 <p>ASSMANG MANGANESE BLACK ROCK MINE OPERATIONS</p>	ASSMANG (PTY) LIMITED	Revision No.: 4.0
	Appendix 12: Emergency Preparedness Plan for the Black Rock Waste Management Facilities	Next Revision Date: 2017/05/31
	Document No: PRO-SHE-E-Ge-G-67	Effective Date: 2015/07/01

Appendix 12: Emergency Preparedness Plan for the Black Rock Waste Management Facilities



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1. Purpose

The purpose of this plan is to:

- Provide actions to be undertaken in emergency situations at the Black Rock Waste Management Facilities

2. Scope


This plan is applicable to the Black Rock Waste Management Facilities and all people using, or visiting such facilities.

3. References

- Black Rock Mine Operations Waste Management Licences;
- Black Rock Code of Practice for Emergency Preparedness (MCOP-SHE-56);
- Emergency Preparedness and Response Procedure (PRO-SHE-E-Ge-G-1519);
- Emergency Preparedness and Response Schedule (FOR-SHE-E-Ge-G-60);
- Risk Assessment for the Waste Management Facilities (BAR-SHE-E-Ge-S-656);
- Evacuation Plan for the Black Rock Waste Management Facilities;
- All applicable laws as contained in the Legal Register


4. Abbreviations & Definitions

BRMO	Black Rock Mine Operations
PPE	Personal Protective Equipment
SOT	Surface Ore Transport
SHERQ	Safety, Health, Environment, Risk and Quality

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5. Responsibilities


Role	Details of Responsibilities	Person Responsible	Email	Telephone / Mobile Phone Numbers
Environmental Officers	<ul style="list-style-type: none"> Oversee the maintenance of the waste management facilities. Administer first aid support in an emergency situation. Contact emergency services (e.g. ambulance and/or fire brigade) when necessary. Compile, review and ensure compliance with the emergency preparedness plan for all the waste management facilities. Implement mitigation and management measures as outlined in the emergency preparedness plan and waste management licence. Undertake regular emergency drills. 	Richard Moseki	richardm@brmo.co.za	053 751 5652 076 022 9281
		Thami Mbonani	thamim@brmo.co.za	Speed Dial: 7054 053 751 5304 072 141 9289 Speed Dial: 7091

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Role	Details of Responsibilities	Person Responsible	Email	Telephone / Mobile Phone Numbers
Environmental Specialist	<ul style="list-style-type: none"> Communicate and recommend relevant training courses to be attended by the Environmental Management staff. Communicate emergency procedures and plans to all Environmental Management staff (including contactors / temporary employees). Supervise and action emergency evacuation procedures (including contacting emergency services). Ensure that the drills are conducted in accordance with the Environmental Emergency Procedure. Review and update emergency plans and procedures when necessary. Ensure that the emergency preparedness plan is compiled and adhered to. Assume the Fire Warden duties when required. 	Bonolo Lekwa	bonolol@brmo.co.za	053 751 5302 082 739 1909 Speed Dial: 7326
Waste Management Facilities Operator/s	<ul style="list-style-type: none"> Attend relevant training courses when nominated. Follow emergency procedures and plans Ensure that the emergency kit is properly taken care of. Take part in actual emergency situations and emergency drills. 	Hans Sebelego	N/A	053 751 5380 073 580 6321 Speed Dial: 7553

6. General

None

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7. Description of Procedure

7.1. Background

This document is an Emergency Preparedness and Response Plan and provides most significant Environmental, Health and Safety emergency situations / issues that are associated with the operation of the Black Rock Mine Operations (BRMO) waste **management facilities**. The document further provides a guidance of how BRMO should respond to those **emergency** situations that may emanate during the operation of the waste disposal facility. The purpose of this document is therefore to curb and control the risks that may emanate during the operation of the site. It is therefore important that the **facilities** owner (BRMO), site operator/s and all users understand regulatory requirements (including this emergency preparedness and response plan) and the implications thereof.

The site is managed by the Environmental Management Section and relies on **the Engineering Department to provide required services (e.g. Surface Ore Transport Section (SOT) for covering and compaction of waste, Civils for the maintenance of infrastructure, etc.)**.


7.2. Waste Management Specifications and Situational Analysis

Waste Minimisation: Although there is a recycling bay located within the waste **management yard**, no salvaging or reclaiming of waste is undertaken at the site. Waste separation is undertaken at source and only waste that has been separated at source is allowed at this recycling bay. Wood is usually disposed of aside and given to persons free of charge.

