Underground explosions which could result from  
Gas and coal dust accumulation & ignition  
Surface lightning
  - c) Transportation incidents which could result from  
Failure of hoisting machinery  
Collision of man carriers on surface or underground  
Personnel transport by bus to various villages and town
  - d) Inundation by water which could result from  
Flooding out of old areas used as reservoirs  
Flooding from goaf areas resulting from surface water ingress through cracks and fissures  
Flooding from adjacent mined out areas
  - e) Personnel being trapped as a result of  
Major ground collapse  
Incidents outside of working places
  - f) Gassing which could result from  
Ventilation failure  
Uncontrolled machine exhaust  
CO & CO<sub>2</sub>
  - g) Fires at surface areas and installations which result from  
Veld fires  
Coal storage – spontaneous or other cause  
Fire in coal plant
  - h) Major chemical spills as a result of containment failure
- 7.1.1 Hazard and risk assessment



i) The afore mentioned hazards have been assessed in terms of probability and possibility as well as severity as required by the risk assessment methodology described in MATLA risk assessment procedure document (SP01) based on the SIMREC Practical Guide to Risk Assessment HIRA document.

ii) Although every measure is taken to reduce the risk and to prevent health and life threatening conditions from developing or occurring, the management of Matla Coal recognises that the need to be prepared for any eventuality, cannot be underestimated or neglected

7.2 In compiling this COP, consideration has been given to mining disasters and the immediate response to such occurrences, which have resulted in catastrophic loss of life as well as minor incidences that have resulted in serious injury to personnel

a) A comprehensive list is not given in this document but would include the Coalbrook, Ermelo Mines, Kinross Mine, Middelbult, Gloria, Pike River (NZ), Upper Big Branch (USA) and other disasters, as well as past emergencies experienced at Matla Mine.

b) The HIRA process therefore addresses the 'WHAT IF?' and the 'Who, What, Where, When and How?' regarding an occurrence, to ensure that the response to such a scenario will ensure the survival of those individuals whose lives are in peril as a result of such occurrence.

c) Although the Management has prepared a response strategy to deal with emergencies, the emphasis will remain focused on prevention

7.3. This Emergency Preparedness Code of Practice will be reviewed as often as is necessary to ensure that the information contained therein is maintained as current as possible. Such period of review will not exceed 36 months if no cause to review at a lesser period occurs. Cause for review may include administrative changes, system and equipment changes / improvements or physical occurrences

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## **8. EMERGENCY RESPONSE AT MATLA MINE**

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## 8.1 Emergency Preparedness Measures

### 8.1.1 Detection and early warning systems

- a) All three underground mines shall be, and are equipped with telemetry systems at strategic points to enable early detection of flammable gas, CO or ventilation failure. Telemetry systems must be installed as per Engineering Procedure EP 38 "Installation of Environmental Telemetry system underground"  
Each system must be connected to the surface control room at the mine where it shall be monitored by the control room official.
- b) In addition to the telemetry system, physical fire patrols shall be done on non production days such as Sundays, Saturdays and public holidays. (The requirements regarding physical fire patrols are detailed in point 9 of the Fire Prevention and Fire Control Document – MP02)
- c) All continuous miners and Short Wall Shearers shall be, and are equipped with suitable onboard Methane detectors which must be electrically interlocked with the machine to ensure that the power is tripped when CH<sub>4</sub> is detected.
- d) Methane detectors must be tested for operability at the start of each shift and the results shall be recorded in a counterfoil book provided for the purpose. The section miner, artisan performing the test, machine operator and section foreman shall confirm the results by signature. The original results page must be kept on file by the section foreman for a period of at least six months. The miner shall be required to confirm the results in his daily report. [Refer to COP 15 section 8.2]
- e) Underground personnel shall make use of GDI testing equipment to test for Methane (CH<sub>4</sub>) and Carbon Monoxide (CO). The procedure for testing and calibrating gas testing and detecting equipment shall be done in accordance with COP 08 "Code of Practice for Lamp Rooms"
- f) Lamprooms shall keep gas detection Instruments which should be issued to strategic underground personnel (Refer to table 8-A below)
- g) The control rooms on all the shafts shall be, and are equipped with early warning lightning detection systems (Refer to table 8-A below). (Refer also to COP 05 "Manage the risk associated with lightning").
- h) Power failures should be addressed through a ringfeed system between the mines when possible / feasible.

- i) Designated areas of conveyor installations shall be monitored by CCTV from the control rooms at the shafts as well as the plant

TABLE 8-A

Type	Mine 1		Mine 2		Mine 3	
	In Use	Back Up	In Use	Back Up	In Use	Back Up
GDI Enviro'	42	14	67	18	60	10
G.D.I. Enviro (Single gas – 100%)	None	None	None	4	None	None
G.D.I. 002 Hydrogen gas only	2	None	1	None	None	None
GDI 007	2	2	6	8	None	5
Observer (Multiple gas – CO, CO <sub>2</sub> , CH <sub>4</sub> , O <sub>2</sub> , H <sub>2</sub> S)	None	None	3	None	None	None
Onboard CH <sub>4</sub>	Sperosens	Sperosens	Sperosens	Sperosens	Sperosens	Sperosens
CO/CH <sub>4</sub> detectors	Guduza Tri and single sensor system	Guduza system	Guduza Tri and single sensor system	Guduza system	Guduza Tri and single sensor system	Guduza system
Radios	Vertex Ex la	Telephone	Vertex Ex la	Telephone	Vertex Ex la	Telephone
Lightning detecting system	Weatherlin k 5.9.3	Boltek Electr. Field Monitor	Weatherlin k 5.9.3	Skyscan	Weatherlin k 5.9.3	None

### 8.1.2 Communication Systems

- a) Surface Communication

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- i) Every office in which key personnel are located shall be provided with a telephone
  - ii) Key personnel shall be required to carry a cellular telephone on their person by which they can be contacted, during or after normal working hours should the need arise
  - iii) Key personnel shall be required to inform either the shaft or office, secretary or receptionist or control room of their whereabouts when not in their office or if having gone underground into the mine workings
- b) Underground Communication
- i) The control rooms at all the shafts shall be and are equipped with Telkom phones as well as Cellular phones and two way radio communications. (Refer to Annexure for control room and emergency control room numbers).
  - ii) All refuge bays, belt drives, sub stations and sections shall be and are equipped with telephone communication. Key and strategic personnel shall utilize two way radio communication
  - iii) The effectiveness of communication systems in Refuge Bays must be tested and recorded at such intervals and by persons as required in terms of MSHA Reg.16.6.3. The responsible Shift boss shall perform this function as part of his routine inspection (Refer to Section 10 of Underground Escape Standards Document – MS03). Such test must also be performed when emergency escape drills are done according to the Underground Escape Standard and Procedure (Refer to MS 02 and MP03).
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### **8.1.3 Emergency Medical Care**

- a) Arrangements for the provision of emergency medical care

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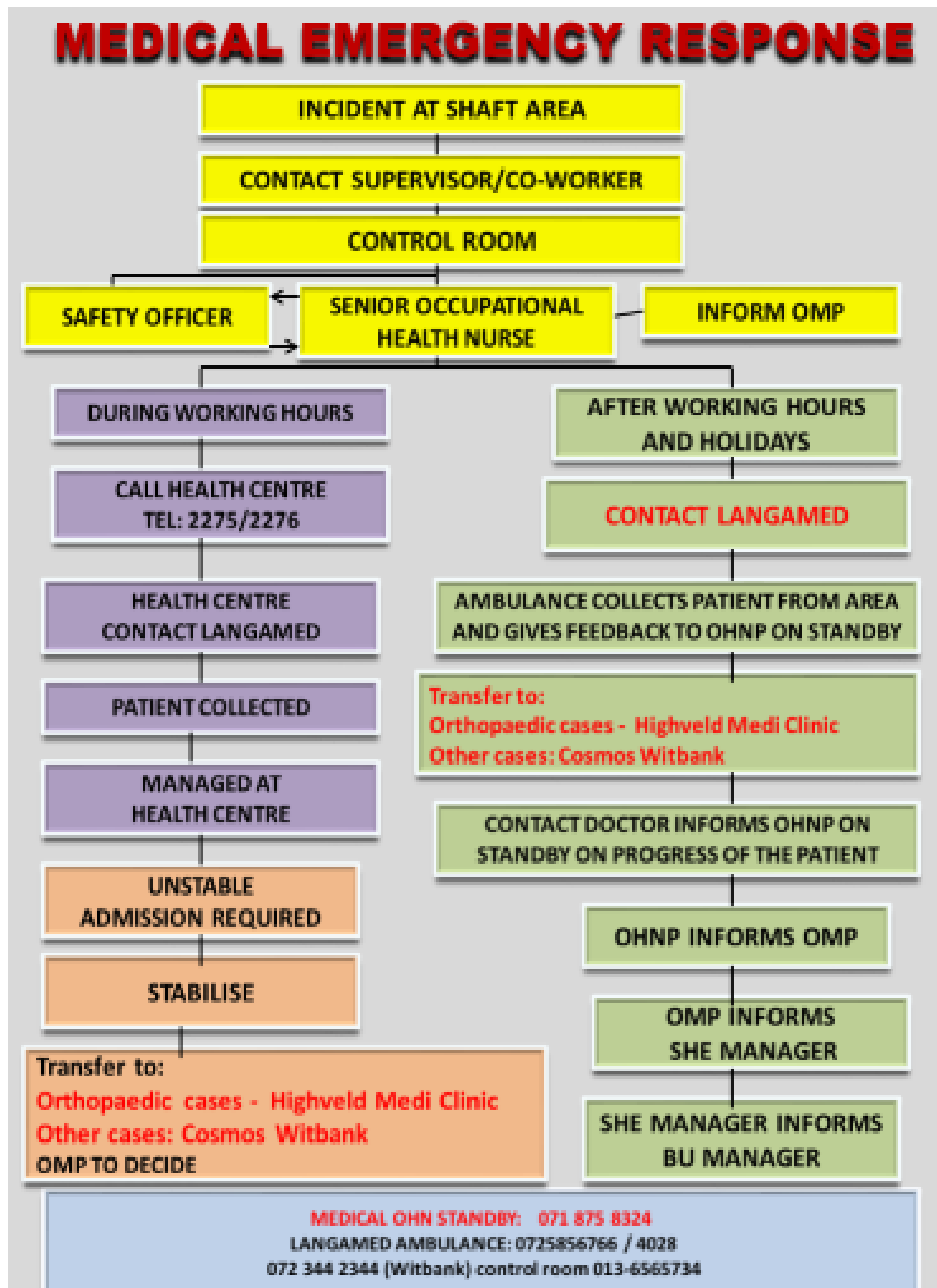
**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

