

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES, JHARKHAND**SHRAM BHAWAN, DORANDA, RANCHI-2**

(Tel:- 0651-2480454 E-mail Id- cifoffice123@gmail.com)

From,

**Chief Inspector of Factories, Jharkhand,
Ranchi.**

To,

**The Occupier,
M/s Radha Casting & Metalik (P) Ltd.,
Industrial Area, Behind IFICO,
Water Filter Plant, P.O.- Marar- 829117,
District: Ramgarh.**

Ranchi Dated: 08-09-2020

**Subject: Recommendation of Emergency Response Plan of M/s Radha Casting &
Metalik (P) Ltd., Palki, P.O.: Marar- 829117, District: Ramgarh.**

Reference: Your letter Ref. No.: RCMPL/75/2020-21, dated- 03.09.2020.

Sir,

This has reference to your letter dated 03.09.2020. The submitted emergency response plan has been verified and examined. The same is being recommended subject to the following conditions: -

1. Regular Mock- drill shall be carried out in the factory as per the provisions and a detailed report should be made available to the Inspector of Factories and Chief Inspector of Factories.
2. A detailed safety audit report conducted by an experienced outside agency shall be submitted along with details of health & safety policy of the above factory.
3. The Emergency Response Plan will be up-dated and revised if there is any modification in the plant, process or industrial activity.
4. Adequate arrangement of medical/ relief facilities (first aid equipments etc.) should be provided and maintained in the emergency control room.
5. Telephone number of key persons to be noted and displayed in the central control room.

A copy of the recommended plan is enclosed herewith.

Yours faithfully,

G. S. S.
08/09/2020
Chief Inspector of Factories, Jharkhand,
Ranchi.

**ON – OFF
SITE
EMERGENCY
RESPONSE PLAN
Of**

M/S Radha Casting & Metalik Private Limited

Vill- Paiki, P.O - Marar, Distt.- Ramgarh

(Jharkhand) PIN- 829117

FORWARD

ON-OFF SITE EMERGENCY MANAGEMENT PLAN is a documented planning to tackle and mitigate any catastrophic or hazardous situation creating emergency situation in a plant or factory in addition to ensuring safety to the extent possible, the document also takes care of the provisions and requirements of following acts/rules.

- | | |
|---|-------|
| 1. Factories act | -1948 |
| 2. Jharkhand Factories Act | -2001 |
| 3. Factories Act (amendment) | -1987 |
| 4. Control of industrial major accident hazardous rules | -1990 |
| 5. Hazardous Wastes (management and handling) rules | -1980 |
| 6. Environment (Protection) act | -1986 |

We appreciate the support extended by the director as well as the other officers in the preparation of this document.

We strongly feel that this document shall go a long way to improve the preparedness for any emergency in the factory.

RECOMMENDED WITH THE
CONDITIONS MENTIONED IN
THIS OFFICE LETTER No. 833
DATED 08.09.2020

G. K. Singh
28/9/2020
Chief Inspector of Factories, Jharkhand
Ranchi

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ANNEXURE-1

ANNEXURE-2

1. INTRODUCTION

M/S RADHA CASTING & METALIK PVT. LTD is engaged in the manufacturing of Pig Iron, Ingots/ Billets, TMT Bar. The factory is located in the Vill.- Paiki. P.O. –Marar, Dist- Ramgarh (Jharkhand) Pin- 829117.

The operation is of continuous nature. The factory runs around the clock.

The factory does not come under the preview of the hazardous process factory as defined under sec .2(c)(b) of the factories amendment act, 1987 not also listed in schedule-1 of the Act. It however, comes within the preview section 87 of the Factories Act, 1948 read with Rules (95) of the Jharkhand Factories Rules, Schedule (13) of the Rule (Chemical Work Rules)

It is a registered factory under the Factories Act, the registration No. is **70257/HBG or the licence No is FCA1636100024001.**

2. NEED OF THE PLAN

It is of course the Factory is fraught with the mechanical hazards due to the arising out of the types of machinery installed, nature of process and the materials handled but the use of the substances such as Diesel oil as well as other combustible materials such as burning of Coal, handling or storages (if any) of flammable chemicals in the bulk quantities in the store, lab etc. makes the industry more vulnerable to fire and explosion.

