

Risk Assessment and Disaster Management Plan

1 RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

1.1 Definition

A major emergency in a work is one which has the potential to cause serious injury or loss of life. It may cause extensive damage to property and serious disruption both inside and outside the work. It would normally require the assistance of emergency services to handle it effectively.

Emergency may be caused by a number of different factors; it will normally manifest itself in two basic forms viz fire, explosion or toxic release.

1.2 Scope

An important element of mitigation is emergency planning i.e. recognizing that accidents are possible, assessing the consequences of such accidents and deciding on the emergency procedures, both on site and off site that needs to be implemented in the event of an emergency.

Emergency planning is just one aspect of safety and cannot be considered in isolation.

1.3 Objective

The objective of onsite disaster management plan for the captive mine is to be in a state of perpetual readiness through training and development to immediately control and arrest any emergency situation so as to avert a full fledged disaster and the consequence of human and property damage and in the event of a disaster still occurring, to manage the same so that the risk of the damage to life and property is minimized. ECL will make a document elaborating the procedure for Emergency Preparedness & Responses. The overall objectives of the emergency plan are:

- (a) To localize the emergency and, if possible eliminate it; and
- (b) To minimize the effect of the accident on people and property.
- (c) Elimination of hazards by local/supervisory personnel and minimizing effects include rendering first aid, evacuation, hospitalization, rehabilitation
- (d) To seek help from outside sources, if required
- (e) Notice/information to authorities

It is a hard rock area and as such no serious disaster is foreseen. However, accidents cannot be ruled out in the mine. Following risks are anticipated:

- Failure of benches
- Fall of machinery/ person from benches
- Failure of transport machinery
- Heavy rainfall resulting in inundation of mine
- Accidents due to blasting/explosives

- Accidents due to fire
- From Electric line through the area

Standard operating procedures shall be made and enforced in case of emergency. To overcome this for provisions of Reg. 119 of M.M.R 1961 shall apply

1. (a) For Electric line, a safety barrier of 45m on either side of electric line shall be left in the lease area.

(b) If there is danger of falling of live wire during working, then no machinery shall be allowed to remain or pass through safety barrier.

(c) RSEB shall be informed of the mishap if occurred or anticipated of fall of electric tower or live wire

2. Inundation

(a) For risk of inundation due to surface water in the open pit, provisions of M.M.R 1961 reg. 127 shall apply

(b) The working in bench form shall be made on a sloping ground and bottom most bench shall be provided with a sump to collect water which will be directly pumped out to surface

(c) Floor control room shall be established in case of danger of inundation. H.FL. shall be marked in the area on a pillar. If water level reaches 0.5m below HFL mark then all men and machinery shall be withdrawn from the pit and work shall be stopped until water recedes to a safe level.

(d) In rainy season when there is danger of inrush of water in the pit, mining work shall be carried out on upper level benches only

3. In case of short circuit of electric line and fire caused due to this mishap, sand bucket and fire extinguishers shall be provided and maintained.

The salient features are elaborated as below:

- Emergency Response Organization
- Communication System
- Action on the site
- Facilities available at site
- Medical treatment for injured personnel

Elimination requires well planned process/technology and its effective implementation, so that such situation should either not arise or if it comes, a pre warning is received for timely action in built or by preparedness for zeroing the effects.

Minimizing the effects may include prompt action, rescue, first aid, and evacuation, fire fighting and also passing on information promptly to people living nearby.

<p><i>Nagaur Limestone Mine (Block 3 B1 (b)) (ML Area- 247.8711 ha) with production capacity of 1.70 Million TPA (ROM) (Limestone production capacity 0.68 Million TPA) with Crusher capacity - 1500 TPH</i></p> <p><i>Located near Village-Deh, Tehsil-Jayal & Village- Sarasani, Tehsil- Nagaur, District- Nagaur (Rajasthan)</i></p>
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1.4 Identification of Hazards

Major hazards due to the proposed mining project have been identified & mitigation measures are suggested. Details are given in the table as under:

Table 7.1
Hazard identification and preventive measures as suggested

S No.	Mining Activity	Occupational Hazard	Potential ill health/ Injury	Preventive Measures	Control measures
1.	Storage, handling & transport of explosives	Premature Explosion and Fire	Fatality	Handling of explosive materials is to be taken care of as per the Metalliferous Mines Regulations, 1961 and Circulars of DGMS	<ul style="list-style-type: none"> • Fire extinguisher • Conducting mock drills at regular interval • PPE's like gloves, shoes etc
		Skin Contact	Burn injury, contact disease		<ul style="list-style-type: none"> • Providing Hand gloves
		Toppling of explosive van	Fatality		<ul style="list-style-type: none"> • Proper maintenance and regular monitoring of machines
2.	Drilling	Dust generation	Breathing uneasiness, Lung & eye infection, Silicosis	<ul style="list-style-type: none"> • Safety of employees during blasting operation and maintenance of mining equipment should be taken care as per Mine Regulations, 1961 and Circulars of DGMS. 	<ul style="list-style-type: none"> • Wet drilling • Providing Dust masks & goggles
		Noise	Hearing loss, irritation, headache, Loss of appetite	<ul style="list-style-type: none"> • Noise level Survey 	<ul style="list-style-type: none"> • Acoustic cabins for operators. • Proper maintenance & operation of machine • Operation only on even ground.
		Bursting of hose pipes	Fatality	-	<ul style="list-style-type: none"> • Daily checking of hose pipes • Replace worn house pipes.
		Vibration	Numbness, Raynaud disease	-	<ul style="list-style-type: none"> • Ergonomically designed cabin • Proper maintenance of machine • operation only on level ground
		Operation Hazard (manual rod changing)	Muscular pain, Ergonomics	-	<ul style="list-style-type: none"> • Training to operators and use of proper tools. • Providing helmets, safety goggles and safety shoes.
3.	ANFO Mixing	Skin Contact	Contact disease	<ul style="list-style-type: none"> • Compliance with code of practice specified by DGMS for ANFO Mixing and its uses. 	<ul style="list-style-type: none"> • Providing Gloves • Fire-Extinguisher
		Pre-mature explosion	Fatality		
		Fire	Injury to person		
4.	Blasting	Fly rock	Disabling injury, loss of body	<ul style="list-style-type: none"> • Safety of employees during blasting 	<ul style="list-style-type: none"> • Blasting carried only after evacuating area of

			parts & fatality	operation and maintenance of mining equipment should be taken care as per Metalliferous Mines Regulations, 1961 and Circulars of DGMS. • Control of dust at generation point through water spraying	520 m radius from blast site. • Proper Blast design • Muffle Blasting • Remove loose boulder from bench • Use of delay detonators relay, • Providing Safety Helmets
		Ground Vibration	Damage to property, injury	-	• Proper Blast design • Use of delay detonators relay
		Noise	Noise Induced Hearing Loss, irritation, headache, loss of appetite	• Noise level Survey	• covering of detonating fuse with sand, • use good stemming material use of delay detonators relay Proper Blast design • Providing ear plug
		Release of toxic gases	Lung infection, discomfort	• Use of good quality of explosive.	• mixing of ammonium nitrate & fuel oil in proper ratio • Providing dust mask
		Premature Blast	Disabling injury/ loss of body parts & fatality	-	• Restrict use of mobile phone & radio etc near the blasting site.
		Misfire	Disabling injury/ loss of body parts & fatality		• Training to deal with misfire according to regulation 167
5.	Operation of Excavator in Mines	Noise	Noise Induced Hearing Loss, irritation, headache, stress	-	• Proper maintenance & operation of machine. • Providing ear plug, ear muffs
		Fire in HEMM	Burn injury, fatality	-	• automatic detection & suppression system • Provision of Fire Extinguisher • daily checking of electrical system
		Heat	Discomfort, stress	• Proper Ventilation	• Thermal barriers • Provision of cool drinking water • Rest shelters • Showers
		Dust generation	Silicosis, respiratory problems & eye infections	• Operation and Maintenance of Tippers.	• Dust suppression on haul roads through water sprinkling • Providing dust mask
		Cabin Vibrations	Numbness, Raynaud disease	• Standard protocol for evaluation of	• Ergonomically designed seats and operation

