Appendix D - EMS Certificates

BUREAU VERITAS
Certification

Certification Awarded to

ANGLO PLATINUM – RUSTENBURG CONCENTRATORS

PO Box 8208, 0300 Rustenburg
South Africa

Bureau Veritas certify that the management system of the above organisation has been assessed and found to be in accordance with the requirements of the standards detailed below.

STANDARD

ISO 14001:2004

SCOPE OF SUPPLY

The crushing milling and flotation of PGM ore to produce at PGM concentrate.

Date of Certification: **30th MARCH 2012**
(Previously Certified by DQS GmbH on 27/09/2010)

Subject to the continual satisfactory operation of the organisation's management system, this certificate is valid until:

26th SEPTEMBER 2013
To check this certificate validity please call +44 (0) 207 661 0700

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

UKAS MANAGEMENT SYSTEMS
008

For Bureau Veritas Certification UK Ltd
Brandon House
180 Borough High Street
London SE1 1LB

Laurent Dahmani
Managing Director

Certificate number: **UKAAT2012-007**

BUREAU VERITAS
Certification

ANGLO AMERICAN
ANGLO CONVERTER PLANT

P.O.Box 404
Kroondal, 0350
South Africa

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 14001:2004

Scope of certification

Production of iron deficient iron-copper which is rich in Platinum Group Metals.

Certification cycle start date: **26th November 2012**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **25th November 2015**

Original certification date: **26th November 2012**

Certificate No. UK004090

Version 1, Revision date: **26th November 2012**

Ken Smith
Managing Director

UKAS MANAGEMENT SYSTEMS
008

Certification body address: Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom.
Local office: Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.

To check this certificate validity please call: 020 7661 0700

BUREAU VERITAS
Certification

AngloAmerican Platinum
WATERVAL SMELTER

0350 Kroondal
South Africa

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 14001:2004

Scope of certification

The production of iron deficient nickel-copper matte that is rich in platinum group metals

Certification cycle start date:	**12 September 2012**
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on:	**11 September 2015**

Certificate No. UK004323 Version 1, Revision date: 12 September 2012

Ken Smith
Managing Director

UKAS MANAGEMENT SYSTEMS
008

Certification body address: Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom.
Local office: Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation.

To check this certificate validity please call: 020 7661 0700

BUREAU VERITAS
Certification

Certification Awarded to

ANGLO AMERICAN PLATINUM LIMITED
RUSTENBURG PLATINUM MINES LIMITED
PRECIOUS METALS REFINERS

Administration Building Portion 4 of Klipfontein 300 JQ
Bleskop, Rustenburg District 0030
South Africa

Bureau Veritas certify that the management system of the above organisation has been assessed and found to be in accordance with the requirements of the standards detailed below.

STANDARD

ISO 14001: 2004

SCOPE OF SUPPLY

The extraction and refining of platinum group metals.

Date of Certification: **30th MARCH 2012**
(Previously Certified by DQS GmbH on 09/02/2012)

Subject to the continual satisfactory operation of the organisation's management system, this certificate is valid until:

8th FEBRUARY 2015
To check this certificate validity please call +44 (0) 207 661 0700

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

UKAS MANAGEMENT SYSTEMS
008

For Bureau Veritas Certification UK Ltd
Brandon House
180 Borough High Street
London SE1 1LB

Laurent Dahmani
Managing Director

Certificate number: **UKAAT2012-050**

BUREAU VERITAS
Certification

Certification Awarded to

ANGLO PLATINUM LTD – WESTERN LIMB TAILINGS RE-TREATMENT

Marikana Road, Rustenburg, 0300
South Africa

Bureau Veritas certify that the management system of the above organisation has been assessed and found to be in accordance with the requirements of the standards detailed below.

STANDARD

ISO 14001:2004

SCOPE OF SUPPLY

Activities, products & services associated with re-mining of tailing dams for the production of PGM concentrate including tailing deposition site.

Date of Certification: **30th MARCH 2012**
(Previously Certified by DQS GmbH on 17/12/2010)

Subject to the continual satisfactory operation of the organisation's management system, this certificate is valid until:

16th DECEMBER 2013
To check this certificate validity please call +44 (0) 207 661 0700

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

UKAS MANAGEMENT SYSTEMS
008

For Bureau Veritas Certification UK Ltd
Brandon House
180 Borough High Street
London SE1 1LB

Laurent Dahmani
Managing Director

Certificate number: **UKAAT2012-004**

Bureau Veritas Certification Brandon House, 180 Borough High Street, London SE1 1LB, United Kingdom

Appendix E - Emergency Preparedness and Response Plans

MANDATORY CODE OF PRACTICE

WESTERN LIMB TAILINGS RE-TREATMENT PLANT

EMERGENCY PREPAREDNESS AND RESPONSE

VERSION: 11.0
LAST REVISION DATE: 2012-08-23
IMPLEMENTATION DATE: 2005-07-18

REFERENCE NUMBER: WLTR-ALL-SHE-COP-0006

	NAME	POSITION	SIGNATURE	DATE
AUTHOR:	Heinz Stellenberg	Chief Safety Officer		29/08/2012
REVIEWED BY:	Vivian Kgatitsoe	Full-time Safety Representative		3/09/12
REVIEWED BY:	Stephen Sekano	NUM		29/08/12
REVIEWED BY:	Andries Ludike	UASA		29/8/12.
REVIEWED BY:	Marco Swanepoel	HRD Officer		3/9/12
REVIEWED BY:	Seabelo Ratau	Technical Superintendant		29/8/12
REVIEWED BY:	Wilfred Skhosana	Senior Accountant		29/08/12
REVIEWED BY:	Peet Swanepoel	Production Overseer		29/8/
REVIEWED BY:	Zola Mabija	Acting Section Engineer		29/08/201
REVIEWED BY:	Johan Weitz	Mining Overseer		29/08/12
REVIEWED BY:	Coenraad v.d Merwe	Contracts Manager - FA		29/08/12
APPROVED BY:	Danie Vermaak	Concentrator Manager		04/09/12

REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

This Code of Practice has been complied in Accordance with the DMR Guideline Ref. DMR 16/3/2/1-A5 issued by the Chief Inspector of Mines

CONTENTS

REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

1. Foreword

This Code of Practice is prepared in accordance with the DMR Guideline Ref. # DMR 1 6/3/2/1 -A5. The purpose of this Code is to document the practices and procedures to be applied to address emergency preparedness and response. The Code is a management tool intended to add value to and enhance the Business Unit. If this objective is not achieved, the Code is not effective and should be reviewed.

Consequently, the Code should be a live document that is in continual use as a guide and a reference. All decisions made and actions should, as a matter of routine, be vetted and reviewed in terms of the Code. Responsible managers and supervisors should be conversant and familiar with the contents of the Code.

This Code is intended to be the framework for the management plan for emergency preparedness and response.

2. Legal Status of the Mandatory Code of Practice

2.1 This Code of Practice was drawn up in accordance with Guideline DMR Reference Number Department of Minerals and Resources1 6/3/2/1-AS issued by the Chief Inspector of Mines.

2.2 This is a mandatory Code of Practice in terms of section 9(2) and (3) of the Mine Health and Safety Act;

2.3 This Code of Practice may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose;

2.4 The latest revision of the Code of Practice shall supersede all earlier issues.

2.5 All managerial instructions, recommendations, procedures (voluntary Codes of Practice), and standards on the relevant topics must comply with the Code of Practice and must be reviewed to ensure compliance.

3. Drafting Committee

NAME	POSITION	Experience
Johan Weitz	Re-mining Overseer	4years
Heinz Stellenberg	Chief Safety Officer	3years
Nico van Wyk	Safety Officer	1year
Vivian Kgatitsoe	Full-time Safety Representative	2years
Johan van Heerden	Site Manager (Bulkmech)	2years
Enoch Dipela	Risk Officer (Bulkmech)	5years
Enoch Dipela	Risk Officer (Bulkmech)	5years
Coenraad van der Merwe	Contracts Manager (Fraser Alexander)	1year
Abraham du Plessis	Section Engineer	6years
Danie Vermaak	Concentrator manager	36 years

4. General Information

Name of Operation/Business Unit	WLTR Concentrator
7.1 Location	Anglo Platinum Rustenburg Section
Magisterial District	Rustenburg
Contact details	Mr. DJR Vermaak Concentrator Manager: WLTR Telephone: +27 (0) 114 598 3422 Fax: +27 (0) 14 598 3411

DMR Reference number	3068
7.2 Commodities produced	The group produces platinum together with other platinum group metals (palladium, rhodium, iridium, ruthenium and osmium) as well as gold and some base metals (nickel, copper and cobalt sulphate)
7.3 Mining method	Re-mining of Old Tailings Dams; Concentrating and Laboratory.
7.4 Unique features	WLTR Concentrator comprises of the following areas: • Klipfontein Re-mining and Pumpstation • Hoedspruit Tailings Dam • WLTR Plant

5. Terms and Definitions

Term	Definition
Aggravating Circumstances	Situation/condition that could make an emergency situation worse
Emergency	A situation that develops when initial controls fail and creates an undesired outcome.
Emergency Committee	A group of management individuals from all disciplines who performs tasks associated with their fields of expertise. (HR, SHE, Engineering etc.)
Emergency Controller	A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.
Emergency Response Team	A team of individuals who have received formal training in the handling of the identified credible incident.
Environmental Emergency	An unplanned event, which has the potential to result in a significant adverse environmental impact and/or could result in legal liability to WLTR Concentrators in terms of environmental legislation commitments.
Material Safety Data Sheet	Contains all relevant information concerning risks associated with the material, appropriate use and handling requirements and steps to be taken in the event of a spill or accident involving the product.
Mitigating Circumstances	People, equipment, services and materials that could reduce the impact of the emergency on t he performance of WLTR Concentrator.
Route of Action	A guide that provides a list of actions that must be followed by an individual/team.
SHE Emergency	A SHE Emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact and /or could result in legal liability for WLTR Concentrator in terms of SHE related legislation, commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response.
Contingency plan	A written plan that indicates services that will be used during prolonged business interruptions to ensure continued production.
Credible incident	An incident with the potential to become an Emergency situation.
Person in charge	A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.
Place of safety	Means any place, which, despite an emergency, can sustain life for the duration of the emergency and is adequate in size to accommodate the maximum number of affected persons likely to be present in the area served by it.
Route of Action	A guide that provides a list of actions that must be followed by an individual/team.
SHE Emergency	A SHE emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact

Term	Definition
	and/or could result in legal liability to WLTR in terms of SHE related legislation commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response

6. Abbreviations

Abbreviation	Explanation
ARL	Acceptable Risk Level
GPAD	Group Public Affairs Department
MSDS	Material Safety Data Sheet
RWD	Return Water Dam
HOD	Head of Department
SAPS	South African Police Service
DMR	Department of Minerals and Resources
COP	Code of Practice
CO2	Carbon dioxide
GPAD	Group Public Affairs Department
ISO	International Standards Organization
OHSAS	Occupational Health Safety Assessment Series
PPE	Personal Protective Equipment
RWD	Return Water Dam
SAPS	South African Police Services
SHE	Safety, Health, Environment

7. Risk Management

The philosophy to which is adhered to, is one of managed risk. This implies that the risk can only be controlled through the application of ongoing management. Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work, and record the significant hazards identified and risk assessed. The employer must determine how the significant risks identified in the risk assessment process must be dealt with, having regard to the requirement of section 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the risk, thereafter to control the risk at source, thereafter to minimise the risk and thereafter, insofar as the risk remains, to provide personal protective equipment and to institute a programme to monitor the risk.

To assist the employer with the risk assessment all possible relevant information such as accident statistics, ergonomic studies, research reports, manufacturers specifications, approvals, design criteria and performance figure for all relevant equipment should be obtained and considered.

In addition to the periodic review required by section 11(4) of the MHSA, the COP should be reviewed and updated after every emergency, altered circumstance, or if significant changes are introduced to procedures, mining and ventilation layouts, mining methods, plant or equipment and material.

8. Emergency Preparedness Programme

- Without proper guidance and training it is almost certain should the employees be faced with a sudden threat, they will follow their own natural instinct, which could result in chaos and panic. The effect of an uncontrolled emergency situation could be catastrophic and cause complete disruption of all operations.
- It is essential that corrective action, taken to cope with an emergency which will be coordinated and disciplined, in order to prevent a disaster.
- Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline. One essential common feature is the necessity for efficient communications.

REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

- Privileged information of the emergency should only be divulged on a "need to know" basis.
- An Emergency Controller/ Coordinator, normally the most senior person on site, will coordinate site activities, with the assistance of the site HOD Team.
- The Emergency Controller/ Coordinator (most senior person at the scene) should be informed as soon as possible of any emergency and kept informed of developments.
- All persons who suffered injuries due to the emergency situation or during the emergency Situation must be transported to the RPM Hospital for treatment.

HOD/Official Team Structure:

Emergency Coordinator: Production Overseer\ Re-mining Overseer

Officials in:
Production
Day Shift Leader
Human Resources
HR Officer/Coordinator
Engineering
Section Engineer
Protection Services
Protection Services Manager/ Protection Services Superintendent
Supply Chain
Stores Controller
Safety, Health and Environmental
Safety/ Occupational Hygiene /Environmental

9. Emergency Preparedness Measures

9.1.1 Detection and early warning systems;

Warning systems are used to provide warnings to employees and external stakeholders that are close to or may be affected by a SHE emergency.

On site warning systems at WLTR include:

- Emergency/ Fire alarms;
- Portable fire alarm (in case of power failure);
- Telephone systems;
- Computer Networking;
- Two-way Radio's;
- Cellular phones;
- Electronic flammable gas detection instruments.
- Flammable gas detection instruments are kept at the occupational hygiene office and are calibrated as per equipment specification at intervals not exceeding one year.

9.1.2 Communication systems;

In the event of an emergency the WLTR control room must be contacted. The control room operator will contact the emergency coordinator as per notification flowchart - Annexure A.

Contact Numbers

Emergency contact numbers are available on the WLTR Concentrator emergency telephone list. The emergency telephone list is available on notice boards. The number for the WLTR control room is:

- WLTR Control Room - **014 598 3415**

When requesting an ambulance, in the case of a medical emergency at work, the following numbers must be dialled: **082 911** or **014 598 2251/ 2250 Speed Dial 60699** for the ambulance crew.

a. Please report clearly:
   - Name of person reporting;
   - The area where the patient will be found;
   - The nature of the emergency;
   - The number of patients involve;
   - Brief description of the emergency;

- The condition of the patient; awake / unconscious.

b. In all cases no communication with external parties will be allowed. Only the Concentrator Manager shall release statements to the general media.

Communications with external parties and Employees
The Group Public Affairs Department (GPAD) will be responsible for liaison with the media in respect of all crises within Anglo Platinum group companies, unless specified otherwise by the GPAD. The complete procedure for media liaison is available in the Group Public Affairs Policy of Anglo Platinum. In all cases, employees and contractors is drawn to Procedure WLTR-ALL-SHE-PRO-006- Communication Consultation and Involvement, which also applies during and after emergency situations.

Testing
Emergency procedures will be tested (emergency mock- ups) as per emergency drill schedule and findings of the mock-ups are kept by the plant safety officers. The annual schedule is available from the Chief Safety Officer.

9.1.3 Emergency medical care;
All medical treatment cases at WLTR Concentrators are referred to Netcare 911. When requesting an ambulance, the following number should be dialed **082 911** or **014 598 2251/ 2250** or speed dial **60699**. This number will connect to the Anglo Platinum dispatching service of Netcare 911 who will dispatch an ambulance and paramedics to assist. The speed-dial number is clearly displayed with the number, so as to ensure that all employees can contact the number, at all times, while at work.

9.1.4 Evacuation and escape procedures

9.1.4.1 Unplanned Evacuations for on Site Emergencies
Procedure is as follows:
Supervisor/Plant Overseer, A Shift, B Shift, C Shift and D Shift:

Unplanned Evacuation
a. Activate the alarm and carry out an evacuation;
b. Evacuate to the assembly points;
c. Supervisor performs a headcount;
d. Senior Official/ supervisor will investigate and evaluate the extent of the danger, and inform the Evacuation Coordinator;
e. Senior Official / supervisor declare area safe;
f. Complete incident notification;
g. Most senior person in charge will establish whether outside emergency services are required.

Fire
a. Same as above.
b. If the emergency alarm is activated in Mode 1 or 2 (1-Continuous, 2-Intermittent)
   - Senior Official/ supervisor to organize search teams to investigate and report back;
   - In case of fire, arrange with fire master to extinguish fire.

9.1.4.2 Unplanned Evacuations after hours
This procedure is the same as in unplanned evacuations during normal hours.

9.1.4.3 Planned Evacuations

a) Maintenance Work
The rest of the evacuation will be exactly the same as during an unplanned evacuation during normal working hours.

b) Emergency Evacuation Drills
Evacuation as per normal procedure in the affected section. The personnel will remain at the emergency evacuation point, until the all clear instruction is received from the most senior official on site.

The following types of Emergency Evacuation Drills will be scheduled at WLTR Concentrator; they all have the same response and can be tested in one test:

1. Fire,
2. Bomb threats,
3. Bulk storage tank failure,
4. Chemical transport tanker spill on Site,
5. Electrical supply failure (ESCOM),
6. Natural disasters,
7. Process explosion,

NB: The above emergency drills does not relieve Heads of Department from conducting emergency drills in their own areas of responsibility with regards to employee awareness vs. exposure to risk.

9.1.4.4 General

a) During a fire or any other emergency, the two way radio channel 2 must be cleared and only used for communications concerning the fire or emergency. (Channel 1 must be used for general communication).
b) The Emergency alarm can be activated manually in the control room.
c) If the alarm is activated the supervisor will respond immediately in order to determine the cause of the alarm.
d) All personnel will assemble at the assembly point. The Production Overseer or his deputy will coordinate the investigation to establish the whereabouts of the fire or cause of the alarm.
e) All employees will receive further instruction from their supervisor at the emergency assembly point.
f) Employees in danger will evacuate on their own initiative. The emergency coordinator (Most Senior person on site) will assume responsibility when he/she is on site.
g) When a fire is discovered, the person discovering it must take immediate steps to bring the fire under control. He/she must ensure that the control centre /immediate supervisor are informed as to the extent and location of the fire.
h) The control centre will then inform the supervisor to investigate the extent of the emergency and to report back to the control centre.
i) The person instructed will ensure that the emergency alarm is activated to assemble all employees.
j) Emergency team members will be assembled at the assembly point and the required remedial steps implemented by the most senior person on site.
k) The supervisor will also ensure that all relevant information relating to the fire or emergency is written down.
l) The Chief Safety Officer will ensure that the necessary SAMRASS forms are completed for the DMR where required.

9.1.5 Team Structures

The following occupations are essential during emergencies that affect the entire plan:

*Emergency Coordinator	-	Concentrator (Or more senior);
*HOD's / Officials	-	Production Overseer
		HR Officer
		Section Engineer
		Security Official
		Stores Controller
		Chief Safety Officer
		Safety Officer
		Process Metallurgist

9.1.6 Contingency plan

Critical items/services that will be needed for use during emergency situations must be identified and listed and records kept with supply chain. The suppliers of these critical items/ services must be contacted and contracts drawn-up between them and Anglo Platinum to ensure that the items listed can be supplied within the shortest possible time.

9.1.7 Prevention

Systems such as process safety, quality assurance, inspections, and plant integrity

Measurements are implemented to prevent emergencies from occurring and escalating to an off-site emergency.

9.1.8 Environmental Incidents

Environmental incidents are treated and reported as indicated in

9.1.9 Training, awareness; and Competence

- Training is conducted in accordance with the procedure WLTR-ALL-SHE-PRO-0012 - Incident Reporting and Corrective action.

9.1.10 Training done to all ex-leave/ new employees:

- Ex-leave refresher
- On-site Induction

9.1.11 Specialised training

- Fire Teams
- First Aid Training

9.2 Management of specific major incidents.

This section contains general information on the handling and responding to specific emergency situations:

9.2.1 Bomb threats

a. The operator receiving the call to the bomb threat must:-
   - Stay calm and do not confront the caller;
   - Make note of the conversation;
   - Contact the control room immediately with the information;
   - The control room operator must contact the Production Overseer and the Chief Safety Officer and report the information he/she received;
   - Evacuate the Plant;
   - SAPS must be contacted and notified of the emergency and assistance required;

b. When the caller has given an indication where the bomb is located such information must be forwarded to the SAPS;
c. Protection services to follow emergency access procedure when SAPS arrives at the site.
d. Protection Services to escort SAPS to the demarcated area and keep a safe distance.
e. Search for devices shall only be performed by SAPS and Anglo Platinum Security personnel;
f. Suspicious areas will be demarcated with yellow and black demarcation tape (black and yellow means “Danger – absolutely do not enter”, or any other means considered effective by SAPS;
g. Making the area safe and evacuating / disabling any devices shall be the responsibility of SAPS bomb squad;
h. General “area safe” command shall be given by SAPS.

9.2.3 Bulk storage tank failure (Surge Tanks)

a. This type of incident will inevitably cause a gradual or instantaneous release of either neat or blended chemical. Areas where chemicals are stored have been designed with capable containment that will contain the spill;
b. In cases like these the objective should be to contain the spill within the area and prevent it from flowing to other areas using designated spillage pumps;
c. Areas of specific concern are the neat SIBX storage area due to the flammable nature of the chemical as well as the potential for negative effect on the environment;
d. The person who notices a bulk storage tank failure at the SIBX storage area should immediately notify the control room, who in turn will notify the Chief Safety Officer and Production Overseer. All known details should be forwarded to the respective persons;
e. Based on the extent of the spill and the particular circumstances of the emergency the Production Overseer shall coordinate the required measures to ensure that the chemical is not released from containment;

f. Personnel shall be evacuated from the general plant area and all ignition sources extinguished / removed. No vehicles shall initially be allowed in to the plant until clarity has been received that it will not present an ignition risk.
g. Once the spill have been contained completely the Production Overseer in consultation with other Head of Departments shall arrange for the required clean up.
a. Under no circumstances shall any source of ignition be allowed into the affected areas. This includes cellular phones.

9.2.4 Chemical transport tanker spill on Site

a. This type of spill shall be addressed similar to that of bulk storage tank failure with the exception that the immediate area around the tanker where the spill occurred shall be contained with suitable material as indicated in the respective MSDS's.
b. All reporting requirements shall be the same as for bulk storage tank failure.
c. Evacuation will be the same as for bulk storage tank failure.
d. Preventing ignition sources shall be the same as for bulk storage tank failure.
e. Where a spill cannot be contained the Production Overseer in consultation with the respective heads of departments shall arrange for the chemicals to be contained in containment areas in the plant (Bunded areas, process water dams etc.)
f. Cleaning up shall be initiated immediately afterwards.

9.2.5 Dam wall failure or overflow

b. Any person who becomes aware of a dam wall failure shall notify their supervisor who in turn shall notify the production foreman (or the plant control room). The control room shall then notify the production overseer.
c. The production overseer shall immediately notify the SHE coordinator, Concentrator Manager and Section Engineering Manager;
d. The extent of the failure shall be assessed and preventative measures shall be decided;
e. All areas that will be affected by the failure shall be determined and notification processed shall immediately be initiated.
f. Arrangements shall be made for required auxiliary services, these will include:
    - SAPS;
    - Central security;
    - Tailings dam Engineer;
    - Cleanup Services;
    - Medical assistance;
    - Emergency power suppliers;
    - Food and other services;
    - Transport facilities (where mass evacuation will be required)
    - Head office involvement.
g. The tailing dam Engineer will be responsible for advising on appropriate measures to minimise impact and remedy the situation;
h. Arrangements shall be made to notify all other parties that may be affected by the failure event;
i. Notification and formal reporting of the incident shall be performed.

9.2.6 Electrical supply failure (ESCOM)

a. Evacuate areas according to the unplanned evacuation procedure.
b. Control room operator shall notify the Production Overseer and Section Engineer.
c. Section Engineer will assess the extent of the emergency and where required call for mutual assistance;
d. Sufficient alternative power supply facilities must be organised to ensure power supply to the critical services such as Emergency Lights, Compressors and other critical processes in the plant.

9.2.7 Natural disasters

a. Being acts of providence, these emergencies cannot be prevented, although impact of such acts can be reduced. Examples are Earthquakes, Storms (Wind/Lightning) and surface flooding.
b. The nature and extend of the disaster will dictate the appropriate actions but the following general rules will apply:

- The person normally in charge of a section or department must take immediate control and must decide on the action required, inter alia, should they evacuate which evacuation point to use, head count, etc.
- The control room operator shall notify the Production Overseer of the situation.
- Examples of natural disasters include but is not limited to:
  - Earthquakes
  - Storms (Wind/Lightning)
  - Surface Flooding

c. The person normally in charge of a section or department must take immediate control and must decide on the action required, inter alia, should they evacuate, which evacuation point, head count, etc. Contact the most senior person in charge and the control centre immediately with the information.
d. The most senior person in charge/control centre must contact the emergency committee as per notification flow chart - Appendix A.
e. As soon as possible after the disaster, the emergency committee must assess the damage, firstly to personnel and then to buildings and equipment.
f. After assessment, if the buildings are safe, personnel can return to their workstations and engineering to attend to the damaged buildings and equipment as per action plans.

9.2.8 Labour unrest

a. When confrontation exist the control room operator must immediately contact the Concentrator Manager and security personnel;
b. The Concentrator Manager shall have full authority to communicate with the employee's representative and communicate for advice and/or instructions with Corporate office, Protection services, Trade Union Representatives, Department of Manpower.
c. The Concentrator Manager in consultation with the Security department, shall determine the need to notify SAPS;
d. The Concentrator Manager shall, once unrest is apparent, call a meeting with the representative body to discuss the specific grievances or attempt to establish what the grievances are and what could be done to resolve the concerns.

9.2.9 Process explosion

a. Follow the Unplanned Evacuation Procedure.
b. Contact the most senior person in charge and the control centre immediately with the information.
c. The most senior person in charge/control centre must contact the emergency committee as per notification flow chart - Appendix A.
d. Injured employees to be treated according to the disaster preparedness procedure of the occupational health department.
e. Demarcate the area with black and yellow demarcation tape (no unauthorised entry), no evidence may be removed until the DME Inspector has inspected the area and the cause of the explosion has been determined, or permission has been granted.
f. The emergency committee in conjunction with the DME must conduct a full investigation regarding the cause of the explosion.
g. The necessary SAMRASS forms must be completed and submitted to the DMR. Engineering to initiate the engineering Action plan.
h. Production management team to assess process flow to determine alternative for continued production.
i. When the person in charge declares the affected area safe, personnel can return to their workstations.

9.2.10 Road Transport Incidents (WLTR Concentrator Transportation Only)

a. WLTR Concentrator personnel to notify control room if they are involved in a company vehicle transport incident. (if possible),
b. The control room operator must notify the person in charge as per the notification flowchart and provide the necessary information.
c. Contingency plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.
d. A full investigation to be conducted in conjunction with the SAPS, SHE Department and relevant road traffic department.
e. Prepare the necessary Rand Mutual documentation and submit to Rand Mutual.

Sabotage and cable theft

a. Contact the Concentrator Surveillance Unit immediately: 014- 5982384.
b. Protection Services Manager to keep person in charge informed of the situation.
c. The person in charge to order an evacuation if required and when it is safe to do so.
d. Medical and fire department to be placed on standby.
e. Person in charge to hand-over to the protection services/ SAPS on arrival at site.

Immediate employee action:

a. To protect the scene, barricade the area and prevent unauthorised entry.
b. Report to immediate supervisor.
c. Warn employees about the situation.
d. Do not panic.
e. Ensure that no evidence is disturbed.
f. Engineering to initiate the engineering action plan.
g. The person in charge can give the all clear workstations.

9.2.11 Water Supply Failure

a. Contact the control room.
b. The control room to contact the Person in charge as per notification flowchart.
c. Water from the reservoir must be diverted into the process water side-stream to ensure continued production.
d. Determine loss of water supply and possible duration.
e. Contact rand water board.
f. Inform employees to preserve water.

9.2.12 Rescuing of person falling into a flotation cell, sumps, and dams.

In the event of a person falling into a flotation cell, sumps and dams the following steps must be followed:

a. Raise the alarm
b. Stop agitator if its running, If persons is able to get out of cell, sump, and dams by him/her self: Follow the Emergency Medical Care procedure
a. If a person cannot get out of the cell: Rescue person with a rope
b. If it is possible to rescue the person:
   - Phone the Emergency Response or Proto Team (See Emergency Contact List)
   - Recover Person
   - Treat , stabilize on site
   - Follow the Medical Care

9.2.13 Rescuing of person suspended working at heights

- Establish contact with the victim.
- Contact the fire department / rescue team & ambulance.
- Calm the victim down.
- Secure the area below and above the victim and remove bystanders from the area.
- Communicate with him/her to minimize the risk of suspension trauma, and to determine the possible extend of his injuries.
- Have the victim release his trapeze strap from his safety harness; ensure that the victim places one foot in the strap, he can then adjust the strap to fit. This will give the rescue team time to prepare for the retrieval of the victim. Keeping in mind that suspension trauma could result if the person is left in the safety harness to long.
- A rescuer is to keep open communication with the victim and have the victim change legs every so often.
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.
- The rescue team/ person trained and competent to use the self descender rescue kit.

9.2.14 The rescue team is to determine how the victim is to be retrieved e.g.

a) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.

b) If the workmen is between floors, a ladder can be placed safely under the victim and the victim can stand on the ladder and release himself (keeping in mind the victim has just fallen and will be nervous and extra care is to be taken)

c) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit is to be used to lower the victim down provided:

d) Anchorage points are securely fitted and tested to take weight without slipping
- The rescue kit is inspected and found to be in good working order
- At least two persons to be present whilst rescue is undertaken
- Only one person to be lowered at one time with the self descender rescue kit
- The victim's weight should be taken up by the rescue system
- Rescue kit operator to ensure system working properly and attachments points secure.