The FACTORIES ACT, 1948 as amended in the year 1987 requires that every occupier shall draw up an onsite -Emergency management plan and detailed disaster control measures for his factory and make them know to the employees and to the general public living in the vicinity of the factory. It is better to have a plan drawn prepared and rehearsal. Therefore, in view of this, it is a imperative to prepare an ON-SITE EMERGENCY PLAN to serve as a guide line at the time of an accident (s) to help all concerned to handle the situation efficiently an quickly.

3. TYPES OF EMERGENCY

An emergency occurring at a plant is one that may cause serious injuries, loss of life, extensive damage to property or environment or serious disruption inside or outside the plant. They may demand the rescue and relief measures on a war footing to handle it efficiently. No matter how well a plant is controlled and safeguarded by instruments and process safety procedure, it is invertible that there is a residual risk which is capable of causing a variety of emergencies.

An unexpected event (an accident or occurrence) in a factory causes disturbance and the normal activities there in snapped temporarily. This too gives rise to emergent situation. Such situations are normally controlled through the manpower and resources available in that particular section of the factory in which incidents take place. In controlling such type of situations hardly any planning is needed. However an action plan to restore normally quickly should be prepared in respect of all probable accidents and alert practice exercise conducted to ensure every action without any confusion and resultant delay.

The other type of event (unexpected event or an accident of occurrence) Which requires help for restoration of normally of different sections of the factory (such as security, maintenance, fire fighting, first aids Etc.) major may not require shutting of the factory partly or completely need plan (called ON-SITE EMERGENCY PLAN) for co-ordinated actions for restoring normally.

At the last, the types of event (An Accident or occurrence) are that in which the situation goes out of control of the factory's authority, manpower and resources. Such a situation cannot be ruled out.

In such a case, the total control for normally is transferred to the District Authority. This is called OFF-SITE EMERGENCY PLAN.

4. OBJECTIVES OF THE PLAN

The main objectives of the plan are to take immediate actions to meet any emergent situation making maximum use of the combined in – plant and allied resources and relief operations. Those are enumerated below.

- To cordon and isolate the effected are for smooth rescue operation.
- It will also show in true sense then awareness of management towards the safety of the personnel, properties as well as environment.

- The plan will also provide the quick relief and habitation measures to be put into efforts in the shortest possible time.
- To rescue and treat casualties and safe guard the rest.
- To identify any dead and provide for the needs of the relatives
- To provide necessary information to statutory agencies.
- To provide information to the news media.

5. METHODOLOGY

Keeping in mind the needs, the plan is formed on the following basis:

- Identification of possible hazards in various shops and their impact on the surroundings.
- Detailed information on the available resources and control measures.

6. IDENTIFICATION OF HAZARDS

The factory is fraught with mechanical accidents hazards due to typical nature of the machinery/equipments installed there in. The safe guarding of the equipments has been complicates by the wide range of operations conditions.

The most frequent injuries are:

- Being stuck by flying ashes.
- Using materials handling equipment improperly.
- Being burned by hot scale.
- Bursting pressure vessels/Air Trunks etc.

However, there are several mechanical hazards on account of unsafe acts/conditions apart from the described above but the accidents / incidents arising of the mechanical hazards would not give rise to an emergent situation.

Storage of Diesel oil and use, there may cause fire/explosion if it is not properly stored and handled with great care, Fire/Explosion, if occurs may cause an emergent situation.

PRESSURE VESSELS

Explosion in pressure vessels may also cause an emergent situation and need preparedness and planning for emergencies. The cause may be -

- Corrosion of the metal of the vessel to a point where it will no longer withstand working pressure.
- Vibration of the vessel or its connected pipings.
- Faulty safety devices.

COLLAPSE OF STRUCTURES

This may cause due to weakness and fatigue developed. Probability may be failure of lifting tools & tackles.

DIESEL STORAGE, USE AND HANDING:

Diesel is used for generating hot water in the HOT WATER GENERATORS installed in the factory and also for running the DG-Set for which it is kept stored also. The auto-ignition temp., explosive limits and flash-points of the substance are 256.6°C, 0.7 to 5% by volume and 22°C to 96°C respectively. Petroleum Products including the diesel are hazardous when the proportions of vapour and air are in explosive range. A source of ignition such as a match, electrical spark, a spark from steel or lint, a lightning strike etc. and air ratio is within the flammable limits there will be fire or explosion for which apart from taking necessary safety measures, an emergency plan should also be prepared.

