DISASTER MANAGEMENT PLAN

Section	12
Sub.Sec.	12.1
Date	July 2020

1. INTRODUCTION

Emergency / Disaster planning is an integral part of the overall loss control program and is essential for any well run organisation. This is important for effective management of an accident / incident to minimise environmental impacts and losses to people & property, both in and around the installation. The important aspect in emergency management is to prevent by technical and organisational measures, the unintentional escape of hazardous materials out of the installation and minimise accidents and losses. Not only the unrecognised hazardous conditions which could aggravate an emergency situation be discovered, but the emergency planning process also brings to light the deficiencies such as lack of resources necessary for effective emergency response. Emergency planning also demonstrates the organisation's commitment to the safety of employees and increases the organisation's safety awareness.

The format and contents of the On-site Disaster Management Plan (DMP) (also known as Emergency Preparedness Plan - EPP) have been developed taking into consideration the regulatory guidelines, other applicable documents and accepted industry good practice principles formulated as a result of lessons learned in actual emergencies requiring extensive emergency response.

DMP can work smoothly and effectively only if the instructions are correctly and promptly followed and action taken at various levels is well co-ordinated.

1.1 OBJECTIVES

The objectives of DMP is to describe the installation's emergency preparedness/response organisation, the resources available and response actions applicable to deal with various types of emergencies that could occur at the installation with the response organisation structure being deployed in the shortest time possible during an emergency. Thus, the objectives of Disaster Management Plan can be summarised as:

1) Rapid control and containment of the hazardous situation
2) Minimising the risk and impact of event/accident as well as environment
3) Effective rehabilitation of the affected persons and prevention of damage to property.

In order to effectively achieve the objectives of emergency planning, the critical elements that form the backbone of the DMP are:

a) Reliable and early detection of an emergency and careful planning.
b) The command, co-ordination, and response organisation structure along with efficient trained personnel.

c) The availability of resources for handling emergencies
d) Appropriate emergency response actions.
e) Effective notification and communication facilities.
f) Regular review and updating of the DMP.
g) Proper training of the concerned personnel.

1.2 RESPONSIBILITY

Responsibility for establishing and maintaining a state of disaster management belongs to the Factory Manager. He is responsible for maintaining distribution control of the plan through System Coordinator (SCO), and for ensuring that the plan and applicable implementing procedures are reviewed and revised. SCO & Manager (HR) is responsible for the training of personnel to ensure that adequate emergency response capabilities are maintained in accordance with the plan. They are also responsible for ensuring the adequacy of the conduct of drills, as outlined in the DMP. All identified employees of various departments are responsible for carrying out their responsibilities, as defined in this DMP.

2. SCOPE AND AVAILABILITY

The emergency planning describes the facility, equipment, organisation services and communication necessary to respond to emergency condition at the company.

2.1 FACILITY DESCRIPTION

HIMGIRI CASTINGS PVT LTD is an IRON DUCTILE CASTINGS manufacturing facility.

2.2 DEFINING A DISASTER

An industrial disaster can be defined as an "occurrence of the abnormalities of such magnitude that create a situation in which normal pattern of life within an industry/installation is suddenly disrupted, adversely affecting not only the environment, personnel and property within the installation but also in its vicinity."

Such an occurrence may result in on-site implications like:

i Fire and/or explosion,
ii Leakage of flammable/combustible material
iii Flood / Earthquake / Cyclone

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During the Environment Analysis carried out in the plant, following emergency conditions are identified:

1. FIRE IN ANY AREA (OTHER THAN MELTING AREA)
2. FIRE IN MELTING AREA
3. SPILAGE OF CHEMICAL/LIQUID METAL
4. FIRE IN ANY AREA (OTHER THAN MELTING AREA)

A fire can be identified when, seen or someone senses it.

A - lF FIRE lS SENSED :

1. When siren/alarm is activated, the Security In charge at main Gate and Electrician on duty should rush to the Fire alarm system (FAS) control panel.

2. They should check the area from where the alarm is activated .The same is displayed at FAS control panel. First they should acknowledge the alarm, and inform all the plant by dialling Security Gate No.9359610323 for the area where the Fire/Smoke is detected than inform Plant for wait till next update, and then call (Emergency Contact list to be displayed near FAS having same name as displayed) the respective area in charge for verifying if there is an emergency and if yes, after conforming the magnitude of Fire/Emergency' ask for evacuation for persons those who are working in corresponding area, Should also inform the incident to Mr.Pauskar –GM (dialling 9422970982) Mr.Rupesh Gawas-HR (8308833004)

3. Shift In charge shall be the main controller and stay behind along with two persons and try and contain the fire. He shall also coordinate with one Security personnel from the main gate.

4. Upon feedback, Security ln charge should ask the area in charge to send all the personal form the affected area and to assemble at the Emergency assembly point near Main Gate.

5. Upon feedback from the respective area, Electrical Engineer/ Electrician In charge will isolate the power form respective Dept. Emergency lights shall be available at Main Gate.