Once integrity of system confirmed, second person to detach safety harness lanyard.

e) **T**hese devices should only be attached to a" D" ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the automatic self rescuer kit.

f) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

9.2.15 Spillage of Tailings from the transfer system (pump and pipes) and spillage of effluent from he tailings dam.

- Burst / spill / leak from tailings at surface.
- Inform Concentrator Manager and Fraser Alexander contractor to action emergency shut-down/ change the line and / or redirect tailings to alternative deposit site.
- To limit the amount of uncontrolled release of tailings it is essential that the process plant be informed immediately of a spill / leak so that emergency shut-down procedures can be implemented immediately.
- Do situation analysis: Identify / locate the position, area affected and volume released, zones downstream which may potentially be affected, if release continues, and cause of release, etc.
- If there is a risk of significant environmental pollution, associated legal risk or risk to health or community well being in the short term-
- Inform relevant Dept. Heads (Plant, Safety, Technical, Engineering Departments) and the Group Process Environmental Manager on 0834638919 and also report the incident through the Incident/Non-conformance reporting system as per procedure WLTR-ALL-SHE-PRO-0012 Incident Reporting and Corrective action.
- Evacuation of area around and downstream of spill in zone of influence of possible flow slide see Annexure C (Zone of Influence). Prevent further access to area (barricade).
- Post guards at a safe distance from the spill.
- If the spill can be contained immediately by the identifier without further risk to this person, other people, or the environment, emergency response task team should be notified to plan the containment and clean up.
- Implement containment and clean-up program.
- The area identified for the disposal of the spilt tailings will be disposed by the tailings appointed contractor.

9.2.15.1 Repair or correct faulty plant/ equipment (e.g. burst pipe).

- The mechanism leading to the release of tailings must be repaired timeously to enable the process plant to get back on stream.
- Monitor containment and clean up actions and update in the management system.
- Initiate environmental monitoring activities if required.
- Environmental monitoring such as soil and water sampling must be taken for testing from areas downstream of the spill need to be implemented to ascertain if the tailings or runoff from the tailings has entered and contaminated any resources.

9.2.14 Spillage of Effluent from the tailings dam

- Spillage, leakage, or overtopping of effluent from the tailings dam, excluding pipelines.

- Inform the Concentrator Manager and the Group Process Environmental Manager about the possibility of no return of effluent from the tailings dam back to the plant for re-use, or the need to increase effluent return to lower ponds levels at the tailings facility.
- Do situation analysis: Identify / locate the position, area affected and volume released, zones downstream which may potentially be affected, if release continues, and cause of release, etc. Ascertain if the release has or will impact on the downstream community and environment outside of the mine area.
- Is there a risk of significant environmental pollution, associated legal risk to health or community well being in the short term, then report the incident through the Incident/Non-conformance reporting system as per procedure WLTR-ALL-SHE-PRO-0012 Incident Reporting and Invetsigation
- Inform communities downstream of spill / release not to use surface water and evacuate people to other areas if required.
- Additional effluent must not be allowed to leave the source or beach, which would otherwise increase the extent of contaminants to the environment.
- Ensure no further or additional discharge of effluent is possible from the source.
- Check that process make-up water from the fresh water dam is minimised. Maximise make-up from the return water dam.
- Monitor water quality in the receiving environment.
- Repair or correct fault (e.g. breached earth wall, spillway eroded, excessive solutions etc.)
- The mechanism leading to the release of the effluent must be repaired timeously.
- Repair work may only be possible after the spillage has been cleaned away and or the level of the effluent has been sufficiently lowered.
- Monitor containment and clean up actions and update in the management system.
- Initiate Environmental monitoring activities if required.

9.3 Reporting and Recording

Emergency procedures will be tested (emergency mock- ups) as per emergency schedule. Records and findings of the emergency drills are kept on site by the plant safety officer.

9.4 Implementation Plan

This COP will be implemented at the WLTR as from the date of approval.

9.5 Compliance with the COP

This COP is instituted as a base line on which the process of emergency preparedness and response will be conducted at WLTR Concentrator.

9.6 Access to the COP and Related Documents

A copy of this COP and related documents are kept available in electronic and hard copy format at the Document Control office.

10 History of Changes

A	As a result of incidents
B	As a result of audit findings
C	Changes in Operating Procedures
D	Changes in Legislation
E	Changes in Technology
F	Changes in Machinery/Equipment
G	Results of risk assessments
H	Change in training requirements
I	New procedure format
J	Change due to spelling or grammatical error
K	To integrate a special instruction into the document control system

REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

Date of change	Revised Item	Reason Code	Name of reviewer
18 Jul 05	Added improved version control and history of change		Adolph van Huyssteen
13 Jan 06	Disclosure indicating “Hard copies of this document may be printed for reference purposes, but will remain valid for a period of 7 days from the date of print indicated below. If any dispute should arise regarding the content of this document, the original signed hard copy will be considered binding...Date of print..." removed. Replaced with "All hardcopies printed will be considered to be uncontrolled documents. Only the original electronic copy and the signed hard copy of this document will be valid. Always review the electronic copy of this document for the most recent changes..."		Adolph van Huyssteen
31 Mar 06	Formatting changes to entire document. Includes index, definitions and responsibility allocation, Interactivity, References as well as Records.		Adolph van Huyssteen
31 Mar 06	Added other anticipated emergencies.		Adolph van Huyssteen
31 Mar 06	Added schedule for complete drills across all disciplines.		Adolph van Huyssteen
31 Mar 06	Updated the CH.		Adolph van Huyssteen
12 May 07	Added more detail to emergency responses.		Adolph van Huyssteen
12 May 07	Removed non-essential information from procedure.		Adolph van Huyssteen
12 May 07	Reviewed entire document, including possible audit changes and changed signature to include L Nyandeni.		Adolph van Huyssteen
12 May 07	Updated the CH.		Adolph van Huyssteen
12 July 07	Updated review date and HOC.	C	Tebogo Mashegoana
12 July 07	Changed reference number from “WLTR-01-01-03-009” to “WLTR-SHE-SHE-PRO-0010”.	I	Tebogo Mashegoana
04 Sep 07	Changed procedure to a new format and template	C	Tebogo Mashegoana
04 Sep 07	Updated review date	C	Tebogo Mashegoana
3 Dec 07	Updated review date	C	Marli Nel
3 Dec 07	Added “using designated spillage pumps”. under 8.7.	C	Marli Nel
3 Dec 07	Added “with fire extinguishers” under 8.3 c.	C	Marli Nel
18 Dec 08	Changed under 5 to “Standards Committee”	C	Marli Nel
18 Dec 08	Annual review	C	Marli Nel
06 Dec 2009	Review	C	Heinz Stellenebrg
19 September 2010	Review –added Zone of influence diagram	C	Heinz Stellenebrg
23 Aug 2012	New procedure format	I	Nico van Wyk

REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

11 Record Control

Records to be maintained in accordance with this procedure:

Identification	Reference number	Responsible for filing	Responsible for maintenance	Location of storage area	Retention period	Method of disposal
Operational Control	WLTR-ALL-SHE-COP-0009	Document Controller	Document Controller	Concentrator: Document Safe	2 Years	Hard copies - Shred Electronic copies - Archive

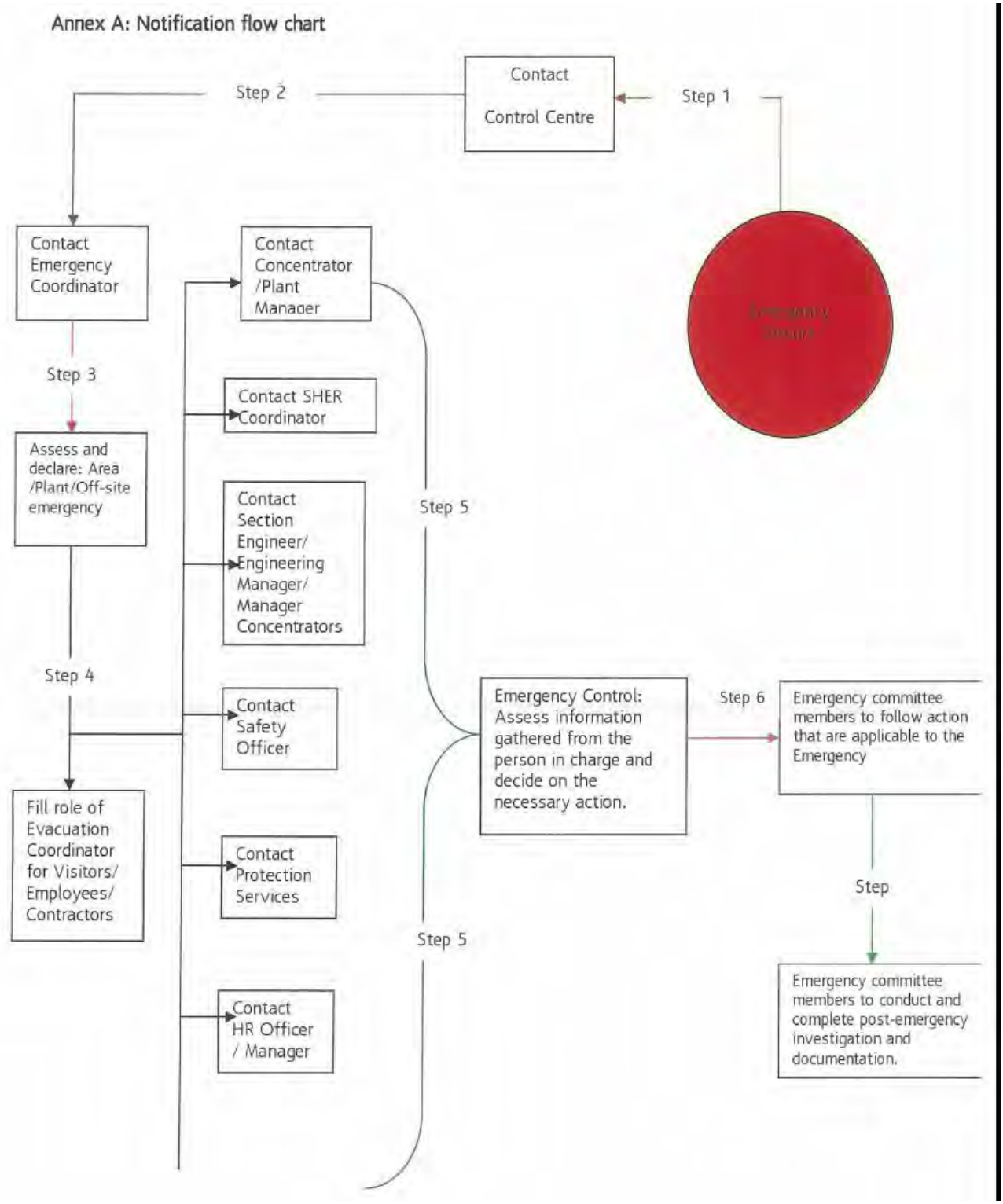
12 References

ISO 14001:2004
OHSAS 18001:2007

13 Appendices

2. Notification Flow Chart
3. Action list
4. Tailings Dam zone of influence

Annex A: Notification flow chart



REF NO:	WLTR-ALL-SHE-COP-0006	DATE OF IMPLEMENTATION:	18 July 2005
VERSION NO:	11.0	LAST REVISION DATE:	23 August 2012

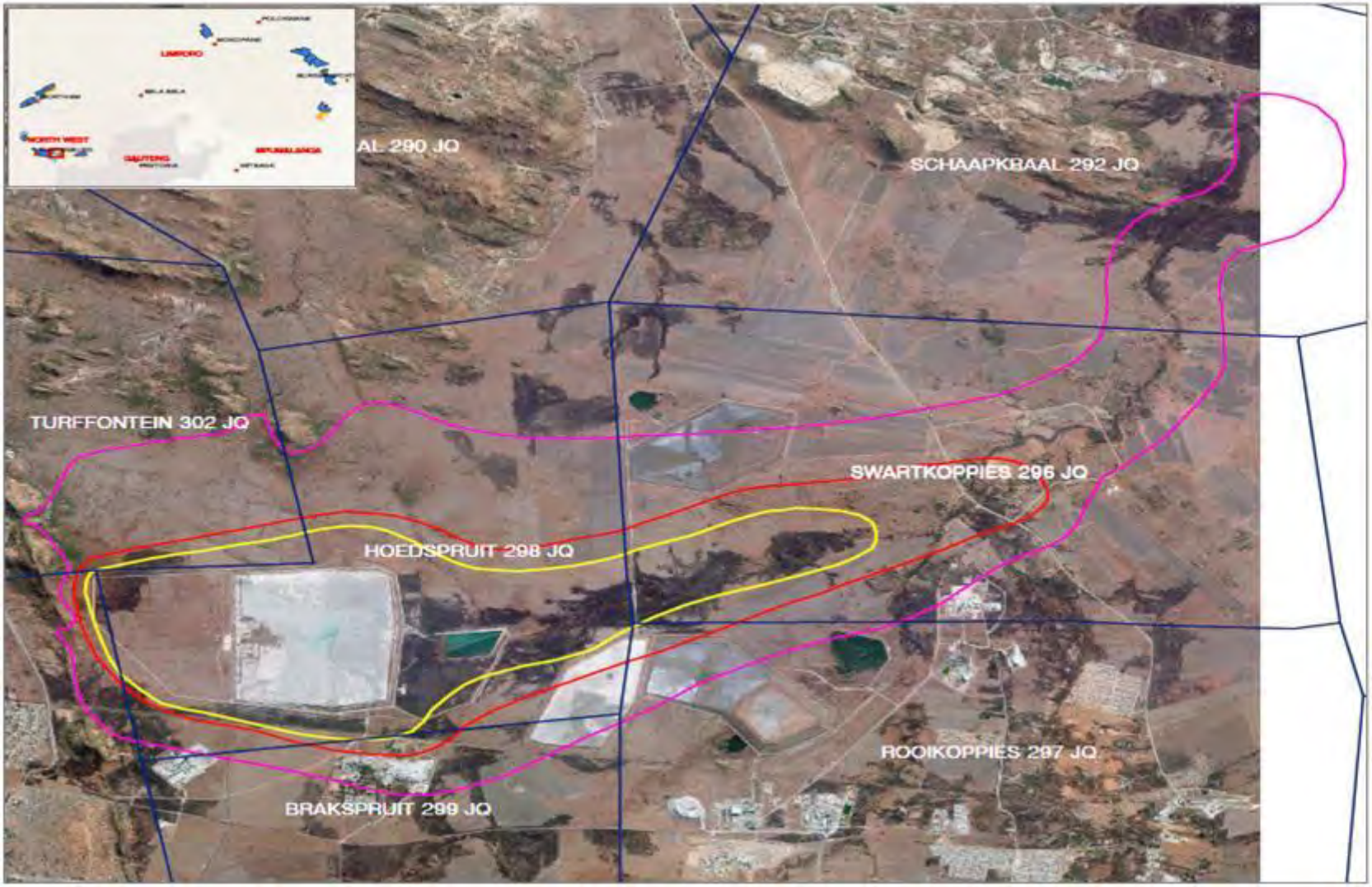
ANNEX B: Action list

1. Control centre coordinator

Activity steps	Tick	Comments
1. Inform emergency coordinator. As per notification flowchart.		
2. If requested by the emergency coordinator informs the emergency committee. As per notification flowchart.		

2. Emergency coordinator

Activity steps	Tick	Comments
1. Familiarize yourself with available information.		
2. Evaluate situation and ensure that all the necessary steps are taken to manage the incident.		
3. Liaise with the person in charge to ensure that all people on-site are safe. If help is needed in a specific area, ensure that help is available.		
4. Liaise with Safety Officer to ensure shutdown activities takes place and feedback to Manager.		
5. Liaise with Section Engineer for support services where necessary.		
6. Liaise with Store Supervisor for support services and suppliers where necessary.		
7. Liaise with HR Officer to ensure all staff is kept informed.		
8. Liaise with Plant Safety Officer to ensure medical aid is provided.		
9. Liaise with Protection Services to ensure access for emergency vehicles/crews.		
10. Inform Manager Rustenburg Concentrators and section engineering manager.		
11. Call off emergency after consultation with Emergency committee. All clear to be given.		
12. Ensure post-incident critique and debriefing is done.		
13. Ensure investigation team is appointed and damage assessment is done.		
14. If the public was affected, ensure that a liaison centre is set up as soon as possible.		
15. Ensure that sources of supply and services such as Utilities, vendors and contractors are available to the Recovery team.		
16. Activate mutual aid plans with other organizations for supplying customers and satisfying contracts.		


AL 290 JQ
SCHAAPKRAAL 292 JQ
TURFFONTEIN 302 JQ
SWARTKOPPIES 296 JQ
HOEDSPRUIT 298 JQ
ROOIKOPPIES 297 JQ
BRAKSPRUIT 299 JQ
AngloAmerican
PLATINUM
HOEDSPRUIT: WLTR
Cadastre
Farms
Zone of Influence (ZOI)
Dams B & C only at Final Height 1202 mamsl (45m High)
Zone of Influence (ZOI)
Dams B and C only at Final Height 1220 mamsl (63m High)
Zone of Influence (ZOI)
Dams B, C and D at Final Height 1277 mamsl (120m High)
Based on SRK Report No. 313603/3 Dated August 2005 (Hoedspruit Tailings Complex Operation and Maintanance Manual)
0 0.5 1 2 3
Kilometers
N
TAILINGS DAM:
ZONE OF INFLUENCE
HOEDSPRUIT: WLTR

MANDATORY CODE OF PRACTISE
ACP OPERATION

EMERGENCY PREPAREDNESS AND RESPONSE

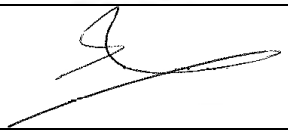
VERSION: 3.0

IMPLEMENTATION DATE: SEPTEMBER 2009

REVISION DATE: FEBRUARY 2012

REFERENCE NUMBER: DMR 16/3/2/1-A5

ACP REFERENCE NUMBER: ACP-ALL-SHE-COP-0001

	POSITION	SIGNATURE	DATE
AUTHOR	SHE MANAGER – ACP		February 2012
REVIEWED	OCCUPATIONAL HYGIENE TECHOLOGIST - ACP		February 2012
APPROVED BY:	MANAGER PRODUCTION - ACP		February 2012
APPROVED BY:	OCCUPATIONAL HYGIENIST SMELTERS		February 2012
APPROVED BY	APPOINTED OCCUPATIONAL MEDICAL PRACTITIONER		February 2012

Ref No	ACP-ALL-SHE-COP-0001	**Date of Implementation**	03 September 2009
Version No	**1**	**Last Revision Date**	28 February 2012

FOREWORD

This Code of Practice is prepared in accordance with the DME Guideline Ref. # DME 16/3/2/1-A5. The purpose of this Code is to document the practices and procedures to be applied to address emergency preparedness and response. The Code is a management tool intended to add value to and enhance the Business Unit. If this objective is not achieved, the Code is not effective and should be reviewed.

Consequently, the Code should be a live document that is in continual use as a guide and a reference. All decisions made and actions should, as a matter of routine, be vetted and reviewed in terms of the Code. Responsible managers and supervisors should be conversant and familiar with the contents of the Code.

This Code is intended to be the framework for the management plan for emergency preparedness and response.

2. Contents

3. Status of Code

- This COP was drawn up in accordance with Guideline DME Reference Number Department of Minerals and Energy 16/3/2/1-A5 issued by the Chief Inspector of Mines.
- This is a mandatory COP in terms of section 9(2) and (3) of the MHSA;
- This COP may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose;
- The latest revision of the Code shall supersede all earlier issues.
- All managerial instructions, recommendations, procedures (voluntary COP's) and standards on the relevant topics must comply with the COP and must be reviewed to ensure compliance.

4. Drafting Committee

This Code was drafted by the following committee:

Full Name	Title	Designation	Affiliation	Experience
Bertus de Villiers	Mr.	Head of Smelter Operations	MHSA 4.(1)	
Graham Burn	Mr.	Engineering Manager		
Duan Anderson	Mr.	Production Manager ACP	MHSA 3.1(A)	
Michael Tlhagadi	Mr.	Acting Section Engineering Manager	MHSA 2.13.1	
Mosi Paulus	Mr.	SHE Manager – ACP	MHSA 2.17.4	
M de Beer	Mr.	Hygienist Smelters	MHSA 12.1	

5. General Information

Name of Operation/Business Unit	ACP Operation
Owner	Anglo Platinum
Location	Portion J of the Farm Waterval 303 JQ District
Managerial District	Rustenburg
Contact Details	P.O. Box 404 Kroondal 0350 Tel: +27 (0) 14 591 5000 Fax: +27 (0) 14 591 5009
DME Reference Number	1444
Commodities Produced	Sulphur deficient nickel-copper matte Sulphuric Acid
Mining Method	**ACP Operation –** Converting and Acid Plant
Related COP's	This COP is related and should be read in conjunction with: CPOM01,WSM-ALL-HLH-PRO-0007, WSM-ALL-HLH-PRO-0009
Unique Features	None

6. Terms and Definitions

"Aggravating circumstances": Situations/conditions that could make an emergency situation worse

"COP" means Code of Practice;

"Contingency plan": A written plan that indicates services that will be used during prolonged business interruptions to ensure continued production.

"Credible incident": An incident with the potential to become an Emergency situation.

"DME" means the Department of Minerals and Energy;

"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;

"Emergency committee" A group of management individuals from all disciplines who performs tasks associated with their fields of expertise. (HR, Safety, Engineering, etc.)

"Emergency controller": A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.

"Emergency response team": A team of individuals who have received formal training in the handling of the identified credible incidents.

"Environmental": An unplanned event, which has the potential to result in a significant adverse environmental impact and/or could result in legal liability to Waterval Smelter Complex in terms of environmental legislation commitments.

"Material Safety Data Sheet": Contains all relevant information concerning risks associated with the material, appropriate use and handling requirements and steps to be taken in the event of a spill or accident involving the product.

"Mitigating circumstances": People, Equipment, Services and Materials that could reduce the impact of the emergency on the performance of the Waterval Smelter Complex

"MHSA" means Mine Health and Safety Act, 1996 (Act No.29 of 1996);

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

"Route of Action": A guide that provides a list of actions that must be followed by an individual/team.

"SHE Emergency": A SHE emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact and/or could result in legal liability to Waterval Smelter Complex in terms of SHE related legislation commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response.

Abbreviations

Abbreviation	Explanation
WSC	Waterval Smelter Complex
WVS	Waterval Smelter
ARL	Acceptable Risk Level
ACP	Anglo Converting Process
CO_2	Carbon dioxide
DMR	Department of Minerals Resources
CCD	Corporate Communications Department
ISO	International Standards Organization
MSDS	Material Safety Data Sheet
OHSAS/ MHSACT	Occupational Health Safety Assessment Series/Mines Health & Safety Act
PPE	Personal Protective Equipment
RWD	Return Water Dam
SAPS	South African Police Services
SHE	Safety, Health, and Environment
RRED	Rustenburg Regional Environmental Department
IRM.net	Integrated Risk Management System

7. Risk Management

The philosophy to which is adhered to, is one of managed risk. This implies that the risk can only be controlled through the application of ongoing management.

Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work, and record the significant hazards identified and risk assessed. The employer must determine how the significant risks identified in the risk assessment process must be dealt with, having regard to the requirement of section 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the risk, thereafter to

control the risk at source, thereafter to minimise the risk and thereafter, insofar as the risk remains, to provide personal protective equipment and to institute a programme to monitor the risk.

To assist the employer with the HIRA all possible relevant information such as accident statistics, ergonomic studies, research reports, manufacturers specifications, approvals, design criteria and performance figure for all relevant equipment should be obtained and considered.

In addition to the periodic review required by section 11(4) of the MHSA, the COP should be reviewed and updated after every emergency, altered circumstance's, or if significant changes are introduced to procedures, process and ventilation layouts, processing methods, plant or equipment and material.

8. Emergency Preparedness Programme

- Without proper guidance and training it is almost certain should the employees be faced with a sudden threat, they will follow their own natural inclination, which could result in chaos and panic. The effect of an uncontrolled emergency situation could be catastrophic and cause complete disruption of all operations.

- It is essential that corrective action, taken to cope with an emergency, will be prompt, coordinated and disciplined, in order to prevent a disaster.

- Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline. One essential common feature is the necessity for efficient communications.

- Privileged information of the emergency should only be divulged on a "need to know" basis.

- An **Emergency coordinator**, normally the most senior person on site, will coordinate site activities, with the assistance of a site **Emergency Response Team**.

- The emergency controller (most senior person at the scene) should be advised as soon as possible of any emergency and kept informed of developments.

- In case where external emergency response teams is required (Netcare 911, Local fire brigade) Protection services shall make all the required necessary PPE available at the gate at all times and shall without any delay allow such external response team proceed to the area where such services is required without delay..

- The Senior Personnel where the external response team(s) is required shall make one official available at the gate to fetch such response team to the exact area where the response services is required.

- All persons who suffered injuries due to the emergency situation or during the emergency situation must be transported to the Hospital for treatment.

- Each Control Room is equipped with one telephone line which is purely dedicated to Emergency services. These landlines are "Zoned" to phone specific emergency numbers only

Emergency Committee:

- Roles and Responsibility (Resident Engineer):
  - Ensure all machines are under control and do not cause any further damage
  - Ensure that machine operators are well trained regarding the operation of such machines.

- Roles and Responsibility (Fire Master):
  - Maintain smooth communication with emergency team

- Make all required resources available and coordinate the use thereof
- Ensure that emergency situation does not result in any catastrophic consequences by attending to it effectively and within reasonable time
- Ensure that all employees know what to do during emergency situation

➢ Roles and Responsibility (Production Line Management):
- Ensure that employees are safely evacuated
- Ensure that the plant is assessed so that it doesn't not create any further risk and all critical machines are stopped without causing any further danger
- Render support to all stake holders during the emergency & recovery.

➢ Roles and Responsibility (SHE Officers who are ER Coordinators):
- Continuously update evacuated employees on status of the emergency
- Ensure that the roll list is conducted and any missing person is searched.
- Coordinate smooth evacuation and recovery plan.

➢ Roles and Responsibility (Production Manager):
- Ensure that all employees are safely evacuated
- Ensure that all stake holders are properly trained in handling emergency and recovery plan
- Ensure that no further risk or damage is caused during emergency

➢ Roles and Responsibility (Protection Services):
- All the access gates must be kept closed at all times (no entrance/exit should be allowed at the access points)
- Required PPE should be made available for all emergency vehicles. Such vehicles must be allowed access on site as urgently as possible
- No emergency vehicle must be allowed to enter site without having someone who will guide it on where to go.

NB! - Every employee is responsible to ensure that his/her visitor remains with him/her during the emergency.

- It is also every employee` responsibility to ensure that they look after each other during emergency to ensure safe evacuation and remain at the assembly point(s) until clearance is given that it is safe to return to work place.

8.1 Emergency Preparedness Measures

8.1.1 Detection and early warning systems;

Warning systems are used to provide warnings to employees and external stakeholders that are close to or may be affected by a SHE emergency. Contamination of streams and risk to surrounding communities may extend to areas outside of the boundary of the mine site. Warnings to nearby communities may be required.

On-site warning systems include:

- Fire alarm
- Telephone systems
- Computer Networking
- Two-way Radio's

There are no formalized warning systems for surrounding communities.

8.1.2 Communication systems;

In the event of an emergency, the emergency plan will flow as follows:

a. Emergency Controller must use the Notification flowchart – Appendix B.
b. Emergency Team to use the Incident Management System – Appendix C,
c. Action Lists – Appendix D, and
d. Recovery Plan

Contact Numbers

Contact numbers are available in ACP's standby list issued weekly by the Plant Secretary and available on notice boards. Emergency telephone numbers are displayed on notice boards and the Emergency Flipchart. When requesting an ambulance, in the case of a medical emergency at work, the following number is dialled: **082 911** or the short code number #2911. This number will connect one to the Anglo Platinum dispatching service of Netcare 911 who will dispatch an ambulance and paramedics to assist. The Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Intranet and Platinum Way.

Communications with external parties and Employees

The Corporate Communications Department (CCD) will be responsible for liaison with the media in respect of all crises within Anglo Platinum group companies, unless specified otherwise by the CCD. The complete procedure for media liaison is available in the Group Public Affairs Policy of Anglo Platinum.

Communication with the Principal Inspector of Mines is done immediately by the Production Manager or Section Engineering Manager if any Emergency occurred as required by the MHSA for reporting

In all cases, employees and contractors is drawn to Communication, Consultation and Awareness Systems Procedure, which also applies during and after emergency situations.

Testing

Emergency procedures will be tested (emergency mock- ups) as per Emergency schedule (ACP-ALL-SHE-COP-001-FRM) and findings of the mock-ups are recorded in IRM.net. Records of emergency drills are kept on site by the Document Controller. Testing of communication systems will be addressed during emergency drills.

8.1.3 Emergency medical care;

First aide will be provided on site by trained level 1 First Aid Certificate holders, the Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Intranet/SHE Web will be initiated and hand-over will be done to the paramedics once they arrive on site. The paramedics will hand over at the Hospital to the physicians.

8.1.4 Evacuation and escape procedures;

Evacuation Procedures

- An awareness of testing of the siren shall be carried out every Wednesday at 11h00. (30 seconds audible) by the Fire Master.
- In order that personnel can distinguish and understand the audible alarm sounds, the different signals shall be as follows:

- Mode 1 - For a fire the signal of the alarm will be a continuous sound.
- Mode 2 - For the signal of the alarm of a “on and off” sound, shall be to evacuate employees in specific area where there is a certain life threat e.g. Furnace runaways
- People who are monitoring compliance with this procedure during the evacuation shall be clearly identified by wearing reflector vests.
- It is an offence for anyone to tamper with anything that has been installed / provided for emergency purposes.

- Evacuation Point 1 – At WVS SHE Notification boards in roadway
- Evacuation Point 2 – At Technical Building in roadway
- Evacuation Point 3 – ACP
- Evacuation Point 4 – Training Centre
- Evacuation Point 5 – Weighbridge

8.1.4.1. Unplanned Evacuations for on Site Emergencies

Procedure is as follows:

Evacuation Leader - A Shift, B Shift, C Shift and D Shift:

Unplanned Evacuation

1 Activate the alarm and carry out an evacuation
2 Evacuate to the assembly points 1, 2, 3, 4 or 5
3 Evacuation Leader or Teams perform headcounts
4 Fire Master will investigate and evaluate the extent of the danger, and inform the Evacuation Leader.
5 Fire Master declares area safe
6 Complete incident notification

Fire

1 Same as 1 to 4 above.
2 If the site alarm is activated in Mode 1 or 2 (1-Continuous, 2-Intermittent)
  - o Fire Team Leader or deputy reports to Fire Station
  - o Organize search teams to investigate and report back
  - o In case of fire arrange teams to control/extinguish fire.

Evacuation

1. Same as 1 to 4 above (planned evacuation)
2. Activate the main Site alarm. Mode 1 or 2
3. Notify the Control Centre, or use the Emergency telephone list
4. Supervisor/Dayshift Leader or deputy informs people of affected area to evacuate to assembly points.
5. Remain at assembly point with personnel until Fire Master or deputy gives all clear.