				vibration level in HEMMs	and controls • Proper maintenance & operation of machine.
		Slipping from stairs	Body injury	-	• Good House Keeping
		Toppling of excavator	Fatality	-	• Operation only on firm ground
		Run over person due to Movement of Excavator	Fatality	-	• Audio-Visual Alarm & following proper Signal codes
		Operating system failure	Disabling injury/loss of body parts & fatality	• Training & awareness Programmes	• Regular Maintenance
6.	Transportation with Dumpers	Material spillage	Injury to person	-	• Suitable loading profile ensuring proper condition of dumper
		Collision	Fatality	-	• Follow traffic rules • Competent Driver
		Jerks & Vibration	Numbness, Raynaud disease	• Ergonomically designed Cabin	• Proper cushion of Operator Seat • Mounting of Cabins on Rubber Pads
		Dust generation	Silicosis, respiratory problems & eye infections	• Construction and Maintenance of pakka haul roads	• Spraying of Water on haul roads
		Brake fail	Fatality / injury	-	• Daily checking of brake system • follow maintenance schedule as manufacturer manual
		Run Over on persons	Fatality / injury	-	• Follow traffic rules
		Steering fail	Fatality / injury	-	• Daily checking of steering system • Follow maintenance schedule as manufacturer manual
		Bursting of front tyre	Fatality / injury	• Use of Good conditions tyres	• daily checking of tyre condition & Pressure.
		Reversing Dumpers	Fatality / injury	-	• Authorized driver • Audio visual alarm • Spotter when reversing • Rear view Camera

7.	Movement and Operation of vehicle other than dumpers	Dust generation	Silicosis, respiratory problems & eye infections	-	<ul style="list-style-type: none"> • Spraying of Water on haul roads • Provide dust masks
		Brake fail	Fatality	<ul style="list-style-type: none"> • Compliance with operating instructions 	<ul style="list-style-type: none"> • Daily checking of brake system, • Provision of break fail alarm system and alternate break.
		Toppling of Vehicle	Fatality	-	<ul style="list-style-type: none"> • Competent Driver, • operation only on firm ground.
		Run Over on persons	Fatality	-	<ul style="list-style-type: none"> • Follow traffic rules
		Steering fail	Fatality	<ul style="list-style-type: none"> • Follow maintenance schedule as manufacture manual 	<ul style="list-style-type: none"> • Daily checking of steering system
		Collision	Fatality	-	<ul style="list-style-type: none"> • Follow traffic rules, • Competent Driver • Providing Steel belt
		Bursting of front tyre	Fatality	<ul style="list-style-type: none"> • Use of Good conditions tyres only, 	<ul style="list-style-type: none"> • daily checking of tyre condition & Pressure
		Reversing vehicle	Fatality	-	<ul style="list-style-type: none"> • Audio visual alarm, • authorized driver • Spotter when reversing.
8.	Dozing	Vibration	Numbness, Raynaud disease	-	<ul style="list-style-type: none"> • Ergonomics cabin and operator seat • cabins mounted on rubber pads
		Noise	Irritation	-	<ul style="list-style-type: none"> • Providing Ear Plug
		Dust generation	Silicosis, respiratory problems & eye infections	-	<ul style="list-style-type: none"> • Control of dust at the point of generation • Use of dust Mask.
		Fall of bauxite during operation	Injury to person	-	<ul style="list-style-type: none"> • Provide Safety Helmets • Proper training to handle face dressing.
		Slip from wooden stair	Injury to body part of persons	-	<ul style="list-style-type: none"> • Use of good quality stair • Provide Safety Helmets
		Falling from wooden stair	Injury to body part of persons	-	<ul style="list-style-type: none"> • Use of good quality stair • Provide Safety Helmets
		Breakage of wooden stair	Injury to body part of persons	-	<ul style="list-style-type: none"> • Use of good quality stair • Provide Safety Helmets