6. In case of failure to control the emergency locally the Shift in charge shall intimate accordingly to the Manager on duty or call for external help. However the incident shall also be reported to HR Head in any case.

B - IF FIRE IS SEEN BY SOMEBODY AND NOT SENSED BY SMOKE DECTECTOR:-

1. Rush to near Manual Call Point (MCP), Indicated in the Safety or Evacuation map, Open the MCP. Security in charge and electrician shall rush to FAS. Security In charge shall ask the

area in charge to send all the personnel form the affected area to assemble at the Emergency assembly point near Main Gate

2. Upon feedback from the respective area Electrical Engineer/ Electrician Incharge will isolate the power form respective PDB (Power Distribution Board)

3. Shift In charge shall be the main controller and stay behind along with two persons and try and contain the fire. He shall also coordinate with one Security personnel from the main gate. (Two Security persons are always available all the time at main gate, so one would remain at Gate and other would be near the incident)

2. FIRE IN MELTING AREA

a. Person who first observes a fire in the Melting area shall inform the security

b. Security In charge shall inform the shift in charge to evacuate the area urgently, and shall arrange to douse the fire with help from Electrical and mechanical technicians; lf extent of fire seems controllable.

c. Incase the fire seems to go out of control, Security In charge shall call the local Fire Fighting station to arrange to douse the fire with help from them. At the same time, also contact Mr. Pauskar (GM) in the factory or at his residence. He shall inform HR Head.

2.1. SPILLAGE OF LIQUID METAL

a. In case of spillage of liquid Metal in plant, the shift in charge shall coordinate the arrangement of spillage along with the personnel in the respective department.

b. The spillage shall be contained by creating dykes.

2.2 PARTICIPATING GOVERNMENTAGENCIES

Continuing liaison is maintained with government agencies to ensure compatibility of related plans. This liaison ensures an understanding of, and proper interfaces for, notifications, responsibilities, and personnel including the resources of state and local agencies.

3.0 THE AVAILABILITY, ORGANTSATION AND UTILISATION OF RESOURCES FOR EMERGENCIES

In order to maintain an emergency response capability, following facilities must be kept in a state of readiness, and sufficient supplies and equipment must be available.

- Emergency Control Centre (ECC)
- Communication equipment
- Alarm systems
- Personal protection equipment
- Fire fighting facilities, equipment and supplies
- Medical facilities, equipment, and supplies
- Monitoring systems
- Transportation systems

In some cases, it may be impossible to maintain all of the equipment necessary for all possible emergencies. ln these cases the local fire brigade, police or private agencies may be called upon.

3.1 EMERGENCY CONTROL SYSTEM

Provision is made to establish an Emergency Control Centre (ECC) from which emergency operations will be directed and co-ordinated. This centre is activated as soon as on site emergency is declared.

During an emergency, the ECC is manned by the security Staff. Therefore, the ECC is equipped with adequate communication systems in the form of telephones, to allow Unhampered communication with the teams involved in bringing the accident under control, and with the external response organisations.

The ECC is always ready for operation and provided with the equipment and supplies necessary during the emergency such as:

- Updated copies of the On-site Disaster Management plan
- Telephone set
- The names, phone numbers, and addresses of company executives, Fire Brigade, Hospital, Police
- Clock
- Fire Extinguishers

- A First Aid Kit
- Emergency Lights
- Several maps of the facility including drainage system for surrounding area showing :
  - i Routes of pipelines, etc.
  - ii The locations where fire extinguishers / personnel protective equipment's are stored.
  - iii Fire Escape Plan
  - iv Tools for breaking Glass
  - v The position of water sources
  - vi The locations of special tools including mitigation equipment and supplies.

3.2 COMMUNICATION EQUIPMENTS AND ALARM SYSTEMS

This kind of equipment is absolutely vital for notifying accident, make the emergency Known both inside and outside of the facility, and co-ordinating, the response actions among the various groups involved in response operations.

The most common types installed in the plant are given below.

SIRENS / HOOTERS

These are audible alarm systems commonly used in facilities. They are locate at vantage points in the plant and are audible at all the locations in the plant. These are audio as well as flashing signal.

MEDICAL FACILITIES. EQUIPMENTS AND SUPPLIES

The facility has access to a medical centre just one km away and is served by a full time Doctor. All type of injuries (Minor or Serious) shall be treated in this medical centre.
The list of the phone number of nearby Hospital should be with Communication Controller.

TRANSPORTATION SYSTEMS

During an emergency, supplies and equipment are transported to the scene of the accident. Some of these materials will be transported on four wheeler vehicle which is available round the clock.

3.3 CLASSIFICATION OF MAJOR/MINOR ACCIDENT

INTENSITY OF ACCIDENT	NATURE OF ACCIDENT
MAJOR	Such unintended events/accidents which can result into loss of life, permanent disability or property damage due to Environmental impacts.
MINOR	Such unintended events/accidents which can result into temporary disability, occupational health or minor loss of property.