Evacuation Leader

1. Same as 1 to 4 above (planned evacuation)

2. If the site alarm is activated in Mode 1 or 2 then the
   - o Fire Team Leader or deputy report to Fire Station
   - o Ensure that fire team members and equipment is ready.
3. Communicator between Emergency Committee and assembly point.

8.1.4.2 Unplanned Evacuations after hours

This procedure is the same as in unplanned evacuations during normal hours.

8.1.4.3 Planned Evacuations

a) Maintenance Work

The rest of the evacuation will be exactly the same as during an unplanned evacuation during normal working hours.

b) Fire Drill

Full evacuation as per normal procedures in the affected sections. The personnel will remain at the emergency evacuation point, until the all clear instruction is received from the Supervisor.

c) General

- o This procedure is to be read in conjunction with the Fire Manual.
- o Copies of the manual are obtainable from the Fire Master.
- o During a fire or any other emergency channel 2 must be cleared and only used for communications concerning the fire or emergency. (Channel 1 must be used for other communication).
- o The Site alarm can be activated manually. In case of an electrical failure the manual alarm will be activated.
- o If either alarm is activated the Fire team and Supervisor will respond immediately in order to determine the cause of the alarm.
- o These personnel will assemble at the Fire team assembly point. The Fire Master or his deputy will coordinate the investigation using rovers to establish the whereabouts of the fire or cause of the alarm.
- o All other employees are to be on standby for evacuation or instruction from the fire team rovers. Employees in danger will evacuate on their own initiative. The Fire Master or his deputy will assume responsibility while he is on site.
- o When the Fire Master or his deputy is not on site, the Supervisor will assume responsibility until the Fire Master arrives.
- o When a fire is discovered, the person discovering it must take immediate steps to bring the fire under control. He/she must ensure that the Control centre/Immediate Supervisor is informed as to the extent and location of the fire.
- o The Control Centre (to be nominated by the Production Manager) will then inform the Supervisor to investigate.
- o The person instructed will ensure that the Site alarm is activated to assemble all fire team members and co-ordinate the fire fighting activities.
- o The Control Centre is to ensure that channel 2 on the plant radio system is continuously monitored so that they can respond to requests of the Fire Master, his deputy or the Supervisor.
- o The Supervisor will also ensure that all relevant information relating to the fire or emergency is written down.
- o All the Emergency Committee members will be notified as per **Notification Flowchart**.

8.1.5 Training and awareness;

Training is conducted in accordance with the Training, Awareness and Competence Systems Procedure. The following training is provided as part of our emergency preparedness and response:

- First Aid training is provided to all supervisory employees
- Basic Fire fighting – Rustenburg Fire Department
- Intermediate Fire Training – Fire Protection Association of SA
- Environmental Awareness training – WSC Induction Program
- WSC Induction – WSC Induction Program
- HAZCHEM Training – (to be initiated)
- At height rescue – (to be initiated)

8.1.5.1 Training done to all ex-leave employees :

- Ex-leave refresher Induction

All new employees on sign-on receive WSC Induction; there after ex-leave refresher induction.

8.2 Emergency Response Measures

8.2.1 Rescue and response capabilities;

A directory of available emergency equipment and other supplies on site and the person(s) responsible for the equipment is given in the Fire Manual available at Protection Services Gatehouse. Equipment details:

- Fire water main ring with hydrant points and 60mm hoses and branches;
- CO_2 Fire extinguishers;
- Dry-powder fire extinguishers;
- Water deluge systems
- Smoke and fire detection systems;
- Foam systems
- CO_2 Auto deluge systems
- Hazardous Chemical spill kits – Peat-Sorb
- First Aid bags
- Stretchers
- Spine Boards and Spider Harnesses
- Safety Showers and Eye Baths

8.2.2 Management of emergencies;

8.2.2.1 Bomb Threats

- The operator receiving the call relating to be bomb threat must:
  - Stay calm and to not confront the caller
  - Make note of the conversation
  - Attempt to complete the Bomb Threat Checklist
  - Contact the Most Senior Person in charge / Control Centre immediately with the information.

- The Most Senior Person in charge / Control Centre must contact the Emergency Controller as per Notification Flowchart.

- Follow Unplanned Evacuation Procedure
- SAPS to be contacted for assistance – 10111
- The Fire Teams must remain on standby while Protection Services conduct a thorough Plant search.
- Demarcate the area/s containing suspect parcels or devices with yellow and black demarcation tape (black and yellow means no entry).
- Re-treat to the evacuation point.
- Protection Services to follow Emergency Access procedure when SAPS arrives at the site.
- Protection Services to escort SAPS to the demarcated area and keep a safe distance.
- SAPS to defuse or remove the device/s under Protection Services escort.
- Emergency Controller to give all clear before personnel can return to their workplaces.

8.2.2.2 Nitric Acid Spillage

Unplanned evacuation during normal working hours for nitric acid leak or spill or in case of fire

- If possible and where applicable, switch off all electric equipment and close the windows.
- In the event of such an emergency, where a section or area has to be evacuated all employees are to evacuate in an orderly, but timeous manner to their designated assembly point. DO NOT PANIC AND DO NOT RUN.
- During a fire or other emergency the Safety Officer /Fire Master will immediately co-ordinate the evacuation.
- If the stack alarm has not been activated by then, the Fire Master will ensure that it is done and that employees have evacuated the area.
- All employees on hearing the alarm will then know that an evacuation to the designated assembly points is imminent.
- Evacuation controllers to take control of the situation at each assembly point and check by using the daily time sheet if employees under their control can be accounted for.
- If someone is unaccounted for, Safety Officer /Fire Master shall be informed immediately and organise a search, until person/s are accounted for.
- The Evacuation controller in charge of the assembly point may move employees to another assembly point if he considers it to be necessary.
- No one shall be allowed to leave the assembly point, or enter evacuated areas, until authorised by the Evacuation controller in charge of assembly point or Safety Officer /Fire Master that all is clear and safe.

8.2.2.3 Chemical Transport Tankers

- Follow Unplanned Evacuation Procedure if necessary and if necessary change position of evacuation point as per the wind direction.
- The Control Centre must contact the Emergency Committee and the relevant supplier as per the Notification Flowchart.
- Demarcate the Tanker area with black and yellow tape (means no entry) to preserve evidence.
- Breathing Apparatus sets to be obtained for competent persons who will be rectifying the problem.
- Record all information gathered for evidence.
- Pump the chemical from the Tanker into available storage tanks if possible and if it can't be used, dispose as hazardous waste as per the legal requirements.
- Dyke the area as per MSDS to prevent spillage reaching watercourses and pump excess chemical into the containers and dispose as hazardous waste.
- When the area has been made safe, the Emergency Coordinator will give the all clear and the affected areas/plant can return to their workstation.

8.2.2.4 Dam wall Failure or Overflow

- Report the Failure or overflow immediately to the Control Centre.
- The Control Centre to notify the Emergency Controller as per the Notification Flowchart.
- Emergency Committee will assess the situation and initiate action as per Action lists.
- Down stream warnings to be conducted by Protection Services.
- Excess water in dam to be transferred back to the Plant.

8.2.2.5 Electrical Supply failure (ESCOM)

- Follow the Unplanned Evacuation Procedure
- The Control Centre to contact the Emergency Controller as per Notification Flowchart
- Engineering Department to assess the power failure and report possible duration to the Emergency Committee.
- The UPS supply will ensure short term supply of power to the following critical services:
  - Ventilation Fans
  - Emergency Lights
  - Other critical processes in the plant.
- When the power supply is returned, the Emergency Controller will issue the all clear and the personnel may return to their workstations.

8.2.2.6 Fires on Site

- Sound the Alarm

- Follow the Unplanned Evacuation Procedure
- The Control Centre to contact the Emergency Controller as per the Notification Flowchart
- Emergency Committee to follow Action Lists
- If feasible isolate the power to the affected area.
- Any contingency plans to be decided on by the most senior person/Fire Master available.
- Conduct a full fire investigation and preserve the evidence.
- Complete the necessary SAMRASS forms for the DMR
- Engineering to follow the Recovery Plan.

8.2.2.7 Natural Disasters

- Being acts of providence, these emergencies cannot be prevented, although impact of such acts can be reduced:
  - Earthquakes
  - Storms (Wind/Lightning)
  - Surface Flooding
- The nature and extent of the disaster will dictate the appropriate actions, but the following general rules will apply:
- The person normally in charge of a section or department must take immediate control and must decide on the action required, inter alia, should they evacuate, which evacuation point, head count, etc.
- The Control Centre must notify the Emergency Controller as per the Notification Flowchart.
- As soon as possible after the disaster, the Emergency Committee must assess the damage, firstly to personnel and then to buildings and equipment.
- After assessment, if the buildings are safe, personnel can return to their workstations and Engineering to attend to the damaged buildings and equipment as per Engineering Recovery Plans.

8.2.2.8 Process Explosions

- Follow the Unplanned Evacuation Procedure.
- The Control Centre must notify the Emergency Controller as per Notification Flowchart
- Injured employees to be treated according to the Disaster Preparedness of the Occupational Health Department.
- Demarcate the area with Black and Yellow demarcation tape (no unauthorised entry), no evidence may be removed until the Inspector has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The Emergency Committee in conjunction with the DME must conduct a full investigation regarding the cause of the explosion.

- The necessary SAMRASS forms must be completed and submitted to the DME.
- Engineering to initiate the Engineering Recovery Plan.
- Production Management team to assess process flow to determine alternative for continued production.
- When the Emergency Controller declares the affected area safe, personnel can return to their workstations.

8.2.2.9 Road Transport Incidents (WSC Transportation Only)

- WSC personnel to notify the Control Centre if they are involved in a company vehicle transport incident. (if possible)
- The Control Centre must notify the Emergency Controller as per the Notification Flowchart and provide the necessary information.
- Contingency Plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.
- A full investigation to be conducted in conjunction with the SAPS and relevant Road Traffic Department.
- Prepare the necessary Rand Mutual documentation and submit to Rand Mutual.

8.2.2.10 Labour Unrest

- When a confrontation exists, the Control Centre as per the Notification Flowchart must immediately contact the Emergency Controller.
- The Emergency Controller or HR Manager shall have full authority to:
    - Communicate with the employees' representative and communicate with the following for advice and/or instructions;
        - Emergency Committee
        - Corporate Office
        - Protection Services
        - Trade Union Representatives
        - Department of Manpower
        - On-mine HR Office
- Notify the SAPS and ask them to remain at a distance, unless/until their presence is requested by the Emergency Committee.
- Once unrest is apparent, call a meeting with the representative body to discuss the specific grievances or attempt to establish what the grievances are.
- Grievances should be presented through the agreed negotiating structure.
- The relevant Union local organizer or general secretaries should be notified if the matter couldn't immediately be resolved.

8.2.2.11 Sulphuric/Nitric Acid Spillage

- Contact the Control Centre immediately.
- The Control Centre to contact the Emergency Controller as per Notification Flowchart.
- The Emergency Controller to order an evacuation when it is safe to do so.
- Medical and Fire department to be placed on standby.
- Isolate the area for more than 30m
- The Emergency stop buttons are also the emergency isolations
- Prohibit all unauthorised entry
- Remain upwind of the spill
- Stay away from low-lying areas
- Ascertain the nature and extent of spillage
- Ascertain the cause of the spillage
- Ascertain the threat to human life or environment
- Ascertain possible damage to both private and mine's equipment and material
- Ascertain whether wall surrounding acid tanks can contain the volume of acid spilt
- Ascertain whether draining system is adequate to allow the volume of acid to spill
- Obtain neutralising agent from stores (normal working hours) and apply to area & cover with a plastic sheet if available
- Contact stores standby official and request emergency supply of neutralising agent (after working hours) and apply to area & cover with a plastic sheet if available
- The Emergency Controller can give the all clear and personnel can return to their workstations.
- After 24-hours remove plastic sheeting and wash neutralised acid into the storm water trench reporting to the pollution control dam

8.2.2.12 Water Supply Failure

- Contact the Control Centre
- The Control Centre to contact the Emergency Controller as per Notification Flowchart.
- Determine loss of Water supply and possible duration.
- Contact Magalies/Rand Water Board.

- Forward notification to employees to preserve water.

8.2.2.13 Molten Metal Run-out/Incident

- Follow the Unplanned Evacuation Procedure.
- The Control Centre must notify the Emergency Controller as per Notification Flowchart
- Injured employees to be treated according to the Disaster Preparedness of the Occupational Health Department.
- Demarcate the area with Black and Yellow demarcation tape (no unauthorised entry), no evidence may be removed until the Emergency Controller/Production Manager and Section Engineering Manager has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The Emergency Committee in must conduct a full investigation regarding the cause of the explosion.
- The necessary SAMRASS forms must be completed and submitted to the DME.
- Engineering to initiate the Engineering Recovery Plan.
- Production Management team to assess process flow to determine alternative for continued production.
- When the Emergency Controller declares the affected area safe, personnel can return to their workstations.
- The results of foaming incident gets treated the same way as Molten material

8.2.2.14 Medical, Multiple Injury or Ill Health Emergency

- Contact the Control Centre.
- Control Centre to contact the Ambulance and Emergency Controller.
- Apply First aid as required and make affected employee/s comfortable.
- Hand-over to paramedics.
- Continuity witness to escort ambulance to relevant hospital and provide feedback on employee/s status to the emergency controller.

8.2.2.15 Suspended fall from height

There are two scenarios that a fall from height using a safety harness could result in

8.2.2.15.1 The victim is suspended but conscious

- Establish contact with the victim
- Contact the fire department / rescue team & ambulance
- Calm the victim down
- Secure the area below and above the victim and remove bystanders from the area.

- Communicate with him to minimize the risk of suspension trauma, and to determine the possible extend of his injuries
- Have the victim release his trapeze strap from his safety harness; ensure that the victim places one foot in the strap, he can then adjust the strap to fit. This will give the rescue team time to prepare for the retrieval of the victim. Keeping in mind that suspension trauma could result if the person is left in the safety harness to long.
- A rescuer is to keep open communication with the victim and have the victim change legs every so often.
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.

The rescue team / person trained and competent to use the self descender rescue kit.

a) The rescue team is to determine how the victim is to be retrieved e.g.
b) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.
c) If the workmen is between floors, a ladder can be placed safely under the victim and the victim can stand on the ladder and release himself (keeping in mind the victim has just fallen and will be nervous and extra care is to be taken)
d) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit is to be used to lower the victim down provided:
    - o Anchorage points are securely fitted and tested to take weight without slipping
    - o The rescue kit is inspected and found to be in good working order
    - o At least two persons to be present whilst rescue is undertaken
    - o Only one person to be lowered at one time with the self descender rescue kit
    - o The victims weight should be taken up by the rescue system
    - o Rescue kit operator to ensure system working properly and attachments points secure. Once integrity of system confirmed, second person to detach safety harness lanyard.
e) This devices should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the automatic self rescuer kit.
f) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

8.2.215.2 The victim is suspended but unconscious or injured and unable to help himself

- Establish contact with the victim
- Contact the fire department / rescue team & ambulance
- Secure the area below and above the victim and remove bystanders from the area
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.

- Prompt response is required as the victim is unconscious and suspension trauma will come on much faster. Get the victim onto a platform where first aid can be administered.

The rescue team / person trained and competent to use the self descender rescue kit.

a) The rescue team is to determine how the victim is to be retrieved e.g.
b) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.
c) If the workmen is between floors, a ladder can be propped safely under the victim this will release some of the tension an the victim, a rescuer can then access the victim using the same ladder ensuring that he secure himself to the structure once close to the victim and that there is a rescuer securing the ladder at the base, the rescuer can then secure the victim to the ladder. At this point additional rescuers can rig the automatic self rescuer kit above the victim and rescuer. The rescuer is to attach the device to the victim and the rescuer can also attach his lanyards to the devices, the device should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The victim's lanyards can then be removed from the structure. The rescuer will then control the victim while he is being lowered to the platform.
d) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit or crane can be used to hoist the victim down, these devices should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the hoist device.
e) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

8.2.2.15.3 Once the victim is on a platform or safe surface

- A first aider is to assess the victim and conduct the relevant first aid treatment treat as with back injury. If back injuries are suspected the extrication device can be applied to the victim and the put into the suspension trauma position
- If suspension trauma has occurred the victim should be placed in a sitting position for approximately 30 minutes.
- The victim is to be stabilized on a spinal board or rescue basket
- A qualified rigger can then be used to connect the basket stretcher to the hook of the crane and lower the victim to the ground.
- The victim can then be given over to the paramedic's for transport to the relevant hospital

8.2.2.15.4 Suspended in a workbasket

Pre-work Requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar crane and workbasket is available within the Group or supply vendors that can assist in rescue operations within one hour.

- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the workbasket.
- Secure the workbasket to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket

(Note: Protection Services must be notified to allow rescue access to the rescue crane and workbasket)

- Establish contact with affected personnel inside the workbasket.
- Lift the second rescue workbasket level with the affected workbasket.
- Secure the affected workbasket to the rescue workbasket utilizing lifting equipment.
- Secure the affected personnel's safety harness to the rescue workbasket.
- Assist the affected personnel to climb over into the rescue workbasket.
- Remove securing lifting equipment and lower the rescue workbasket to the ground.

8.2.2.15.5 Elevated platform failed in upper position

Pre-work requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar work platform or crane and workbasket is available within the Group or supply vendors that can assist in rescue operations within one hour.

- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the elevated platform.
- Secure the platform to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket/elevated platform

(Note: Protection Services must be notified to allow rescue access to the rescue elevated platform or crane and workbasket)

- Establish contact with the affected personnel inside the elevated platform
- Lift the second rescue workbasket/elevated platform level with the affected platform

- Secure the affected elevated platform to the rescue workbasket/elevated platform utilizing lifting equipment
- Secure the affected personnel's safety harness to the rescue workbasket/elevated platform.
- Remove securing lifting equipment and lower the rescue workbasket/elevated platform to the ground.

Rescue Operation by mechanical means for elevated platforms

- Establish contact with affected personnel and explain rescue procedure
- The Section Engineer for the affected area where the work is conducted must establish if the elevated platform can be lowered by mechanical means.
- Once established, the lowering of the elevated platform may proceed under the section engineer's direct supervision.

8.2.2.16 Rescue from Confined Space

Rescue from confined space could be fatal. As a result, no any other employee may attempt to rescue any person who is trapped or believed to require rescue from the confined space unless:

- **A rescuing person is a qualified first aider**
- **A rescuing person knows how to use a Breathing Apparatus Set or is using a respirator**
- **A recuing person has another person to assist with the rescuing process**
- **Control room has been informed of this attempt so that an ambulance could be called while the rescuing is in progress**

8.2.2.17 Acid Splash

The person who has suffered acid splash shall be rinsed/washed off thoroughly by the use of showers. In any instance where diphoteryn solution is at reach, it shall also be used to reduce the extend of acid burns. An ambulance shall be called for the affected person to receive medical attention.

8.3 Reporting and Recording

Emergency procedures will be tested (emergency mock- ups) once a quarter. Any scenario based in credible incidents demonstration shall be used to test the response and recovery plan and findings of the mock-ups are kept by the plant Fire Master. Records of emergency drills are kept on site.

9. Implementation Plan

This COP will be implemented at the ACP as from 01 October 2009.

10. Compliance with the COP

This COP is instituted as a base line on which the process of emergency preparedness and response will be conducted at the ACP.

11. Access to the COP and Related Documents

Ref No	ACP-ALL-SHE-COP-0001	**Date of Implementation**	03 September 2009
Version No	**1**	**Last Revision Date**	28 February 2012

A copy of this COP and related documents are kept available at the Document Control office for examination by any affected person. The COP is incorporated into the official documentation system of the ACP and displayed on the Anglo Platinum Way.

Annex A: Appointments

The following appointments must be made:

i. Emergency Coordinator - The Production Manager: The Emergency Coordinator to take control of the emergency and lead the Emergency Committee in performing their duties.
ii. Emergency Controller – A Senior Site Official: Emergency Controller to manage the Emergency Response Teams on the site and provide continuous feedback to the Emergency Committee and Emergency Coordinator.
iii. Emergency Committee – Various HOD's: The Emergency Committee to assist the Emergency Controller to ensure fast and effective control of the emergency situation with the use of the Emergency Response Teams.
iv. Emergency Response Teams – Competent Fire/Hazmat/Rescue personnel who must treat the emergency and avoid it escalating into a disastrous or catastrophic event.

Note:
In the absence of the Production Manager, the next level of command will take control over the situation.

Annex B: Identifying all possible emergency situations

Determining of Credible Incidents that could lead to an Emergency situation

i. The SHE Manager will lead the assessment and involve employee representatives, SHE staff, Management and external parties if required for their expert knowledge.

ii. A comprehensive ACP wide assessment must be completed to identify credible incidents that could lead to an emergency situation, the following documentation to be scrutinized and a physical inspection of the sites to be conducted:

- Past experience and related industry incident information;
- SHE incident analysis and investigation documentation;
- Baseline HIRA documentation;
- MSDS's;
- Lessons learned from Emergency practice drills
- Major changes implemented, i.e. Chemical, Equipment, Facilities; Procedures
- The ACP needs with regard to emergency units;
- External News letters from the DME; and
- Additional information gathered from Newspapers and Television broadcasts that apply to our People, Environment, Material, Equipment and Product.

iii. This process will be followed annually during the review or after an emergency situation has presented itself within the ACP or similar Businesses.

HIRA

(It must be kept in mind that the Emergency Plan will indicate action after an emergency has occurred, due to possible control failures)

i. A comprehensive HIRA will be conducted of all credible incidents identified and the SHE Manager will facilitate the operation.

ii. During the HIRA process, all risk control measures and aggravating circumstances must be identified.

iii. The control measures to be initiated will form the Route of Action as required from the HOD Team for each credible incident.

The SHE Manager will facilitate the review of the Emergency Plan HIRA and Route of Action

i. The route of action will be determined by the HIRA conducted on credible incidents identified, Management experience and knowledge; past records and External sources.

ii. It is recommended that the route of action must only serve as a general guide during the emergency situation and that it will be up to the most senior person on the plant, most senior person at the scene, HOD Team and Emergency Response Team to initiate additional actions, as each situation may change and pose its own challenges.

iii. During each review the Route of Action must be revised to ensure that it stays current and applicable to each identified credible incident.

Contingency Plan

i. Critical items/services that will be needed for use during Emergency situations must be identified and listed and records kept with supply chain.

ii. The Suppliers of these critical items/services must be contacted and Contracts drawn-up between them and Anglo Platinum to ensure that the items listed can be supplied within the shortest possible time.

Recovery Plan

i. The Recovery Plan will be initiated immediately after an Emergency situation has occurred.

ii. The Section Engineering Manager will be the leader or controller during this phase of the emergency situation.

iii. The recovery plan will be based on the use of the SAP and site specific P and ID's, to ensure the equipment is purchased according to specifications.

iv. The Section Engineering Manager is responsible to update and review the Recovery Plan.

Notification process

There are six main steps in managing an emergency, from the identification of the situation to final close off. These are as follows:
1. Find and identify
2. Ensure human safety
3. Reporting
4. Containment and clean-up
5. Corrective and preventative action
6. Monitoring

The notification process travels up the organizational chain of command.
Use the Notification Flow-chart as reference.

Credible Incidents

This is an on-site survey for identifying incidents at the WSC affecting or threatening to affect people and assets on-site or in the surrounding communities.

Credible incidents	Risk Class
Bomb Threats	19 (H)
Bulk Storage Tank Failure	18 (H)
Dam wall-overflow	2 (L)
Fire and Fire Protection Systems Failures	8 (M)
Gas Storage Failure	13 (H)
Mud rushes due to excessive water in bins	9 (M)
Multiple Injuries could be as a result of confined space incident, structural failure, snake bite etc	13 (H)
Process Explosion	21 (Ex)
Major Nitric/ Sulphuric Acid Spillage	18 (H)
Road Transport Incidents	18 (H)
Transformer Explosions	8 (M)
Major Legal non-conformance	12 (M)
Noxious airborne pollutant exposure	21 (Ex)
Confined Space entry and exécution of work	18
Acid Splash	21
Off Site	
Natural Disaster	3 (L)
Tailings Dam Failure/overflow	2 (L)
Water recovery dam wall failure/overflow	2 (L)
Oxygen Plant Explosion	8 (M)

Ref No	ACP-ALL-SHE-COP-0001	Date of Implementation	03 September 2009
Version No	1	Last Revision Date	28 February 2012

NB! The main objective of the emergency response plan is to keep people/employees away from risk areas without sustaining injuries and to put recovery plan as urgently as possible to avoid financial further loss.

Prevention

ACP systems such as process safety, assurance, inspections and plant integrity measurements are implemented to prevent emergencies from occurring and escalating to a catastrophic event.

Risk Control Measures

1) Protective systems - equipment and leak seal equipment.

2) Color coding of master control devices.

3) Location and shutdown procedures of master control devices.

4) Planned Maintenance schedules on SAP.

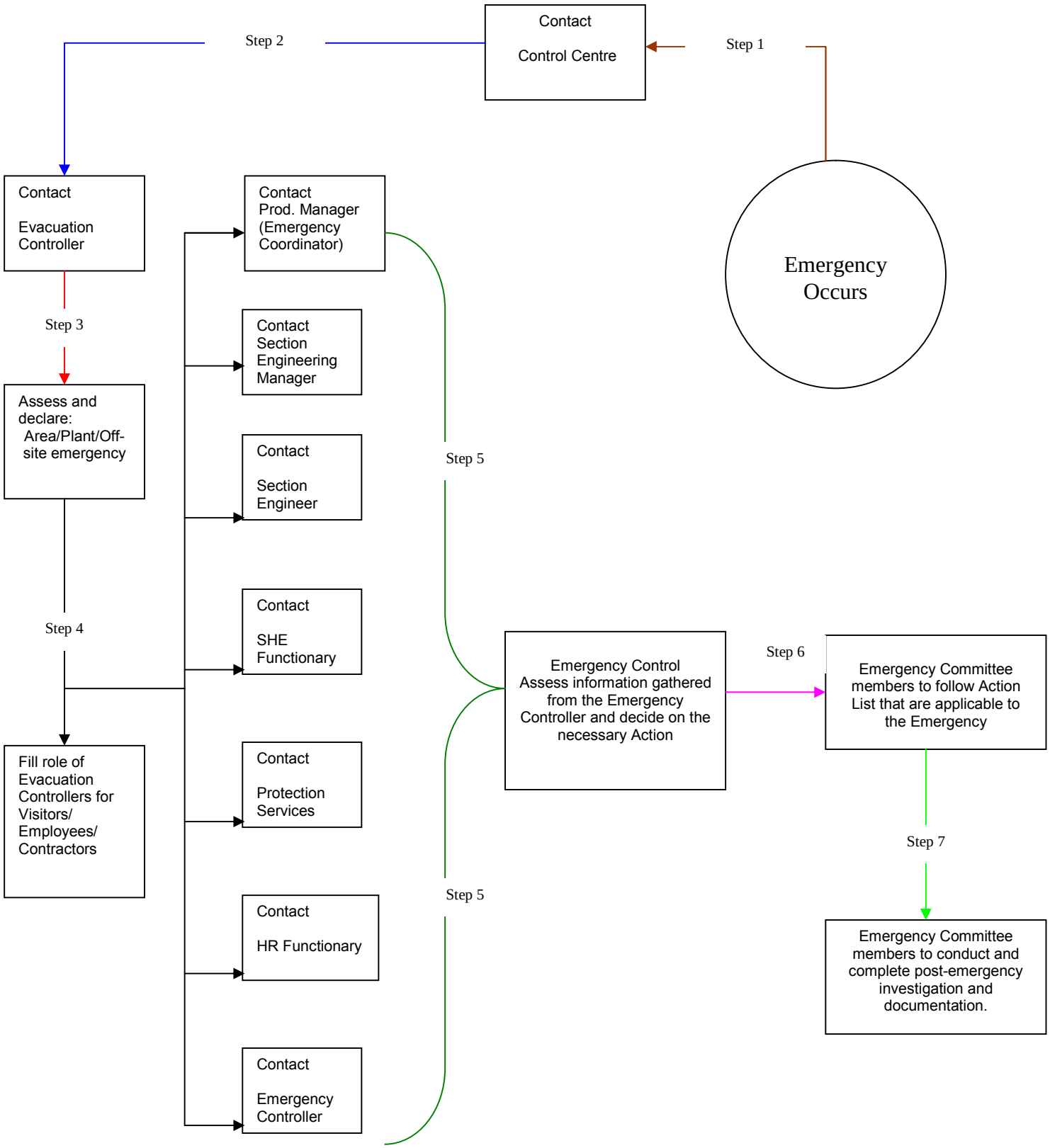
5) Pre-use checklists, Audits and Inspections.