In the event of any medical emergency the following procedure must be adhered to as depicted in the flow diagram and explained in paragraph b) below. (Refer to Table 8- B) [*See Emergency Procedure for Health Care Worker's document no.OHSP 04*]

b) In case of an emergency or injury on duty, the communication shall be handled by the control room officers as per Medical Emergency Response procedure:

- i) Personnel from underground will contact the control room official.
- ii) Control room official shall glean as much information regarding the incident as is practicably possible with the emphasis on 'What Where When How and Who (including names and company numbers)?'
- iii) Control room official will contact the standby sisters on 082 903 3165 / 082 903 2468 after hours and 2275 / 2276 / 911 during office hours.
- iv) Health centre staff will contact Langamed control room on 072 344 2344 for an ambulance during working hours and after hours.
- v) Langamed will collect the person from the accident scene.
- vi) The sister on standby shall notify the Occupational Medical Practitioner.
- vii) Langamed will transport the patient to the Health centre during working hours and to Cosmos Casualty after hours.
- viii) It shall be the sole prerogative of the Occupational Medical Practitioner to refer injured personnel to other emergency medical facilities.
- ix) To this effect the OMP shall provide and maintain an up to date index of all the external emergency medical services which may be required in the event that an incident escalates to disaster status

TABLE 8-B



This list shall include:

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- a) Ambulance services including helicopter transportation
  - b) Hospitals with specialised trauma services such as orthopaedic and burn care.
  - c) Mortuary and ortopsy / post mortem services
- c) Matla Medical Centre Personnel

To ensure the swift treatment of incident trauma the medical centre shall under normal circumstances be staffed at all times by the following personnel:

- i) Langamed ambulance personnel on 24/7 standby at the Matla health centre
- ii) A registered nurse shall be available within 30-45 minutes after receiving an emergency call. The nurse shall evaluate the information received telephonically and notify the OMP

In the event of a disasterous incident, all Matla employed medical staff may be called upon to be available to assist. The OMP shall direct the functions of medical staff.

- d) Medical equipment and facilities provided at Matla;
- i) Matla Coal has been exempted from the requirements of MHSA MA Regulation 24.3 in that no first aid rooms are required. Langamed ambulance service is contracted to provide and maintain a 24/7 emergency medical service in the form of a fully equipped ambulance manned by two paramedic staff. This service is stationed at the Matla health centre for immediate dispatch to all areas on the mine complex.
  - ii) Matla health care centre is equipped to deal with medical emergencies insofar as the stabilisation of injured personnel is concerned before referral to major health care facilities. To this effect it is assisted by Langamed Emergency service.
  - iii) The health centre has emergency facilities including X-ray and AED instruments for cardiac arrest.
  - iv) Each work area on surface including admin offices, stores, workshops and plant, as well as underground production sections shall be provided with two standard first aid bags and stretchers [*as per MHSA-MA Reg. 24.1.1 & 24.3*].

v) All supervisory personnel shall be trained to and have a valid first aid certificate of at least level 1. [MHSA-MA Reg. 24.7] Annual refresher course shall be done with yearly induction and renewal of certificates at three yearly intervals.

vi) Work areas which have been identified as designated or remote from production sections [Sub stations, mini substations, belt drives] shall also be equipped with first aid bags and stretchers]

vii) All refuge bays shall be equipped with 2 first aid bags and 2 stretchers

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#### **8.1.4 Mine Evacuation and Escape Procedures**

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## **A. UNDERGROUND ESCAPE PROCEDURE**

The following represents the standard escape procedure and must be followed as far as is practicable given the situation at hand

- i) All personnel must be withdrawn from the workfaces to the Ocenco station. Activate the hand crank siren to signal the evacuation of the section. Assemble the personnel and do a head count. Record names of all personnel present. Ensure that no person remains inside.
- ii) Long duration Ocenco units must be distributed to evacuees. Do a roll call and form a line to start walking out. [*Refer to document MP 03 – Underground escape procedure*]
- iii) If it is possible and safe to do so, inform the control room official of what has occurred and the plan of action and escape route that will be followed. Time will be of the essence, do not waste it
- iv) The supervisor must, taking all available carbon monoxide (CO) meters with, proceed to lead all the employees to the place of safety (Rescue bay or downcast/incline shaft).
- v) Depending on the shortest distance to the Rescue bay, consider using the return airway escape route, as noxious gases will flow to the section or area via the intake airways
- vi) Ensure the route to be followed has a guide rope installed. It is possible that visibility could deteriorate very quickly resulting in the need to use the guide rope
- vii) Follow the guide rope / life line until visibility requires that the line be hand held. Walk at a brisk pace, do not run. Do not panic
- viii) The supervisor must monitor for carbon monoxide continuously. CO alarm will go off intermittently at 50 ppm and will alarm continuously at 100 ppm. Should the reading on the CO testing equipment reach 300ppm, the leader / miner must immediately instruct the evacuees / workers to don their self-rescuers.
- ix) Should the personal Oxybox body worn self-rescuer become depleted whilst on route to the refuge bay, change over to the long duration Ocenco self rescuer.

x) On reaching the Refuge bay, take roll call and inform the control room official of what has happened and wait for further instructions. Good communication is essential to assist in rescue operations and to prevent panic

xi) At the Refuge bay / place of safety, the supervisor must carry out the duties required of the supervisor. [*Refer to documents MP 03 – underground escape procedures and MS 03 – underground escape standards*]

xii) In brief, the following course of action will need to be followed at the refuge bay;

- a) Immediately start the fresh air fan or device as applicable
- b) Activate the outside audible alarm
- c) Instruct employees to sit down on the benches provided
- d) Phone the Control Room Official giving the following details
  - i. Phone number and location of Rescue bay.
  - ii. Number of employees in the Rescue bay.
  - iii. Nature of injuries and what treatment is being administered.
  - iv. Inform Control Room Official of any missing employees and last known whereabouts.
  - v. Manage the conservation of cap lamp batteries
  - vi. Ration food and water.
  - vii. Await further instructions from the Control Room and maintain an open phone line.
  - viii. The supervisor must begin a logbook recording the sequence of events leading up to and including the actual incident. [*If unable to phone, stay in Rescue bay and stay calm*]
- xiii) It will be expected from the supervisor or team leader to maintain an atmosphere of calm among the work force. Remember that any sign of panic will only complicate the situation.

8.1.4.1 Underground emergency response

i) Notwithstanding the fact that every effort is made to control the hazards associated with underground mining the potential for a major emergency situation developing in the underground workings is of primary concern to the employer and the risk rating is high.

ii) *Any event which endangers the health and safety of an employee must be regarded as an emergency, whether it concerns an individual or a group of personnel*

iii) *In the event of any medical emergency the procedure as depicted in the flow diagram must be adhered to (Refer to Table 8- B)*

iv) In any scenario the objective for all affected personnel shall be to reach a place of safety (Rescue bay or downcast shaft) as soon as possible.

v) As referred to in section 7.1 of this document, six major emergency scenarios are recognised being the following:

- a) Underground fire
- b) Gas and dust explosion
- c) Inundation by water
- d) Major collapse of ground trapping personnel
- e) Transportation incident
- f) Ventilation failure

vi) Basic guidelines for each scenario are described below. It must be borne in mind that the personnel affected may be in the best position to evaluate their situation and decide on a course of action.