9.	Loading of limestone	Falling of limestone, buckets	Injury to person	-	<ul style="list-style-type: none"> • Provide Safety shoes & safety helmets.
		Slipping & Breaking of tools	Injury to person	-	
10.	Diesel storage	Fire	body injury	-	<ul style="list-style-type: none"> • Fire extinguisher
		Leakage of oils	Wastage, skin infection	-	<ul style="list-style-type: none"> • Maintenance & monitoring of machines
		Fire	Burn injury	<ul style="list-style-type: none"> • Source of fire near diesel generator should be avoided 	<ul style="list-style-type: none"> • use of Fire Extinguisher
		Electric Shock	Fatality	-	<ul style="list-style-type: none"> • Use of hand Gloves
		Slipping due to oil slippage	Injury	<ul style="list-style-type: none"> • Good housekeeping. 	<ul style="list-style-type: none"> • Use of Safety Shoes
11.	Unloading of diesel	Falling of drums	Injury	-	<ul style="list-style-type: none"> • Handling of drum carefully
12.	Air Filling on Tyres, Opening Fitting of tyres	Bursting of Tyres	Injury to eyes	-	<ul style="list-style-type: none"> • checking of pressure gauge properly. • Use of safety goggles
		Slipping of tools	Injury to person	-	<ul style="list-style-type: none"> • Careful usage of tools. • Use of Safety shoes & helmets
13.	Exploration	Dust generation	Silicosis, respiratory problems & eye infections	-	<ul style="list-style-type: none"> • Wet drilling • Providing Dust mask & goggles
		Smoke	Lung infection	-	<ul style="list-style-type: none"> • Providing Dust Mask.
		Flying of Drill Chips	Eye injury	-	<ul style="list-style-type: none"> • rubber pads at drill machines • Providing Safety goggles
		Run over person due to Uncontrolled Movement of Excavator	Fatality	-	<ul style="list-style-type: none"> • Safety shoes
		Toppling of Machine	Fatality	-	<ul style="list-style-type: none"> • Leveling of surface before movement of machine. • Helmet & shoes
		Bursting of hose		-	<ul style="list-style-type: none"> • Regular pipe checking, • helmet and shoes.

		Operational hazard (manual rod changing)	Muscular pain, Ergonomics	-	<ul style="list-style-type: none"> • Surface shouldn't be wet to avoid slip. • Helmet
14.	Crusher operation	Noise generation	Hearing loss, ill health	-	<ul style="list-style-type: none"> • Instruments are kept in isolated rooms. • Surgical hand gloves, nose mask, safety shoes
		Exposure to dust	Respiratory problems , ill health	• Dust extraction system in the Crusher	<ul style="list-style-type: none"> • Water sprinkler to arrest dust. • Use of ear plug, nose mask, safety shoes
		Oil spillage	Tripping, slipping, injury	-	<ul style="list-style-type: none"> • Overloading should be avoided.
		Exposure to dust	Respiratory problems , ill health	-	<ul style="list-style-type: none"> • Water sprinkler to arrest dust. • Use of ear plug, nose mask, safety shoes

1.5 Emergency Response Organization

The key person of the mines will be responsible for co-ordination in case of emergency situated in any section of the mine is given below:

Person	Responsibility
Mines Manager	Site Controller
Shift In charge / Section In Charge	Accident Controller/ Communication Officer
Employee who gives the first information about the incident/ accident	Primary Controller
P & A Department (HOD)	Liaison Officer

1.5.1 Key Personnel and their responsibility

The appointment of all the key personnel i.e. Site Controller, Accident Controller/Communication Officer, Primary Controller and Liaison Officer will be taken up after the execution of mining lease and will be intimated to IBM and other concerned authorities as per statute.

(i) Site Controller

The Site Controller has an overall responsibility for controlling the incident/ accident and directing the personnel.

- To prepare a foolproof plan for control of accidents like landslides, subsidence, flood, fire and other natural calamities
- To inform statutory bodies of the State and Central Government.
- To inform Communication Officer about the emergency, Control Centre and assembly point.
- To provide all assistance and call for Fire Squad, Security Officer and other services required for removing/ control of danger.
- To ensure that all necessary personnel assemble at assembly point.
- Make arrangements for medical treatment to the personnel injured

(ii) Accident Controller

- Mock rehearsal of management plan prepared for accident.
- To withdraw men/ machines from the affected area with priority for safety of personnel, minimize damage to the machines, environment and loss of material.
- To make a report based on the facts and figures and submit to the Site Controller
- To communicate with the Site in-charge and make arrangements for transportation of the injured personnel.

(iii) Primary Controller

- To inform the Accident Controller/ shift In-charge from the nearest means of communication about the location and the nature of accident.
- To assist in clearing any obstruction in relief of accident. To carry out all instructions of Accident Controller.
- To provide first aid treatment and communicate with the Shift in charge.

1.5.2 Code of Practice in case of Explosion & Accidents

Objective

To deal with accidents efficiently and quickly

Line of Action

Any person, who notices any explosion or accident, should immediately take steps to give warning by suitable means and at the same time take necessary action for withdrawal of men from the site. He shall also inform the Mines Owner and other officials without any delay.