ACTION PLAN

While action plans in respect of all the accidents, major or minor should be prepared and kept ready well-rehearsed and drilled, but in respect of the following accidents, an ON-SITE EMERGENCY PLAN to serve as a guide line at the time of emergency to help all concerned to handle the emergent situation efficiently and with confidence otherwise there will be utter confusion and chaos.

- Over turning of powered vehicles, fork lift-trucks etc (if any)
- Bursting of pressure vessel.
- Bursting or explosion in hot water generator unit.
- Fire in storage, use and handling of diesel.

7. AVAILABLE RESOURCES

We have seen that apart from the mechanical hazards. There is a risk of Fire/ Explosion. Bursting of pressure vessel may cause severe injuries to several persons at a time.

To meet any eventually the factory has developed a good fire fighting system. Requirement of water just to meet at different stages and especially for fire fighting in the plant, bore well is located in the different direction of the plant. The water required for drinking, other utilities and cooling purposes is distributed through allied piping network and intermediate storage system. Sufficient number of portable Hand Appliances of different capacities is installed at the requisite locations of the plant.

In the factory a room has been earmarked known as FIRST AID POST. The following medicines are also available-

- Medicine – For treatment of common ailments.
- Surgical –Sterilised dressing materials antiseptic lotions.
- Burn- Lotions & ointments for burn injuries.

MEDICAL SERVICES

In view of the number of workers employed in the factory, a whole time Medical officer is not required to be employed statutorily in the factory. However, 4 (four) FIRST-AID- BOXES are maintained and company vehicle is also to treat and carry the injured persons respectively to the hospital have been provided. The CO. have made arrangements with the local nursing homes at Ramgarh.

Out of 4(four) FIRST- AID- BOXES two is kept in the office of the Factory and two at the shop- floors. They contain all the medicines and the contents as prescribed under rule 64 (c) of the Jharkhand Factories Rules. As stated by the management 4 (four) persons are trained in giving first- Aid.

In addition to the services mentioned above, a room having good ventilation, plenty of light (both natural and artificial),conveniently located in respect of the plants of the factory with running water and toilet close- by (First-Aid Room) with the following equipment shall be provided:-

- (a) Stretchers -2 Nos.
- (b) Blankets - 2 Nos.
- (c) Moveable Curtains

FIRE- FIGHTING

Quantity of water for fire –fighting purposes shall be calculated in accordance with the formulae as provided under Rule 62(2) of the Jharkhand factories Rules and the figure so arrived at (quantity of water) shall be maintained for at least 100 minutes.

At least 50 percent of this water (quantity of water) supply Or 450 klitres (whichever is less) shall be maintained in the form of static tanks distributed round the factory with due regard to potential fire risks. The water so stored would not be used for any other purpose other than fire –fighting. Adequate number of FIRE HYDRANTS ,not less than 15 cm in diameter and capable of supplying water minimum of 4500 litres/min at 07 kg/cm sq. shall be provided with due regard to the fire- risks.

However, in the “Light hazard” occupancy like officers, assembly halls etc. ONE 09 litre water bucket for every 100 square meters of floor area or part thereof and 09 litre water bucket (soda acid or gas pressure or bucket pump extinguisher) for each 06 bucket or part thereof with a minimum of the extinguisher and two buckets per compartment of the building shall be provided.

Sufficient number of persons shall be trained in using fire fighting equipments.

Lastly, FIRE- FIGHTING DRILLS shall be conducted at least once in every 03 month and records in respect of such periodical drills shall be maintained in a bound register.

CONTROL MEASURES

Safety devices are provided wherever necessary.

8. PRE –EMERGENCY MANAGEMENT ACTIVITIES

Pre emergency activities are conducted regularly so that any incident may not take place.

i) INTERNAL SAFETY AUDIT

The internal safety audit is conducted regular interval of time and been broadly discussed during safety committee meeting for

identifying hazards, unsafe Acts/Conditions and also to take the appropriate measures in proper nick of time.