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a) Underground fires

i) Fire may have its origin inbye or outbye of a production section. The locality will dictate the response. *[Note: All uncontrolled fires in the underground are considered to be dangerous occurrences and need to be reported I T O M HSA Reg. 23.4 f). [form SAMRASS 1 and SAMRASS 6 to be completed and forwarded to I O M within 14 days]*

ii) The most senior person in the section should manage the situation. Under normal conditions the miner *[M HSA Section 7.4 & MA Reg. 2.9.2 appointee]* will be the most senior person. It may occur that the senior person has been incapacitated by the incident. Then the next senior person will need to take control. This hierarchy needs to be established and communicated to the section personnel.

iii) With every emergency evacuation drill / exercise, the hierarchy needs to be reiterated and the information logged on the evacuation drill report. Bear in mind that seniority refers to the *proficiency in emergency* of the person that will lead the group. **This must be established beforehand.**

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1. Fire inbye of production section.

i) In the event of a fire inbye of a production section, all personnel must be withdrawn from the workfaces to the Ocenco station. Activate the hand crank siren to signal the evacuation of the section. Assemble the personnel and do a head count. Record names of all personnel present. Ensure that no person remains inside. Recover any personnel that may have been injured and administer first aid.

ii) In a production section the number of personnel would range from 10 to 20 persons depending on whether maintenance crews or other are in the section

iii) Determine the source of the fire. If the fire can be brought under control *without endangering personnel, this must be done. Do not panic.*

iv) *Compile a bill of information regarding the fire [where, what, when, who & how]. Report the fire to the control room. Be concise. Do not panic.*

v) *Bring the fire under control:*

a) *Switch off the section booster fans. Fanning the fire will encourage the spread. Isolate the power to the section.*

- b) *In the event of electrical machinery make use of ABC Type fire extinguisher to control fire. For open electrical panel make use of CO2 type extinguisher*
- c) *For fire on belt and tail end, stop the belt by activating pull cord and use water or ABC Type fire extinguisher.*
- d) *For fire started due to welding or flame cutting, use water, ABC Type fire extinguisher or stone dust.*
- e) *If at all possible, erect brattices to isolate the fire from the ventilation and open brattice on the return to short circuit the ventilation from the fire.*
- f) *Approach the fire from the ventilation intake side. Fumes and smoke may be lethal.*
- vi) In the event that the fire is / or becomes uncontrollable the section must be evacuated and personnel must withdraw to a refuge bay or surface.
- vii) Remember that the conditions near the fire can deteriorate rapidly. Carbon monoxide, smoke and other gasses can replace the oxygen in the air.
- viii) Monitor the CO levels with a GDI. 300 ppm of CO will require the immediate deployment of self rescuer sets.
- ix) Prepare to leave the section.
- a) Inform the control room of your decision to leave. Give the reason for leaving, yours will be the last up to date information regarding the situation before a fire team arrives. Make it as accurate as possible.
- b) Long duration Ocenco units must be distributed to evacuees. If injured personnel are stretcher bound, stretcher bearers must be assigned. Do a roll call and form a line to start walking out. [*Refer to document MP 03 – Underground escape procedure*] **Escape procedure** is highlighted in bold font under section 8.1.4.A.

**THE ESCAPE PROCEDURE AS DETAILED UNDER SECTION 8.1.4.A Underground Escape Procedure NEEDS TO BE FOLLOWED WITHOUT DELAY.**

- c) If personnel carrier transport is available, it must be used. Do not race out of the mine, stay calm. Do not panic

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2. Fire outbye of production section.

i) The most senior person in the section must manage the situation. [*Refer to paragraph 8.1.4.1.A.ii)*]

ii) Depending on the locality of a fire the number of personnel affected may range from 15 in a single section to 40 in a ventilation district to 100 on a seam to 250 in the underground

iii) In the event of a fire outbye of a production section, noxious gases (carbon monoxide and other) entering the section with the intake air will trigger the alarm at the waiting place once the **Tri flow** sensor starts to detect CO of more than 50 ppm. [*Refer to documents EP 38 – installation of telemetry system underground as well as MS 02 – fire prevention and fire control*]

vi) Alternatively the section may receive notice of a fire that has started outbye of the section from the control room or other means.

vii) If and when in contact with the control room, try to determine the location of the fire as this will help to determine a course of action. Personnel may not be able to reach the shaft exit and the probability is that they will need to reach a refuge bay.

viii) Alternatively personnel may have to make their way out of the section *via* the return airway. **The ability to make an informed decision will depend on the diligence with which escape drills were performed**

ix) *A fire outbye of the section can have dire consequences for section personnel, it is crucial that speedy and correct decisions be taken. Smoke from an outbye fire will reach the section at the rate of the ventilation flow.*

**THE ESCAPE PROCEDURE AS DETAILED UNDER SECTION 8.1.4.A Underground Escape Procedure NEEDS TO BE FOLLOWED WITHOUT DELAY.**

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b). Underground explosions

The Matla Mine Mandatory Code of Practice Document COP15 – *Prevention of Flammable gas and coal dust Explosions in Collieries* provides for the preventative measures that need to be taken and have been implemented to avoid same from occurring.

In the unlikely and unfortunate event that an explosion does occur, the following procedure must be followed.

1. Explosion outby of production section.
  - i) An explosion in the underground will have a profound effect on all the sections of a mine and depending on the proximity to a section the effects may be devastating.
  - ii) Depending on the locality of an explosion the number of personnel affected may range from 15 in a single section to 40 in a ventilation district to 100 on a seam to 350 in the underground
  - iii) Personnel may experience any of the following;
    - a) Loss of ventilation due to ventilation structure damage
    - b) Depleted oxygen due to consumption of same in explosion
    - c) Power failure due to services being damaged
    - d) Fire resulting from explosion
    - e) Injuries resulting from persons affected by shock wave
    - f) Low visibility from dust propagation
    - g) Panic for fear of death
  - iv) In addition there may be the possibility of subsequent explosions.
  - v) There may be no time to waste. Supervisors will need to congregate personnel at the ocenco station without delay. Contact must be made with the control room as soon as possible, if possible, to confirm an emergency. As conditions may become worse CO readings will confirm whether or not to deploy self rescue breathing apparatus.

**THE ESCAPE PROCEDURE AS DETAILED UNDER SECTION 8.1.4.A Underground Escape Procedure NEEDS TO BE FOLLOWED WITHOUT DELAY.**

2. Explosion inbye of production section.

i) An explosion inbye of a production section of the mine will in all probability occur as a result of the ignition of flammable gas.

ii) In a production section the number of personnel may range from 10 to 20 persons depending on whether maintenance crews are in the section

iii) Such an explosion will have a catastrophic effect on all personnel in the immediate vicinity of the explosion.

iv) Lesser extent explosions resulting from electrical equipment or other causes are unlikely to have the same immediate impact, but are nevertheless of same significance.

v) Personnel may experience any of the following;

- a) Fatalities
- b) Serious injuries resulting from burns to the exposed body parts and lungs of personnel who were close to the explosion
- c) Injuries resulting from persons affected by shock wave
- d) Loss of ventilation due to ventilation structure damage
- e) Depleted oxygen due to consumption of same in explosion
- f) Power failure due to services being damaged
- g) Fire resulting from explosion
- h) Low visibility from dust propagation
- i) Possibility of subsequent explosion
- j) Panic for fear of death

vi) The magnitude of the explosion will dictate the response of the personnel involved.

vii) Personnel who were less affected by the explosion will need to compose themselves and render assistance to the injured if possible. Every attempt must be made to evacuate all personnel from the scene

**As indicated in section 8.1.4.1.A.ii) the hierarchy of succession must be established for every working team so that they are not stuck for a leader in the case of an emergency. Be aware that key personnel may be dead or severely injured.**

**THE ESCAPE PROCEDURE AS DETAILED UNDER SUB SECTION 8.1.4.A Underground Escape Procedure NEEDS TO BE FOLLOWED WITHOUT DELAY**



- c). Flooding of the underground workings
- i) The Matla Mine Mandatory Code of Practise Document *COP03 – Prevention of Inrushes* provides for the preventative measures that need to be taken and have been implemented to avoid same from occurring.
  - ii) All significant water accumulations [reservoirs, dams, flooded old workings etc.] are / must be clearly marked on the underground mine plans in the Control Room.
1. In the unfortunate event that an inrush does occur, the following procedure must be followed.
- i) In a production section the number of personnel would range from 10 to 20 persons depending on whether maintenance crews or other are in the section. Determine whether any personnel are missing
  - ii) The escape routes of those sections that may be affected by flooding from significant water accumulations are / must be clearly marked on the mine plans in the Control Room
  - iii) In the event of flooding of a production section, the control room official will do the following:
    - a) Enquire as to what side of the section is being flooded.
    - b) Instruct miner/person in charge to withdraw all persons to a place of safety using the escape route not being flooded, by referring to the Mine Plan.
    - c) Instruct the electrician / person in charge to, where possible, withdraw machinery as far as possible from the endangered area. This may only be done if it does not endanger the person performing the tasks.
    - d) Report the incident to the Manager, Engineer, Supervisor and Safety Practitioner.
    - e) Report to the Medical person on standby
  - iv) Miner / supervisor / person in charge must do the following:
    - a) Ensure that all persons in the area are notified to evacuate the area.