Duties of Head of Department (Site Controller) & Shift In charge (Accident Controller):

- a) On receipt of information about explosion or accident, site controller and accident controller shall forthwith rush to the spot and make the arrangements for withdrawal of affected persons, if any.
- b) Inform the security officers and statutory bodies of State and Central Government.
- c) Inform the hospital for Ambulance for affected persons, if any.
- d) Provide First aid to affected persons.

1.5.3 Action in Emergency

If any emergency like fire arises in the mine one should immediately inform Security Supervisor and inform the key personnel and act as detailed above followed by blowing the Alarm. The emergency alarm will be wailing sound for two minutes on hearing telephone or alarm; the key personnel will act as per responsibilities. The procedure for all emergency situations as mentioned above would be same.

1.5.3.1 Site Restoration

The incident controller will check the areas thoroughly for possible hazards such as toxic fumes or live wires after emergency and will inform site controller accordingly.

The key personnel will meet to evaluate their individuals and overall performance in responding to situation after the emergency is over. The review shall determine:

- Effectiveness of emergency response plan.
- Mine crew performance.
- Need for updating or revision the emergency response plan.
- Suitable arrangement for restarting the work.

- Evaluation and control of effluent arising out of mitigating measures like foam discharge & overflow of oil in water.
- Rehabilitate evacuated area.
- Adopt measures to prevent similar recurrence.

1.5.4 Precautions

To avoid all these disasters at working place and to minimize their effects following precautions shall be taken and arrangement shall be made at the working place.

- (i) Periodical maintenance of mine machineries.
- (ii) The persons shall be trained properly to handle the situation.
- (iii) Detailed warning system, implementation procedure, emergency control centre shall be maintained at the mine with names of trained persons.
- (iv) Details and availability of heavy machinery, fire-fighting equipment shall be made available at the site.
- (v) Proper arrangements shall be made for treatment of injured person, if any.

All the safety equipment shall be made available in the mine.

1.5.5 Post Disaster Analysis and Evaluation

When the emergency is over, the team will carry out a detailed analysis of cause of accident/occurrence, evaluate the influence of various factors and find out the procedures to minimize them in future. At the same time adequacy of disaster management plan shall also be evaluated and shortcomings shall be rectified to improve the plan.

1.5.6 Off-Site Emergency Planning

1.5.6.1 Introduction

The off-site emergency plan is an integral part of any hazard control system. It would be based on those accidents identified by the works management, which could affect people and the environment outside the works. Thus, the off-site plan follows logically from the analysis that took place to provide the basis for the on-site plan and the two plans should, therefore, complement each other. The key feature of a good off-site emergency plan is flexibility in its application to emergencies other than those specifically included in the formation of the plan. The roles of the various parties that may be involved in the implementation of an off-site plan are described below. The responsibility for the off-site plan will be likely to rest either with the works management or with the local authority.

Either way, the plan must identify an emergency coordinating officer who would take overall command of the off-site activities. As with the on-site plan, an emergency control center will be required within which the emergency coordinating officer can operate. An early decision will be required in many cases on the advice to be given to people living “within range” of the accident – in particular whether they should be evacuated or told to go indoors. Consideration of evacuation may include the following factors:

- a. In the case of a major fire but without explosion risk (e.g. an oil storage tank), only houses close to the fire are likely to need evacuation, although a severe smoke hazard may require this to be reviewed periodically.
- b. But if the fire escalates it might be necessary to evacuate people nearby, but only if there is time; if insufficient time exists, people would be advised to stay indoors and shield themselves from the fire while measures are taken by those outside to douse fire

1.5.6.2 Aspects To Be Included In An Off-Site Emergency Plan

Some of the aspects to be included in off-site emergency plan are as follows:

a) Organization

Details of command structure, warning systems, implementation procedures, emergency control centers, name and appointments of incident controller, site main controller, their deputies and other key personnel.

b) Communications

Identification of personnel involved, communication center, call signs, network, list of telephone numbers.

c) Special Emergency Equipment

Details of availability and location of heavy lifting gear, bulldozers, specified fire-fighting equipment, fireboats.

d) Voluntary Organizations

Details of organizers, telephone numbers, resources, etc.

e) Meteorological information

Arrangements for obtaining details of weather conditions prevailing at the time and weather forecasts will be made.

f) Humanitarian Arrangements

Transport, evacuation centers, emergency feeding, treatment of injured, first aid, ambulances, temporary mortuaries.

g) Public Information

Arrangements for: -

- (i) Dealing with the media-press office
- (ii) Informing relatives, etc.

h) Assessment

Arrangements for: -

- (i) Collecting information on the causes of the emergency
- (ii) Reviewing the efficiency and effectiveness of all aspects of the emergency plan.