Prevention and detection equipment, early warning detection

Preparedness

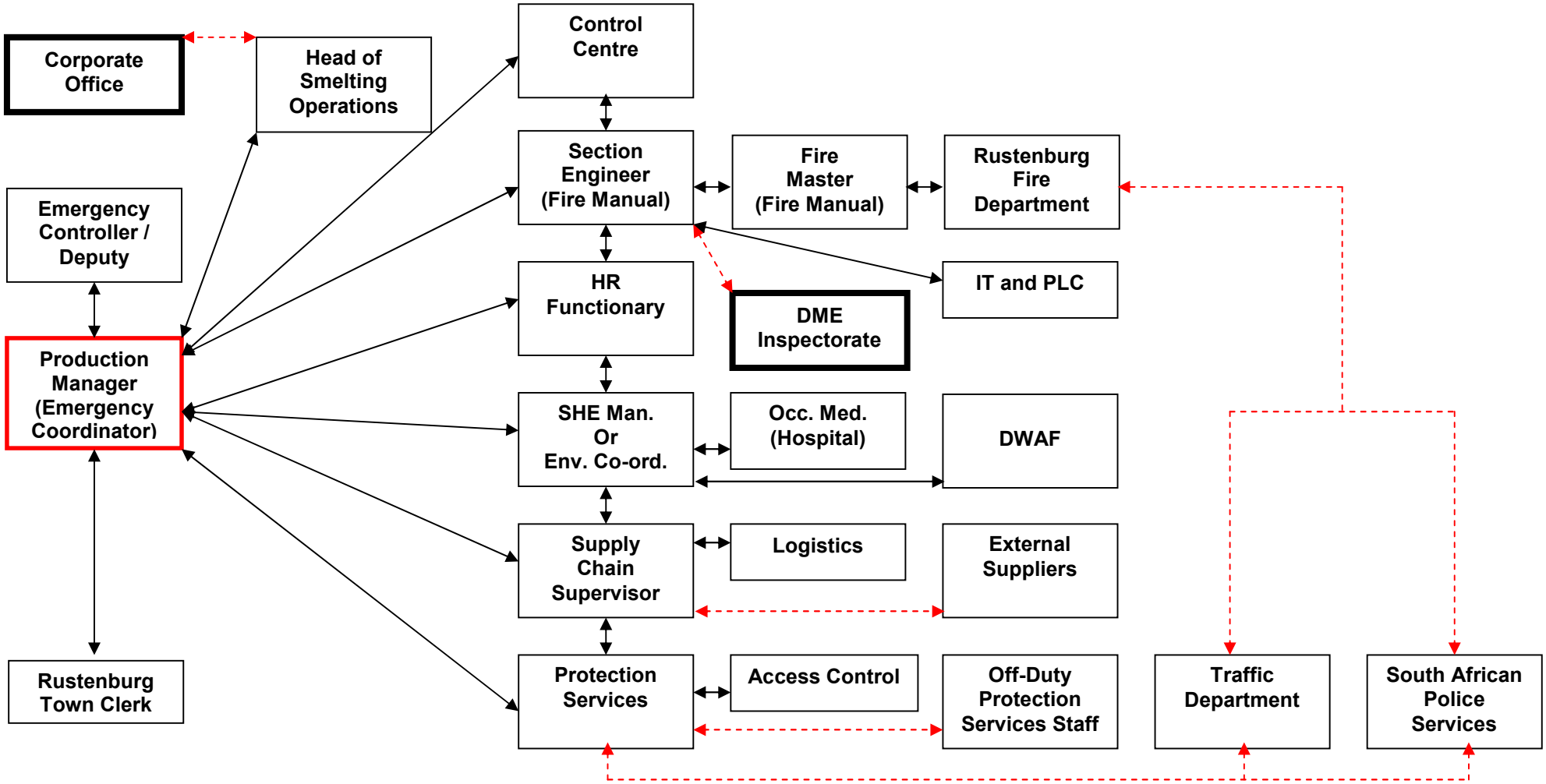
- **Mode one – Site alarm will sound continuously. Do not evacuate until mode two is activated.**
- **Mode two - Site alarm will sound intermittently. Evacuate immediately.**

Annex C: Notification flow chart



Ref No	ACP-ALL-SHE-COP-0001	Date of Implementation	03 September 2009
Version No	1	Last Revision Date	28 February 2012

ANNEX D: INCIDENT MANAGEMENT SYSTEM



Ref No	ACP-ALL-SHE-COP-0001	Date of Implementation	03 September 2009
Version No	3	Last Revision Date	29 February 2012

ANNEX E: ACTION LISTS – MANAGER PRODUCTION – ACTION LIST

ACTIVITY STEPS	TICK	COMMENTS
1. Familiarize yourself with available information.		
2. Evaluate situation and ensure that all the necessary steps are taken to manage the incident.		
3. Liaise with the Evacuation Controllers to ensure that all people on-site are safe. If help is needed in a specific area, ensure that help is available.		
4. Liaise with Section Engineering Manager to ensure shutdown activities.		
5. Liaise with Section Engineering Manager for support services and DME Inspectorate where necessary.		
6. Liaise with Supply Chain for logistics and external suppliers where necessary.		
7. Liaise with HR Officer to ensure all staff is kept informed.		
8. Liaise with Safety Officer/Environmental Coordinator to ensure medical aid is provided and or DWAF is contacted depending on emergency.		
9. Liaise with Protection Services to ensure Access for emergency vehicles/crews, SAPS and Traffic control as required.		
10. Inform HOSO.		
11. Call off emergency after consultation with Emergency committee. All clear to be given.		
12. Ensure post-incident critique and debriefing is done.		
13. Ensure investigation team is appointed and damage assessment is done.		
14. Ensure Recovery team is appointed.		
15. If the public was affected, ensure that a liaison centre is set up as soon as possible.		
16. Ensure that sources of supply and services such as Utilities, vendors and contractors are available to the Recovery team.		
17. Activate mutual aid plans with other organizations for supplying customers and satisfying contracts.		

Ref No	ACP-ALL-SHE-COP-0001	**Date of Implementation**	03 September 2009
Version No	**3**	**Last Revision Date**	29 February 2012

CONTROL CENTRE COORDINATOR – ACTION LIST

ACTIVITY STEPS	TICK	COMMENTS
1. Inform Evacuation controller. As per Notification flowchart.		
2. If requested by the Evacuation controller informs the Emergency committee. As per Notification flowchart.		

Ref No	ACP-ALL-SHE-COP-0001	**Date of Implementation**	03 September 2009
Version No	**3**	**Last Revision Date**	29 February 2012

The following Emergency situations will be practiced at ACP Operation to ensure that possible failures in our Emergency response is addressed and rectified.

No	Emergency Type	Area	Responsible Person	Due Date
1	Falling from Height Rescue	ACP	Emergency	Feb 2010
2	Multiple Injuries Drill	ACP	Safety &Emergency	30 March 2010
3	Major Nitric / Sulphuric Spillage	ACP	Env & Emergency	May 2010
4	Major Fire	ACP	SHE Dept	July 2010
5	Road Tanker Chemical Rapture	ACP	Env & Emergency	Sept 2010
6	Excessive dust emission	ACP	Env & Hygiene	Nov 2010
7	Chemical Transport Tanker	ACP	Env & Emergency	February 2011
8	Natural Disaster	ACP	Emergency	May 2011
9	Chemical Spillage at Acid Plant	ACP	Env & Emergency	August 2011
10	Process Explosion	ACP	Fire & Emergency	December 2011
11	Falling and Rescue from Height	Sebenza Area	Safety	March 2012
12	Process Explosion and Major Fire Resulting in Multiple Injuries	ACP	SHE Department	June 2012
13	Confined Space Rescue	Each area in Converter & Acid Plant	Env & Emergency	August 2012
14	Chemical Burns & Major Chemical Leaks	Acid Plant Only	Safety	October 2012

An Emergency Drill Report must be completed for each practiced scenario; all deviations/findings must be actioned and the final report must be sent to Document Control.

AngloAmerican PLATINUM

MANDATORY CODE OF PRACTICE

PRECIOUS METALS REFINERS

EMERGENCY PREPAREDNESS AND RESPONSE

VERSION: 5.0

LAST REVISION DATE: 2012-11-14

FIRST IMPLEMENTATION DATE: 2009-05-29

REFERENCE NUMBER: PMR-SHEQ-SAF-COP-0001

	NAME	POSITION	SIGNATURE	DATE
AUTHOR:	S de Jager	SHEQ Manager		14/11/2012
REVIEWED BY:	P Soaisa	Environmental Coordinator		14/11/2012
REVIEWED BY:	S Magane	Chief Safety Officer		14/11/2012
REVIEWED BY:	J Cronjé	Risk Officer (Fire)		14/11/2012
REVIEWED BY:	C Venter	Occupational Hygienist		14/11/2012
REVIEWED BY:	P Makgolane	Section Engineering Manager		14/11/2012
REVIEWED BY:	F Mashimbye	Production Manager		14/11/2012
REVIEWED BY:	C Mathuloe	SHE Forum Committee		14/11/2012
REVIEWED BY:	E Pretorius	Standards Committee		14/11/2012
APPROVED BY:	D Spann	Head Of Operations PMR		14/11/2012

This Code of Practice has been compiled IN ACCORDANCE WITH DMR GUIDELINE REF. # DME 16/3/2/1-A5 issued by the Chief Inspector of Mines

REF NO:	PMR-SHEQ-SAF-COP-0001	DATE OF IMPLEMENTATION:	29 May 2009
VERSION NO:	5.0	LAST REVISION DATE:	14 Nov 2012

MANDATORY CODE OF PRACTICE

The following Mandatory Code of Practice was discussed and accepted by the SHE Forum Committee Members

MCOP: **Emergency Preparedness and Response**

Revision No.: **5.0**

Date: **6 November 2012**

	Position	Signature	Date
Acceptance of MCOP:	**Full Time SHE Representative**		
Acceptance of MCOP:	**NUMSA**		
Acceptance of MCOP:	**UASA**		
Acceptance of MCOP:	**SHEQ Manager**		
Acceptance of MCOP:	**Head of Operations**		

1 Foreword

This Code of Practice is prepared in accordance with the DMR Guideline Ref. # DME 16/3/2/1-A5. The purpose of this Code is to document the practices and procedures to be applied to address emergency preparedness and response. The Code is a management tool intended to add value to and enhance the Operation. If this objective is not achieved, the Code is not effective and should be reviewed.

Consequently, the Code should be a live document that is in continual use as a guide and a reference. All decisions made and actions should, as a matter of routine, be vetted and reviewed in terms of the Code. Responsible managers and supervisors should be conversant and familiar with the contents of the Code.

This Code is intended to be the framework for the management plan for emergency preparedness and response.

2 Table of Contents

3 Status of Mandatory Code of Practice

- The COP was drawn up in accordance with Guideline Reference Number DME 16/3/2/1-A5 issued by the Chief Inspector of Mines.
- This is a mandatory COP in terms of section 9(2) and (3) of the MHSA;
- The COP may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose;
- The COP supersedes all previous relevant COPs; and
- 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

4 Members of Drafting Committee

Full Name	Title	Designation	Affiliation	Experience
Deryck E. Spann	Mr.	Head of Operations PMR		
Fortune Mashimbye	Mr.	Production Manager		Production
Pobane Makgolane	Mr.	Section Engineering Manager		Engineering
Stephen Magane	Mr.	Chief Safety Officer		SHEQ
Johan Cronje	Mr.	Risk Officer (Fire)		SHEQ
Pule Soaisa	Mr.	Environmental Coordinator		SHEQ
Corli Venter	Ms	Occupational Hygienist		SHEQ
Sarel de Jager	Mr.	SHEQ Manager		SHEQ

5 General Information

Name of Operation/Business Unit	Precious Metals Refiners
Owner	Anglo Platinum
Location	Administration Building Portion 4 of Klipfontein 300 JQ Bleskop
Magisterial District	Rustenburg
Contact details	Head of Operations PMR P O Box 331 Kroondal Telephone: +27 (0) 14 567 9100 Fax: +27 (0) 14 567 9260
DMR Reference number	3083
Commodities produced	Platinum (Pt), Palladium (Pd), Iridium (Ir), Iridate, Gold (Au), Osmium Dioxide (OsO2), Rhodium (Rh), and Ruthenium (Ru).
Mining method	Refining of precious metals
Related COPs and standards	This COP is related and should be read with attached Proformas.

Unique features	PMR is a one of a kind refinery for PGM group metals. PMR is also a high security plant. The following define the most likely potential environmental emergencies at PMR: • Uncontrolled stack emissions • Chlorine / ammonia leaks • Chemical / Hazardous substance spills • Hydrocarbon spills or leaks • Surface fires including veld fires • Effluent containment dam wall failure or dam overflow • Spill or leak of process water • Incidents involving radioactive material

6 Terms; Definitions and Abbreviations

Term	Definition
Credible Incident	An incident with the potential to become an Emergency situation.
Disaster	A sudden unplanned event of great misfortune, which has resulted in loss of life and/or major damage to property or environment. Three types of disasters can generally be identified, namely: Natural disasters, e.g. earthquake, lightning, floods etc. "Man-made" disasters, which are normally caused by malfunctioning of equipment, machinery, or negligent conduct, e.g. chemical explosion, fire, chemical spill, major chlorine or ammonia release, etc. Disasters caused by deliberate actions of an individual/group of individuals, e.g. riot bomb blast, act of terrorism, sabotage etc.
Emergency	It is an unplanned event, which has the potential to result in a significant adverse to safety, health, environmental and/or quality impact and/or could result in legal liability to PMR.
Emergency Committee	A group of management individuals from all disciplines who performs tasks associated with their fields of expertise.
Emergency controller	A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.
Environment	Surroundings in which PMR operates, including air, water, soil, natural resources, flora, fauna, humans and their interrelation.
Material Safety Data Sheet	A document provided by the supplier or manufacturer of a hazardous materials, and by specialist service providers, that specifies the particular hazardous material, how it shall be stored, handled, used and disposed of, particular precautions that should be taken, and the method of first aid treatment.
SHE Emergency	A SHE emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact and/or could result in legal liability to PMR in terms of SHE related legislation commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response.

Abbreviation	Explanation
DMR	Department of Minerals and Resources
DMS	Document Management System
EMI	Environmental Management Inspector
ENV	Environmental
HODs	Head of Departments
ISO	International Organization for Standardization
L0	Level 0
L1	Level 1
L1 B/R	Level 1 Boardroom

L2	Level 2
L3	Level 3
MCOP	Mandatory Code of Practice
MSDS	Material Safety Data Sheet
NEMA	National Environmental Management Act 107 of 1998
OCH	Occupational Hygiene
OHSAS	Occupational Health and Safety Assessment Series
PMR	Precious Metals Refiners
PMS	Protection Services Manager
POPs	Persistent Organic Pollutants
PS	Protection Services
SAPS	South African Police Services
SHE	Safety, Health and Environment
SHEQ	Safety, Health, Environmental and Quality
SL	Shift Leader

7 Risk Management

The philosophy to which is adhered to is one of managed risk. This implies that the risk can only be controlled through the application of ongoing management.

Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work, and record the significant hazards identified and risk assessed. The employer must determine how the significant risks identified in the risk assessment process must be dealt with, having regard to the requirement of section 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the risk, thereafter to control the risk at source, thereafter to minimise the risk and thereafter, insofar as the risk remains, to provide personal protective equipment and to institute a programme to monitor the risk.

NEMA s(2)(4)(i) requires the social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.

NEMA s(30)(4) requires that the responsible person or, where the incident occurred in the course of that person's employment, his or her employer, must, as soon as reasonably practicable after knowledge of the incident -

(a) take all reasonable measures to contain and minimise the effects of the incident, including its effects on the environment and any risks posed by the incident to the health, safety and property of persons;
(b) undertake cleanup procedures;
(c) remedy the effects of the incident;
(d) assess the immediate and long-term effects of the incident on the environment and public health.

To assist the employer with the risk assessment all possible relevant information such as accident statistics, ergonomic studies, research reports, manufacturers specifications, approvals, design criteria and performance figure for all relevant equipment should be obtained and considered.

In addition to the periodic review required by section 11(4) of the MHSA, the COP should be reviewed and updated after every emergency, altered circumstances, or if significant changes are introduced to procedures, process and ventilation layouts, process methods, plant or equipment and material.

8 Emergency Preparedness Programme

- Precious Metals Refiners, being a responsible company committed to the Health and Safety of its employees, communities and the protection of the environment, established and implemented an emergency preparedness and response code of practice based on Risk Assessment of identified potential emergency scenarios.

- The planning, preparing and training undertaken prior to an emergency situation will guide you during the course of an emergency. Without proper guidance and training it is almost certain the employees faced with a sudden threat, will follow their own natural inclination, which could result in chaos and panic. The effect of uncontrolled emergency situation could be catastrophic and cause complete disruption of all operations.

- It is essential that corrective action, taken to cope with an emergency, will be prompt, coordinated and disciplined, in order to prevent a disaster.

- Emergencies will be handled on the principle that emergencies, originating on-site, will be managed and handled by PMR and if required RPM, RBMR or Waterval Smelter can be contacted for assistance.

- Off-site emergencies will be managed and handled by the Rustenburg Town Council with the support of PMR (depending on the legal responsibility).

- An off-site environmental emergency is an unplanned event outside of an Operational area of responsibility, which has the potential to result in a significant adverse environmental impact and/or could result in legal liability to Anglo Platinum in terms of environmental legislation commitments. The event occurs over the short term and requires an immediate response. The following define the most likely potential environmental emergencies:

  - Uncontrolled stack emissions
  - Chemical/Hazardous substances spills/release
  - Hydrocarbon spills or leaks
  - Surface fires including veld fires
  - Dam Wall failure or dam overflow
  - Spills or leaks of process water
  - Incidents involving radioactive material
  - Other environmental emergencies requiring special services

- The Emergency Response for each of the identified Credible Incidents is listed under Management of Emergencies.

- Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline. One essential common feature is the necessity for efficient communications.

- Certain details of this emergency plan should only be divulged on a “need to know” base.

- Each employee shall have access to the current Emergency Plan File which lists all hazardous materials used in that specific area / department. The Emergency Plan File shall be located in the control room / workplace where all employees have 24 hour access to information.

- Printed copies of the MSDS’s must be available in the Emergency Plan File and should be in the required 16-point format. The Emergency Plan File must be reviewed on a monthly basis and updated accordingly. All required updates must be forwarded to the SHEQ Department.

- After every monthly review the Emergency Plan File Monthly Checklist (**PMR-SHEQ-SAF-COP-0001-FRM-018**) must be signed. The checklist must be available in the Emergency Plan File and will form part of the SHEQ competition.

- An **Emergency Controller**, normally the Head of Operations or Production Manager, will coordinate site activities, with the assistance of a site **Emergency Committee**.

- The Emergency Controller (Head of Operations or the Production Manager) should be advised as soon as possible of any emergency and kept informed of developments.

- All persons who suffered injuries due to the emergency situation or during the emergency situation must be treated in accordance to **PMR-MED-PRO-0010** (Managing after hours Injuries / Illness) and **PMR-MED-PRO-0004** (Emergency Medical Care: Injury on duty during working hours).

- **Emergency Committee Structure**

  Emergency Controller: Head of Operations / Production Manager
  Scribe: Private Secretary / Alternate
  HOD's / Officials in: **Production**
  Metallurgical Production Engineer
  Human Resources
  Snr HR Manager / HR Officer
  Engineering
  Section Engineering Manager / Section Engineer
  Protection Services
  Protection Services Manager / Snr. Superintendent
  Finance
  Snr Finance Manager / Snr. Cost Accountant
  Medical
  Occ. Health Physician / Occ Health Nurse
  SHEQ
  SHEQ Manager / Chief Safety Officer / Environmental Coordinator / Occupational Hygienist

- There will be **8 Emergency Coordinators** during normal office hours consisting of the following teams:

- **Fire / Search Coordinator: Team 1** – Shift Leader of Bay 1, Bay 2 and Solvex.
- **Evacuation Coordinator (Emergency Assembly Point 1 Level 2): Team 2** - Shift Leader of VRP and Utilities.
- **Communications Coordinator (Medical Station Level 2): Team 3** - Shift Leader of Bay 3 and Bay 4
- **Evacuation Coordinator (Emergency Assembly Point 2 Level 2): Team 4** – Shift Leader of IM Plant.
- **Evacuation Coordinator (Emergency Assembly Point 1 Level 1): Team 5** – Shift Leader of Tankfarm.
- **Evacuation Coordinator (Emergency Assembly Point – Level 2 Helipad)**: **Team 6** – Area Coordinator of Level 3
- **Evacuation Coordinator (Emergency Assembly Point 2 Level 1)**: **Team 7** – SHE Representative / Alternate
- **Evacuation Coordinator (Emergency Assembly Point Level 0)**: **Team 8** – Protection Services Officer / Alternate

8.1 Emergency Preparedness Measures

8.1.1 Detection and early warning systems

Warning systems are used to provide warnings to employees, contractors and external stakeholders that are close to or may be affected by a SHE emergency. Contamination of streams and risk to surrounding communities may extend to areas outside of the boundary of the PMR site.

On site warning systems include:

- Main stack alarm
- Local evacuation alarms

- Fire alarms

Employees, visitors and contractors at PMR will be warned of an Emergency by the activation of the main stack alarm.

- **Mode One -** stack alarm will sound continuous. Do not evacuate to your respective evacuation point until the Evacuation Coordinator contacts you to evacuate the area.
- **Mode Two -** stack alarm will sound intermittently (oscillating alarm). Evacuate Levels 0, 1, 2 and 3 immediately to the relevant Emergency Assembly Points. The alarm will be deactivated after 10 minutes by the Fire / Search Coordinator to improve communication between the different Evacuation Coordinators. Employees must remain until the all clear is given by the Evacuation Coordinator.

There are no formalized warning systems for surrounding communities.

8.1.2 Communication systems

- Communication systems include:
  - Telephones
  - Cell phones
  - Satellite phones
  - Two-way radios (plant operational radios and protection services radios)
  - Computer networking (e-mail)

- During a fire or any other emergency, **channel 3** is to be cleared and only used for communications concerning the fire or emergency. (Channel 1 must be used for other communications.)

- Three satellite phones are available at the following areas:
  - Head of Operations Office
  - Protection Services Main Control Room
  - Utilities Control Room

- The three satellite phones must be on charge at all times and checked on a regular basis to ensure that it is in operation.

- In the event of an emergency, the emergency plan will flow as follows:

a. Protection Services Main Control Room must use the Notification flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
b. Emergency Team to use the Incident Management System (**PMR-SHEQ-SAF-COP-0001-FRM-003**), Action Lists (**PMR-SHEQ-SAF-COP-0001-FRM-004** to **014**) and Notification flowchart **PMR-SHEQ-SAF-COP-0001-FRM-002**).

- **Contact Numbers**

Contact numbers are available in the PMR standby list issued weekly by the Production Manager Secretary and available on notice boards. PMR Emergency contact numbers (**PMR-SHEQ-SAF-COP-0001-FRM-021**) are displayed on notice boards, the DMS system and Platinum Way.

When requesting an ambulance, in case of a medical emergency at work, the following number is dialled: **082 911** or the short code number 5911. This number will connect one to the Anglo Platinum dispatching service of Netcare 911 who will dispatch an ambulance and paramedics to assist. The relevant Shift Leader of the affected area will contact Netcare 911 after notifying the Occupational Health Nurse on call. The Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Intranet and Platinum Way.

- **Communication with external parties and employees**

The Corporate Communications Department (CCD) will be responsible for liaison with the media in respect of all crises within Anglo American Platinum group companies, unless specified otherwise by the CCD. The complete procedure for media liaison is available in the Group Public Affairs Policy of Anglo American Platinum.

Communication with the Principal Inspector of Mines must be done immediately by the Production Manager or Section Engineering Manager if any Emergency has occurred as required by the MHSA for reporting.

In all cases, employees and contractors is drawn to the Communication, Participation and Consultation Operational Procedure (**PMR-SHEQ-PRO-0011**), which also applies during and after emergency situations.

- **Testing**

Emergency procedures (emergency / fire / environmental mock-ups) will be tested as per PMR Site Objectives and Targets and PMR Safety Improvement Plan. Findings and records of the mock-ups and emergency drills are kept on site at the SHEQ Department. Actions identified during the mock-ups and emergency drills will be recorded in Irm.net. Testing of communication systems, Emergency services response and on-site reaction will be addressed during emergency drills.

Evacuation Coordinators who are monitoring compliance with this procedure during the evacuation shall be clearly identified by wearing reflector vests.

The total emergency evacuation alarm will be tested every Wednesday at 12:00 (30 seconds audible) by the Risk Officer (Fire). During this time the Evacuation Coordinators must set their two-way radios to channel 3 to test that the radios are operational and to ensure that they are able to communicate with each other.

Local evacuation practice drills, not involving external parties, must be done as per schedule. Area/sections at PMR are expected to do local emergency practice drills (**PMR-SHEQ-SAF-COP-0001-FRM-017**) on monthly basis and submit reports to the SHEQ Department through SHEQ files.

Shift Leaders to check all evacuation alarms on a shift basis, by signing the checklist (**PMR-SHEQ-SAF-COP-0001-FRM-020**).

8.1.3 Emergency Medical Care

A well-equipped clinic with full-time medical personnel, which is on duty during normal working hours i.e. from 07H00-16H00, forms the basis of the first-aid facilities, and when necessary, the Bleskop Hospital is being made use of which operates 24 hours.

An ambulance is available 24 hours a day from the nearby Bleskop Hospital. Netcare 911 at **082 911** or the short code number 5911 (Shift Leader will make the call) can be called and will be on-site within a few minutes if necessary.

A full-time medical official is available on standby on a 24-hour basis. Shift leaders are trained to a Level 2 stage and found competent to administer immediate first aid after hours on shift. The Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Platinum Way will be initiated and handover will be done to the paramedics once they arrive on site. The paramedics will hand over at the Hospital to the physicians.

8.1.4 Plant evacuation and escape procedures

8.1.4.1 Responsibilities and duties of Evacuation Coordinators

- Shift leaders, Process Coordinators//Supervisor (C2/C3) and other Fire Team Members must receive training on the Emergency Preparedness and Response procedure at least annually or as changes occur.
- It is compulsory for Shift Leaders and Process Coordinators to be part of the Fire Team of PMR.
- All Fire Team Members will be appointed in terms of Section 7(4) of the Mine Health and Safety Act, Act 29 of 1996 ("MHSA").
- Evacuation Coordinators will be clearly identified by wearing reflector vests.

- **Fire / Search Coordinator (Fire Station Level 2) – Team 1**

Team 1 – Shift Leader of Bay1, Bay 2 and Solvex

- Activates the main stack alarm (Mode 1 or 2)
- In case of a total plant evacuation the Fire/Search Coordinator, all fire team members and rope rescue members will report at the Fire Station in Level 2 immediately.
- The Fire/Search Coordinator will organize and control the fire team and accompany fire team members to the area where the fire or emergency is.
- Allocate Fire Marshalls to direct employees to the nearest Emergency Assembly Points and to ensure that nobody moves back into the workplaces.
- Ensure that all workplaces are properly searched making use of 2 fire team members that work as a team.
- The Fire/Search Coordinator will communicate with the Communications Coordinator regarding the plant search.
- When the search has been completed all search members will report back at the Fire Station for further instructions from the Fire/Search Coordinator.
- The Fire/Search Coordinator will deactivate the total evacuation alarm at the pump station after 10 minutes to improve communication between the Evacuation Coordinators.

- **Evacuation Coordinator (Emergency Assembly Point 1 Level 2) – Team 2**

Team 2 – Shift Leader of VRP and Utilities

- The Evacuation Coordinator will go to the Emergency Assembly Point 1 Level 2 and communicate to the employees by making use of the communication system provided
- He will communicate with the other Evacuation Coordinators via two-way radios on channel 3.
- Take over control at the Emergency Assembly Point 1 in Level 2.
- The SHE Representative/alternate of each department must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**) and report any missing employees to the Evacuation Coordinator.
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees.
- Remain at the Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

- **Communications Coordinator (Medical Station Level 2) – Team 3**

Team 3 – Shift Leader of Bay 3 and Bay 4

- Reports to the Medical Station Level 2.
- Notify the Protection Services Main Control Room (**9104**).
- Communicator between the emergency committee team and affected area.
- Communicate with Evacuation Coordinators if any employees are missing.
- He will communicate with the Evacuation Coordinators to send personnel back to their workplaces.

- **Evacuation Coordinator (Emergency Assembly Point 2 Level 2) – Team 4**

Team 4 – Shift Leader of IM Plant

- The Fire Coordinator activates the main stack alarm (Mode 1 or 2).
- The Evacuation Coordinator will go to the Emergency Assembly Point 2 Level 2 and communicate to the employees by making use of the communication system and with the other Evacuation Coordinators via two-way radios on channel 3.
- Take over control at the Emergency Assembly Point 2 in Level 2.
- The SHE Representative/alternate of each department must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**) and report any missing employees to the Evacuation Coordinator.
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees
- Remain at Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

- **Evacuation Coordinator (Emergency Assembly Point 1 Level 1 Tankfarm) – Team 5**

Team 5 – Shift Leader of Tankfarm

- The Fire Coordinator activates the main stack alarm (Mode 1 or 2).
- The Evacuation Coordinator will go to the Emergency Assembly Point (depends on the wind directions) Identify the assembly points and communicate to the employees by making use of the communication system and with the other Emergency Coordinators via two-way radios on channel 3.
- Take over control at the Emergency Assembly Point 1 in Level 1 Tankfarm area.
- The SHE Representative/alternate of each department must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**) and report any missing employees to the Evacuation Coordinator.
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees.
- Remain at the Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

- **Evacuation Coordinator (Level 3) – Team 6**

Team 6 – Area Coordinator of Level 3

- The Fire Coordinator activates the main stack alarm (Mode 1 or 2).
- The Evacuation Coordinator will go to the Emergency Assembly Point (depends on the emergency situation – Search Point, Level 2 Helipad or Level 1 Emergency Assembly Point 1) and communicate to the employees.
- The Evacuation Coordinator will communicate with the other Emergency Coordinators via two-way radios on channel 3.
- Take over control at the Emergency Assembly Point.
- The SHE Representative/alternate of each department must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**) and report any missing employees to the Evacuation Coordinator.
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees.
- Remain at the Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

- **Evacuation Coordinator (Emergency Assembly Point 2 Level 1) – Team 7**

Team 7 – SHE Representative / alternate

- The Evacuation Coordinator will go to the Emergency Assembly Point 2 in Level 1 and communicate to the employees.
- The Evacuation Coordinator will communicate with the other Emergency Coordinators via two-way radios on channel 3.

- Take over control at the Emergency Assembly Point.
- The SHE Representative/alternate must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**) and report any missing employees to the Evacuation Coordinator.
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees.
- Remain at the Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

- **Evacuation Coordinator (Level 0) – Team 8**

Team 8 – Protection Services Officer / alternate

- The Evacuation Coordinator will go to the Emergency Assembly Point in Level 0 and communicate to the employees.
- The Evacuation Coordinator will communicate with the other Emergency Coordinators via two-way radios on channel 3.
- Take over control at the Emergency Assembly Point.
- The Protection Services Officer / alternate must start with the head count making use of the head count list (**PMR-SHEQ-SAF-COP-0001-FRM-016**).
- The Evacuation Coordinator will inform the Communications Coordinator of any missing employees.
- Remain at the Emergency Assembly Point with personnel until the Communications Coordinator gives the all clear.

8.1.4.2 Plant evacuation procedure

- Employees, visitors and contractors at PMR will be warned of an Emergency by the activation of the stack alarm.
  - **Mode One -** stack alarm will sound continuous. Do not evacuate to your respective evacuation point until the Evacuation Coordinator contacts you to evacuate the area.
  - **Mode Two -** stack alarm will sound intermittently (oscillating alarm). Evacuate Levels 0, 1, 2 and 3 immediately to the relevant emergency assembly points.

- It is an offence for anyone to tamper with anything that has been installed / provided for emergency purposes

8.1.4.3 Emergency Assembly Points

When the stack alarm is in mode two (sound intermittently) employees must evacuate to the nearest emergency assembly point.