- Personnel protective equipment are also been checked.
- On regular basis.
- Checking of Fire Fighting equipment.

-

ii) SAFETY AUDIT BY THIRD PARTY

The Company management has not yet carried out the safety audit from outside agency and expected to do the same very soon. According the recommendations to eliminate the hazards will be implemented.

iii) TRAINING

- To organize regular training to the employees on handling various safety equipment in emergency.
- To organize fire fighting training for handling emergent situation siring.
- To train the people in industries situated around on taking protection steps in case of particular situation.

iv) MOCK DEMONSTRATION

- Mock Drills to be conducted at a fixed regular interval to check the performance of the Personnel and Equipment.

9. ON-SITE EMERGENCY MANAGEMENT PLAN

Is an interval and essential part of loss prevention strategy? Though a great deal of precautions is taken and operating standards and facilities are provided, there always remain a possibility of occurring emergency. As such emergency preparedness becomes essential so that action can be elements of the plan would be:-

- Locating operating centre
- Management o operation centre
- Sequence of Action
- Guide lines for handling emergency

- Telephone No's of key personnel
- Duties of each person
- Evacuation Plan
- Fire Protection Plan
- Medicine Service Plan
- Rehabilitation Plan
- Civil Neighbouring industry and special organisation.
- Contact person lists with Tel. Nos. and address
- Protection of evidence and logging of events actions plan

A) The following agreements would exist inside the plant to meet the emergencies.

- i) There would be Co-ordinates for emergency on the following
 - a) Chief Co-ordinator -1
 - b) Safety Co-ordinator -2
 - c) Communication Co-ordinator -1
- ii) There would be an information centre/emergency control room inside the factory

RESPOSIBILITY OF CHIEF CO-ORDINATOR

PRE EMERGENCY FUNCTION

- To ensure the implementation of emergency planning
- To ensure that the emergency control room in adequately and other essential items are readily available
- To ensure that the Department of Sectional heads have developed well-trimmed emergency in their respective discipline.

RUNNING OR MANAGING OF DISASTER CONTROL CENTRE

- Setup an emergency Control Centre in the administrative building of the factory under the direct charge of managing through the use of siren.
- Declare state of emergency through the use of siren.
- Mobilize the main Co-ordinator

- Inform all local statutory authorities
- Authorize evacuation of number of the public in the vicinity of the plant
- Assist Safety Co-ordinator
- Decide the level of emergency
- Ensure that key personnel are called and exercise control o those part of unit which are outside the scene of events.
- Continuously assess the possible development to find out most probably course of event
- Arrange for recording of events in Chronological order
- Order for setting up an enquiry Committee to enquire into the cause of disaster, the lapses and fixing up the responsibility

SAFETY CO- ORDINATOR

- Ensure Safe shutdown of the operation
- Mobilize the fire fighting operation
- Conduct fire fighting operation
- Effectively deploy man power both internal and external
- Monitor requirements of fire fighting and Co- ordinate with communication Co- ordinate for procurement of spares.
- Arrange flood lighting of the affected areas (if required)
- Arrange dewatering of the fire fighting area

COMMUNICATION CO –ORDINATOR

- Inform external agencies for agreed assistance. Direct outside agencies on their arrival to the respective Co-ordinator
- In case of communication equipment failure send
- Message to police station, Telephone Dept and other
- Concerned offices
- Activate the medical centre and mobilize the medical team
- Arrange ambulance and transfer of casualties to hospitals
- Maintain a casualties register
- Co-ordinate with police in the event of fatalities
- Arrange procurement of spares and additional medical drugs/ appliances

- Arrange food beverages and drinking water for all those involved in fire fighting activities
- Communicate with relatives of employees injured, involved in fire fighting activities
- Arrange transport as required
- Co-ordinate with police for conduct of traffic outside the premises
- Monitor entry of personnel in the premises
- Co-ordinate members of the public from the vicinity of the plant and arrange refreshments at the relief centre if required
- Co-ordinate with external agencies for specialized assistance