- b) Ensure that persons performing rescue operations or withdrawing machinery are not endangering themselves or other persons
  - c) Once reaching a place of safety notify the Control Room official of the status of the persons who have reached a place of safety
  - d) Apply first aid. Request medical assistance and ambulances if necessary
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- d). Procedure for the rescue of persons trapped due to a major fall of ground

**The Matla Mine Mandatory Code of Practise Document *COP01 – Combat Rock Fall Accidents* provides for the preventative measures that need to be taken and have been implemented to avoid same from occurring. In the unlikely and unfortunate event that a major ground fall does occur, the following procedure must be followed.**

Depending on the locality of a major roof collapse, the number of personnel that could be trapped may range from 15 in a single section to 40 in a ventilation district to 100 on a seam to 350 in the underground

**1. Scenario A:**

If the fall of ground does not interrupt telephonic communication:

- i. The supervisor, or most senior person available, must proceed to the nearest telephone and notify the Control Room Official of the fall of ground and give the following information:

- a) Exact area where the fall of ground has taken place.
- b) Number of persons injured, if any.
- c) Total number of persons trapped.
- d) Has the ventilation flow to the area been affected?
- e) The telephone number of the reporter.

- ii. The control room official must then notify the following persons

- a) Relevant area supervisor [Mine overseer / shiftboss]
- b) Safety officer
- c) Mine Manager
- d) Emergency medical response team

- iii. Once the Mine Manager has been notified, he shall take charge of the situation and if required, follow the emergency procedure as detailed in Section 10 of this document (Phone for Rescue Drill 013 692 3121)

**2 Scenario B:**

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**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

Should the fall of ground interrupt communications, and it becomes apparent that persons have not returned to surface, the following procedure must be followed:

- i. Ascertain how many persons are missing by doing a "Shaft Clearance" at the lamp room
  - ii. Send a search party to the area in which it is known that the persons were last working.
  - iii. Should it become apparent that the persons have been trapped by a major fall of ground, the Mine Manager will be notified and shall then follow the procedure for catastrophic underground emergencies as per Section 10 of this document (Phone for Rescue Drill 013 6923121)
  - iv. The Mine Manager will, in conjunction with the Chief Surveyor, plot a point at which the Rescue drill will start drilling.
- 

- e). Procedure for responding to ventilation fluctuations and / or failures

- i) The Matla Mining Procedure Document MP06 – Stoppage of Main Fan / Ventilation Fluctuations, provides for the measures that need to be taken when responding to fan failure / ventilation fluctuations to avoid a major incident from occurring.
- ii) A main fan stoppage will affect all personnel that are underground. At any one time there could be as many as 350 persons in the underground
- iii) Fluctuations and / or failure of the ventilation system may initially not constitute an emergency situation, but may give rise to same if the procedure is not adhered to
- iv) In brief the procedure requires that In the event of a main fan stopping for any reason and thereby endangering the safety of persons in the workings, the Manager shall ensure that:-
- a). The electricity supply to the underground is automatically switched out
  - b). Immediate steps are taken to withdraw all persons from such workings to the waiting place or nearest refuge bay.
    - 1) When fan stoppage is less than an hour – withdraw people to the waiting place.
    - 2) When fan stoppage is more than an hour – withdraw people to the nearest refuge bay.
  - c). The operation of non flameproof vehicles must be stopped during the stoppages of main fans and ventilation failure.
  - d). After the main fan has been restarted, no electrical power to the workings must be switched on and no person other than those engaged in making the necessary examinations shall enter such workings until safe conditions have been restored and confirmed as such by a mining official such as a shift boss, mine overseer or manager
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## **B. SURFACE EVACUATION PROCEDURE**

**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

The following represents the standard evacuation procedure and must be followed as far as is practicable given the situation at hand

- i) The evacuation of a surface structure or area shall be initiated by either a verbal instruction or a siren [hooter, claxon, yelp etc.] or both.
- ii) New employees shall be made aware of evacuation procedures when they are introduced to their working area.
- iii) In the event of an evacuation, personnel shall vacate the structure or area and assemble at the assembly point as speedily as possible. Do not run and do not panic.
- iv) Personnel are advised to take only their immediate personal effects such as handbags and when possible, laptop computers when vacating a building
- v) Office doors should be closed, but not be locked, to prevent the spread of fire and to contain smoke when applicable.
- vi) Before closing a door, make sure than no person is still remaining inside. Do a visual inspection behind desks and drawers, filing cabinets and closets to ensure that the room or building is empty.
- vii) Personnel who are capable of carrying and using a fire extinguisher should without endangering themselves, bring a fire extinguisher with to the assembly area.
- viii) If possible, attempt to extinguish or control the fire
- ix) Any emergency situation regarding fire at such installations or areas must be dealt with by the fire fighting team appointed and trained in accordance with document EP27 [Fire fighting team procedure]
- x) Any emergency medical situation at such installation shall be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25)
- xi) Emergency evacuation drills shall be done on a quarterly basis to ensure that personnel vacate and congregate at the assembly points without incident

#### **8.1.4.2 Surface emergency response**

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Surface areas, structures and occurrences that may require emergency response or evacuation have been identified as:

**a) Surface substations.**

i) Surface substations have been identified as high risk installations with electrocution and fire as the primary hazards. Engineering procedures for the prevention and response to emergencies at these installations are detailed in documents EP01 [33kv Electrical lockout & switching procedure], EP02 [11kv Electrical lockout & switching procedure], EP08 [Safe working on electrical circuits]

ii) *Only authorised competent personnel who can comply with the operating procedures shall be allowed to execute any function pertaining to a sub station*

iii) *All surface substations shall be equipped with emergency exit doors with panic bar activated opening mechanism*

iv) *All surface substations shall be equipped with a self activating fire suppression system using an inert and non noxious gas to suppress a fire in the sub station*

v) *Any emergency situation regarding fire at such an installation must be dealt with by the fire fighting team appointed and trained in accordance with document EP27 [Fire fighting team procedure]*

vi) *Any emergency medical situation at such installation shall be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25)*

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**b) General surface structures.**

- i) The risk rating for an emergency situation developing at any of the surface structures at Matla Coal, which may endanger the health and safety of large groups of personnel is low.
- ii) The majority of structures are ground floor only. Certain of the hostel and training centre buildings are double storied in modular construction. A Single elevator is provided for handicapped / disabled persons and is positioned outbye of the structures. No other elevators are required
- iii) Buildings are constructed of generally non combustible materials. All buildings shall be / are provided with fire extinguishing equipment such as fire hoses and portable fire extinguishers.
- iv) Unless obstructed by deliberate action to prevent escape, all buildings can be vacated by using multiple entrances / exits provided in the design of structures.
- v) *Every office shall be provided with an escape diagram which must be posted on a notice board or other conspicuous place, instructing the occupants of the building in the escape route and the emergency assembly point.*
- vi) **The evacuation procedure as detailed on page 38 under B SURFACE EVACUATION PROCEDURE needs to be followed without delay**
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**c) Coal plant and stockpile.**



- i) The risk rating for any catastrophic threat to life and health insofar coal preparation plant and appurtenant infrastructure is concerned, is low. These installations are subject to daily inspection / scrutiny
  - ii) Buildings are constructed of steel with iron clad sides which are non combustible materials. All buildings shall be provided with fire extinguishing equipment such as fire hoses and portable fire extinguishers
  - iii) Unless obstructed by deliberate action to prevent escape, all buildings can be vacated by using multiple entrances / exits provided in the design of structures.
  - iv) Spontaneous combustion at the coal stockpile shall be contained by the correct management of stacking, compaction and reclaiming. Although combustion is not impossible, the risk is minimal
  - v) *Every plant structure shall be provided with an escape diagram which must be posted on a notice board or other conspicuous place, instructing the occupants of the building in the escape route and the emergency assembly point.*
  - vi) *Any emergency situation regarding fires must be dealt with by the fire fighting team appointed and trained in accordance with document EP27 [Fire fighting team procedure]*
  - vii) *Any emergency medical situation at the plant or stockpile area shall be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25)*
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**d) Mining rights area – outbye.**

i) Outbye areas refers to the mining rights area and adjacent land which may be affected by the mining or associated activities performed at Matla Coal. To this effect the following are included:

- a) Overland conveyors and transfer drives
- b) Access roads
- c) Open agricultural land (grassland)
- d) Surface subsidence resulting from total extraction mining in underground areas

ii) The risk rating for any threat to life and health insofar as installed infrastructure in outbye areas is concerned is low. These installations are subject to daily inspection / scrutiny

iii) Surface subsidence is a predicted occurrence and shall be included in the measures required to rehabilitate the surface. The hazard and risk rating for same to be a threat to life and health is low.

iv) Open grassland has been identified as being of a seasonal high hazard emanating from veld fires caused by acts of arson.

v) *Any emergency situation regarding fires on outbye land must be dealt with by the fire fighting team appointed and trained in accordance with document EP27 [Fire fighting team procedure]*

vi) *The appointed fire master shall also liaise with land users on and adjacent to the mining right area with respect to the creation and maintenance of fire breaks to prevent emergencies from developing*

vii) *Any emergency medical situation on the outbye area which involves an employee performing his official function, shall be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25)*

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e). **Surface transportation – bus service for mine personnel.**

- i) Although every effort is made to ensure that the busses carrying personnel to and from the mine to various destinations at shift changes are kept at a proper standard of maintenance, and that the operators / drivers are competent, the possibility of a collision cannot be ruled out with absolute conviction.
- ii) Matla Mine operates a fleet of 13 busses which do as many as 73 trips per day to convey 1300 passengers to and from Thubelihle, Phola Park, and Kriel. The maximum passengers on a bus does not exceed 67 persons
- iii) The general safety of bus transport cannot be contested when light motor traffic only is involved. In the event of collisions the survival rate of bus passengers outweighs that of light vehicle passengers for obvious reasons.
- iv) With the increased volumes of heavy vehicles, in particular coal transporting inter-link type trucks, the outcome of a collision between a bus and an inter-link, would be disastrous for persons commuting by bus.
- v) Although a public road collision will be a matter for investigation by the SAPS, the implications for the company may be severe.
- vi) On receiving notice of a collision involving a mine personnel bus, the procedure for the evacuation of deceased and injured must be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25).
- vii) *The Central Engineering Emergency Telephone list shall be kept posted against the wall at the transport controller's office. The numbers currently in use are 017 616 2271 or 073 224 7928*
- viii) *The Emergency telephone numbers of key personnel shall be kept displayed on the list in legible and clear print at all times [current person, Barnie van der Merwe: 083 303 0143 or 082 824 0104]*
- ix) Any injured personnel that need to be moved to any facility by another ambulance service will have to be traced so that the OMP can ensure that they are referred to the appropriate emergency medical facilities as listed.
- x) The mine manager shall in collaboration with the HR department arrange for the next of kin to be notified without delay.
- xi) To this effect the next of kin should must be discouraged from visiting the collision site, as this will exacerbate the condition, hamper evacuation activities and may lead to more collisions.

xii) Personnel assisting at the collision site should as far as is practicable adhere to the following procedures:

1. Post guards at each side of the road at least 200m from the collision site to warn oncoming traffic.
2. Collect first aid kit from inside bus
3. First aiders to get together and prioritize casualties.
4. If accident victims are in a place of further danger then remove them to a place of safety or remove the source of danger
5. Administer first aid with priority given in the following order:
  - a) Airways
  - b) Breathing
  - c) Circulation (bleeding and pulse)
6. Whilst first aid is being administered contact the transport controller at 017 616 2271 or 073 224 7928 making sure to relay the following information:
  - a) Contact telephone number
  - b) Locality / place of collision
  - c) Status of injured [*number of injured*]
  - d) Whether or not a doctor is required
  - e) Is more than one ambulance needed?
  - f) If specialised equipment is required [*Jaws of life etc.*]

xiii) The transport controller shall do the following:

1. Alert the key personnel on standby [See points v – viii section D]
2. Alert the security officer at the security control room to dispatch security personnel to assist at the collision
3. Alert the medical sister on standby to dispatch a Langamed ambulance to the collision site and to notify the Matla OMP

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**f) Water purification plant – hazardous chemical spills.**

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i) The treatment process of mine water extracted from the underground mines at Matla requires the use of highly corrosive chemical substances which may be lethal or impart serious injury should the chemical come into contact with or inundate personnel working at the plant.

ii) These chemicals are:

1. Sulphuric acid
2. Hydrochloric acid
3. Sodium hypochloride
4. Sodium hydroxide
5. Ferric chloride

iii) These above mentioned substances are kept in bulk tanks or containers of more than or equal to 25lt and must be kept in dedicated bunded areas.

iv) No decanting of chemical into any other vessel or container shall take place unless the vessel or container is expressly dedicated for the holding of the liquid and has been clearly marked by name for the purpose.

v) For treatment of chemical contact with personnel, *Diphoterine*® shall be kept available as an antidote treatment together with emergency shower and wash basin facilities at the points of storage and use.

vi) In the event of accidental spillage the correct neutralising agent as prescribed by the *Material Safety Data Sheet* shall be used as first defence to contain the effect of the spillage and shall be kept in sufficient quantities on site to be immediately available for emergency use.

vii) *Any emergency situation regarding fires or spillages must be dealt with by the fire fighting team appointed and trained in accordance with document EP27 [Fire fighting team procedure]*

viii) *Any emergency medical situation, shall be dealt with as detailed in TABLE 8-B in Section 8.1.3 (page 25)*

ix) *The Emergency telephone numbers of key personnel shall be kept displayed at all storage and consumption points in legible and clear print at all times. All personnel shall be made aware of the existence of the emergency telephone list and the procedures to be followed.*

#### 8.1.4.3 Places of safety in the underground at matla coal

##### a) Ventilation and rescue plans.

i) All facilities pertaining to the provision and maintenance of safety in the underground workings of the mine shall be detailed on the Ventilation and Rescue plans of the underground workings as contemplated in MHSa Reg. 17.19.

ii) These plans shall be posted in every board room and control room at every mine as well as in the office of the Mine Manager and the Occupational Hygiene competent person. Copies shall be kept available in every rescue brigade room (proto room), underground section and every refuge bay  
(To comply with MHSa Reg. 17.22 & 17.19)

##### b) Refuge bays.

i) Refuge bays shall be provided at predetermined intervals which are within 1000m of any working face. All underground areas of Matla Mine have a roof height which is in excess of 1,8m, which will enable personnel to walk upright along an escape route to a refuge bay.

ii) At an easy pace of 4 km/h, any refuge bay will be no more than 15 minutes walking time from a section. (*Average internationally recognised pace is 5.0 km/h*)

iii) All escape routes to refuge bays shall be provided with a life line which follows the escape route from a section to the refuge bay. Both primary and secondary escape routes must be provided with a life line. The life line must be equipped with cones to assist persons using the line in zero visibility conditions, with direction to the refuge bay (*Document MP 03 – Underground Escape Procedures section 5*)

iv) The standard for the design and equipping of refuge bays is addressed in documents MS03 – Underground escape standard and MP03 – Underground escape procedure.

Permanent refuge bays shall be provided with a services borehole (208mm steel casing) for the provisioning of emergency supplies eg. Air, water, rations, communication and other requisites. A dedicated area for the breakthrough of the rescue drill shall be demarcated inside the refuge bay.

v) All refuge bays shall have a readily accessible road on surface which is demarcated by directional notices from the provincial or nearest service road, for use by rescue teams and for access of the rescue drill.

vi) The exact location of any new refuge chamber must be reported to the survey office as and when it is completed, and the position and coordinates shall be recorded on the ventilation and rescue plans.