Location of Emergency Assembly Points

Level 0
- Emergency Assembly Point – In front of Registration Office

Level 1
- Emergency Assembly Point 1 - Tankfarm Control Room
- Emergency Assembly Point 2 – Adjacent to Executive Office Block
- Emergency Assembly Point – Contractor Laydown Area

Level 2
- Emergency Assembly Point 1 – Goods Airlock
- Emergency Assembly Point 2 – South side of IM Building
- Emergency Assembly Point – Fire Station

- Emergency Assembly Point for Level 3 – or Emergency Assembly Point – Level 2 Helipad, Search Point, Level 1 Emergency Assembly Point 1 (refer to total unplanned evacuation (Level 3 Team 6) **PMR-SHEQ-SAF-COP-0001-FRM-001**)

8.1.4.4 Unplanned Evacuations for onsite emergencies

Total Unplanned Evacuation

Procedure is as follows:

The Total Unplanned Evacuation Procedure for Levels 0, 1, 2 and 3 is summarized in (**PMR-SHEQ-SAF-COP-0001-FRM-001**):

1. Activate the alarm and carry out a total evacuation.
2. Evacuate to the nearest Emergency Assembly Point. Level 3 employees evacuate to the safest Emergency Assembly Point as communicated by the Evacuation Coordinator.
3. Shift Foreman sweep affected areas to ensure that all employees have evacuated.
4. SHE Representative or alternate performs a headcount using the check list. (**PMR-SHEQ-SAF-COP-0001-FRM-016**).
5. Fire Team Members / Process Coordinator / Shift Foreman / Supervisor will investigate and evaluate the extent of the danger, and inform the Communication Coordinator.
6. Fire Team Members / Process Coordinator / Shift Foreman / Supervisor declare area safe.
7. Complete incident notification. (**PMR-SHEQ-SAF-PRO-0007-FRM-001**)

Local Unplanned Evacuation

1. Activate the local evacuation alarm or portable super-sound alarm (in case local evacuation alarms are out of order) and carry out a local evacuation.
2. Evacuate to the local Emergency Assembly Point.
3. Shift Foreman sweeps his area of responsibility to ensure that all employees have evacuated.
4. SHE Representative or alternate performs a headcount using the check list. (**PMR-SHEQ-SAF-COP-0001-FRM-016**).
5. Fire Team Members / Process Coordinator / Shift Foreman / Supervisor will investigate and evaluate the extent of the danger, and inform the Communication Coordinator.
6. Fire Team Members / Process Coordinator / Shift Foreman / Supervisor declare area safe.
7. Complete incident notification. (**PMR-SHEQ-SAF-PRO-0007-FRM-001**)

Fire

- This procedure is to be read in conjunction with the Fire Extinguishing Equipment Procedure (**PMR-SHEQ-FIRE-PRO-0002**). This procedure is obtainable from the DMS.

- **During a fire or any other emergency, channel 3 is to be cleared and only used for communications concerning the fire or emergency. (Channel 1 must be used for other communications.)**

1. The 578 stack alarm can be activated manually or on start up of the main fire water pumps. In case of an electrical failure the manual alarm will be activated.

2. If either alarm is activated the Fire team, Risk Officer (Fire) and Shift Leader will respond immediately in order to determine the cause of the alarm.

3. These personnel will assemble at the Fire Station assembly point (Compressor station).

4. The Risk Officer (Fire), his deputy or the Shift Leader will coordinate the investigation using rovers in levels 2 & 3 to establish the whereabouts of the fire or cause of the alarm.

5. All other employees in levels 2 & 3 are to be on standby for evacuation or instruction from the fire team rovers.

6. Employees in danger will evacuate on their own initiative. Level 1 evacuation coordinator to be on standby should it be necessary to evacuate his/her people.

7. The Risk Officer (Fire) or his deputy will assume responsibility while he is on site.

8. When the Risk Officer (Fire) or his deputy is not on site (Afternoon shift, night shift or the weekend), the Shift Leader will assume responsibility until the Risk Officer (Fire) arrives.

9. When a fire is discovered, the person discovering it must take immediate steps to bring the fire under control. He/she must ensure that the Control Room (**9104**) is informed as to the whereabouts of the fire.

10. The Control Room will then inform the Shift Leader to investigate. The Risk Officer (Fire), his deputy or Shift Leader will ensure that the 578 stack alarm is activated to assemble all fire team members and co-ordinate the fire fighting activities.

11. The control room is to ensure that channel 3 on the plant radio system is continuously monitored so that they can respond to requests of the Risk Officer (Fire), his deputy or the Shift Leader.

12. They will also ensure that all relevant information relating to the fire or emergency is written down.

13. All the Emergency Committee members will be notified as per **Notification Flowchart** (**PMR-SHEQ-SAF-COP-0001-FRM-002**).

14. All initial investigations of fire or evacuation alarms detected via the Ziton/Chubb monitoring systems will be investigated by the Shift Leader, who will be informed by the Control Room as to the alarms whereabouts

15. The shift Leader will then inform the Risk Officer (Fire) or his deputy if necessary.

Evacuations – Level 1 (Stack / Fire alarm)

- Level 1 employees should not evacuate when the stack/fire alarm is activated.
- In the event of an emergency or fire, the Evacuation Coordinator or his/her deputy is to order and coordinate the evacuation of the respective buildings.
- He/she will arrange for the fire team to be notified.
- He/she will also arrange for the head count at the Emergency Assembly Point.

- Nobody is to leave the Emergency Assembly Point or enter the evacuated areas without his/her permission.
- In case of a total evacuation of the entire Plant (all levels) the Evacuation Coordinator Level 1 is to liaise with the Evacuation Coordinators in Level 2.

Evacuations – Tankfarm Level 1

- In case of a fire or major chemical spillage in the Tankfarm, employees will evacuate to the safest Emergency Assembly Point (Emergency Assembly Point 1 or 2 in Level 1).
- Employees at Emergency Assembly Point 1 in Tankfarm will use the alternative escape route through the dam area when the Emergency Coordinator gives the instruction.
- The Emergency Coordinator informs the Communications Coordinator that they need to use the alternative escape route through the Dam Area.
- The Communications Coordinator informs the Protection Services Control Room (**9104/9201**) to open the security gates leading to Level 0.
- The emergency key of the dam gate is available at Control Department and the Tankfarm Control Room.
- Employees must follow directions toward the security gate, where Protection Services will unlock the three gates leading to Level 0.
- The keys of the security gates will be available at the Gatehouse Control Room.
- Employees assemble at the Level 0 Assembly Point.

8.1.4.5 Unplanned Evacuations after hours

This procedure is the same as in unplanned evacuations during normal hours.

8.1.4.6 Planned Evacuations

Maintenance Work

- All employees working with high value equipment/material must timeously be informed regarding the planned evacuation in order to give enough time to secure and lock away everything.

Level 3

- Main evacuation route; Level 3 evacuate through the bullion tunnel to the Level 2 Helipad (sterile area) where all the employees will gather under control of Protection Services.
- If further evacuation is needed Level 3 employees will evacuate to either Level 2 or Level 1 (depending on safety threat)
- If the helicopter is on the Level 2 Helipad evacuation will take place directly to Level 1 escorted by Protection Services.
- Alternative evacuation route; Level 3 evacuate through L3 Search Point stretcher door and is escorted by Protection Services to the goods airlock (Emergency Assembly Point 1 Level 2).

8.1.5 Training & Awareness

The following training is provided as part of the emergency preparedness and response:

- First aid training to all supervisory employees and departmental SHE Representatives.
- Basic fire fighting for fire team members
- Intermediate Fire Training – Fire Protection Association of SA for Shift Leaders and Process Coordinators/Supervisor (C2/C3)
- Rope Rescue training for Rope Rescue Team Members (Engineering)
- Environmental awareness training – PMR Induction Programme
- PMR Induction Programme
- PMR Visitors Induction Programme

All new employees on sign-on receive PMR Induction; thereafter annual SHE re-training is done.

8.2 Emergency Response Measures

8.2.1 Rescue and Response Capabilities

- There is one emergency centre (Level 1 Boardroom) on site.
- There is a fire truck in Level 1 fitted with the necessary fire fighting equipment - foam trolleys.
- There is a four-wheeler in Level 2 that can be utilized to tow the foam trolley around.
- Trained fire teams are available at all hours.
- Safety showers and eye baths
- Ziton fire detection systems, and suppression systems are installed in the following locations:
    - Area 100 - Site/Pipe Rack MPC system (Break glass)
    - Area 100 – Chemical stores Level 1, Fire detection
    - Area 110 - Main Consumer Substation (Fire detection & Halon gas)
    - Area 110 - Generator Room (Fire detection)
    - Area 111 - MCC2 – “S x B” (Fire detection & Halon gas)
    - Area 111 – MCC2 “S x B Cable void (Fire detection and Pyroshield gas)
    - Area 112 - MCC3 - Tank Farm (Fire detection and Pyroshield gas)
    - Area 120 – Workshop (Break glass)
    - Area 120 – Drawing Office
    - Area 170 – General Stores (Fire detection system)
    - Area 170 – MCC 1 (Fire detection and Halon gas)
    - Fire detection and Pyroshield gas suppression in cable riser.
    - Fire detection and Pyroshield gas suppression in Cable void
    - Fire detection and Pyroshield gas in Equipment Room
    - Area 180 - Admin and Change Rooms
    - Fire detection in commissioning offices
    - Fire detection in Training Offices & Library
    - Area 200 - R & D Bay (Fire detection)
    - Area 200 - Tech library – Fire detection and (Pyroshield gas suppression).
    - Area 200 - Bays 1 to 4 (Break glass, Sirens and Evaluation alarms)
    - Area 200 - Bay 5 (Break glass and Evaluation alarm)
    - Area 300 - Solvex A (Fire detection, Inergen gas in Equipment room and foam in the plant)
    - Area 344 - Organic Recovery (Fire detection) and Foam sprinkler system.
    - Area 400 – VRP Break glasses in plant area, (Fire detection, Pyroshield gas in Equipment room.
    - Area 436 – Residue Handling Plant (Fire detection, Pyroshield gas and break glass)
    - Area 553 – Gas Storage (Fire detection) and Break glass
    - Area 554 - Flammable store (Fire detection and foam sprinkler system)
    - Organic and Diesel store (Fire detection and foam extinguishing system)
    - Area 555 – Aqueous Storage (Fire detection)
    - Area 570 – Pump House (Fire detection)
    - Area 582 – Air and Vacuum (Fire detection)
    - Area 600 – Solvex B (Fire detection, Pyroshield gas in equipment room and foam in the plant)
    - Administration Office – Level 1 (Fire detection)
    - Level 3 (Fire detection and FM 200 gas in equipment room)
    - Security Surveillance Room (Fire detection and Inergen gas suppression)
- Ziton fire detection systems, and suppression systems installed in the IM building and area.
    - 113 Server room fire detection and FM200 gas
    - 113 Substation fire detection and FM 200gas
    - 114 Control room, fire detection
    - 114 PLC room, fire detection and FM 200 gas
    - 114 Equipment room, fire detection and FM 200 gas
    - 114 MCC room, fire detection

- 115 Transformers, water suppression
- 115 MCC room, fire detection
- 116 Control room, fire detection
- 116 PLC room, fire detection and FM 200 gas
- 430 Spillage Evaporator, break glass
- 577 Chiller plant, fire detection, break glass
- 583 Compressor room, fire detection
- 706 Solvent extraction, foam suppression and fire detection
- 706 Equipment room, fire detection and FM 200 gas
- 806 Solvent extraction, foam suppression and fire detection
- 806 Equipment room, fire detection and FM 200 gas
- 900 IM Building fire detection systems on all floors
- 978 Draught plant, break glass and temperature probe operation on fire water system
- All these fire systems are linked on the network and report to the Maestro sytem in the Utilities shift leader office and it is monitored by Protection services.
- Hazardous Chemical spill kits for environmental spillages

- First Aid Equipment and Personnel
  - Occupational Health Nurse on 24 hour standby
  - Trained First Aiders – Level 1 & 2
  - Two Medical Clinics
  - First Aid Bags
  - Stretchers
  - Blankets

8.2.2 Management of On-Site Emergencies

The Emergency Response for each of the identified Credible Incidents listed below will be set out in alphabetical order.

Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline.

8.2.2.1 Air Pollution

Uncontrolled emissions from Area 584 Particulate Stack

- Follow Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Control Room must contact the Emergency Committee as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Shut down the Incinerator and Kroll Burner to minimize the pollution.
- Extra Breathing Apparatus to be obtained from the Plant for the persons who will be rectifying the problem.
- Demarcate Area 584 with Black and Yellow demarcation tape to preserve evidence.
- Record all information gathered for evidence.

- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

Uncontrolled emissions from Area 578 and 978 Chlorine Scrubber Stack

- Follow Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**)
- The Control Room must contact the Emergency Committee as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Extra Breathing Apparatus's to be obtained from the Plant for the persons who will be rectifying the problem.
- Notify production areas to shut down chlorine destruct processes.
- Notify Tankfarm to shut off Chlorine supply.
- Utilities to perform a system check to determine failure of scrubbing columns, engineering to repair.
- Utilities to check scrubbing solution pH and make-up new batch if necessary.
- Demarcate Area 578 with Black and Yellow demarcation tape to preserve evidence.
- Record all information gathered for evidence.
- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

8.2.2.2 Ammonia Release

- Ensure that all personnel evacuate upwind from the source of release.
- The Control Room must contact the Emergency Committee and AFROX as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Demarcate the Ammonia Station to preserve evidence.
- Extra Breathing Apparatus to be obtained from the Plant for the persons who will be rectifying the problem.
- Record all information gathered for evidence.
- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

8.2.2.3 Bomb Threat

- The operator receiving the call must:
  - Stay calm and do not confront the caller
  - Make note of the conversation
  - Attempt to complete the Bomb Threat Checklist (**PMR-SHEQ-SAF-COP-0001-FRM-015**)
  - Contact the Control Room immediately with the information.

- The Control Room must contact the Emergency Controller as per Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).

- Follow Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**)

- SAPS to be contacted as per Incident Management System (**PMR-SHEQ-SAF-COP-0001-FRM-003**) for assistance.

- The Fire Teams must remain on standby while Protection Services conduct a thorough Plant search.

- Demarcate the area/s containing suspect parcels or devices with yellow and black demarcation tape.

- Retreat to the evacuation point at the goods airlock.

- Protection Services to follow Emergency Access procedure when SAPS arrives at the site.

- Protection Services to escort SAPS to the demarcated area and keep a safe distance.

- SAPS to defuse or remove the device/s under Protection Services escort.

- Emergency Controller to give all clear and personnel can return to their workplaces.

8.2.2.4 Bulk Storage Tank Failure

- Follow Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).

- The Control Room must contact the Emergency Committee and the relevant supplier as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).

- The Control Room must notify the PMR Environmental Coordinator .

- PMR Environmental Coordinator must notify Environmental Manager Process.

- Environmental Manager Process will inform all interested and affected parties outside PMR.

- Demarcate the Bulk Storage Tank Area (Area 555) to preserve evidence.

- Extra Breathing Apparatus to be obtained from the Plant for the persons who will be rectifying the problem.

- Record all information gathered for evidence.

- The Emergency Controller must advise on the safe disposal of the chemicals

- Engineering to follow the Engineering Recovery plan.

- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

8.2.2.5 Chemical Transport Tanker Failure

- Follow Unplanned Evacuation Procedure if necessary (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Control Room must contact the Emergency Committee and the relevant supplier as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Demarcate the Tanker to preserve evidence.
- Extra Breathing Apparatus to be obtained from the Plant for the persons who will be rectifying the problem.
- Record all information gathered for evidence.
- Follow the instruction from the MSDS to prevent spillage reaching water courses .
- The Emergency Controller must advise on the safe disposal of the chemicals
- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

8.2.2.6 Chlorine Release

- Ensure that all personnel evacuate upwind from the source of release.
- The Control Room must contact the Emergency Committee and NCP as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Demarcate the Chlorine Station to preserve evidence.
- Extra Breathing Apparatus to be obtained from the Plant for the persons who will be rectifying the problem and the Chlorine suits must be used.
- Record all information gathered for evidence.
- When the area has been made safe the Emergency Controller will give the all clear and the affected areas/plant can return to their work stations.

8.2.2.7 Compressor Failure

- Follow unplanned Evacuation procedure if necessary (**PMR-SHEQ-SAF-COP-0001-FRM-001**).

- Shut down critical processes that cannot be continued manually (Shift Leader or deputy to decide).
- The Control Room must contact the Emergency Committee as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Contact Rand Air as per 24 hour Standby List.
- Protection Services to seal Rand Air mobile compressor as per Protection Services standards.
- Fitter/Standby Fitter to connect the Mobile compressor to PMR mainline with the set of lines kept inside the compressor station.
- Start up Mobile compressor and perform diagnostics.
- Start up stopped critical processes.
- Engineering to Follow the Engineering Recovery Plan.

8.2.2.8 Contractor Control

- Report incident to the Engineering Foreman to whom Contractor reports.
- Foreman must report incident to the relevant Section Engineer, complete the investigation, IR proceedings and contact the Protection Services Control Room.
- The Control Room will notify the Emergency Controller as per Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Protection Services Rover will escort the Contractor off site.
- The Contractor will be removed from the Bio-metrics System to prevent further access to the Plant.

8.2.2.9 Dam Wall Failure or Overflow

- Report the Failure or overflow immediately to the Control Room at **9104/9201**.
- The Control Room to notify the Emergency Controller as per the Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Emergency Committee will assess the situation and initiate action as per Action Lists (**PMR-SHEQ-SAF-COP-0001-FRM-004** to **014**).
- Excess water in dam to be transferred to other dams.
- Temporary dyking must be attempted to prevent further down stream pollution or overflowing.
- Manager Engineering to contact a professional civil contracting company to start dam wall repairs.

8.2.2.10 Draught Failure

- Follow unplanned Evacuation procedure if necessary (**PMR-SHEQ-SAF-COP-0001-FRM-001**).

- Run critical processes from Main Control (Shift Leader or deputy to decide).
- The Control Room must contact the Emergency Committee as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Utilities to conduct a system diagnostic to determine the problem.
- Engineering to initiate action plan to rectify the draught problem.
- SHEQ department to ensure Breathing Apparatus are refilled to ensure operators can enter the plant to continue with production.
- Engineering to follow the Engineering Recovery Plan.
- When system is up and running, Emergency Controller will give the all clear and personnel can return to their workstations.

8.2.2.11 Electricity Supply Failure

- Follow the Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Emergency Diesel alternators should start-up within six minutes of the power failure.
- The Control Room to contact the Emergency Controller as per Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Engineering Department to assess the power failure and report possible duration to the Emergency Committee.
- Sufficient Diesel supply must be organized to ensure continued running of the alternators that supply power to the following critical services:
    - 581 Ventilation Fans
    - Emergency Lights
    - Compressors
    - Fire Water pumps
    - UPS system battery chargers
    - Other critical processes in the plant.
- Depending on duration of the power failure, the processes must be shut down manually and the plant made safe and secure.
- When the power supply is returned, the Emergency Controller will issue the all clear and the personnel may return to their workstations.

8.2.2.12 Fire

- Sound the Alarm.
- Follow the Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Control Room to contact the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Emergency Committee to follow Action Lists (**PMR-SHEQ-SAF-COP-0001-FRM-004** to **014**)

- If feasible isolate the power to the affected area.
- Any contingency plans to be decided on by the most senior person available.
- Conduct a full fire investigation and preserve the evidence.
- Complete the necessary SAMRASS forms for the DMR.
- Engineering to follow the Engineering Recovery Plans. (**PMR-SHEQ-SAF-COP-0001-FRM-005**).
- Above is applicable to Fires in Level 1, 2 and 3.
- If it becomes necessary for external fire crews to be involved with the fighting of the fires, Protection Services will escort them into PMR under their various procedures.
- All evacuation procedures and fire fighting procedures must be followed and read in conjunction with the Fire Extinguishing Equipment Procedure (**PMR-SHEQ-FIRE-PRO-0002**).

8.2.2.13 Food Poisoning

- Medical Station to notify the Control Room immediately if food poisoning is reported.
- The Control Room to notify the Emergency Controller as per the Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Close the Canteen facilities and post Notifications to employees regarding possible symptoms.
- Follow the Emergency Medical Care: Illness during working hours (**PMR-MED-PRO-0003**) operational procedure to treat sick employees.
- Initiate Food Poisoning Prevention Plan compiled by the Food Committee to avoid repeat.
- Emergency Committee to determine replacement staff and organize employees.
- Full investigation to be launched and evidence to be preserved.

8.2.2.14 Gas Storage Failure

- Follow the Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Control Room to contact the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**) and AFFROX.
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Risk Officer (Fire) to check that spark-free equipment is used.
- Cylinders to be kept wet and cool by unmanned fire hose.
- Assess stock loss and preserve evidence of damage.
- AFFROX to remove all cylinders in the storage area for testing and supply results of tests.

- When the area is safe, the Emergency Controller will issue the all clear and the personnel may return to their workstations.

- Logistics to place new order for lost and removed stock.

8.2.2.15 Government Officials Unplanned Visits (e.g. DMR, EMI etc)

- When the officials arrive at the Vehicle Entrance Level 0, the Security Officer on duty will request identification from the official.

- The Security Officer will contact the Protection Services System Administrator, who will immediately contact the Senior Superintendent for instructions. The Snr Superintendent will inform the Protection Services Manager. It will be the responsibility of the PSM to inform the Head of Operations or his/her delegate .

- If the visit takes place after hours, the Security Officer at the Vehicle Entrance will contact the Shift Superintendent for further instructions. Once approved, the inspectors must be allowed on site and should be requested to drive up to the Gate House and wait for further assistance.

- The PSM will then make the necessary arrangements for their access into the plant and will give further instructions to the on duty Protection Services Member.

- These inspectors will fill in the Visitors Register and will be registered on the Babylon Access Control System.

- The Protection Services Manager will control their access to and movement in the plant

8.2.2.16 Invasion of Insects

- Affected area to follow the Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**) if necessary.

- Contact Environmental Department to organize Pest Control.

- Protection Services to escort Pest Control staff to affected area.

- Pest Control to remove/eradicate problem.

- When area is safe from pest/pesticides, workforce can return to workstations.

8.2.2.17 Key Machine Breakdowns

- Contact the Shift Leader who will assess the breakdown.

- The Shift Leader must contact the relevant Engineering Foreman to investigate the extent of the breakdown.

- The Engineering Foreman must provide the Section Engineer and Section Engineering Manager with the information obtained.

- The Section Engineering Manager must liaise with the affected area/s Production Managers and the Emergency Controller must be informed.

- Engineering to initiate repair and follow the Engineering Recovery Plans.

8.2.2.18 Key Person Sudden Resignation/Illness

- HR Manager or deputy to liaise with the affected department/section/ and Head Office.
- Second in charge of area will be placed in an acting capacity and the relevant/temporary legal appointments will be made.
- The necessary advertisements will be made according to the Company HR Procedures if the person resigned.
- The Second in charge of the area will be relieved as soon as a new appointment is made or the person returns after sick leave.

8.2.2.19 Labour Unrest

- When a confrontation exists, the Control Room as per the Notification Flowchart must immediately contact the Emergency Controller. **PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Emergency Controller or HR Manager shall have full authority to:
- Communicate with the employees' representative and communicate with the following for advice and/or instructions –
    1) Emergency Committee
    2) Corporate
    3) Protection Services
    4) Trade Union Representatives
    5) Department of Manpower
- Notify the SAPS and ask them to remain at a distance, unless/until their presence is requested by the Emergency Committee.
- Once unrest is apparent, call a meeting of the representative body to discuss the specific grievances or attempt to establish what the grievances are.
- Grievance should be represented through the agreed negotiating structure.
- The relevant Union local organizer or general secretaries should be notified if the matter couldn't immediately be resolved.

8.2.2.20 Natural Disasters

- Being acts of providence, these emergencies cannot be prevented, although impact of such acts can be reduced:
    - Earthquakes
    - Storms (Wind/Lightning)
    - Surface Flooding
- The nature and extent of the disaster will dictate the appropriate actions, but the following general rules will apply:
- The person normally in charge of a section or department must take immediate control and must decide on the action required, inter alia, should they evacuate, which evacuation point, head count, etc.
- The Control Room must notify the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- As soon as possible after the disaster, the Emergency Committee must assess the damage,

firstly to personnel and then to buildings and equipment.

- After assessment, if the buildings are safe, personnel can return to their workstations and Engineering to attend to the damaged buildings and equipment as per Engineering Recovery Plans.

8.2.2.21 Process Explosion

- Follow the Unplanned Evacuation Procedure (**PMR-SHEQ-SAF-COP-0001-FRM-001**).
- The Control Room must notify the Emergency Controller as per Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- The Control Room must notify the PMR Environmental Coordinator.
- PMR Environmental Coordinator must notify the Environmental Manager Process.
- Environmental Manager Process will inform all interested and affected parties outside PMR.
- Injured employees to be treated according to Emergency Medical Care: Injury on duty during working hours (**PMR-MED-PRO-0004**) and Managing after hours Injuries / Illness (**PMR-MED-PRO-0010**) operational procedures.
- Demarcate the area with Black and Yellow demarcation tape, no evidence may be removed until the Inspector has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The Emergency Committee must hold a full investigation into the explosion.
- The necessary SAMRASS forms must be completed and sent to the DMR.
- Engineering to initiate the Engineering Recovery Plan.
- Production Management team to assess process flow to determine alternative for continued production.
- When the Emergency Controller declares the affected area safe, personnel can return to their workstations.

8.2.2.22 Road Transport Incidents

- PMR personnel to notify Control Room if they are involved in a company vehicle transport incident. (If possible)
- The Control Room must notify the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**) and provide the necessary information.
- Contingency Plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.
- A full investigation to be held with the SAPS and relevant Traffic Services.

8.2.2.23 Sewage/Waste Blockage

- Report the blockage to the Control Room, who must notify the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**).

- Determine location of the blockage and clear if possible.
- 583 and Level 2 to Sterile area – unblock lines with necessary equipment.
- Sterile area to Level 1 – unblock lines with necessary equipment.
- Level 1 to Level 0– unblock lines with necessary equipment.
- Sewerage station macerator– unblocks lines with necessary equipment.
- Big macerator can be bypassed to 2 x small macerators.
- SP 50 positive displacement pump and standby pump available to pump sewerage to RPM Sewerage station.
- If above system fails, the Honey-sucker from RPM will remove the sewerage from the PMR Sewerage station.

8.2.2.24 Steam Supply Failure

- Notify the Control Room immediately at **9104**.
- The Control Room must notify the Emergency Controller as per the Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**).
- Shift Leaders to ensure that critical sequenced processes relying on the Steam supply are placed on hold or shut down.
- Engineering to determine if the problem is at PMR and follow the Engineering Recovery Plan.
- If the problem is not a PMR problem, RBMR must be contacted immediately to rectify the Steam supply.

8.2.2.25 Suspended fall from height

There are two scenarios that a fall from height using a safety harness could result in

8.2.2.25.1 The victim is suspended but conscious

□□Establish contact with the victim
□□Contact the fire department /rope rescue team & ambulance
□□Calm the victim down
□□Secure the area below and above the victim and remove bystanders from the area.

- Communicate with him to minimize the risk of suspension trauma, and to determine the possible extend of his injuries.
- Have the victim release his trapeze strap from his safety harness; ensure that the victim places one foot in the strap, he can then adjust the strap to fit. This will give the rescue team time to prepare for the retrieval of the victim. Keeping in mind that suspension trauma could result if the person is left in the safety harness to long.
- A rescuer is to keep open communication with the victim and have the victim change legs every so often.
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout

The rope rescue team / person trained and competent to use the self descender rescue kit.

a) The rope rescue team is to determine how the victim is to be retrieved e.g.
b) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.
c) If the workmen are between floors, a ladder can be placed safely under the victim and the victim can stand on the ladder and release himself (keeping in mind the victim has just fallen and will be nervous and extra care is to be taken)
d) If the workmen are below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit is to be used to lower the victim down provided:
   - Anchorage points are securely fitted and tested to take weight without slipping
   - The rescue kit is inspected and found to be in good working order
   - At least two persons to be present whilst rescue is undertaken
   - Only one person to be lowered at one time with the self descender rescue kit
   - The victims weight should be taken up by the rescue system
   - Rescue kit operator to ensure system working properly and attachments points secure. Once integrity of system confirmed, second person to detach safety harness lanyard.
e) This devices should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the automatic self rescuer kit.
f) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

8.2.2.25.2 The victim is suspended but unconscious or injured and unable to help himself

- Establish contact with the victim
- Contact the fire department / rope rescue team & ambulance
- Secure the area below and above the victim and remove bystanders from the area
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.
- Prompt response is required as the victim is unconscious and suspension trauma will come on much faster. Get the victim onto a platform where first aid can be administered.

The rescue team / person trained and competent to use the self descender rescue kit.

a) The rescue team is to determine how the victim is to be retrieved e.g.
b) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.
c) If the workmen are between floors, a ladder can be propped safely under the victim this will release some of the tension an the victim, a rescuer can then access the victim using the same ladder ensuring that he secure himself to the structure once close to the victim and that there is a rescuer securing the ladder at the base, the rescuer can then secure the victim to the ladder. At this point additional rescuers can rig the automatic self rescuer kit above the victim and rescuer. The rescuer is to attach the device to the victim and the rescuer can also attach his lanyards to the devices, the device should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The victim's lanyards can then be removed from the structure. The rescuer will then control the victim while he is being lowered to the platform.

d) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit or crane can be used to hoist the victim down, these devices should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the hoist device.
e) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

8.2.2.25.3 Once the victim is on a platform or safe surface

- A first aider is to assess the victim and conduct the relevant first aid treatment, treat as with back injury. If back injuries are suspected the extrication device can be applied to the victim and the put into the suspension trauma position.
- If suspension trauma has occurred the victim should be placed in a sitting position for approximately 30 minutes.
- The victim is to be stabilized on a spinal board or rescue basket.
- A qualified rigger can then be used to connect the basket stretcher to the hook of the crane and lower the victim to the ground.
- The victim can then be given over to the paramedic's for transport to the relevant hospital

8.2.2.25.4 Suspended in a workbasket

Pre-work Requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar crane and workbasket is available within the Group or supply vendors that can assist in rescue operations within one hour.
- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the workbasket.
- Secure the workbasket to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket

(Note: Protection Services must be notified to allow rescue access to the rescue crane and workbasket)

- Establish contact with affected personnel inside the workbasket.
- Lift the second rescue workbasket level with the affected workbasket.
- Secure the affected workbasket to the rescue workbasket utilizing lifting equipment.
- Secure the affected personnel's safety harness to the rescue workbasket.
- Assist the affected personnel to climb over into the rescue workbasket.
- Remove securing lifting equipment and lower the rescue workbasket to the ground.