Following would be the specialised agencies for combating. The major fire

1. Police
2. Fire Brigade, District Authorities and other neighbouring industries.
3. Other Mutual Aid members

Specified Assistance Would be brought from

1. State Electricity Board for Switching off or maintaining continuous electricity supply as the case may be.
2. Water supply department water transporters for arranging water required for fighting.
3. Doctors for immediate attention at site.
4. Ambulance Service.
5. Video Shooting Services to film the actual Emergency disaster scenario and the relief operations. Local fire fighting equipment supplies for Emergency replacements.
6. Dependable source for financial assistance if required.
7. Hospital/ nursing Homes- number of beds. Capacity to treat casualties facilities for treatment of burns, Poison cases etc.
8. Medical Shops-Whether storing life savings drugs, opening day and night to be indicated.
9. Mobile genotor-hire service for emergency power supply.
10. Blood bank/Blood donors Association
11. Telephone Exchange for giving priority to emergency calls

12. Caterers- for providing food to the evacuated Numbers of the public if required.
13. Car/Taxi hires services.

Statutory Authorities to be informed

1. Factories Inspection Dept.
2. District Authorities
3. Chief controller of Explosive (if necessary)

EMERGENCY ALARM SYSTEM

There would be two different types of alarms to differentiate on type of emergency from other. The system shall have back up facility or generator to take in case of power failure

Fire or Gas	-Normal Fire Siren
Emergency/Evacuation	-A high continuous Siren
All clear	-Continuous Fire Siren

In case of failure of above alarm system, communication shall be via telephone to telephone operator who will inform all. A public address on the board shall be installed at the main gate; Walkie- Talkie and paging system are very useful for Communication during emergency.

The alarm shall be regularly checked and properly maintained. Another useful communication system shall be pneumatic whistle with pre-determined codes of communication.

In case of failure of emergency siren, messengers shall be used to communicate the event. The basic and essential features used to communicate the event. The basic and essential features of emergency planning are -

- a) Assuming the size and nature of the events foreseen and the probability of their occurrence. The events that are commonly having serious burns to personnel or resulting in collapse of structure or release of toxic chemicals (if any) in the environment.
- b) Liaison with local authorities including the emergency services.

c) Procedure-

- Raising the alarm
- Communications both within and outside the work zone
- Rescue/ Evacuation of personnel and containment of emergency

d) Appointment of key personnel and specifying their duties and responsibilities such as

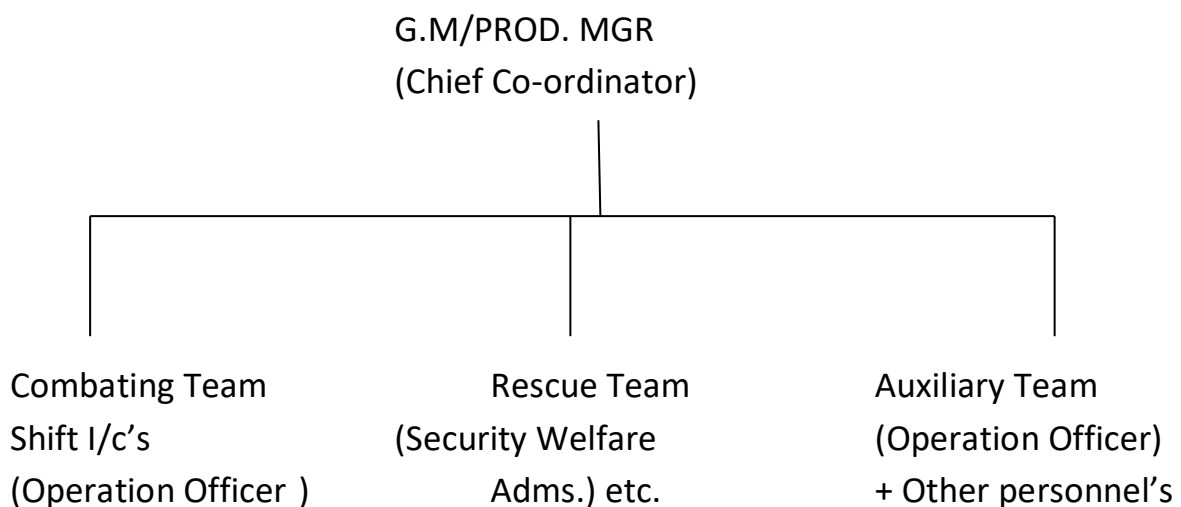
- Emergency Control Centre
- Details of action to be taken on site
- Details of action to be taken off site
- Training and rehearsal
- Reviewing and updating

ORGANISATION

Emergencies are rarely occurring. As such, they are not a day to day activity, not planned activity at a fixed time of schedule. The activities during the emergencies are to be co-ordinate and this could be achieved by an organisation.