**c) Self contained self rescuer.**

i) All personnel including visitors to the underground shall be required to wear an Oxybox body worn SCSR at all times. Any person who needs to enter the underground of the mine must receive instruction in the use of the SCSR before doing so. Records of training shall be kept at the training centre. *(In compliance with MHSR Reg.16.2.1) (Document MP 03 – Underground Escape Procedures section 2) (Document MS 03 – Underground Escape Standards paragraph 3)*

ii) The Oxybox will provide 25 minutes of breathing air (from chemically generated oxygen) at a rate of 35 L/m to a maximum of 120 – 150 minutes of breathing air at a rate of 10 L/m, which would represent maximum to minimum rates of the ‘95<sup>th</sup> percentile man’ at work or at rest.

iii) In addition to the body worn Oxybox SCSR, all production sections shall be provided with an Ocenco SCSR caché containing 40 units as an additional precaution against irrespirable air.

iv) The Ocenco SCSR has the ability to sustain breathing for 60 minutes during heavy physical activity or up to 8 hours at rest whilst following the instructions for user at rest. *(O E M Ocenco SCSR instruction manual Nr. NH13747) (Document MP 03 – Underground Escape Procedures section 3) (Document MS 03 – Underground Escape Standards section 4)*

v) [Additional information regarding the use and duration of SCSRs’ in respect of low seam areas, as well as steeply inclined and obstructed escape passages can be found in the Chamber of Mines’ publication: *Res-Q-Pacs; How to Calculate Safe Travelling Distances*]

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### **8.1.5 TRAINING AND AWARENESS**

**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

### 8.1.5.1 Content and frequency of training.

i) Training and awareness could be phrased to mean 'awareness training' and includes several disciplines intended to make personnel aware of the nature of the hazards of their employment as required in terms of MHS Act Section 10.

ii) Irrespective of the requirements of MHS Act, it is the Policy of Exxaro at all the business units to provide for the safety of its workforce by ensuring a safe and healthy working environment. To this effect Exxaro is committed to ensuring that every employee is adequately equipped with sufficient knowledge to perform their task without endangering themselves or their fellow workers.

iii) Training and awareness at Matla Coal shall therefore have the following priorities:

- 1 Selection of personnel prior to employment shall be done to ensure that applicants have adequate foundation training in their field of employment [SP04 Procedure for training competency and awareness]
- 2 Medical screening shall be done to ensure that the person is suitably fit to be employed in his / her particular work environment [COP 12 Mandatory Categories of Medical Examination for Assessment]
- 3 A program of induction must be complied with to ensure that the employee understands the mine and its particular environment, hazards and risks [HRDF017 / 016 Induction Programs]
- 4 Training in response procedures with regard to medical emergencies i.e.first aid training shall be provided to all supervisory personnel and should be provided to every person working underground as may be practicably possible. [MHS Act Reg.24.7 All supervisory personnel trained in first aid]
- 5 Res-Q-Pac training in the use of the Dräger Oxyboks K body worn SCSR shall be given to all underground personnel [HRDF017 / 016 Induction – all u/ground personnel, MHS Act Reg.16.2.1]
- 6 Training in the inspection of and use of gas testing equipment shall be provided to all machine operators [HRDF045 Theory and practical test GDI Enviro, MTP28 Test for CH4 with gas detection device]



- 7 Training in the inspection of and use of fire extinguishers shall be provided to all mine personnel as part of induction training [*HRDF017 / 016 Induction, MTP31 Examine fire extinguisher*]
- 8 Training of and authorisation of machine operators and licensing / refresher training and re issuing of licenses [MHTA Section 7.1.c) & d). MHTA Reg 8.10.], which includes correct procedure for conducting pre use inspection of equipment shall be done annually at periods not exceeding 12 months [*ES 10 Licencing of operators, MP16 Use of pre-use checklists*]
- 9 Workplace orientation IRO. Lamproom procedures, underground machine procedures, waiting place and production section / work area procedures shall be done under guidance of section supervisors [*MHTA Section 7.1.e), HRDF037 Induction program area specific*]
- 10 Orientation shall be provided by section supervisors IRO evacuation procedure with regard to section emergency assembly point (Ocenco caché) life line use, escape routes and locality of refuge bays [*HRDF039 Employee Orientation, MS03 Underground escape standard*]
- 11 Periodic escape route exercises shall be done at intervals not exceeding 30 days, during which the whole section will participate in walking the escape route to the nearest refuge bay. [*MP03 Underground escape procedure, MS03 Underground escape standard*]
- 12 Simulated emergency scenarios shall be done at intervals not exceeding 6 months during which a simulated situation is presented and responded to.
- 13 Emergency evacuation drills for surface personnel to clear buildings and assemble at the dedicated assembly point, shall be done at three monthly intervals
- 14 Surface fire team shall attend refresher training at six monthly intervals and participate in burning of fire breaks to maintain fire fighting skills. New members to the fire team shall be trained by accredited fire training institution [*EP27 Fire Fighting Team Procedure*]
- 15 Members of the rescue brigades shall be tested and trained by the central Mines Rescue Training Service in Evander as required [*MHTA Reg. 16.5*]

**8.1.5.2 Procedures and appropriate actions to be taken in the event of emergency.**

i) Emergency procedures and actions as detailed under sections 8.1.4.1 to 8.1.4.4 of this document shall be deemed the appropriate response to situations described therein. Refer to Section 10 for Emergency Response to Catastrophic Underground Emergencies

**8.1.5.3 Correct procedures and applications on the use of emergency equipment.**

i) The correct use of emergency equipment is detailed in the particular training program pertaining to the specific equipment [*MP02 Fire prevention and fire control, MS02 Fire prevention and fire control, MTP31 Examine fire extinguisher*]

ii) Standard fire fighting equipment such as fire hoses, dry powder extinguishers and CO2 fire extinguishers must be dealt with during induction training when personnel start on the mine or return from annual leave.

iii) Training in the use of short and long duration SCSR breathing apparatus shall be repeated at six monthly intervals for underground personnel.

iv) The surface fire team shall be trained in the use of fire tenders and pump systems and other specialised equipment by the accredited service provider.

v) Members of the rescue brigade shall undergo stringent selection and training in the use of specialised underground fire fighting and rescue equipment use. This training shall be provided by the M R S based in Evander

#### **8.1.5.4 Actions required relating to the location and shutdown controls / lock out devices**

i) Shut down control shall refer to the isolating of the workings by cutting the power to machinery that service the underground or plant and thereafter locking the power supply out until such time as it is safe to restore power to such equipment or machinery.

ii) Lock out shall only be performed by authorised competent personnel. Personnel performing lockout or restoration of power shall comply strictly with the requirements of Engineering Procedures [EP 01 “33kv Lock out and switching procedure”, EP 02 “11kv Lock out and switching procedure”, EP 03 “Electrical lock out for underground belt drives” and EP 04 “Electrical lock out for underground production machines”]

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**8.1.5.5 Instruction (training) in the use of self contained self rescuers.**

- i) All underground personnel shall be trained in the use of the Dräger Oxybox K short duration SCSR as well as the Ocenco EBA 6.5 long duration SCSR.
  - ii) Training in the use of the Oxybox shall be provided as a theoretical class concurrent with practical participation in a simulation section at the training centre.
  - iii) Training in the use of the Ocenco long duration SCSR shall be given in the form of practical demonstration at the various mines
  - iv) Use of the equipment shall also be presented by means of periodic audiovisual refresher training given during safety meetings at the various shafts (Mines 1, 2 & 3)
  - v) Training shall be conducted in accordance with the O E M instruction manual.
  - vi) A record of all training shall be kept by the training department.
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**8.1.5.6 Locality of copies of emergency procedures and instructions.**

- i) All emergency procedures and instructions are available to computer users on the Matla SHAREPOINT system.
  - ii) In addition to the electronic copies, relevant hard copies shall be kept available at the control rooms, underground refuge bays and in the production section's safety management files.
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## **8.2 EMERGENCY RESPONSE MEASURES**

### **8.2.1 RESCUE AND RESPONSE CAPABILITIES**

#### **8.2.1.1 Underground**

- i) In compliance with MSHA Regulation 16.5.1, a) & b) Matla shall establish and maintain, three mine rescue teams for deployment in the underground workings in the event of an emergency.
- ii) Members of the rescue teams shall be employees who have volunteered service and shall be certified physically fit by the mine's appointed medical officer, to undergo rescue training
- iii) Each team shall be dedicated to a mine eg. Matla 1, 2 & 3 mines, but shall in the event of an emergency at any of the three mines be available for deployment at such mine
- iv) A team shall consist of a team coordinator and a minimum of five active members being, a captain, vice captain and at least three ordinary members.
- v) At each mine the team coordinator shall serve as the appointed rescue coordinator and shall be required to have successfully completed a Control Room Management Course as provided for by the Central Mine Rescue Station at Evander. [MSHA Reg 16.5.1 c) iii]
- vi) Each team shall be provided with an adequately spaced and provisioned storage facility for their express and exclusive use, which may ordinarily be referred to as the Proto Room, at the particular mine
- vii) Matla has entered into an "A" Class membership agreement with the Mines Rescue Services which allows for the use of rescue teams from other member mines together with unlimited training of Matla personnel as rescue team members. [MSHA Reg. 16.5.1c)]
- viii) In terms of the agreement the M.R.S. (Mines Rescue Services) in Evander shall provide for the selection and training of the mine's rescue teams. To this effect Matla shall also make use only of the equipment that is recommended by the M.R.S and which complies with the provisions of MSHA Reg.16.5.1 b)
- v) It shall be the responsibility of the rescue team coordinator, in collaboration with the contracted mine rescue service provider, to ensure that the rescue team members at the mine as well as the equipment at their disposal comply with the requirements of MSHA Regulations 16.5.1b) & 2d)

- vi) The team coordinator shall ensure that the rescue team members inspect and maintain the rescue equipment as required by the Original Equipment Manufacturer and that a record of same is kept
- vii) In the event of an emergency requiring additional equipment, expertise and manpower the rescue team coordinator shall contact the M.R.S for assistance.