8.2.2.25.5 Elevated platform failed in upper position

Pre-work requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar work platform or crane and workbasket is available within the Group or supply vendors that can assist in rescue operations within one hour.
- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the elevated platform.
- Secure the platform to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket/elevated platform
(Note: Protection Services must be notified to allow rescue access to the rescue elevated platform or crane and workbasket)

- Establish contact with the affected personnel inside the elevated platform
- Lift the second rescue workbasket/elevated platform level with the affected platform

8.2.2.26 Terrorism Attacks

- Contact the Control Room immediately at 9104.
- The Control Room to contact the Emergency Controller as per Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**)
- Protection Services Manager to keep Emergency Controller informed of the situation.
- The Emergency Controller to order an evacuation when it is safe to do so.
- Medical and Fire department to be placed on standby.
- Emergency Controller to hand-over to the Senior Military or SAPS official when they arrive.
- **Immediate employee action:**
    - Find Shelter
    - Assist co-workers
    - Try to raise alarm
    - Stay under cover as long as necessary
    - Do not panic.
- After the attack, send the first aid and fire teams to the scene to assist and remove the injured.
- Ensure that no evidence is disturbed.
- Engineering to initiate the Engineering Recovery Plan.
- The Emergency Controller can give the all clear and personnel can return to their workstations.

8.2.2.27 Transformer Explosion

- Contact the Control Room at 9104

- The Control Room must contact the Emergency Controller as per Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**)
- Demarcate the area with Black and Yellow demarcation tape to preserve evidence.
- Electrician to switch power over to the Stand-by Transformer.
- Engineering to follow the Engineering Recovery Plan.

8.2.2.28 Vital Computer Loss

- Contact the Help Desk or Control Department immediately.
- Control Department to follow the Disaster Recovery Manual for Control Department.
- The processes that where running on sequence, must be manually monitored by Production until the computers are back on line.

8.2.2.29 Water Supply Failure

- Contact the Control Room at 9104 and the Water Permit holder.
- The Control Room to contact the Emergency Controller as per Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**)
- The Control Room must notify the PMR Environmental Coordinator.
- The Control Room must notify the Section Engineering Manager.
- Water from the 570 Reservoir must be diverted into the process water side-stream to ensure continued production.
- Determine loss of water supply and possible duration.
- Contact Rand Water Board.
- Organize Tanker services if necessary.
- Forward notification to employees to preserve water and supply bottled water for drinking purposes.
- Chemical Toilet facilities to be organized and removal of sewerage.
- Buckets of water to be kept at all Safety Showers and eye baths.

8.2.2.30 Incidents involving radioactive material

- Refer to **PMR-ENG-INS-PRO-0012** - Radio Active Material

8.2.3 Management of Off-Site Emergencies

8.2.3.1 Response relating to off-site emergencies

Environmental Emergencies

- Contact the Control Room at 9104.

- The Control Room to contact the Emergency Controller as per Notification Flowchart. (**PMR-SHEQ-SAF-COP-0001-FRM-002**).

- PMR Environmental Coordinator must notify the Environmental Manager Process.

- Environmental Manager Process will inform all interested and affected parties outside PMR.

8.2.3.2 Road Traffic Incident Involving PMR Vehicles

- PMR personnel to notify Control Room if they are involved in a company vehicle transport incident. (If possible)

- The Control Room must notify the Emergency Controller as per the Notification Flowchart (**PMR-SHEQ-SAF-COP-0001-FRM-002**) and provide the necessary information.

- Contingency Plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.

- A full investigation to be held with the SAPS and relevant Traffic Services.

8.2.4 Recovery

The following steps are to be followed after the disaster occurred and the Emergency Controller has issued the all clear:

1. Planned Maintenance prepares a complete checklist of all the equipment in the affected area.

2. Section Engineering Manager to select teams who will move into the disaster area to assess the damage.

3. Engineering personnel must inspect all the equipment in the affected area and complete the checklist.

4. The checklist is returned to the Planned Maintenance office.

5. Planned Maintenance prints out the necessary specifications of the damaged equipment, the supplier, and their telephone/fax numbers and contact personnel.

6. HR to contact approved Labour Hire companies for extra Labour to assist in repair work if necessary.

7. The Planned Maintenance office for the replacement/repair/salvage of the damaged equipment then generates maintenance orders.

8. All work performed must be conducted according to PMR specifications and standards.

9. The Section Engineering Manager must approve any deviations from the standard or specifications.

10. The Maintenance Orders are completed by the Artisans who replaced/repaired/salvaged the equipment as to ensure the equipment history is updated on the Planned maintenance system.

11. After completion of the repairs, commissioning of the affected area is initiated.

12. When everything is back online and passed commissioning, it is signed over to Production and normal Production may continue.

8.3 Reporting and Recording

Emergency procedures will be tested (emergency, fire and environmental mock-ups) as per PMR Site Objectives and Targets and PMR Safety Improvement Plan.

9 Implementation Plan

This COP has been implemented at Precious Metals Refiners. SHEQ Manager, Chief Safety Officer, Environmental Coordinator, Risk Officer (Fire) and Occupational Hygienist are responsible to review this code of practice at least once a year or as conditions change.

10 Compliance with the COP

This COP is instituted as a baseline on which the process of emergency preparedness and response will be conducted at PMR. Management as well as other personnel to ensure that they are conversant with the contents of this COP.

11 Review of COP

The Drafting Committee will review the COP at least once a year or as conditions change. According to the Mine Health and Safety Act, Act 29 of 1996, an inspector may instruct an employer to review the code of practice within a specified period if the COP does not comply with the guidelines of the Chief Inspector of Mines or is inadequate to protect the health and safety of employees.

12 Access to the COP and Related Documents

A complete copy of this COP and related documents will be kept readily available at the SHEQ Department of PMR for examination by any affected person. All codes of practices and procedures can be viewed from the Document Management System (DMS) by anyone who has access to a computer.

13 References

PMR-SHEQ-PRO-0011 - Communication, Participation and Consultation
PMR-SHEQ-FIRE-PRO-0002 - Fire Extinguishing Equipment
PMR-MED-PRO-0003 - Emergency Medical Care: Illness during working hours
PMR-MED-PRO-0004 - Emergency Medical Care: Injury on Duty during Working Hours
PMR-MED-PRO-0010 - Managing after hours Injuries / Illness
PMR-ENG-INS-PRO-0012 - Radio Active Material
PMR-SHEQ-SAF-PRO-0007-FRM-001 - Incident Notification Form

14 Appendices

PMR-SHEQ-SAF-COP-0001-FRM-001 - Unplanned Emergency Evacuation
PMR-SHEQ-SAF-COP-0001-FRM-002 - Notification Flowchart
PMR-SHEQ-SAF-COP-0001-FRM-003 - Incident Management System
PMR-SHEQ-SAF-COP-0001-FRM-004 - Emergency Controller Action List
PMR-SHEQ-SAF-COP-0001-FRM-005 - Manager Engineering Action List
PMR-SHEQ-SAF-COP-0001-FRM-006 - Human Resources Manager Action List
PMR-SHEQ-SAF-COP-0001-FRM-007 - Occupational Health Physician Action List
PMR-SHEQ-SAF-COP-0001-FRM-008 - Protection Services Manager Action List
PMR-SHEQ-SAF-COP-0001-FRM-009 - Production Manager Action List 1
PMR-SHEQ-SAF-COP-0001-FRM-010 - Production Manager Action List 2
PMR-SHEQ-SAF-COP-0001-FRM-011 - Evacuation Coordinator Action List
PMR-SHEQ-SAF-COP-0001-FRM-012 - Financial Manager Action List
PMR-SHEQ-SAF-COP-0001-FRM-013 - SHEQ Manager Action List
PMR-SHEQ-SAF-COP-0001-FRM-014 - Control Room Action List
PMR-SHEQ-SAF-COP-0001-FRM-015 - Bomb Threat Checklist

PMR-SHEQ-SAF-COP-0001-FRM-016 - Emergency Evacuation Head Count Checklist
PMR-SHEQ-SAF-COP-0001-FRM-017 - Emergency Evacuation Practice Drills
PMR-SHEQ-SAF-COP-0001-FRM-018 - Emergency Plan File Monthly Checklist
PMR-SHEQ-SAF-COP-0001-FRM-019 - Emergency Plan File Index
PMR-SHEQ-SAF-COP-0001-FRM-020 - Evacuation Alarm Checklist
PMR-SHEQ-SAF-COP-0001-FRM-021 - PMR Emergency Contact Numbers
PMR-SHEQ-SAF-COP-0001-FRM-022 - Emergency Assembly Points Level 2 Master List
Emergency Preparedness and Response Plan

AngloAmerican PLATINUM

MANDATORY CODE OF PRACTICE
RUSTENBURG CONCENTRATORS

EMERGENCY PREPAREDNESS AND RESPONSE

VERSION: 4.0

LAST REVISION DATE: 2012-08-29

FIRST IMPLEMENTATION DATE: 2009-08-26

REFERENCE NUMBER: RPMC-ALL-SHER-COP-0011

	NAME	POSITION	SIGNATURE	DATE
AUTHOR:	Barend Nortje	Safety Risk Manager		6/9/12.
REVIEWED BY:	Thabo Masilo	Chief Safety Officer		6/9/12
REVIEWED BY:	David Hadzhi	Environmental Coordinator		5/9/12
REVIEWED BY:	Jurie Van Brakel	Section Engineering Manager / Chairman of Standards Committee		5/9/12
REVIEWED BY:	Dineo Tsame	Occupational Hygiene Officer		6/9/12
REVIEWED BY:	Itumeleng Letsapa	Full Time Health and Safety Rep		6/9/12
REVIEWED BY:	Andries Myburgh	UASA Representative		6/9/12.
REVIEWED BY:	Glorand Pule	NUM Representative		6/9/12
RECOMMENDED BY:	Dirk Crafford	Plant Manager Waterval Concentrator		5/9/2012
RECOMMENDED BY:	Piet Botha	Plant Manager UG2 Concentrator		05/09/2012
APPROVED BY:	Buks Marais	Manager Concentrators		6/9/2012

Contents

FOREWORD

This Code of Practice is prepared in accordance with the DMR Guideline Ref. # DME 16/3/2/1-A5. The purpose of this Code is to document the practices and procedures to be applied to address emergency preparedness and response. The Code is a management tool intended to add value to and enhance the Business Unit. If this objective is not achieved, the Code is not effective and should be reviewed.

Consequently, the Code should be a live document that is in continual use as a guide and a reference. All decisions made and actions should, as a matter of routine, be vetted and reviewed in terms of the Code. Responsible managers and supervisors should be conversant and familiar with the contents of the Code.

This Code is intended to be the framework for the management plan for emergency preparedness and response.

3 Status of the Code of Practice

- This Code of Practice was drawn up in accordance with Guideline DMR Reference Number Department of Mineral and Resources 16/3/2/1-A5 issued by the Chief Inspector of Mines.
- This is a mandatory Code of Practice in terms of section 9(2) and (3) of the MHSA;
- This Code of Practice may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose;
- The latest revision of the Code of Practice shall supersede all earlier issues.
- All managerial instructions, recommendations, procedures (voluntary Codes of Practice) and standards on the relevant topics must comply with the Code of Practice and must be reviewed to ensure compliance.

4 Drafting Committee

Full Name	Title	Designation	Affiliation	Experience
Dineo Tsame	Ms.	Occupational Hygiene Officer		
Barend Nortje	Mr.	Safety Risk Manager	-	14 years
David Hadzhi	Mr.	Environmental Coordinator		11 years
Thabo Masilo	Mr.	Chief Safety Officer		15 years
Jurie van Brakel	Mr.	Section Engineering Manager/ Chairperson Standards Committee	Resident Engineer's Association	24 years
Itumeleng Letsapa	Mr.	Full- Time Health and Safety Representative	-	16 years
Dirk Crafford	Mr.	Plant Manager Waterval Concentrator	MMMA SAIMM	23 years
Piet Botha	Mr.	Plant Manager UG 2 Concentrator	MMMA SAIMM	32 years
Glorand Pule	Mr.	NUM representative	UNION Association	11 years
Andries Myburgh	Mr.	UASA representative	UNION Association	4 years
Buks Marais	Mr.	Manager Concentrators	MMMA SAIMM	35 years

5 General Information

Name of Operation/Business Unit Owner	Rustenburg Concentrators Anglo American Platinum
Location Magisterial District	Portion J of the farm Waterval 303 JQ District Rustenburg
Contact details	Mr. WJ. Marais Manager Concentrators: Rustenburg Telephone: +27 (0) 14 598 2360 Fax: +27 (0) 14 598 2039
DMR Reference number	3068
Commodities produced Mining method	The group produces platinum together with other platinum group metals (palladium, rhodium, iridium, ruthenium and osmium) as well as gold and some base metals (nickel, copper and cobalt sulphate). Concentrating.
Unique features	Rustenburg Concentrators comprises of the following areas: • Waterval Concentrator • Waterval UG 2 Concentrator • Metallurgical Services

6 Terms and Definitions

"Aggravating circumstances": Situations/conditions that could make an emergency situation worse

"Contingency plan": A written plan that indicates services that will be used during prolonged business interruptions to ensure continued production.

"Credible incident": An incident with the potential to become an Emergency situation.

"DMR" means the 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;

"Emergency committee" A group of management individuals from all disciplines who performs tasks associated with their fields of expertise. (HR, Safety, Engineering, etc.)

"Person in charge": A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.

"Emergency response team": A team of 4 individuals per shift who have received formal training in the handling of the identified credible incidents. The team will consist of a team captain and 3 team members.

"Emergency controller/ Coordinator": A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of emergency equipment.

"Environmental": An unplanned event, which has the potential to result in a significant adverse environmental impact and/or could result in legal liability to RPMC in terms of environmental legislation commitments.

"Material Safety Data Sheet": Contains all relevant information concerning risks associated with the material, appropriate use and handling requirements and steps to be taken in the event of a spill or accident involving the product.

"Mitigating circumstances": People, Equipment, Services and Materials that could reduce the impact of the emergency on the performance of the RPMC

"MHSA" means Mine Health and Safety Act, 1996 (Act No.29 of 1996);

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

"Route of Action": A guide that provides a list of actions that must be followed by an individual/team.

"SHE Emergency": A SHE emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact and/or could result in legal liability to RPMC in terms of SHE related legislation commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response.

Abbreviations

Abbreviation	Explanation
RPMC	Rustenburg Platinum Mine Concentrators
ARL	Acceptable Risk Level
COP	Code of Practice
RPMC	Rustenburg Platinum Mine Concentrators
DMR	Department of Mineral Resources
GPAD	Group Public Affairs Department
HOD	Head of Department
ISO	International Standards Organization
MSDS	Material Safety Data Sheet
OHSAS	Occupational Health Safety Assessment Series
PPE	Personal Protective Equipment
RWD	Return Water Dam
SAPS	South African Police Services
SHE	Safety, Health, Environment
CCD	Corporate Communications Department

7 Risk Management

The philosophy to which is adhered to, is one of managed of risk. This implies that the risk can only be controlled through the application of ongoing management. Section 11 of the MHSA requires the employer to identify hazards, assess the health and safety risks to which employees may be exposed while they are at work, and record the significant hazards identified and risk assessed. The employer must determine how the significant risks identified in the risk assessment process must be dealt with, having regard to the requirement of section 11(2) and (3) that, as far as reasonably practicable, attempts should first be made to eliminate the risk, thereafter to control the risk at source, thereafter to minimise the risk and thereafter, insofar as the risk remains, to provide personal protective equipment and to institute a programme to monitor the risk.To assist the employer with the risk assessment all possible relevant information such as accident statistics, ergonomic studies, research reports, manufacturers specifications, approvals, design criteria and performance figure for all relevant equipment should be obtained and considered.In addition to the periodic review required by section 11(4) of the MHSA, the COP should be reviewed and updated after every emergency, altered circumstance, or if significant changes are introduced to procedures, mining and ventilation layouts, mining methods, plant or equipment and material.

8 Emergency Preparedness Programme

- Without proper guidance and training it is almost certain should the employees be faced with a sudden threat, they will follow their own natural instinct, which could result in chaos and panic. The effect of an uncontrolled emergency situation could be catastrophic and cause complete disruption of all operations.
- It is essential that corrective action, taken to cope with an emergency which will be coordinated and disciplined, in order to prevent a disaster.
- Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline. One essential common feature is the necessity for efficient communications.
- Privileged information of the emergency should only be divulged on a “need to know” basis.
- An Emergency Controller/ Coordinator, normally the most senior person on site, will coordinate site activities, with the assistance of the site HOD Team.
- The Emergency Controller/ Coordinator (most senior person at the scene) should be informed as soon as possible of any emergency and kept informed of developments.
- All persons who suffered injuries due to the emergency situation or during the emergency Situation must be transported to the RPM Hospital for treatment.

HOD/Official Team Structure:

Emergency Coordinator: Plant Manager
HOD’s/Officials in : **Production**
Day Shift Leader/Production Overseer
Human Resources
HR Officer/Coordinator
Engineering
Section Engineer/Section Engineering Manager
Protection Services
Protection Services Manager/ Protection Services Superintendent
Supply Chain
Stores Controller/Buyer
Safety, Health and Environmental
Safety/ Occupational Hygiene /Environmental

8.1 Emergency Preparedness Measures

8.1.1 Detection and early warning systems:

Warning systems are used to provide warnings to employees and external stakeholders that are close to or may be affected by a SHE emergency. Contamination of streams and risk to surrounding communities may extend to areas outside of the boundary of the mine site. Warnings to nearby communities may be required.

On site warning systems at Rustenburg Concentrators include:

- Fire alarms;
- Portable fire alarm (in case of power failure);
- Telephone systems;
- Computer Networking;
- Two-way Radio's;

There are no formalized warning systems for surrounding communities.

8.1.2 Communication systems;

In the event of an emergency the Control Room must be contacted. The Control Room operator will contact the emergency coordinator as per notification flowchart – Annexure A.

Contact Numbers

Emergency contact numbers are available on the Rustenburg Concentrators emergency telephone list. The emergency telephone list is available on notice boards. The number for the control room is:

1. Waterval UG2 Control Room – 014 598 2726
2. Waterval Retrofit Control Room – 014 598 2362
3. Protection Services (Main Control Room) – 014 598 2307 / 2111/ 2441
4. Metallurgical Services (Main control room) - 014 598 2307 / 2111/ 2441

Communications with external parties and Employees

The Corporate Communications Department (CCD) will be responsible for liaison with the media in respect of all crises within Anglo American Platinum group companies, unless specified otherwise by the CCD. The complete procedure for media liaison is available in the Group Public Affairs Policy of Anglo American Platinum.

Communication with the Principal Inspector of Mines must be done immediately by the Concentrator Manager or Section Engineering Manager if any Emergency has occurred as required by the MHSA for reporting.

In all cases, employees and contractors are drawn to Procedure Communication, Consultation and Awareness Systems Procedure, which also applies during and after emergency situations.

Testing

Emergency procedures will be tested (emergency mock- ups) as per emergency drill schedule and findings of the mock-ups are captured on IRM.net and records kept by the plant safety officers, a copy of the report are sent to the Document Controller. The annual schedule is available from the Safety

Risk Manager. Testing of communication systems, Emergency services response and on-site reaction will be addressed during emergency drills.

8.1.3 Emergency medical care;

First Aide will be provided on site by trained level1 First Aid Certificate holders. (All Supervisors of all shifts of all sections as per shift schedule (e.g. Morning / afternoon / night) are level1 First aid Certificate holders).
All injuries are referred to Netcare 911. When requesting an ambulance, the following number should be dialled 011 209 8782 speed dial 60699. This number will connect to the Anglo American Platinum dispatching service of Netcare 911 who will dispatch an ambulance and paramedics to assist. The speed-dial number is clearly displayed with the number, so as to ensure that all employees can contact the number, at all times, while at work.

All medical waste will be sent with the Ambulance in a red disposal bag and will not be disposed on site.

8.1.4 Evacuation and escape procedures;

Evacuation Procedures

- Testing of the warning systems shall be carried out monthly.

8.1.4.1. Unplanned Evacuations for on Site Emergencies

Procedure is as follows:

Evacuation Leader - Shift A, Shift B, Shift C, Shift and Shift D:

Unplanned Evacuation

1. Activate the alarm and carry out an evacuation;
2. Evacuate to the assembly points;
3. Supervisor performs a headcount;
4. The Safety Officer or Team Captain will investigate and evaluate the extent of the danger, and inform the Emergency Controller/ Coordinator;
5. Most senior person in charge will establish whether outside emergency services are required.
6. Plant Manager / Supervisor declare area safe;
7. Complete incident notification;

Fire:

1. Same as point 1 to 5 above.

2. If the emergency alarm is activated.

- o Supervisor/Plant Overseer to organize search teams to investigate and report back;
- o Arrange with Local Fire Department to extinguish fire.

8.1.4.2. Unplanned Evacuations after hours

This procedure is the same as in unplanned evacuations during normal hours.

8.1.4.3 Planned Evacuations

a) Maintenance Work

The rest of the evacuation will be exactly the same as during an unplanned evacuation during normal working hours.

b) Fire Drill

Evacuation as per normal procedure in the affected sections, the personnel will remain at the emergency evacuation point, until the all clear instruction is received from the Plant Manager / Supervisor.

8.1.4.4 General

- During a fire or any other emergency, the two way radio channels must be cleared and only used for communications concerning the fire or emergency.
- The Emergency alarm can be activated manually or on start up of the main firewater pumps in the case of the UG2 Concentrator. In case of an electrical failure the manual alarm will be activated.
- If either alarm is activated the supervisor will respond immediately in order to determine the cause of the alarm.
- These personnel will assemble at the assembly point. The Plant Manager or his deputy will coordinate the investigation using rovers to establish the whereabouts of the fire or cause of the alarm.
- All employees are to be on standby for evacuation or instruction from supervisor. Employees in danger will evacuate on their own initiative. The emergency coordinator will assume responsibility when he is on site.
- When the emergency coordinator is not on site, the most senior person on site will assume responsibility.
- When a fire is discovered, the person discovering it must take immediate steps to bring the fire under control. He/she must ensure that the control centre /immediate supervisor are informed as to the extent and location of the fire.
- The control centre will then inform the supervisor to investigate the extent of the emergency and to report back to the control centre.
- The person instructed will ensure that the emergency alarm is activated to assemble all employees.
- The Safety Officer or Team Captain will ensure that all relevant information relating to the fire or emergency is written down.
- All the emergency committee members will be notified as per notification flowchart - Annexure A.
- The Safety Risk Manager will ensure that the necessary SAMRASS forms are completed for the DMR where required.

8.1.5 Training, awareness; and Competence

Training is conducted in accordance with the procedure Training, Awareness and Competence Systems Procedure.

The following training is provided as part of our emergency preparedness and response:

- First Aid training is provided to all supervisory employees
- Basic Fire fighting – Rustenburg Fire Department
- Environmental Awareness training
- HAZCHEM Training
- At height rescue

- Confined Space Rescue

8.1.5.1 Training done to all ex-leave/ new employees :

- Legal refresher training

8.2 Emergency Response Measures

8.2.1 Rescue and response capabilities;

A directory of available emergency fire-fighting equipment and other supplies on site and the person(s) responsible for the equipment is given in; the fire plan.

Equipment details:

- Fire water main ring with hydrant points and 60mm hoses and branches;
- CO2 Fire extinguishers;
- Dry-powder fire extinguishers;
- Water deluge systems;
- Smoke and fire detection systems;
- Foam systems;
- Argon Gas Auto deluge systems;
- Hazardous Chemical spill kits – Peat-Sorb;
- First Aid bags;
- Stretchers;
- Spine Boards and Spider Harnesses;
- Safety Showers and Eye Baths.

8.2.2 Management of emergencies

8.2.2.1 Determining of credible incidents that could lead to an emergency situation

Credible incidents that could lead to an emergency situation were assessed at Rustenburg Concentrators. The following documentation was scrutinized and physical plant inspections conducted:

- Past experience and related industry incident information;
- SHE incident analysis and investigation documentation;
- Baseline Risk Assessment documentation;
- Lessons learned from Emergency practice drills;
- Major changes. Follow the Change Management Procedure i.e. chemical, equipment, facilities; procedures and people;
- The business units needs with regard to emergency units;
- External news letters from the DMR; and
- Additional information gathered from newspapers and television broadcasts that apply to our employees, environment, material, equipment and product.

8.2.2.2 Risk assessment

A comprehensive risk assessment was conducted and all credible incidents identified during the risk assessment process, all mitigating and aggravating circumstances has been identified. The control measures to be initiated form the route of action for each credible incident. The route of action only serve as a general guide during the emergency situation and it will be up to the most senior person on the plant to initiate additional actions, as each situation may change and pose its own challenges. During each review

the route of action will be revised to ensure that it stays current and applicable to each identified credible incident.

Incidents identified through the risk assessment process at Rustenburg Concentrators include but is not limited to:

- Bomb Threats
- Bulk Storage Tank Failure
- Chemical Transport Tanker Failure
- Compressors/Blowers Failure
- Return dam wall failure
- Electricity Supply Failure
- Fire and Fire Protection Systems Failures
- Gas Storage Failure
- Mud rushes due to excessive water in bins
- Multiple Injuries
- Natural Disaster
- Process Explosion
- Suspended Fall from Height
- Road Transport Incidents
- Strikes and Riots
- Structural collapse
- Transformer Explosions
- Health Epidemic
- Noxious airborne pollutant exposure
- Confined spaces
- Major Chemical Spillage
- Tailings Dam Failure

8.2.2.3 Contingency plan

Critical items/services that will be needed for use during emergency situations must be identified and listed and records kept with supply chain.
The suppliers of these critical items/services must be contacted and contracts drawn-up between them and Anglo American Platinum to ensure that the items listed can be supplied within the shortest possible time**.**

8.2.2.4 Recovery Plan

i. The Recovery Plan will be initiated immediately after an Emergency situation has occurred.
ii. The Section Engineering Manager will be the leader or controller during this phase of the emergency situation.
iii. The recovery plan will be based on the use of the SAP and site specific P and ID's, to ensure the equipment is purchased according to specifications.
iv. The Section Engineering Manager is responsible to update and review the Recovery Plan.

Notification process

There are six main steps in managing an emergency, from the identification of the situation to final close off.

These are as follows:
1. Find and identify
2. Ensure human safety

3. Reporting
4. Containment and clean-up
5. Corrective and preventative action
6. Monitoring

The notification process travels up the organizational chain of command.

8.2.2.5 Prevention

Rustenburg Concentrators systems such as process safety, assurance, inspections and plant integrity measurements are implemented to prevent emergencies from occurring and escalating to a catastrophic event

Risk Control Measures:

- Protective systems - equipment and leak seal equipment.
- Color coding of master control devices.
- Location and shutdown procedures of master control devices.
- Planned Maintenance schedules on SAP.
- Pre-use checklists, Audits and Inspections.
- Diesel Generators.
- UPS Systems

8.2.2.6 **Management of Emergencies:**

8.2.2.6.1 Bomb Threats

- The operator receiving the call relating to the bomb threat must:
  - Stay calm and do not confront the caller;
  - Make note of the conversation;
  - Contact the most senior person in charge and the control centre immediately with the information.
- The most senior person in charge/control centre must contact the Emergency committee as per notification flow chart – Appendix A.
- Follow unplanned evacuation procedure.
- Concentrator surveillance unit to be contacted for assistance – 014 598 2384.
- SAPS to be contacted for assistance - 10111
- The fire teams must remain on standby while protection services conduct a thorough plant search.
- Demarcate the area/s containing suspect parcels or devices with yellow and black demarcation tape (black and yellow means no entry).
- Re-treat to the evacuation point.
- Protection services to follow emergency access procedure when SAPS arrives at the site.
- Protection Services to escort SAPS to the demarcated area and keep a safe distance.
- SAPS to defuse or remove the device/s under protection services escort.
- Person in charge to give all clear before personnel can return to their workplaces.

8.2.2.6.2 Bulk Storage Tank Failure

- Follow unplanned evacuation procedure and if necessary change position of evacuation point as per the wind direction.
- Contact the most senior person in charge and the control centre immediately with the information.

- The most senior person in charge/control centre must contact the emergency committee as per notification flow chart – Appendix A.
- Demarcate the bulk storage tank area with black and yellow tape (means no entry) to preserve evidence and ensure reference is made to the MSDS when dealing with the spill.
- Correct PPE to be worn as specified by the MSDS.
- Gather all information for future reference.
- Pump the chemical in the bunded area into available storage tanks.
- Pump any contaminated chemical into containers and dispose as hazardous waste as per the Waste Handling Procedure – RPMC-ALL-ENV-PRO-0036
- The area should be cleaned as per Spillage Clean-up Procedure RPMC-ALL-ENV-PRO-0037.
- When the area has been made safe the emergency coordinator will give the all clear and the affected areas/plant can return to their workstations.

8.2.2.6.3 Chemical Transport Tanker Spill

- Follow unplanned evacuation procedure if necessary and if necessary change position of evacuation point as per the wind direction.
- Contact the most senior person in charge and the control centre immediately with the information.
- The most senior person in charge/control centre must contact the emergency committee as per notification flow chart – Appendix A.
- Demarcate the tanker area with black and yellow tape (means no entry) to preserve evidence and ensure reference is made to the MSDS when dealing with the spill.
- Correct PPE to be worn as specified by the MSDS.
- Gather all information for future reference.
- Pump the chemical from the tanker into available storage tanks or if contaminated dispose as hazardous waste as per the Waste Handling Procedure RPMC-ALL-ENV-PRO-0036.
- Dyke the area as required preventing spillage from reaching watercourses and pumping excess chemical into the containers and disposing as hazardous waste.
- When the area has been made safe, the emergency coordinator will give the all clear and the affected areas/plant can return to their workstation.

8.2.2.6.4 Tailings Dam wall Failure or Overflow

- Report the failure or overflow immediately to the control centre.
- The control centre to notify the person in charge as per the notification flowchart.
- Emergency committee will assess the situation and initiate action.
- The community downstream will be warned by protection services.

8.2.2.6.5 Electrical Supply failure (ESCOM)

- Follow the unplanned evacuation procedure
- The emergency diesel generators should/ will start-up after the power failure.
- Engineering department to assess the power failure and report possible duration to the Emergency Coordinator.
- Sufficient diesel supply must be arranged to ensure continual running of emergency equipment i.e.:
  - Ventilation fans
  - Emergency lights where available
  - Compressors
  - Fire Water pumps
  - UPS system battery charges

- Other critical processes in the plant.
- When the power supply is restored, the Emergency Controller will issue the all clear and the personnel may return to their workstations.