Approach which has quick response capabilities. The organisation structure of emergency management will be as under:-

ORGANISATION CHART FOR CONTROL OF DISASTER EMERGENCY



PROMPT COMMUNICATION SYSTEM DURING EMERGENCY

The fire can be located by the plant personnel or any one moving the plant any employee in such situation the communication system will be as:

- On observing by any employee, information will be given to either safety Co-ordinator or communication Co-ordinator immediately either by calling other by shouting.
- Safety or communication Co-ordinator (in this case shift-in I /c) will alone sent the information to Emergency control room. Security I/n, or Security on gate arranges to set the fire fighting tea, rescue team at the site of occurrence so that the supervisor can take a few independent decisions to achieve to overall objective.

The responsibilities of some of the Co-ordinators of organisation during emergency are as follows:

Chief Co-ordinators

- Assurance emergency and activate the plan
- Continuous Preview and monitoring of the emergency situation and take corrective action with help of other senior members
- In emergency is prolonged arrange for the replacement of emergency handling members
- Control of traffic and transportation facilities for the emergency.

Safety Co-ordinator

- Maintain close liaison with Chief Co-ordinators.
- Control of operation and depending on situation of shut down of other operation, loading/unloading and isolation of affected areas.
- External Technical guidance and Logistical to fire personnel.
- Establish danger zone and barricuacade if necessary.

- Plan and organize evacuation services

Medical Chief (if any)

- Preparation of plant dispensary/or First –Aid-Centre (if any) under readiness for emergency.
- Arrange for keep medical supplies and equipment.
- The Co-ordinators should not leave the command post unattended

Communication and Co-ordinators

Communication includes physical and administration means by which plant operator can rapidly notify plants management and off site emergency responses agencies and the public. They also include the emergency responses which must be taken to protect health and safety of the plant personnel and the public, without adequate communications successful disaster planning cannot be executed.

RESPONSIBILITY OF SERVICES

FIRST-AID-SRVICES

- Local dispensary/nursing homes medical officers on duty.
- Through the medical officer, ensure medical supervision of the victims and provide FIRST-AID.

ADMINISTARTION AND WELFARE SERVICES

They will be responsible for preservation of evidence of taking photograph if necessary for future enquiries into the case of emergency personnel.

POWER AND WATER SERVICES

They will ensure adequate supply of water and power required for emergency service water for fire- fighting too.

STORES

They are responsible for providing adequate and requires tools and equipment for emergency.

TRANSPORTATION SERVICES

Adequate transport vehicles will be provided for medical treatment communication, excavation and the movement of emergency staff. The vehicle will be equipped such as:

- Ambulance which can accommodate stretchers
- Pick up van with radio communication system
- General purpose vehicles.

FACILITIES WITH THE EMERGENCY CONTROL CENTRE

It shall be located near the gate. It shall be equipped with the following:

- Telephone connection P&T and ineternal with STD Facilities
- Public addresses system which includes lifing commissioner Supt. of Police by Suptd. Of Police, sub Divisional Officer, Dy Chief Inspector of Factories, Inspector of factory, P.S. (District Fire Officer)
- Electrical Siren or Hooters
- Emergency Light
- Portable Generator
- Self-Breathing Appliances
- First-Aid Boxes equipped with all necessary items
- Personnel Protective equipments
- Suitable Furniture
- Stretchers
- Rope Ladders
- Fire Suit
- Spanner Set
- Layout Plan of the factory
- Fire Fighting and rescue operational Manual

- List of all key personnel with their address and telephone nos.
- Technical documentation of the complex P&I diagram process date equipment date
- Maps marked with escape routes
- Complex information regarding the fire fighting and medical services
- Refreshment

One officer not below the rank of shift-in-charge/others officers shall always be on duty in than emergency control room. The emergency control room shall function round the clock.

MUTUAL AID SYSTEM

During emergency you may contact local nearby industries for any kind of help. Also contact District fire officer for providing help of fire brigade as well as other chief medical officer/medical officer ESI Hospital/Nursing Homes etc.