Collection and Transportation: Waste is transported to the site using waste trucks, tipper trucks and light duty vehicles. **Although the waste management facilities are** owned and managed by the Mine (BRMO), the site is also being used by other people within the close proximity (e.g. neighbouring farmers & **residents from Black Rock, Schoonspruit and District 6 Villages**).


Hazardous Waste Management: No hazardous waste is allowed to enter the **general waste disposal facility. Hazardous waste must** be sent to hazardous waste transfer facility (**located in close proximity to the waste disposal site**). Spillages and/or leakages of hydrocarbons from machinery and other vehicles are usually the main concerns within the site. However measures have been put in place to deal with those events.

Record Keeping: Register of all vehicles entering the site has been developed and used on a daily basis. The register is used to record the incoming and outgoing waste, including types, quantities and transporter details. All the records are kept in the file in the office of the Waste Management Facilities Operator/s.


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7.3. Risk Assessment

Risk	Impact <i>(high medium and low)</i>	Likelihood <i>(Unlikely, likely and highly likely)</i>	Mitigation Strategy	Contingency Plan
Burning of the waste disposal facility	High	Likely	<ul style="list-style-type: none"> No hot ashes and open fires will be allowed within the waste disposal facility. Create firebreaks around the site. Ensure that the emergency procedure is briefed to all relevant persons and adhered to. Erect signage at the entrance of the waste disposal facility Regular inspection of fire hoses and fire extinguishers will be undertaken Hazardous waste will not be permitted on site. Install fire hydrants and fire extinguishers at the site. 	<ul style="list-style-type: none"> Use fire hydrants and dry powder fire extinguishers to extinguish the fire. Call the BRMO Surface Fire Captain to assist with equipment and personnel. Call for external assistance if the internal resources cannot be able to deal with the situation.
Vehicle malfunction	Medium	Likely	<ul style="list-style-type: none"> Undertake pre-inspection check before any vehicle may be operated / driven. Ensure regular servicing and maintenance of vehicles and other equipment. Do the spot checks on vehicles entering the waste disposal site. Spill kits will always be available on site. All Mine vehicles and equipment will always be equipped with fire extinguishers. 	<ul style="list-style-type: none"> Place drip tray under any vehicle that might be leaking oil. Remove contaminated soil from the site to hazardous waste transfer facility. Remove the malfunctioning vehicle / machinery from the site to the workshop.

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Risk	Impact <i>(high medium and low)</i>	Likelihood <i>(Unlikely, likely and highly likely)</i>	Mitigation Strategy	Contingency Plan
Earth tremor	High	Unlikely	<ul style="list-style-type: none"> Evacuate the area in case of any suspected movement or tremor. Teach waste management facilities operators of the possible signs of earth tremor. 	<ul style="list-style-type: none"> Employees will be trained on first aid to counter for such unforeseen events. First aid kit will be readily available and well stocked. Close the area for operation until it has been declared safe.
Land subsidence	High	Likely	<ul style="list-style-type: none"> Evacuate the area in case of any suspected movement or tremor. Teach / brief the Waste Management Facilities Operators about the possible signs of earth land subsidence. Close the area for operation until a risk assessment has been conducted and the area declared safe. 	<ul style="list-style-type: none"> Employees will be trained on first aid to counter for such unforeseen events. First aid kit will be readily available and well stocked. Close the area for operation until it has been declared safe. Conduct specialist studies to assess the possibility of the recurrence of the event.
Waste disposal site slope failure	Low	Unlikely	<ul style="list-style-type: none"> Ensure that the slope of the waste disposal site is kept as flat as possible. 	<ul style="list-style-type: none"> Appoint a specialist to undertake studies with regard to slope stability and what might have caused the slope failure.
Oil spillages or leaks	Medium	Highly likely	<ul style="list-style-type: none"> Ensure that machinery and equipment are properly serviced. Spill kit will be made readily available and well stocked to enable timeous response to spillages. 	<ul style="list-style-type: none"> Self-made drip tray to be made readily available to contain potential leakages and/or spillages as much as possible. Remove all contaminated soil from the site to the hazardous waste transfer facility.
Industrial action	Medium	Likely	<ul style="list-style-type: none"> The site will be closed for operation in case of labour unrest / strikes. Fence off the waste disposal facility so that it is outside of the mine premises 	<ul style="list-style-type: none"> Close the site for operation Designate an area at the shafts where waste should be temporarily stored until things are back to normal