8.2.2.6.6 Natural Disasters

Being acts of providence, these emergencies cannot be prevented, although impact of such acts can be reduced:

- Earthquakes
- Storms (Wind/Lightning)
- Surface Flooding

The nature and extent of the disaster will dictate the appropriate actions, but the following general rules will apply:

- The person normally in charge of a section or department must take immediate control and must decide on the action required, inter alia, should they evacuate, which evacuation point, head count, etc.
- Contact the most senior person in charge and the control centre immediately with the information.
- The most senior person in charge/control centre must contact the emergency committee as per notification flow chart – Appendix A.
- As soon as possible after the disaster, the emergency committee must assess the damage, firstly to personnel and then to buildings and equipment.
- After assessment, if the buildings are safe, personnel can return to their workstations and engineering to attend to the damaged buildings and equipment as per action plans.

8.2.2.6.7 Process explosion

- Follow the Unplanned Evacuation Procedure.
- Contact the most senior person in charge and the control centre immediately with the information.
- The most senior person in charge/control centre must contact the emergency committee as per notification flow chart – Appendix A.
- Injured employees to be treated according to the disaster preparedness procedure of the occupational health department.
- Demarcate the area with black and yellow demarcation tape (no unauthorised entry), no evidence may be removed until the DMR Inspector has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The emergency committee in conjunction with the DMR must conduct a full investigation regarding the cause of the explosion.
- The necessary SAMRASS forms must be completed and submitted to the DMR.
- Engineering to initiate the engineering Action plan.
- Production management team to assess process flow to determine alternative for continued production.
- When the person in charge declares the affected area safe, personnel can return to their workstations.

8.2.2.6.8 Road Transport Incidents (Rustenburg Concentrators Transportation Only)

- Rustenburg Concentrator personnel to notify control centre if they are involved in a company vehicle transport incident. (if possible)

- The control centre must notify the person in charge as per the notification flowchart and provide the necessary information.
- Contingency plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.
- A full investigation to be conducted in conjunction with the SAPS, SHE Department and relevant road traffic department.
- Prepare the necessary Road Accident Fund documentation and submit.

8.2.2.5.9 Labour Unrest (Check numbers)

When a confrontation exists, the Control Centre as per the Notification Flowchart must immediately contact the Concentrator Surveillance Unit- 014 -5982384.

The Person in charge or HR Manager shall have full authority to:

- Communicate with the employees' representative and communicate with the following for advice and/or instructions:
  a. Emergency Committee
  b. Corporate Office
  c. Protection Services
  d. Trade Union Representatives
  e. Department of Manpower

- Notify the SAPS and ask them to remain at a distance, unless/until their presence is requested by the emergency committee.
- Once unrest is apparent, call a meeting with the representative body to discuss the specific grievances or attempt to establish what the grievances are.
- Grievances should be presented through the agreed negotiating structure.
- The relevant Union local organizer or general secretaries should be notified if the matter couldn't immediately be resolved.

8.2.2.5.10 Sabotage

- Contact the Concentrator Surveillance Unit immediately- 014- 5982384.
- Protection Services Manager to keep person in charge informed of the situation.
- The person in charge to order an evacuation if required and when it is safe to do so.
- Medical and fire department to be placed on standby.
- Person in charge to hand-over to the protection services/ SAPS on arrival at site.

Immediate employee action:

- To protect the scene, barricade the area and prevent unauthorised entry.
- Report to immediate supervisor.
- Warn employees about the situation.
- Do not panic.
- Ensure that no evidence is disturbed.
- Engineering to initiate the engineering action plan.
- The person in charge can give the all clear and personnel can return to their workstations.

8.2.2.5.11 Water Supply Failure

- Contact the control centre
- The control centre to contact the Person in charge as per notification flowchart.

- Water from the reservoir must be diverted into the process water side-stream to ensure continued production.
- Determine loss of water supply and possible duration.
- Contact rand water board.
- Inform employees to preserve water.

8.2.2.6.12 Spillage of Tailings from the transfer system (pump and pipes) and spillage of effluent from the tailings dam.

- Burst / spill / leak from tailings at surface.
- Inform Plant/ Concentrator Manager to action emergency shutdown/change the line and / or redirect tailings to alternative deposit site.
- To limit the amount of uncontrolled release of tailings it is essential that the process plants be informed immediately of a spill / leak so that emergency shutdown procedures can be implemented immediately.
- Do situation analysis: Identify / locate the position, area affected and volume released, zones downstream which may potentially be affected, if release continues, and cause of release, etc.
- If there is a risk of significant environmental pollution, associated legal risk or risk to health or community well being in the short term-
  - Inform relevant Dept. Heads (Plant, Safety, Hygiene, Engineering, and Environmental Departments) and report the incident through the Incident/Non-conformance reporting system as per procedure RPMC-ALL-SHER-PRO-0013 SHE Investigating and Reporting of Incidents / Injuries.
- Evacuation of area around and downstream of spill in zone of influence of possible flow slide. Prevent further access to area (barricade). Post guards at a safe distance from the spill.
- If the spill can be contained immediately by the identifier without further risk to this person, other people or the environment, emergency response task team should be notified to plan the containment and clean up.
- Implement containment and cleanup program.
- The area identified for the disposal of the spilt tailings will be disposed by the tailings appointed contractor. Repair or correct faulty plant / equipment (e.g. bust pipe).
- The mechanism leading to the release of tailings must be repaired timeously to enable the process plant to get back on stream.
- Monitor containment and clean up actions and update in the management system.
- Initiate environmental monitoring activities if required.
- Environmental monitoring such as soil and water sampling must be taken for testing from areas downstream of the spill need to be implemented to ascertain if the tailings or runoff from the tailings has entered and contaminated any resources.

8.2.2.5.13 Spillage of Effluent from the tailings dam

- Spillage, leakage or overtopping of effluent from the tailings dam, excluding pipelines.
- Inform Plant/ Concentrator Manager Waterval and UG2 plant about the possibility of no return of effluent from the tailings dam back to the plant for re-use, or the need to increase effluent return to lower ponds levels at the tailings facility.
- Do situation analysis: Identify / locate the position, area affected and volume released, zones downstream which may potentially be affected, if release continues, and cause of release, etc. Ascertain if the release has or will impact on the downstream community and environment outside of the mine area.
- If there is a risk of significant environmental pollution, associated legal risk to health or community well being in the short term, then report the incident through the Incident/Non-conformance reporting system as per procedure RPMC-ALL-SHER-PRO-0013 Non-conformance and Corrective action

- Inform communities downstream of spill / release not to use surface water and evacuate people to other areas if required.
- Additional effluent must not be allowed to leave the source or beach, which would otherwise increase the extent of contaminants to the environment.
- Ensure no further or additional discharge of effluent is possible from the source.
- Check that process make-up water from the fresh water dam is minimised. Maximise make-up from the return water dam.
- Monitor water quality in the receiving environment.
- Repair or correct fault (e.g. breached earth wall, spillway eroded, excessive solutions etc.)
- The mechanism leading to the release of the effluent must be repaired timeously.
- Repair work may only be possible after the spillage has been cleaned away and or the level of the effluent has been sufficiently lowered.
- Monitor containment and clean up actions and update in the management system.
- Initiate Environmental monitoring activities if required.

8.2.2.5.14 Rescuing of person suspended working at heights

- Establish contact with the victim.
- Contact the fire department / rescue team & ambulance.
- Calm the victim down.
- Secure the area below and above the victim and remove bystanders from the area.
- Communicate with him/her to minimize the risk of suspension trauma, and to determine the possible extend of his injuries.
- Have the victim release his trapeze strap from his safety harness; ensure that the victim places one foot in the strap, he can then adjust the strap to fit. This will give the rescue team time to prepare for the retrieval of the victim. Keeping in mind that suspension trauma could result if the person is left in the safety harness to long.
- A rescuer is to keep open communication with the victim and have the victim change legs every so often.
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.
- The rescue team / person trained and competent to use the self descender rescue kit.

The rescue team is to determine how the victim is to be retrieved e.g.

a) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.

b) If the workmen is between floors, a ladder can be placed safely under the victim and the victim can stand on the ladder and release himself (keeping in mind the victim has just fallen and will be nervous and extra care is to be taken)

c) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit is to be used to lower the victim down provided:

d) Anchorage points are securely fitted and tested to take weight without slipping
- 0 The rescue kit is inspected and found to be in good working order
- 0 At least two persons to be present whilst rescue is undertaken
- 0 Only one person to be lowered at one time with the self descender rescue kit
- 0 The victim's weight should be taken up by the rescue system
- 0 Rescue kit operator to ensure system working properly and attachments points secure.

Once integrity of system confirmed, second person to detach safety harness lanyard.

e) this devices should only be attached to a" D" ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the automatic self rescuer kit.

f) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

9. Contravention

Breach of this COP may lead to disciplinary / legal action.

9.1 Distribution

#	Distributed to	Physical Copy	Electronic Copy
1	Standards Committee	Document Control Storage Facility	Intranet> Policies and Standards
2	Manager Concentrators/ Plant/ Manager Concentrators		

9.2 Additional Information

- Emergency procedures will be tested (emergency mock- ups) as per emergency schedule. Records and findings of the emergency drills are kept on site by the plant Safety Officers.
- This COP is instituted as a base line on which the process of emergency preparedness and response will be conducted at Rustenburg Concentrators.
- The original copy of this COP is available at the Document Control Office. The COP is incorporated into the official documentation system of the Rustenburg Concentrators.

10 Safety Requirements for this Standard

Emergency aspects addressed in other COP's

- Confined space entry – addressed in the confined space entry procedure (RPMC-ALL-OCH-STD-0092).
- Communication with external parties – Communication, Consultation and Involvement (RPMC-ALL-SHER-PRO-0008)
- Training is conducted in accordance with the procedure (RPMC–ALL-SHER-PRO-0006).
- Change management implemented in accordance with the Change Management Procedure (RPMC-ALL-ENG-PRO-0010)
- Waste Handling Procedure (RPMC-ALL-ENV-PRO-0036).
- Spillage Clean-up Procedure (RPMC-ALL-ENV-PRO-0037).

11 Implementation Plan

This COP has been implemented at the Rustenburg Concentrators as of the 26 August 2009.

12 History of Changes

Reason for Change - Index	
A. As a result of incidents	B. As a result of audit findings
C. New / changes in governance documents	D. Changes in legislation
E Changes in technology	F. Changes in machinery/equipment
G Results of risk assessments	H. Change in training requirements
I. New document format	J. Change due to spelling or grammatical error
K. To integrate a special instruction into the document control system	

Date of change	Revised Item (Paragraph number)	Changes Made	Reason Code	Name of reviewer
		NEW STANDARD	C	Standards Committee
2011-06-15		UPDATED COVER PAGE, VERSION AND REVISION	C/I	Standards Committee
	4	ADDED ADDITIONAL MEMBERS TO THE DRAFTING COMMITTEE		
	8.1.2 AND 8.1.3	ADDED THE LAST SENTENCE		
	8.2.2.5.1	UPDATED NUMBER		
	8.2.2.5.2	ADDED FIRST BULLET POINT.		
	8.2.2.5.8	ADDED ROAD ACCIDENT FUND		
	8.2.2.5.14	CHANGED TITLE AND CHANGED SECOND BULLET POINT TO “STOP EQUIPMENT”		
2012-06-27		COP REVISED AND UPDATED ACCORDING TO ANNUAL REVIEW	C/I	Standards Committee
2012-08-29	8.2.2.2	ADD ADDITIONAL BULLET POINT “MAJOR CHEMICAL SPILLAGE”	C	Standards Committee

13 Record Control

Records to be maintained in accordance with this Standard (refer to the Anglo American Platinum

Identification	Reference number	Responsible for filing	Responsible for maintenance	Location of storage area	Retention period	Method of disposal
Emergency Preparedness and Response	RPMC-ALL-SHER-COP-0011	Document Controller	Document Controller	Document Control Storage Facility	Keep current and previous version. Archive Electronic Copies after 5 years	Shredding older versions and archive after 5 years
Communication, Consultation and Involvement	RPMC-ALL-SHER-PRO-0008					
Training, Awareness and Competence	RPMC-ALL-SHER-PRO-0006					

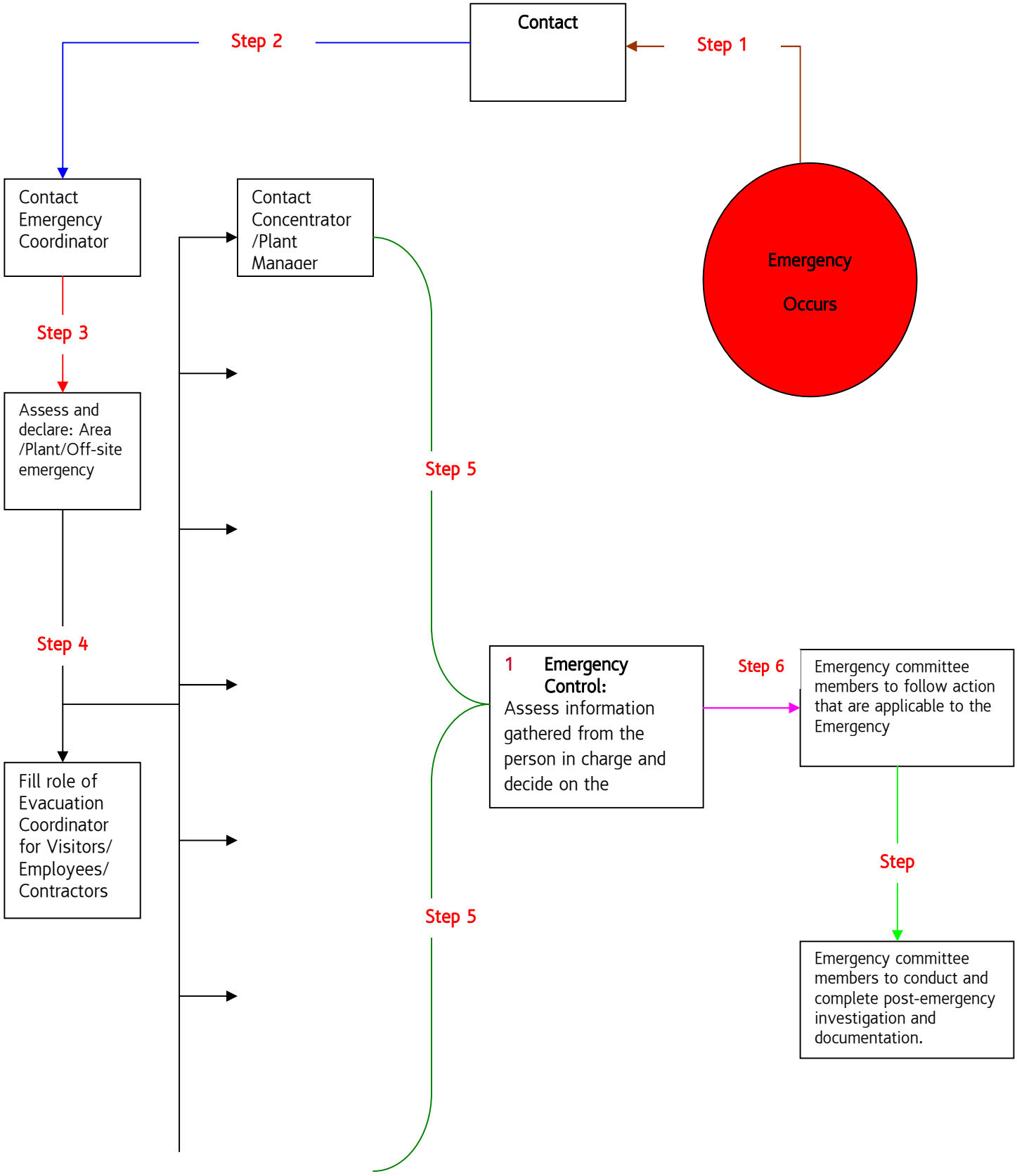
14 References

- DMR (Department of Mineral Resources) Guidelines – DME 16/3/2/1-A5.
- Anglo Fatal Risk Standards
- Anglo Platinum Golden Rules
- Training, Awareness and Competence
- Anglo Golden Rules
- Emergency Numbers
- Communication, Consultation and Involvement
- Group Environmental Centre Environmental: Non Conformity and Incident Control.

15 Appendices

Appendix A- Notifcation Chart
Appendix B: Action list

Annexure A: Notification flow chart



Appendix B: Action list

1. Control centre coordinator

Activity steps	Tick	Comments
1. Inform emergency coordinator. As per notification flowchart.		
2. If requested by the emergency coordinator informs the emergency committee. As per notification flowchart.		

2. Emergency coordinator

Activity steps	Tick	Comments
1. Familiarize yourself with available information.		
2. Evaluate situation and ensure that all the necessary steps are taken to manage the incident.		
3. Liaise with the person in charge to ensure that all people on-site are safe. If help is needed in a specific area, ensure that help is available.		
4. Liaise with Safety Officer to ensure shutdown activities takes place and feedback to Manager.		
5. Liaise with Section Engineer for support services where necessary.		
6. Liaise with Store Supervisor for support services and suppliers where necessary.		
7. Liaise with HR Officer to ensure all staff is kept informed.		
8. Liaise with Plant Safety Officer to ensure medical aid is provided.		
9. Liaise with Protection Services to ensure access for emergency vehicles/crews.		
10. Inform Manager Rustenburg Concentrators and Section Engineering Manager.		
11. Call off emergency after consultation with Emergency committee. All clear to be given.		
12. Ensure post-incident critique and debriefing is done.		
13. Ensure investigation team is appointed and damage assessment is done.		
14. If the public was affected, ensure that a liaison centre is set up as soon as possible.		
15. Ensure that sources of supply and services such as Utilities, vendors and contractors are available to the Recovery team.		
16. Activate mutual aid plans with other organizations for supplying customers and satisfying contracts.		

AngloAmerican PLATINUM

OPERATIONAL PROCEDURE

WATERVAL SMELTER

MANDATORY CODE OF PRACTICE

EMERGENCY PREPAREDNESS AND RESPONSE

VERSION: 6.0

LAST REVISION DATE: FEBRUARY 2013
FIRST IMPLEMENTATION DATE: FEBRUARY 2010
DMR MINE REFERENCE NUMBER: 1444

REFERENCE NUMBER: WSM-ALL-SHE-COP-0001

DMR REFERENCE NUMBER: DMR 16/3/2/1-A5

	POSITION	SIGNATURE	DATE
AUTHOR BY:	SHE MANAGER WATERVAL SMELTER		FEBRUARY 2013
REVIEWED BY:	ENVIRONMENTAL COORDINATOR		FEBRUARY 2013
REVIEWED BY:	OCCUPATIONAL HYGIENIST - SMELTERS		FEBRUARY 2013
RECOMMENDED BY:	SECTION ENGINEERING MANAGER		FEBRUARY 2013
ACCEPTED BY:	FULL-TIME REPRESENTATIVE		FEBRUARY 2013
APPROVED BY:	PRODUCTION MANAGER		FEBRUARY 2013

This Code of Practice is drawn up in accordance with DMR **Guidelines REF# DMR 16/3/2/4-A**

MANDATORY CODE OF PRACTICE

WATERVAL SMELTER

The Following Mandatory Code of Practice was discussed and accepted by the Health and Safety Committee Members

MCOP: Emergency preparedness and Response
WSM-ALL-SHE-COP-0001

Rev no: 6.0

Date: February 2013

	POSITION	SIGNATURE	DATE
ACCEPTANCE OF MCOP:	Mechanical Fitter		FEBRUARY 2013
ACCEPTANCE OF MCOP:	Processor		FEBRUARY 2013
ACCEPTANCE OF MCOP:	Processor		FEBRUARY 2013
ACCEPTANCE OF MCOP:	Alternate full time safety rep		FEBRUARY 2013
ACCEPTANCE OF MCOP:			FEBRUARY 2013

1 Foreword

This Code of Practice is prepared in accordance with the DMR Guideline Ref. # DMR 16/3/2/1-A5. The purpose of this Code is to document the practices and procedures to be applied to address emergency preparedness and response. The Code is a management tool intended to add value to and enhance the Business Unit. If this objective is not achieved, the Code is not effective and should be reviewed.

Consequently, the Code should be a live document that is in continual use as a guide and a reference. All decisions made and actions should, as a matter of routine, be vetted and reviewed in terms of the Code. Responsible managers and supervisors should be conversant and familiar with the contents of the Code.

This Code is intended to be the framework for the management plan for emergency preparedness and response.

2 Contents

3 Status of Code

- This COP was drawn up in accordance with Guideline DMR Reference Number Department of Minerals and Energy 16/3/2/1-A5 issued by the Chief Inspector of Mines.
- This is a mandatory COP in terms of section 9(2) and (3) of the MHSA;
- This COP may be used in an accident investigation/inquiry to ascertain compliance and also to establish whether the COP is effective and fit for purpose;
- The latest revision of the Code shall supersede all earlier issues.
- All managerial instructions, recommendations, procedures (voluntary COP's) and standards on the relevant topics must comply with the COP and must be reviewed to ensure compliance.

4 Drafting Committee

This Code was drafted by the following committee::

Full Name	Title	Designation	Affiliation	Experience
Mark Zaborowski	Mr.	Production Manager Waterval Smelter	MHSA 3.1(a)	8 Years Smelter Experience
Natale Scarcella	Mr.	Section Engineering Manager	MHSA 2.13.1	4 Years Smelter Experience
Keneilwe Mokone	Ms.	Environmental Coordinator	None	4 Years Smelter Experience
P van Coller	Mr.	Hygienist	Section 12.1	6 years as OH
Dirk van Jaarsveld	Mr.	SHE Manager	MHSA 2.17.4	16 Years

5 General Information

Name of Business Unit :Waterval Smelter

Owner :Rustenburg Platinum Mines

Location :Portion J of the Farm Waterval
303 JQ District
Rustenburg

Magisterial District :Rustenburg

Contact details :P.O. Box 404
Kroondal
0350
Tel: (014) 591 5000
Fax: (014) 591 5009

DME reference number :1444

Commodities Produced : Sulphur deficient nickel-copper matte Sulphuric Acid.

Mining Method : Waterval smelter – Smelting

Related COP's :This COP is related and related and be read in conjuction with:

Unique Features :None

6 Terms and Definitions

TERM	DEFINITIONS
Aggravating circumstances	Situations/conditions that could make an emergency situation worse.
COP	Code of Practice.
Contingency plan	A written plan that indicates services that will be used during prolonged business interruptions to ensure continued production.
Credible incident	An incident with the potential to become an Emergency situation.
DMR	means the Department of Minerals and 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. (HR, Safety, Engineering, etc.)
Emergency controller	A knowledgeable person on site at the Emergency situation, who controls the actions of personnel and use of equipment.
Emergency response team	A team of individuals who have received formal training in the handling of the identified credible incidents.
Environmental Emergency	An unplanned event, which has the potential to result in a significant adverse environmental impact and/or could result in legal liability to Waterval Smelter in terms of environmental legislation commitments.
Material Safety Data Sheet	Contains all relevant information concerning risks associated with the material, appropriate use and handling requirements and steps to be taken in the event of a spill or accident involving the product.
Mitigating circumstances	People, Equipment, Services and Materials that could reduce the impact of the emergency on the performance of the Waterval Smelter

MHSA	means Mine Health and Safety Act, 1996 (Act No.29 of 1996); and Mine Health and Safety Amendment Act 78 of 2008.
Place of safety	means any place, which, despite an emergency, can sustain life for the duration of the emergency and is adequate in size to accommodate the maximum number of affected persons likely to be present in the area served by it.
Route of Action	A guide that provides a list of actions that must be followed by an individual/team.
SHE Emergency	A SHE emergency is an unplanned event, which has the potential to result in a significant adverse Safety, Health or Environmental impact and/or could result in legal liability to Waterval Smelter in terms of SHE related legislation commitments and could expose Anglo Platinum to litigation or public embarrassment. The event occurs over the short term and requires an immediate response.

7 Emergency Preparedness Programme

- Without proper guidance and training it is almost certain should the employees be faced with a sudden threat, they will follow their own natural inclination, which could result in chaos and panic. The effect of an uncontrolled emergency situation could be catastrophic and cause complete disruption of all operations.
- It is essential that corrective action, taken to cope with an emergency, will be prompt, coordinated and disciplined, in order to prevent a disaster.
- Not all the aspects of this emergency plan will be applicable in every situation, as this plan suits local circumstances and only acts as a guideline. One essential common feature is the necessity for efficient communications.
- Privileged information of the emergency should only be divulged on a “need to know” basis.
- **An Emergency coordinator**, normally the most senior person on site, will coordinate site activities, with the assistance of a site **HOD Team**.
- The emergency controller (most senior person at the scene) should be advised as soon as possible of any emergency and kept informed of developments.
- All persons who suffered injuries due to the emergency situation or during the emergency situation must be transported to the Hospital for treatment.

HOD/Official Team Structure

Emergency Coordinator: Manager Production
HOD's/Officials in : Production
Metallurgical Production Engineer
Human Resources
HR Officer/Coordinator
Engineering
Section Engineer/Section Engineering Manager
Protection Services
Protection Services Manager/ Protection Services Superintendent
Supply Chain
Stores Controller/Buyer
Safety, Health and Environmental
Safety/Environmental/Occupational Hygienist

7.1 Emergency Preparedness Measures

7.1.1 Detection and early warning systems;

Warning systems are used to provide warnings to employees and external stakeholders that are close to or may be affected by a SHE emergency. Contamination of streams and risk to surrounding communities may extend to areas outside of the boundary of the mine site. Warnings to nearby communities may be required.

On-site warning systems include:

Fire alarm
Telephone systems
Computer Networking
Two-way Radio's

There are no formalized warning systems for surrounding communities.

7.1.2 Communication systems;

In the event of an emergency, the emergency plan will flow as follows:

a. Emergency Controller must use the Notification flowchart – Appendix C.
b Emergency Team to use the Incident Management System – Appendix D,
c Action Lists – Appendix E, and
d Recovery Plan

Contact Numbers

Emergency Flipcharts and the Platinum Way. When requesting an ambulance, in the case of a medical emergency at work, the following number is dialled: 082 911 or the short code number #2911. This number will connect one to the Anglo Platinum dispatching service of Netcare 911 who will dispatch an ambulance and paramedics to assist. The Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Intranet and Platinum Way.

Communications with external parties and Employees

The Corporate Communications Department (CCD) will be responsible for liaison with the media in respect of all crises within Anglo Platinum group companies, unless specified otherwise by the CCD. The complete procedure for media liaison is available in the Group Public Affairs Policy of Anglo Platinum.

Communication with the Principal Inspector of Mines must be done immediately by the Production Manager or Section Engineering Manager if any Emergency has occurred as required by the MHSA for reporting.

In all cases, employees and contractors is drawn to Communication, Consultation and Awareness Systems Procedure, which also applies during and after emergency situations.

Testing

Emergency procedures will be tested (emergency mock- ups) as per Emergency schedulWSM-ALL-SHE-COP-0001-SUP-001, the top 14 credible incidents are scheduled to take place on an annual basis with a minimum of one drill per month and findings of the mock-ups are recorded in IRM.net. Records of emergency drills are kept on site by the Document Controller. Testing of communication systems, Emergency services response and on-site reaction will be addressed during emergency drills. Emergency Drill Flipcharts for each credible incident is available to the control rooms to provide guidance during simulated drills and actual emergencies.

7.1.3 Emergency medical care;

First aide will be provided on site by trained level 1 First Aid Certificate holders. (All supervisors of all shifts of all sections as per shift schedule (e.g. Morning / afternoon / night) are level 1 First aid Certificate holders), The Netcare 911 Ambulance Hailing Procedure (Injured and ill person transport and evacuation) is available on the Platinum Way will be initiated and hand-over will be done to the paramedics once they arrive on site. The paramedics will hand over at the Hospital to the physicians.

7.1.4 Evacuation and escape procedures;

Evacuation Procedures

An awareness of testing of the siren shall be carried out every Wednesday at 11h00. (30 seconds audible) by the Fire Master.
In order that personnel can distinguish and understand the audible alarm sound, the different signals shall be as follows:

- Mode 1 - For Waterval Smelter the signal of the alarm will be a continuous sound.
- Mode 2 - For ACP, the signal of the alarm is an “on and off” sound.
- People who are monitoring compliance with this procedure during the evacuation shall be clearly identified by wearing reflector vests.

- It is an offence for anyone to tamper with anything that has been installed / provided for emergency purposes.
- Evacuation Point 1 – At WVS SHE Notification boards in roadway
- Evacuation Point 2 – At Technical Building in roadway
- Evacuation Point 3 – ACP
- Evacuation Point 4 – Training Centre
- Evacuation Point 5 – Weighbridge

7.1.4.1 Unplanned Evacuations for on Site Emergencies

Procedure is as follows:

Evacuation Leader - A Shift, B Shift, C Shift and D Shift:

7.1.4.2 Unplanned Evacuation

1 Activate the alarm and carry out an evacuation
2 Evacuate to the assembly points 1, 2 or 3
3 Evacuation Leader or Teams perform headcounts
4 The Control Room will investigate and evaluate the extent of the danger, and inform the Evacuation Leader.
5 The Evacuation Leader declares area safe
6 Complete incident notification.

Fire

1 Same as 1 to 4 above.
2 If the site alarm is activated in Mode 1
- o Fire Team Leader or deputy reports to Fire Station
- o Organize search teams to investigate and report back
- o In case of fire arrange teams to control/extinguish fire.

Evacuation

1. Same as 1 to 4 above
2. Activate the main Site alarm. Mode 1
3. Notify the Control Centre, or use the Emergency telephone list
4. Supervisor/Dayshift Leader or deputy informs people of affected area to evacuate to assembly points.
5. Remain at assembly point with personnel until Supervisor/Dayshift Leader or deputy gives all clear.

Evacuation Leader

1. Same as 1 to 4 above.
2. If the site alarm is activated in Mode 1 then the

Fire Team Leader or deputy report to Fire Station
Ensure that fire team members and equipment is ready.

3. Communicator between Emergency Committee and assembly point.

7.1.4.3 Unplanned Evacuations after hours

This procedure is the same as in unplanned evacuations during normal hours.