The emergency Control Room will be assembly points for assemble persons, employees, contract workers, casual labours etc.

v) POST EMERGENCY ACTIVITIES

POST DISASTER ACTIVITIES SHALL BE AS UNDER:

- a) In order to restore the system back to normal proper repair of the plant, machineries and rehabilitation of the victims and affected persons are essential Engineering services and other will arrange to bring the system back to normal after through repair and replacement of the equipments
- b) Through medical check up of the persons of the affected areas shall be done
- c) Relevant records, log books, charts and record pertaining to the mishap will be collected

- d) The occupation of the factory shall arrange to constitute a committee to enquire into the causes of the incidents to fix up the responsibility and to suggest the future courses of action so that the incident can be avoided
- e) Insurance company will be informed about the incident. The Insurance Company shall get the survey of the damage done by the surveyor. The concerned personnel would arrange to make the estimate of the damage and properties claim would be lodged with Insurance Company.
- f) The findings of the enquiry committee, suggestions and recommendations will be implemented by the concerned section after approval of competent authority.
- g) Statutory authorities shall be informed about findings of the enquiry committee.

Vi) OFF-SITE EMERGENCY PLAN

The offsite emergency plan is logical and compatible extension of the onsite emergency plan. It is dealt those incidents which have the potential to harm persons of the environment outside the boundary of the premises. Occupier of the factory will provide sufficient information to enable the local authority to formulate plan in addition to involving themselves actively the formulations the off site plan also covers the actions outside the works. The roles of various agencies who may be involved in the implementation of an off side plan or given below:

- a) Off site plan will develop by the District local Authority. There will be existence of an excellent Communications System between the factory and local authority.
- b) The Communications system between the factory and local authority i.e local administrations, police, health authority, fire stations, factories in the vicinity etc. Should always function day-night.

- c) There will be unified sources of Liaison for dealing with outside agency to avoid confusion at any stage at the time of emergency.
- d) The management will provide advice to the entire outside Organisation which become involved in handling the off-site emergency and which will need previously aspects of the works activities e.g. emergency services medical assistance and also water work authorities.
- e) Disaster/emergency Planning Committee: It is expected that Dy. Commissioner, Ramgarh who will be the chairman of the DISASTER CO-ORDINATION COMMITTEE will be planning with the emergency services. The committee will be consisting of members from police, Health Services, Fire Brigade Factory Inspectorates, Pollution Control Board, and Representative from industries identifying having off-site consequences. The factory (M/s Radha Casting & Metalik Private Limited) will keep the committee informed about the available from the local nursing homes, hospitals; fire stations maintained that should be provided to meet emergencies.

ANNEX – INDEX

ANNEXURE – I

ANNEXURE – II

ANNEXURE – I

CHEMICAL INFORMATION SAFETY SHEET

1. DIESEL OIL

ANNEXURE – II

CHEMICAL INFORMATION SAFETY SHEET

(DIESEL OIL)

1) THE NAME OF THE SUBSTANCE:

DIESEL OIL: GAS OIL

A COMPLEX mixture of hydrocarbons

2) THE PHYSICAL & CHEMICAL PROPERTIES AND OTHER CHARACTERISTICS:

a) Sp Gr.	0.8-0.91 (20°c)
b) Vapour Density	3.0 – 5.0
c) Flash Point	22°c to 96°c
d) Explosive Limits	0.7 to 5% Vo by air
e) Auto Ignition Tem.	256.6°c

Oily liquid, light brown colour

Characteristics odour (about 0.1 ppm Odour threshold)

Solubility (Water)

3. THE PHYSICAL HAZARDS OF THE SUBSTANCE:

HAZARDS

- (1) FIRE: Moderate when exposed to heat or flame,
Can react with oxidising materials. Flash back may occur along vapour trail.
- (2) EXPLOSION: Moderate when exposed to heat or flame

4. THE HEALTH HAZARD OF THE SUBSTANCE INCLUDING THE SIGNS & SYMPTOMS.

- a) INHALATION : Dizziness Headache
- b) INGESTION : Nausea, Vomiting, Irritation of mouth and gastro intestinal tract may follow.
- c) ASPIRATION : Rapidly developing – potentially fatal chemical pneumonitis.
- d) SKIN & EYE CONTACT : Prolonged or repeated contact may remove natural fat from the skin, skin chapping or cracking or dermatitis may be the result. CASES of skin cancer have also come to the notice