**8.2.1.2 Surface**

- i) Matla Coal has contracted the services of Langamed to provide emergency medical services for all medical emergency events.
- ii) In terms of this agreement, Langamed shall ensure that adequate provision is made so that evacuation of injured personnel can be done without delay and shall include airlift capability should such be required.
- iii) It shall be the duty of the appointed OMP to ensure that the agreement is current and is timeously renewed as and when required.
- vi) Matla Coal is situated adjacent to Matla Power Station, Kriel Power Station and Kriel Colliery. Provision shall be made for the direct contacting and communicating with these entities by maintaining an up to date directory of numbers and contact persons, should they be be directly affected by an occurrence at Matla mine.
- v) The contact list for adjacent properties and industries shall be kept updated and available at the office of the BU Manager as well as at the central services transport control room.
- vi) The updated contact list shall be made available to all key personnel and copies of same shall be posted on all notice boards for edification of all personnel employed in the various working areas [refer to Annexure 1 for updated contact number list]

## 8.2.2 MANAGEMENT OF EMERGENCIES

- i) Emergency response procedures, including this Emergency Preparedness Code of Practice shall be reviewed as often as is necessary to ensure that the information contained therein is maintained as current as possible.
  - ii) Such period of review should not exceed 24 months if no cause to review at an earlier date occurs. Cause for review may include administrative changes, system and equipment changes / improvements or physical occurrences
  - iii) Matla Coal is situated adjacent to Matla Power Station, Kriel Power Station and Kriel Colliery. Provision shall be made for the direct contacting and communicating with these entities by maintaining an up to date directory of numbers and contact persons, should they be be directly affected by an occurrence at Matla mine.
  - iv) The contact list for adjacent properties and industries shall be kept updated and available at the office of the BU Manager as well as at the central services transport control room.
  - v) The updated contact list shall be made available to all key personnel and copies of same shall be posted on all notice boards for edification of all personnel employed in the various working areas [See also 8.2.1.2.and refer to Annexure 1 for updated contact number list]
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## 8.3. REPORTING AND RECORDING

**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

To ensure that the systems and procedures for emergency response are maintained, documented proof of compliance shall be kept by the responsible heads of department [H O D] for the periods as indicated below:

1. Declarations I R O roof conditions, flammable gas, ventilation and other safety conditions that are recorded daily by the miner on the section declaration / firemans report, shall be kept on file by the responsible mine overseer for at least 3 months [MHSa Reg.14.1.3]
2. Reports on the testing, maintenance and calibration of testing equipment shall be kept in the lamp room for at least 2 years.
3. Records of the testing of SCSR equipment [Oxybox & Ocenco] shall be kept in the lamp room for a period of at least 2 years [MHSa Reg.16.4.1 & 2]
4. Records the Sprosens reading made on a daily basis in the book provided by the OEM shall be kept by the responsible engineering foreman for at least 1 year.
5. Records of inspection done on rescue team equipment shall be kept at the proto room for a period of at least 2 years
6. Records of training undergone at the sentral rescue services training facility shall in addition to same kept at the MRS also be kept at the proto room for a period of at least 2 years
7. Records of inspections done of the underground refuge bays by the person appointed I T O MHSa MA Reg. 2.15.1 or 2.17.1 shall be kept by the chief safety officer of the area for a period of at least 1year
8. Records of inspections done of the underground refuge bays as required I T O MHSa Reg. 16.6.3(b) shall be kept by the environmental control officer for a period of at least 2 years
9. Records of inspections done on fire hydrants along belt trajectories and drives shall be kept for a period of at least 2 years.
10. Records of inspections done on fire extinguishers at all required installation points such as surface buildings, plant, sub stations and workshops, as well as all underground production sections, sub stations, belt drives and other installations as directed from time to time shall be kept for a period of at least 2 years



11. Records of escape drills performed monthly in the underground and quarterly on surface as directed shall be kept for a period of at least 1 year by the safety officer assigned to the area

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#### **8.4 EMERGENCY ASPECTS ADRESSED IN OTHER MANDATORY COP'S AS WELL AS MINE STANDARDS AND PROCEDURES**

Emergencies aspects and systems are addressed in the following COP's and mine standards and procedures

:

- COP 01 "Combat rock fall accidents"
- COP 03 "Prevention of intrushes"
- COP 08 "Code of practice for Lamp rooms"
- COP 14 "Thermal stresses"
- COP 15 "Prevention of flammable gas and coal dust explosions"
- MS 02 " Fire prevention and control"
- MS 03 "Underground escape standard"
- MS 05 "Flammable gas warning devices and measuring instruments"
- MP 02 "Underground escape procedure"
- MP 06 "Stoppage of main fan and ventilation"
- MP 11 "Lamp room procedure"
- EP 38 " Installation of Environmental Telemetry system underground"

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#### **9.1 IMPLEMENTATION PLAN (Part D of Guideline)**

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**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

The following implementation programme is established to achieve the objective of this COP

<b>Process</b>	<b>Action</b>	<b>Responsible person</b>	<b>Due date or frequency</b>
Approval of COP	Submit to the Health and Safety committee for approval (include full time safety rep and union rep(s))	Sustainability Manager	Initial, thereafter post - revision
Approval of COP	Submit to relevant Managers for approval (include Business unit Manager)	Sustainability Manager	Initial, thereafter post - revision
Review and compilation of supporting documents	Review and compilation of supporting documents to ensure that the requirements in the guideline, COP and applicable legislation are sufficiently addressed ( <i>Include relevant documents referred to in the COP</i> )	Sustainability Manager	Initial, thereafter post - revision
Document control	Register COP and relevant documents in the document control index (master list)	Document administrator (SHEC Department)	Initial, thereafter post - revision
Document control	Load COP and relevant documentation onto the DMS (sharepoint) for easy access. Uncontrolled copies will also be provided on request as per system procedure regarding document control (SP 06)	Document administrator (SHEC Department)	Initial, thereafter post - revision
Document control	Schedule COP and relevant documents for review	Document administrator (SHE Department)	Initial, thereafter post - revision
Implementation of COP and supporting documents	Review training needs analysis (training matrix) and revise if necessary	Sustainability Manager and Training Department	Initial, thereafter post - revision
Implementation of COP and supporting documents	Schedule and provide awareness training regarding the COP and relevant legislation (include the consequences for non-compliance)	Sustainability Manager and Training Department	Initial, thereafter post - revision
Implementation of COP and supporting documents	Schedule and provide training regarding in-task procedure(s) and standard(s) as per system procedure regarding competency, training and awareness (SP 05)	Sustainability Manager relevant Mine overseers and shift bosses	Repetitive at set intervals as prescribed in the COP

## **9.2 COMPLIANCE WITH THIS COP**

**PLEASE NOTE:** If printed, always refer to the Electronic Database for the latest version of this document as that would serve as the only valid version at all times.

All employees will be given awareness training on the necessity to comply with the requirements and the content of this COP. Consequences of **non-compliance** will be communicated to all stakeholders. Responsible employees, such as Section Engineers, Superintendents, Foremen and SHEC practitioners will conduct planned inspections, audits and planned task observations to verify compliance with this COP. *Non-compliances will be managed according to the system procedure SP09, regarding continual improvement (managing accidents, incidents, non-conformances and potential non-conformances).*

### **9.3 ACCESS TO THIS COP**

- An approved copy of this COP and supporting documentation will be available on the DMS (Sharepoint), accessible for all users and the approved document will be filed at the SHEC Department in the designated file.
- An uncontrolled copy of the COP or related documents will be available on request from the Document Administrator
- Relevant employees will be made fully conversant with those sections of the COP or related documentation relevant to their respective areas of responsibility during induction and/or awareness training sessions

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## **10. RESPONSE TO CATASTROPHIC UNDERGROUND EMERGENCIES**

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### **10.1 The purpose of the emergency response plan**

- i) Limit the adverse effects of the emergency, with regards to safety and health of personnel or other affected parties
- ii) Limit the adverse effect of the emergency with regards to loss of property and equipment
- iii) Limit the loss of resources [material, financial, technical] that may result from the emergency condition.
- iv) Restore the activity / process to normality as soon as practicable

### **10.2 Organisational structure**

- i) The reporting structure at the mine during normal operating conditions, shall be maintained during emergency conditions, but for the addition of outside resources to assist in specialised activities such as the Mines Rescue Service
- ii) Role players shall need to know their function as part of the implementation plan. Successful implementation will depend on the various role players and their understanding of their function in the plan.

### **10.3 Establishing an emergency control centre**

- i) The first response shall be to establish whether the emergency will escalate to a magnitude which will require an emergency control centre.
- ii) All three mines are provided with suitably sized and located board rooms, which are equipped with notice boards, audio visual equipment, internet connection, telephone connection with conference facilities and a permanent display of the latest ventilation and rescue plans. These venues shall be used as control centres in the event of an emergency situation developing in the underground at one of the three Matla mines.
- iii) The shaft control room will not be suitable for use as an emergency control centre and will maintain its function as a logistics control centre.