7.1.4.4 Planned Evacuations

a) Maintenance Work

The rest of the evacuation will be exactly the same as during an unplanned evacuation during normal working hours.

b) Fire Drill

Full evacuation as per normal procedure in the affected sections. The personnel will remain at the emergency evacuation point, until the all clear instruction is received from the Supervisor.

c) General

- This procedure is to be read in conjunction with the Fire Quality Manual.
- During a fire or any other emergency channel 4 must be cleared and only used for communications concerning the fire or emergency. (Channel 1 must be used for other communication).
- The Site alarm can be activated manually. In case of an electrical failure the manual alarm will be activated.
- If either alarm is activated the Fire team and Supervisor will respond immediately in order to determine the cause of the alarm.
- These personnel will assemble at the Fire team assembly point. The Responsible Section Engineer or his deputy will coordinate the investigation using rovers to establish the whereabouts of the fire or cause of the alarm.
- All other employees are to be on standby for evacuation or instruction from the fire team rovers. Employees in danger will evacuate on their own initiative. The Responsible Section Engineer or his deputy will assume responsibility while he is on site.
- When the Responsible Section Engineer or his deputy is not on site, the Supervisor will assume responsibility until the Responsible Section Engineer arrives.
- When a fire is discovered, the person discovering it must take immediate steps to bring the fire under control. He/she must ensure that the Control centre/Immediate Supervisor is informed as to the extent and location of the fire.
- The Control Centre (to be nominated by the Production Manager) will then inform the Supervisor to investigate.
- The person instructed will ensure that the Site alarm is activated to assemble all fire team members and co-ordinate the fire fighting activities.
- The Control Centre is to ensure that channel 2 on the plant radio system is continuously monitored so that they can respond to requests of the Responsible Section Engineer, his deputy or the Supervisor.
- The Supervisor will also ensure that all relevant information relating to the fire or emergency is written down.
- All the Emergency Committee members will be notified as per Notification Flowchart.

7.1.5 Training and awareness;

Training is conducted in accordance with the Training, Awareness and Competence Systems Procedure. The following training is provided as part of our emergency preparedness and response:

- First Aid training is provided to all supervisory employees
- Basic Fire fighting – Rustenburg Fire Department
- Intermediate Fire Training – Fire Protection Association of SA
- WVS Induction – WVS Induction Program
- HAZMAT Training
- At height rescue

7.1.5.1 Training done to all ex-leave employees :

- Ex-leave refresher Induction

All new employees on sign-on receive WVS Induction; there after ex-leave refresher induction.

7.2 Emergency Response Measures

7.2.1 Rescue and response capabilities;

A directory of available emergency equipment and other supplies on site and the person(s) responsible for the equipment is given in the Fire Quality Manual. Equipment details:
Fire water main ring with hydrant points and 60mm hoses and branches;
CO2 Fire extinguishers;
Dry-powder fire extinguishers;
Water deluge systems
Smoke and fire detection systems;
Foam systems
CO2 Auto deluge systems
Hazardous Chemical spill kits – Peat-Sorb
First Aid bags
Stretchers
Spine Boards and Spider Harnesses
Safety Showers and Eye Baths

7.2.2 Management of emergencies;

7.2.2.1 Bomb Threats

The operator receiving the call relating to be bomb threat must:

- Stay calm and to not confront the caller
- Make note of the conversation
- Attempt to complete the Bomb Threat Checklist
- Contact the Most Senior Person in charge / Control Centre immediately with the information.
- The Most Senior Person in charge / Control Centre must contact the Emergency Controller as per Notification Flowchart.
- Follow Unplanned Evacuation Procedure
- SAPS to be contacted for assistance

- Protection Services takes control of the Bomb Threat and follows the Protection Services Protocal.
-

- Protection Services to follow Emergency Access procedure when SAPS arrives at the site.
- Protection Services to escort SAPS.
- SAPS to defuse or remove the device/s.
- Emergency Controller to give all clear before personnel can return to their workplaces.

7.2.2.2 Xanthate Spillage

- Unplanned evacuation during normal working hours for Xanthate spillage or in case of fire
- If possible and where applicable, switch off all electric equipment and close the windows.
- In the event of such an emergency, where a section or area has to be evacuated all employees are to evacuate in an orderly, but timeous manner to their designated assembly point. DO NOT PANIC AND DO NOT RUN.
- During a fire or other emergency the Safety Officer will immediately co-ordinate the evacuation.
- If the alarm has not been activated by then, the Safety Officer will ensure that it is done, and ensure alarm was heard at back of furnace and that employees have evacuated the area.
- All employees on hearing the alarm will then know that an evacuation to the designated assembly points is imminent.
- Evacuation controllers to take control of the situation at each assembly point and check by using the daily time sheet if employees under their control can be accounted for.
- If someone is unaccounted for, Safety Officer shall be informed immediately and organise a search, until person/s are accounted for.
- The Evacuation controller in charge of the assembly point may move employees to another assembly point if he considers it to be necessary.
- No one shall be allowed to leave the assembly point, or enter evacuated areas, until authorised by the Evacuation controller in charge of assembly point or Safety Officer that all is clear and safe.

As per emergency flip chart:

- Contact the Furnace Control Room 5057 immediately.
- The Control Room to contact the Emergency Controller as per Notification Flowchart.
- The Emergency Controller to order an evacuation when it is safe to do so.

- Shut down ignition sources or open flames which may cause explosion.
- Stay upwind out of low areas.
- Barricade the area with black and yellow barricading tape.
- Prohibit all unauthorised entry
- Avoid contact with material.
- Ascertain the nature and extent of spillage.
- Ascertain the cause of the spillage, identify the source to prevent further spillage.
- Ascertain the threat to human life or environment.
- Ensure to prevent further spreading of the spilled material from entering drains.
- Contact stores standby official and request emergency supply of neutralising agent (after working hours) and apply to area.
- Cover with dry sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal as hazardous waste.
- The Emergency Controller can give the all clear and personnel can return to their workstations.

7.2.2.3 Chemical Transport Tankers

- Follow Unplanned Evacuation Procedure if necessary and if necessary change position of evacuation point as per the wind direction.
- The Control Centre must contact the Emergency Committee and the relevant supplier as per the Notification Flowchart.
- Demarcate the Tanker area with black and yellow tape (means no entry) to preserve evidence.
- Breathing Apparatus sets to be obtained for the persons who will be rectifying the problem.
- Record all information gathered for evidence.
- Pump the chemical from the Tanker into available storage tanks if possible and if it can't be used, dispose as hazardous waste as per the legal requirements.
- Dyke the area as per MSDS to prevent spillage reaching watercourses and pump excess chemical into the containers and dispose as hazardous waste.
- When the area has been made safe, the Emergency Coordinator will give the all clear and the affected areas/plant can return to their workstation.

As per emergency flip chart:

- Follow Unplanned Evacuation Procedure if necessary and if necessary change position of evacuation point as per the wind direction.
- The Furnace Control Room must contact the Emergency Committee and the relevant supplier as per the Notification Flowchart.

- Demarcate the Tanker area with black and yellow tape (means no entry) to preserve evidence. Contact detail of person erecting the black and yellow tape must be posted on the taped area
- Breathing Apparatus sets to be obtained for the persons who will be rectifying the problem.
- Record all information gathered for evidence and obtain relevant msds.
- Pump the chemical from the Tanker into available storage tanks if possible and if it can't be used, dispose as hazardous waste as per the legal requirements.
- Dyke the area as per MSDS to prevent spillage reaching watercourses and pump excess chemical into the containers and dispose as hazardous waste.
- When the area has been made safe, the Emergency Coordinator will give the all clear and the affected areas/plant can return to their workstation.
- All persons exposed to follow the injury procedure and MSDS requirements for First Aid

7.2.2.4 Electrical Supply failure (ESCOM)

- Note: The Prolonged Power outage plan must be implemented once total prolonged outage is determined.
- Follow the Unplanned Evacuation Procedure

- The Control Centre to contact the Emergency Controller as per Notification Flowchart

- Engineering Department to assess the power failure and report possible duration to the Emergency Committee.

- Diesel generators will ensure supply of power to critical systems such as:

- Ventilation systems
- Cooling water systems

- The UPS supply will ensure short term supply of power to the following critical services:

- Communication systems
- Emergency Lights

- When the power supply is returned, the Emergency Controller will issue the all clear and the personnel may return to their workstations.

7.2.2.5 Fires on Site

- Sound the Alarm

- Follow the Unplanned Evacuation Procedure

- The Control Centre to contact the Emergency Controller as per the Notification Flowchart

- Emergency Committee to follow Action Lists

- If feasible isolate the power to the affected area.

- Any contingency plans to be decided on by the most senior person available.
- Conduct a full fire investigation and preserve the evidence.
- Complete the necessary SAMRASS forms for the DMR
- Engineering to follow the Recovery Plan.

7.2.2.6 Process Explosions

- Follow the Unplanned Evacuation Procedure.
- The Control Centre must notify the Emergency Controller as per Notification Flowchart
- Injured employees to be treated according to the Disaster Preparedness of the Occupational Health Department.
- Demarcate the area with Black and Yellow demarcation tape (no unauthorised entry), no evidence may be removed until the Inspector has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The Emergency Committee in conjunction with the DMR must conduct a full investigation regarding the cause of the explosion.
- The necessary SAMRASS forms must be completed and submitted to the DMR.
- Engineering to initiate the Engineering Recovery Plan.
- Production Management team to assess process flow to determine alternative for continued production.
- When the Emergency Controller declares the affected area safe, personnel can return to their workstations.

7.2.2.7 Road Transport Incidents (WVS Transportation Only)

- WVS personnel to notify the Control Centre if they are involved in a company vehicle transport incident. (if possible)
- The Control Centre must notify the Emergency Controller as per the Notification Flowchart and provide the necessary information.
- Contingency Plan to be decided upon depending on the seriousness of the injuries sustained by personnel, damage to company transport and where the incident occurred.
- A full investigation to be conducted in conjunction with the SAPS and relevant Road Traffic Department.
- Prepare the necessary Rand Mutual documentation and submit to Rand Mutual.

7.2.2.8 Labour Unrest

- When a confrontation exists, the Control Centre as per the Notification Flowchart must immediately contact the Emergency Controller.

- The Emergency Controller or HR Manager shall have full authority to:

- Communicate with the employees' representative and communicate with the following for advice and/or instructions;

- Emergency Committee
- Corporate Office
- Protection Services
- Trade Union Representatives
- Department of Manpower
- On-mine HR Office

- Notify the SAPS and ask them to remain at a distance, unless/until their presence is requested by the Emergency Committee.

- Once unrest is apparent, call a meeting with the representative body to discuss the specific grievances or attempt to establish what the grievances are.

- Grievances should be presented through the agreed negotiating structure.

- The relevant Union local organizer or general secretaries should be notified if the matter couldn't immediately be resolved.

7.2.2.9 Suspended fall from height

There are two scenarios that a fall from height using a safety harness could result in

7.2.2.9.1 The victim is suspended but conscious

- Establish contact with the victim
- Contact the rescue team & ambulance
- Calm the victim down
- Secure the area below and above the victim and remove bystanders from the area.
- Communicate with him to minimize the risk of suspension trauma, and to determine the possible extend of his injuries
- Have the victim release his trapeze strap from his safety harness; ensure that the victim places one foot in the strap, he can then adjust the strap to fit. This will give the rescue team time to prepare for the retrieval of the victim. Keeping in mind that suspension trauma could result if the person is left in the safety harness to long.
- A rescuer is to keep open communication with the victim and have the victim change legs every so often.
- If in the proximity of electrical circuits, send or send for a competent person to isolate all power by means of a proper lockout system, and ensure that the key is brought back and kept with the rescuer.

The rescue team / person trained and competent to use the self descender rescue kit.

a) The rescue team is to determine how the victim is to be retrieved e.g.
b) If a victim has fallen and is able to stand on something or be pulled onto something this is to be done. Ensuring that the platform / structure or object is safe for the victim and the rescuer.
c) If the workmen is between floors, a ladder can be propped safely under the victim this will release some of the tension an the victim, a rescuer can then access the victim using the same ladder ensuring that he secure himself to the structure once close to the victim and that there is a rescuer securing the ladder at the base, the rescuer can then secure the victim to the ladder. At this point additional rescuers can rig the automatic self rescuer kit above the victim and rescuer. The rescuer is to attach the device to the victim and the rescuer can also attach his lanyards to the devices, the device should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The victim's lanyards can then be removed from the structure. The rescuer will then control the victim while he is being lowered to the platform.
d) If the workmen is below a floor where access can't be obtained from the bottom but where access can be obtained from the top the automatic self rescuer kit or crane can be used to hoist the victim down, these devices should only be attached to a D ring on the victims safety harness at no time should they be attached around the waist or a limb of the victim. The rescue team will probably be required to cut the victims lanyards loose from the connection point this is only to be done if the victim is correctly secured to the hoist device.
e) Where there is no access to the victim from below or above a man cage can be used to access the victim the rescuers are to be two persons in the cage to help the victim in. Only once the victim is in the man cage should his lanyards be removed from the anchorage point.

7.2.2.9.2 Once the victim is on a platform or safe surface

- A first aider is to assess the victim and conduct the relevant first aid treatment treat as with back injury. If back injuries are suspected the extrication device can be applied to the victim and the put into the suspension trauma position.
- If suspension trauma has occurred the victim should be placed in a sitting position for approximately 30 minutes.
- The victim is to be stabilized on a spinal board or rescue basket
- A qualified rigger can then be used to connect the basket stretcher to the hook of the crane and lower the victim to the ground.
- The victim can then be given over to the paramedic's for transport to the relevant hospital

7.2.2.9.3 Suspended in a workbasket

Pre-work Requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar crane and workbasket is available within the Group or supply vendors that can assist in rescue operations within one hour.
- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the workbasket.
- Secure the workbasket to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket

(Note: Protection Services must be notified to allow rescue access to the rescue crane and workbasket)

- Establish contact with affected personnel inside the workbasket.
- Lift the second rescue workbasket level with the affected workbasket.
- Secure the affected workbasket to the rescue workbasket utilizing lifting equipment.
- Secure the affected personnel's safety harness to the rescue workbasket.
- Assist the affected personnel to climb over into the rescue workbasket.
- Remove securing lifting equipment and lower the rescue workbasket to the ground.

7.2.2.9.4 Elevated platform failed in upper position

Pre-work requirements

- The Section Engineer responsible for the area where the work needs to be done must ensure that a similar work platform or crane and workbasket is available

within the Group or supply vendors that can assist in rescue operations within one hour.

- The above will however not be required if the rescue can be done from the actual structure where the work is being performed. However it must be identified during the pre-work HIRA.

Rescue Operation from Structure

- Establish contact with affected personnel inside the elevated platform.
- Secure the platform to the structure with lifting equipment.
- Provide lifelines to affected personnel
- Assist affected personnel onto structure

Rescue Operation from second workbasket/elevated platform

(Note: Protection Services must be notified to allow rescue access to the rescue elevated platform or crane and workbasket)

- Establish contact with the affected personnel inside the elevated platform
- Lift the second rescue workbasket/elevated platform level with the affected platform
- Secure the affected elevated platform to the rescue workbasket/elevated platform utilizing lifting equipment
- Secure the affected personnel's safety harness to the rescue workbasket/elevated platform.
- Remove securing lifting equipment and lower the rescue workbasket/elevated platform to the ground.

Rescue Operation by mechanical means for elevated platforms

- Establish contact with affected personnel and explain rescue procedure
- The Section Engineer for the affected area where the work is conducted must establish if the elevated platform can be lowered by mechanical means.
- Once established, the lowering of the elevated platform may proceed under the section engineer's direct supervision.

7.2.2.10 Water Supply Failure

- Contact the Control Centre
- The Control Centre to contact the Emergency Controller as per Notification Flowchart.
- Determine loss of Water supply and possible duration.
- Contact Magalies/Rand Water Board.
- Forward notification to employees to preserve water.
- Notify Procurement to obtain bottled drinking water for site personnel.

7.2.2.11 Molten Metal Run-out/Incident

- Follow the Unplanned Evacuation Procedure.
- The Control Centre must notify the Emergency Controller as per Notification Flowchart
- Injured employees to be treated according to the Disaster Preparedness of the Occupational Health Department.
- Demarcate the area with Black and Yellow demarcation tape (no unauthorised entry), no evidence may be removed until the Emergency Controller/Production Manager and Section Engineering Manager has inspected the area and the cause of the explosion has been determined, or permission has been granted.
- The Emergency Committee in must conduct a full investigation regarding the cause of the explosion.
- The necessary SAMRASS forms must be completed and submitted to the DMR.
- Engineering to initiate the Engineering Recovery Plan.
- Production Management team to assess process flow to determine alternative for continued production.
- When the Emergency Controller declares the affected area safe, personnel can return to their workstations.

7.2.2.12 Medical, Multiple Injury or Ill Health Emergency

- Contact the Control Centre.
- Control Centre to contact the Ambulance and Emergency Controller.

- Apply First aid as required and make affected employee/s comfortable.
- Hand-over to paramedics.
- Continuity witness to escort ambulance to relevant hospital and provide feedback on employee/s status to the emergency controller.

7.3 Reporting and Recording

Emergency procedures will be tested (emergency mock- ups) as per Emergency schedule and findings of the mock-ups are kept by the plant safety officers. Records of emergency drills are kept on site.

8 Implementation Plan

This COP will be implemented at the WVS as from 01 January 2009.

9 Compliance with the COP

This COP is instituted as a base line on which the process of emergency preparedness and response will be conducted at the WVS.

10 Access to the COP and Related Documents

A copy of this COP and related documents are kept available at the Document Control office for examination by any affected person. The COP is incorporated into the official documentation system of the WVS and displayed on the Platinum Way.

11 Annexures

Annex A: Appointments

The following appointments must be made:

i) Emergency Coordinator - The Production Manager: The Emergency oordinator to take control of the emergency and lead the Emergency Committee in performing their duties.

ii) Emergency Controller – A Senior Site Official: Emergency Controller to manage the Emergency Response Teams on the site and provide continuous feedback to the Emergency Committee and Emergency Coordinator.

iii) Emergency Committee – Various HOD's: The Emergency Committee to assist the Emergency Controller to ensure fast and effective control of the emergency situation with the use of the Emergency Response Teams.

iv) Emergency Response Teams – Competent Fire/Hazmat/Rescue personnel who must treat the emergency and avoid it escalating into a disastrous or catastrophic event.

Note:

In the absence of the Production Manager, the next level of command will take control over the situation.

Annex B: Identifying all possible emergency situations

Determining of Credible Incidents that could lead to an Emergency situation

i) The SHE Manager will lead the assessment and involve employee representatives, SHE staff, Management and external parties if required for their expert knowledge.

ii) A comprehensive WVS wide assessment must be completed to identify credible incidents that could lead to an emergency situation, the following documentation to be scrutinized and a physical inspection of the sites to be conducted:

- Past experience and related industry incident information;
- SHE incident analysis and investigation documentation;
- Baseline HIRA documentation;
- MSDS's;
- Lessons learned from Emergency practice drills
- Major changes implemented, i.e. Chemical, Equipment, Facilities; Procedures
- The WVS needs with regard to emergency units;
- Anglo Fatal Risk Standards;
- External News letters from the DMR; and
- Additional information gathered from Newspapers and Television broadcasts that apply to our People, Environment, Material, Equipment and Product.

iii) This process will be followed annually during the review or after an emergency situation has presented itself within the WVS or similar Businesses.

HIRA

(It must be kept in mind that the Emergency Plan will indicate action after an emergency has occurred, due to possible control failures)

i) A comprehensive HIRA will be conducted of all credible incidents identified and the SHE Manager will facilitate the operation.

ii) During the HIRA process, all risk control measures and aggravating circumstances must be identified.

iii) The control measures to be initiated will form the Route of Action as required from the HOD Team for each credible incident.

The SHE Manager will facilitate the review of the Emergency Plan HIRA and Route of Action

i) The route of action will be determined by the HIRA conducted on credible incidents identified, Management experience and knowledge; past records and External sources.

ii) It is recommended that the route of action must only serve as a general guide during the emergency situation and that it will be up to the most senior person on the plant, most senior person at the scene, HOD Team and Emergency Response Team to initiate additional actions, as each situation may change and pose its own challenges.

iii) During each review the Route of Action must be revised to ensure that it stays current and applicable to each identified credible incident.

Contingency Plan

i) Critical items/services that will be needed for use during Emergency situations must be identified and listed and records kept with supply chain.

ii) The Suppliers of these critical items/services must be contacted and Contracts drawn-up between them and Anglo Platinum to ensure that the items listed can be supplied within the shortest possible time.

Recovery Plan

i) The Recovery Plan will be initiated immediately after an Emergency situation has occurred.

ii) The Section Engineering Manager will be the leader or controller during this phase of the emergency situation.

iii) The recovery plan will be based on the use of the SAP and site specific P and ID's, to ensure the equipment is purchased according to specifications.

iv) The Section Engineering Manager is responsible to update and review the Recovery Plan.

Notification process

There are six main steps in managing an emergency, from the identification of the situation to final close off. These are as follows:

1. Find and identify
2. Ensure human safety
3. Reporting
4. Containment and clean-up
5. Corrective and preventative action
6. Monitoring

The notification process travels up the organizational chain of command.

Use the Notification Flow-chart as reference.

Credible Incidents

This is an on-site survey for identifying incidents at the WVS affecting or threatening to affect people and assets on-site or in the surrounding communities.

On-Site

Animals such as snake and dog bites

Bomb Threats

Bulk Storage Tank Failure

Chemical Transport Tanker Failure

Compressors/Blowers Failure

Contractor Control

Draught/Ventilation Failure

Electricity Supply Failure

Fire and Fire Protection Systems Failures

Gas Storage Failure

Green Scorpion visit

Invasion of Insects

Key Machine Breakdowns

Key Person Resignation/Illness

Mud rushes due to excessive water in bins

Multiple Injuries

Natural Disaster

Process Explosion

Xanthate Spillage

Suspended Fall from Height

Prolonged Emergency Repairs

Road Transport Incidents

Sewerage/Waste Blockage

Strikes and Riots

Structural collapse

Terrorism and Terrorism Attack

Transformer Explosions

Vital Computer Loss

Water Supply Failure

Health Epidemic

Major Legal non-conformance

Héritage Management

Noxious airborne pollutant exposure

Confined spaces
Flammable gas (Lower Explosive Limit)

Off Site

Natural Disaster

Tailings Dam Failure

Water recovery dam wall failure/overflow

Oxygen Plant Explosion

Prevention

WVS systems such as process safety, assurance, inspections and plant integrity measurements are implemented to prevent emergencies from occurring and escalating to a catastrophic event.

Risk Control Measures

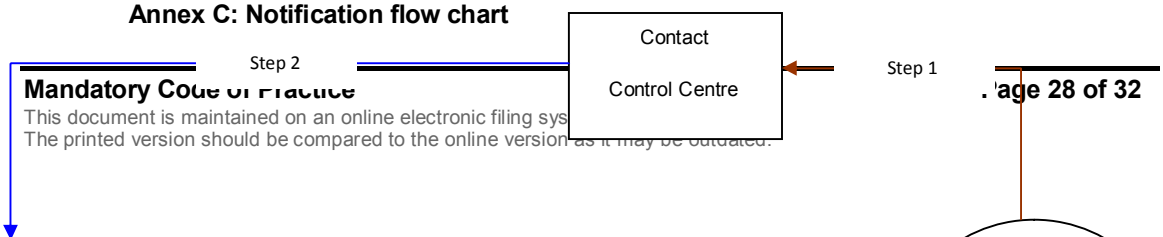
1. Protective systems - equipment and leak seal equipment.
2. Color coding of master control devices.
3. Location and shutdown procedures of master control devices.
4. Planned Maintenance schedules on SAP.
5. Pre-use checklists, Audits and Inspections.
6. Diesel Generators.
7. UPS Systems

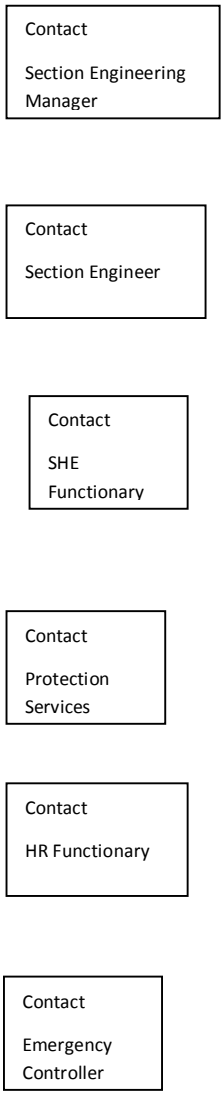
Prevention and detection equipment, early warning detection

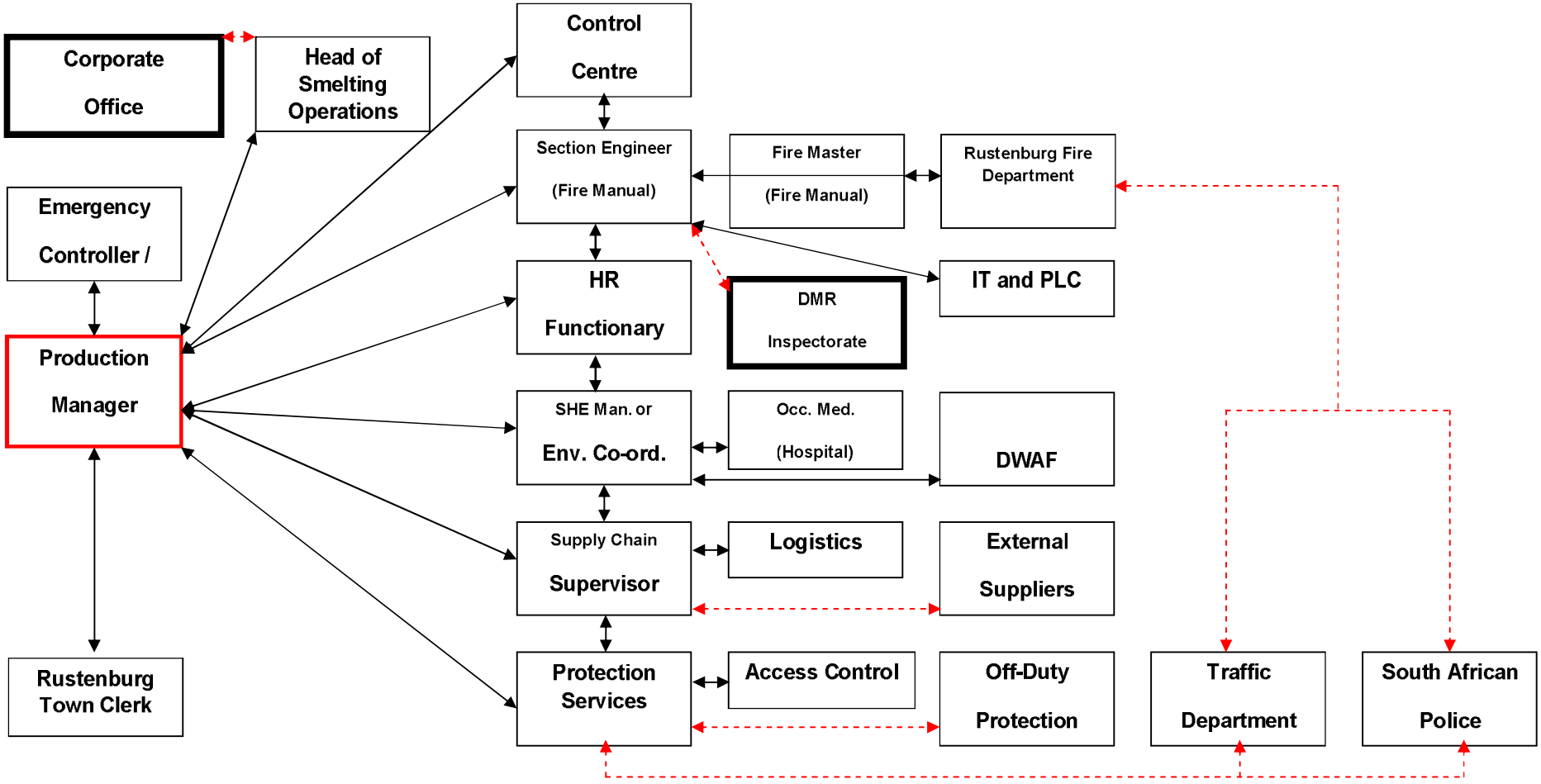
Preparedness

Mode one – Site alarm will sound continuously. Evacuate immediately.

Annex C: Notification flow chart




Contact
Section Engineering Manager
Contact
Section Engineer
Contact
SHE Functionary
Contact
Protection Services
Contact
HR Functionary
Contact
Emergency Controller


Corporate Office
Head of Smelting Operations
Control Centre
Section Engineer (Fire Manual)
Fire Master (Fire Manual)
Rustenburg Fire Department
Emergency Controller /
HR Functionary
DMR Inspectorate
IT and PLC
Production Manager
SHE Man. or Env. Co-ord.
Occ. Med. (Hospital)
DWAF
Supply Chain Supervisor
Logistics
External Suppliers
Rustenburg Town Clerk
Protection Services
Access Control
Off-Duty Protection
Traffic Department
South African Police

ANNEX E: ACTION LISTS – MANAGER PRODUCTION – ACTION LIST

ACTIVITY STEPS	TICK	Comments
1. Familiarize yourself with available information.		
2. Evaluate situation and ensure that all the necessary steps are taken to manage the incident.		
3. Liaise with the Evacuation Controllers to ensure that all people on-site are safe. If help is needed in a specific area, ensure that help is available.		
4. Liaise with Section Engineering Manager to ensure shutdown activities.		
5. Liaise with Section Engineering Manager for support services and DMR Inspectorate where necessary.		
6. Liaise with Supply Chain for logistics and external suppliers where necessary.		
7. Liaise with HR Officer to ensure all staff is kept informed.		
8. Liaise with Safety Officer/Environmental Coordinator to ensure medical aid is provided and or DWAF is contacted depending on emergency.		
9. Liaise with Protection Services to ensure Access for emergency vehicles/crews, SAPS and Traffic control as required.		
10. Inform HOSO.		
11. Call off emergency after consultation with Emergency committee. All clear to be given.		
12. Ensure post-incident critique and debriefing is done.		
13. Ensure investigation team is appointed and damage assessment is done.		
14. Ensure Recovery team is appointed.		
15. If the public was affected, ensure that a liaison centre is set up as soon as possible.		
16. Ensure that sources of supply and services such as Utilities, vendors and contractors are available to the Recovery team.		
17. Activate mutual aid plans with other organizations for supplying customers and satisfying contracts.		

Control Centre Coordinator Action List

ACTIVITY STEPS	TICK	COMMENTS
1. Inform Evacuation controller. As per Notification flowchart.		
2. If requested by the Evacuation controller informs the Emergency committee. As per Notification flowchart.		