5. **THE PRIMARY ROUTE (S) OF ENTRY :** As above

6. **THE PREMISSIBLE LIMITS OF EXPOSURE AS PRESCRIBED UNDER THE SECOND SCHEDULE U/S 41-F OF THE FACTORIES ACT.**

THERESHOLD LIMIT VALUE (TLV)

MAX^M. ALLOWABLE CONCENTRATION = 5MG/M³

7. **ANY GENERAL CONTROL MEASURE FOR SAFE HANDLING**

a) It is necessary that no open flame or heat should be brought near the storage and in course of handling and use of the substance. Oxidising materials to be kept away from the oil. Adequate vitalisation is to be maintained in the storage are.

b) Extinguishing agents such as:-

- Foam
- Carbon dioxide
- Dry Chemical

are to be maintained for fighting fire.

c) As regards health hazards, it is necessary to

i) Maintain adequate vitalisation to keep vapour concentration down.

- (1) Prohibit aponic by mouth
- (2) Provide protective clothings to avoid skin Contact.
- (3) Adequate first-Aid arrangements and facilities to be maintained.

ANNEXURE-II

1. CHECK OF EARTHING PIT.
2. EXAMINATION OF LIFTING M/C AND PRESSURE VESSELS.
3. FIRST –AID FIRE FIGHTING EQUIPMENT
4. RECORDS OF MOCK-DRILLS
5. ACCESSORIES AND PERSONNEL PROTECTIVE EQUIPMENTS (PPE’S)

EXAMINATION OF LIFTING MACHINES PRESSURE VESSELS

Sl. No.	Name of equipment	Location of Installation	Agency/ Person	Component is checked	Observations	Steps Taken	Next Due Date Examination	Remarks

FIRST-AID FIRE FIGHTING EQUIPMENT									
Sl. No.	Make	Equipment No.	Class of fire	Capacity	Date of Refill	Equipment No.	Location of Installation	Date of Last Inspection	Remarks

CHECK OF EARTHING PIT							
Sl. No.	Date of Examination	Agency Person	Measured Resistance	Allowable Resistance	Steps Taken	Next Due Date Examination	Remarks

RECORD OF MOCK-DRILL

1. Date of bill :
2. Location of Emergency :
3. Nature of Emergency :
4. Details of Response Time :

<u>Activity</u>	<u>Time</u>	<u>Response</u>
4.1 Emergency Spotted		
4.2 Alarm Raised (Vocal/Hand Siren)		
4.3 Electrical Siren sounded (wailing)		
4.4 DCP Discharged		
4.5 Rescue teams on site		
A. Fire Combat Team		
B. First-Aid Team		
C. Auxiliary Team		
4.6 All Bulk/ packed trucks evacuated		
4.7 Mutual Aid members on sit		
4.8 All clear given on site.		
4.9 Siren sounded for all clear		
5. Overall assessment of preparedness of the drill:		
6. Positive features of the Drill :		
7. Areas of improvement :		

ACCESSORIES & PERSONNEL PROTECTIVE EQUIPMENT

1. PVC Apron
2. Leather Lined asbestos hand gloves
3. Rubber Hand Gloves
4. Resuscitator
5. Safety helmets
6. Flood Light/search Light
7. Light extension Ladder/ Fixed Ladder
8. Ropes (Manila) / Safety Ladder
9. Spanner set
10. Rope Ladder
11. Bolt Cutters
12. Emergency Torches
13. First-aid kit
14. Stretcher
15. Public Address System
16. List of Important telephone numbers such as :
 - **Dy. Commissioner (Ramgarh)**
 - Sub- Divisional Officer
 - Superintendent Of police (Ramgarh)
 - Deputy Superintendent of Police
 - Local Nursing Home
 - Govt. Hospital
 - E S I Hospital
 - Dist. Fire Officer
 - Regional Officer (Jharkhand State Pollution Control Board, Hazaribag)
 - Dy. Chief Inspector of Factories
 - Inspector of Factories etc.