S. No	Names	Contact No
1.	District Collector and District Magistrate, Nagaur	01582-241444, 241786
2.	Chief Medical Officer, Nagaur	01582-240844
3.	Ambulance	102
4.	Fire	101
5.	PCR	100
6.	PHC at village, Deh	01583-276113
7.	Police station, Jayal	01583-272234

1.5.6.3 Role of The Emergency Coordinating Officer

The various emergency services will be coordinated by an Emergency Coordinating Officer (ECO) who is likely to be a senior police officer but, depending on the circumstances, could be a senior fire officer. The ECO will liaise closely with the site main controller. Again depending on local arrangements, for very severe incidents with major or prolonged off-site consequences, the external control may pass to a senior local authority administrator or even an administrator appointed by the Central or State Government.

1.5.6.4 Roles of Major Hazard Managements

Where the local authority has the organization to formulate the plan, the role of management in off-site emergency planning will be to establish liaison with those preparing the plans and to provide information appropriate to such plans. This will include a description of possible on-site accidents with potential for off-site harm, together with their consequences and an indication of the relative likelihood of the accidents.

Advice should be provided by works managements to all the outside organizations which may become involved in handling the emergency off-site and which will need previously to have familiarized themselves with some of the technical aspects of the works activities, e.g. emergency services, medical departments, etc.

1.5.6.5 Role of The Local Authority

In some places the duty to prepare the off-site plan lies with the local authorities. They may have appointed an emergency planning officer (EPO) to carry out all this duty as part of the EPO's roles in preparing for a whole range of different emergencies within the local authority area. The EPO will need to obtain the information to provide the basis for the plan.

Rehearsals for off-site plans are important for the same reasons as on-site plans and will need to be organized by the EPO.

1.5.6.6 Role of The Police

The police normally assume the overall control of an emergency, with a senior officer designated as emergency coordinating officer.

Formal duties of the police during an emergency include protecting life and property and controlling traffic movements.

The functions include controlling bystanders, evacuating the public, identifying the dead and dealing with casualties and informing relatives of dead or injured.

1.5.6.7 Role of The Fire Authorities

The control of a fire is normally the responsibility of the senior fire brigade officer who would take over the handling of the fire from the site incident controller on arrival at the site. The senior fire brigade officer may also have a similar responsibility for other events. Fire authorities having major hazard works in their area should have familiarized themselves with the location on site of all stores of flammable materials, water and foam supply points and fire-fighting equipments.

1.5.6.8 Role of The Health Authorities

Health authorities, including doctors, surgeons, hospitals, ambulances and so on, have a vital part to play following a major accident and they should form an integral part of any emergency plan.

For major fires, injuries will be the result of the effects of thermal radiation to a varying degree and the knowledge and experience to handle this in all, but extreme, cases may be generally available in most hospitals.

1.5.6.9 Roles of The Government Safety Authority

The Inspectors of Director General of Mines Safety may want to satisfy themselves that the organization responsible for including the off-site plan has made adequate arrangements for handling emergencies of all types including major emergencies.

In the event of an accident, local arrangements regarding the role of the factory inspector will apply. In the aftermath, factory inspectors may wish to ensure that the affected areas are rehabilitated safely.

1.5.7 Care and maintenance during temporary discontinuance

When the mine will be temporarily discontinued due to any unforeseen circumstances, the following care and maintenance will be carried out.

- Notice of temporary discontinuance of work in mine shall be given to the Controller General, Controller of Mines and the Regional Controller of Mines, IBM, DGMS & DMG, State Govt. officials under Rule 24 of MCDR 1988 and Reg. 6 of MMR 1961 respectively
- All mining machineries shall be shifted to a safe place
- Entrance to the mines or part of the mines to be discontinued shall be fenced off as per DGMS Circular and security Guards shall be posted for the safety and to restrict any unauthorized entry to the area.
- Competent persons shall inspect the area regularly
- Air, water and other environmental monitoring shall be carried out
- Care for plantation done shall be carried out on a regular basis
- Measures of care, maintenance and monitoring of status of unplanned, discontinued mining operations expected to reopen in future
- All rules and regulations shall be followed in case of any temporary discontinuance of mine