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7.4. Management


7.4.1. Emergency Contact Details

Service	Contact	Phone number
BRMO Clinic	Sister-in-charge	(053) 751 5384
BRMO Incident Reporting Line	SHERQ	7000
Police	SAPS Kuruman	(053) 712 9800
Fire	Surface Fire Captain	073 269 1824
Ambulance	Ambulance driver on duty	073 191 5130 / 082 306 5590
Security	Control Room Operator	(053) 751 5209
Emergency Number	Control Room Operator	4555 (Internal) 053 751 5603 (Ext)
Safety	Safety Officer	(053) 751 4098
Environmental Management	Environmental Superintendent	(053) 751 5302 / 082 739 1909

7.4.2. Emergency Procedure

Scenario 1: Burning of Waste Management Facilities

Question	Details
Critical incident	Burning of the waste disposal site
Possible causes	<p>The following incidents may cause fires within the waste disposal facility:</p> <ul style="list-style-type: none"> Open fires such as smoking, disposing hot ash, illegal burning of waste and/or spontaneous burning due to extreme temperatures. Sparks resulting from the equipment brakes. Fires emanating from adjacent land / facilities (e.g. Salvage Yard, Black Rock village)
Immediate actions	<ul style="list-style-type: none"> Determine the significance of the burning and ask for assistance if necessary. Initiate steps to extinguish the fire
Secondary actions	<ul style="list-style-type: none"> Report incident to the Environmental Specialist
Resources needed	<ul style="list-style-type: none"> Fire hydrant Fire team (depending on the seriousness / significance of the fire) Fire extinguisher PPE (dust mask, leather gloves, safety goggles, safety shoes and overalls)

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Scenario 2: Hydrocarbons Leakage / Spillages


Question	Details
Critical incident	Bursting of the diesel / oil tank
Background	Diesel and/or oil tank bursting may happen as a result of either mechanical failure or accident.
Immediate actions	<ul style="list-style-type: none"> Place drip tray below the machinery Stop the leak Remove the leaking machine from the site to the workshop
Secondary actions	<ul style="list-style-type: none"> Undertake clean-up Report the incident
Resources needed	<ul style="list-style-type: none"> Spill kit Drip trays

Scenario 3: Overflow of Sewage Effluent into the Site

Question	Details
Critical incident	Overflow of sewage effluent into the waste disposal site
Background	The sewage treatment plant is situated adjacent to the waste disposal site. Due to the topography, the overflows will run into the waste disposal site. The overflow collection sump is to be built on the border of the sewage treatment plant and the waste disposal site. Despite the sump that will be built, overflows might still happen due to mechanical failure.
Immediate actions	<ul style="list-style-type: none"> Pump the effluent from the sump back into the sump / sequential batch reactors Remove the leaking machine from the site to the workshop
Secondary actions	<ul style="list-style-type: none"> Close out the area where the effluent accumulated in order to allow for evaporation to occur Report the incident
Resources needed	<ul style="list-style-type: none"> Pumps Barricade tape

7.4.3. Key Personnel Training

Job title	Name	Training Requirements
Waste Management Facilities Operator	Hans Sebelego	<ul style="list-style-type: none"> Fire-fighting; First Aid; and Spill Management.
Environmental Officer	Richard Moseki	<ul style="list-style-type: none"> Fire-fighting; First Aid; and Spill Management.
Environmental Officer	Thami Mbonani	<ul style="list-style-type: none"> Fire-fighting; First Aid; and Spill Management.

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Emergency Kit


Object	Frequency of Inspections / Checking	Person responsible
Dry powder fire extinguishers	Monthly	Thami Mbonani
First-aid kits	Monthly	Richard Moseki
Oil spill kits	Monthly	Thami Mbonani
Drip trays	Monthly	Thami Mbonani
Barricade tape	When dealing with the incident	Hans Sebelego

8. Records

No	Record	Ref.	Resp. Person	Storage	Retention Period	Disposition
1.	Emergency Drills		Occupational Hygienist	File	1 year	Shred
2.	Fire extinguishers service records		Occupational Hygienist	File	1 year	Shred
3.	Fire extinguishers inspection reports		Occupational Hygienist	File	1 year	Shred
4.	Survey records		Chief Surveyor	File	Life of mine	Shred

9. Appendix

A – Fire Evacuation Plan

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Appendix A

Fire Evacuation Plan