### **10.4 Role players and functions of role players.**

Unless they are incapacitated by the incident or are engaged directly with the rescue team activities the functions of the following personnel shall be:

- a) **Mine Manager** [appointed ITO MHSA Sect 3.1.a) and trained as required by MHSA Reg 16.5 (1) (c) (iii) and appointed in terms of MHSA Reg 16.5 (1) (g) (i) to take charge of a control room during an emergency]
- i) To coordinate and control emergency room activities. Refer to 'MRS Control Room management Manual' for guidance.
  - ii) Gather all available information regarding the emergency situation from the shaft control room official and available witnesses
  - iii) Contact MRS and inform same of the situation
  - iv) Liaise with local MR team captain to call out available Matla teams
  - v) Notify the DMR principal inspector in Emalahleni
  - vi) Notify the manager sustainability at Exxaro HQ in Pretoria
  - vii) Organise an incident management team inclusive of a scribe to log all relevant events.
  - viii) Plan and establish an emergency strategy in collaboration with MRS officials.
  - ix) Brief rescue teams on emergency strategy.
  - x) Arrange for the MRS to bring rescue drill on site if required
- b) **Safety Officer** [Appointed ITO MHSA MA Reg 2.17.1 subject to Reg 2.17.4]
- i) Assist mine manager to collect facts regarding incident [what, where, when, who, how and why]
  - ii) Notify key personnel to assemble at emergency control room
  - iii) Arrange for persons to perform duty as scribe [ administrative person with minute capturing abilities capable of working shifts if required]
  - iv) Collect shaft clearance information from lamp room and determine number of personnel possibly / probably trapped or incapacitated by the emergency
  - v) Collect all documentation required to be kept by law [including COP's] and submit same to emergency control room for safe keeping
  - vi) Arrange for administration of accident / incident reports in collaboration with OMP

- c) **Mine Overseer** [Appointed ITO MHSA MA 2.14.1 - to control manage and direct the area of the mine in which the incident has taken place]
- i) Knowledge of the area will be of critical importance to rescue teams and it is imperative that the Mine Overseer will have this knowledge.
  - ii) Assist in selecting and establishing a fresh air base in the workings if required
  - iii) Where possible the fresh air base shall be manned around the clock by a senior supervisor such as a Mine Overseer or senior Shift boss.
  - iv) Control provisioning of equipment and requisites at fresh air base
- d) **Shiftboss** [Appointed ITO MHSA MA Reg 2.15.1 – to be in charge of that section of the mine]
- i) Knowledge of the area will be of critical importance to rescue teams and it is imperative that the Shiftboss will have this knowledge.
  - ii) Provide information relating to last known physical conditions in the area in which the emergency has occurred.
  - ii) Perform service as runner / messenger if required
- e) **Engineer** [Appointed ITO MHSA MA Reg 2.13.1 to 2.13.5, to be in general charge of machinery]
- i) In conjunction with the incident management team, plan the emergency strategy and develop contingency plans
  - ii) Ensure continued operation of electrical power supply to required underground areas.
  - iii) Confirm that the recent mine plans depicting electrical switches, sub-stations, water pipes and valves are correct.
  - iv) Provide suitable transport for both surface and underground.
  - v) Ensure continued operation of shaft conveyance.
  - vi) Ensure continued operation of the communications network inclusive of the installation of emergency phones.
  - vii) Provide specialist equipment and personnel where required.
  - viii) Alert ESCOM to ensure uninterrupted electrical power supply to the mine.
  - ix) Authorise equipment requisites,

- f) **VOHE practitioner** [Appointed ITO MHSA Section 12.1]
- i) Confirm that the most current ventilation plans for the mine are up to date.
  - ii) In conjunction with the incident management team plan emergency strategy and develop contingency plans with regards to;
    - a) Reconnaissance patrol routes
    - b) Isolating of incident
    - c) Location of fresh air base
    - d) Rerouting of ventilation
    - e) Continued operation of main fans.
  - iii) Assist in measurement, analysis, interpretation and preparing of reports to management
  - iv) Provide gas detection equipment and observers to assist underground where required.
  - v) Provide information and feedback to incident controller on any other environmental conditions and hazards.
- g) **Mine Surveyor** [Appointed ITO MHSA Reg. 17.2.a) to be in charge of surveying, mapping and mine plans at the mine]
- i) Provide up to date ventilation and rescue plans or sections of plans at the required scale for use by MRS teams
  - ii) Determine position for rescue drill if required
- h) **MRS Official** [As contracted ITO MHSA Reg.16.5.1.c) to coordinate and facilitate the provision of mine rescue and other related services]
- i) Personnel from the MRS have vast experience in various underground emergency situations and need to be consulted in strategic planning.
  - ii) In the event of an underground emergency requiring a rescue team, an MRS official should be present throughout the deployment of such rescue teams.
  - iii) This MRS official shall have the following functions:
    - a) Muster additional rescue teams as required
    - b) Ensure that rescue team members comply with MHSA Reg.16.5.5 [*Valid license to practice and medically fit*]
    - c) Make recommendations on method of controlling emergency in terms of equipment and materials required

- d) Arrange the provisioning of equipment such as rescue drill, inertisation system, and other specialised equipment as required
  - e) Advise rescue teams on *modus operandi* to deal with emergency
  - f) Arrange rotation and relief of rescue teams
- l) **Occupational Health Practitioner** [Appointed ITO MHSA Sect.13.3.a) to promote the health and safety of employees at a mine]
- i) Required for the medical examination of the mines rescue teams as necessary.
  - ii) Provide for the treatment of medical emergencies.
  - iii) Arrange for the evacuation of casualties to hospitals for specialised treatment
  - iv) Arrange for removal of fatalities to morgues and subsequent pathology
  - v) Coordinate administration of RMD and / or Commissioner reports
- j) **HR Practitioner** [Appointed ITO MHSA MA Reg.2.9.2]
- i) Establish nominal roll of personnel affected by emergency – trapped, injured, deceased.
  - ii) Ensure that next of kin are informed with first hand knowledge and that confidentiality is maintained
  - iii) Arrange transport, provide accommodation, food and refreshment, social and counselling service for next of kin that need to come to site.
  - iv) In collaboration with Mine Manager arrange press/news media control with the media relations officer
  - v) In collaboration with Security manager ensure strict access control at the mine entrances
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## 11 SCHEDULE OF ADDITIONAL REFERENCES

- Chamber of Mines Research Organization (COMRO) ' ResQpac How to calculate safe travelling distances
- The Lamproom 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 practices for emergency respons procedure
- Safety in Mines Research Advisory Committee SIMRAC research report COL 801 'Analysis of emergency care provided for injured Miners in the South African Mining Industry and Recommendations of the provision of Emergency Care
- Disaster Management Act, Act no 57 of 2002

Other publications form Mine Professional Organisations, SIMRAC, DMR, etc. could also be consulted.

**ANNEXURE - EMERGENCY CONTACT NUMBERS**

Mine 1 Control Room	017 616 2385 / 6	82 900 7552
Mine 2 Control Room	017 616 2425 / 6	082 900 7553
Mine 3 Control Room	017 616 2513 / 2516	082 9007554
Emergencies	017 616 2920 017 616 2565	
Plant Control Room	017 616 2277	
Security Control Room	017 616 2286	
Risk manager – Thomas Sekautu	017 616 2141	082 707 7605
Transport Control Room [central]	017 616 2271	
Sustainability manager - Mervyn Geduldt	017 616 2146	071 860 8538
Head safety - James Porteous	017 616 2180	083 598 7927
Central- C S O. Ricardo van Rooi	017 616 4096	083 446 8033
Mine 1- C S O. Paul Cloete	017 616 2691	083 455 5365
Mine 2- C S O. Grace Mathebula	017 616 2403	071 876 6940
Mine 3- C S O. Celeste Wilson	017 6167315	084 727 2898
Fire Master surface – Bernie v d Merwe	017 616 2345	082 824 0104 083 303 0143 (A/h)
Matla health centre	017 616 2275 / 6 (O/h)	071 875 8324 (A/h)
Sister on standby	063 257 8820 (A/h)	
S A P S Emergency	10111	
S A P S Kriel	017 648 2266	
Kriel emergency services - fire	017 648 3838 (O/h)	
Kriel emergency services	017 648 1017	
Witbank emergency services	013 690 6222 / 6333 / 6444 (24hr)	
Department mineral resources	013 653 0500 (O/h)	
Matla power station	017 612 6675	017 612 6418 (reception)
Kriel colliery	017 617 1220 (reception)	
Kriel municipality office	017 648 2241/ 2382 (O/h)	
HELIPAD	Latitude (S)	Longitude (E)
Main office	26 : 15 : 22.3796	29 : 07 : 01.0647
Mine 2	26 : 12 : 48.0564	29 : 06 : 22.7874