4. COMMAND CO-ORDINATION AND RESPONSE ORGANISATION STRUCTURE

One of the most important objectives of emergency planning is to create a response organisation structure capable of being activated in the shortest time possible during an emergency.

The organisations and the facilities required to support command, coordination and their response are summarised in the following subsections.

4.1 MAIN CONTROLLER – GM

He shall assume the role of Main Controller and is overall in-charge of the situation. His task will be to co-ordinate all internal and external activities from the Emergency Control Centre, from where all operations will be directed. He shall:

- ✓ Relieve the Incident Controller from responsibility of the Main Controller.
- ✓ Co-ordinate to avail services from external agencies like police, fire brigade, hospitals, etc., if called for, following the declaration of a major emergency.
- ✓ Exercise direct operational control of the unaffected section of the facility.
- ✓ In consultation with the Incident Controller, expedite the shutting down of operations at the affected installation
- ✓ Ensure that all the employees are evacuated from the affected area and the casualties, if any, are given necessary medical attention. Instruct personnel department for rushing casualties to hospitals, if required
- ✓ Ensure preservation of evidence for enquiries to be conducted by statutory authorities.

4.2 INCIDENT CONTROLLER-SUPERVISOR / HEAD OF THE AFFECTED SECTION

Assume the role of Incident Controller and take charge of the situation. Keep the Main Controller informed of the situation from time to time. He shall :

1. Informs the Emergency Control Centre (ECC) about the emergency.
2. Proceed to the scene of emergency and assess the situation.
3. Direct all operations within the affected areas with the following priorities:
   a. Safety of personnel.
   b. Minimise damage to property and loss of material.

4. Advise ECC to provide first aid and rush casualties to hospital.
5. Get all non-essential persons safely evacuated after stopping all the jobs.
6. Pending arrival of the Main Controller, direct the shutting down and evacuation of the facility.
7. Report all developments to the Main Controller

4.3 MANAGER-ELECTRICAL/ UTILITIES

He shall:

- ✓ Be alert on duty for any electrical isolation of equipment during the emergency.
- ✓ Ensure that adequate power supply is available for sensitive facility operations.
- ✓ Electricians shall position himself at the disposal of the Incident Controller handling for any immediate electrical emergency.

4.4 THE MAINTENANCE PERSONNEL

The main responsibility of this team is to provide technical support during the emergency. They shall:

- ✓ Be prepared for providing emergency supplies and services such as water, emergency lighting, and other required utilities.
- ✓ Assess damages and provide technical assistance to determine the operability of damaged units.
- ✓ Carry out or assist the accident investigation.

4.5 COMMUNICATION CORDINATOR

He shall:

- ✓ Notify about the emergency to the MD, GM and other technical staffs.
- ✓ Keep all the vehicle and driver in readiness and maintain continuous contact with the Main Controller & Incident Controller and dispatch the vehicles as per their needs.
- ✓ Keeping a minimum of one vehicle, as standby, at the facility for the emergency use. Do not use the vehicles for any purpose other than for transporting critically injured to hospital.
- ✓ On receipt of instructions from the Main Controller, notify the fire brigade, police, hospitals, and neighbouring facility for assistance.
- ✓ Organise for transporting the injured to the hospitals wherein arrangements are made to handle such emergencies. The nearby hospitals should be identified in advance.

4.6 PERSONNEL OF THE AFFECTED AREA

They shall:

- ✓ Do as directed by the Main/incident Controller.
- ✓ Take adequate steps to safeguard important documents.
- ✓ Continue to handle the emergency as guided by the Main / Incident Controller.
- ✓ Stop all non-essential operations.
- ✓ Evacuate the work place as instructed by the Incident Controller.

4.7 PERSONNEL OF THE NON-AFFECTED AREA

They shall :

- ✓ Those employees who may be in the toilet or any other place, on hearing the shall :
- ✓ Immediately rush back to their work area.
- ✓ Act as per the instructions of the incident Controller.
- ✓ All the employees shall confine themselves at the place of work and wait for further instructions.
- ✓ Take adequate steps to safeguard important documents in case their areas are likely to be affected.

4.8 DUTIES OF KEY PERSONNEL PFIOR TO AN EMERGENCY

SAFETY TEAM / MANAGER – ELECTRICAL
He shall :

- ✓ Maintaining the fire fighting equipment in operating condition at all times. Keep a list of all such equipment & updating their refilling.
- ✓ List of appropriate fire extinguishing media / safety equipment be kept readily available.
- ✓ Periodically check the working of communication equipment.
- ✓ Ensure that the FIRST AID BOXES are adequate and medicines kept in it are not expired.
- ✓ Record of All the Major & Minor event including near Miss, route cause analysis for the event occurrence, Future planning so that the same situation don't occur

4.9 DUTIES OF KEY PERSONNEL DURING AN EMERGENCY

Fire Fighting / Incident Control Team :-

Shall be responsible to control the incident the team include Shift Engineer from One technician One Electrician and Fitter.

Engineering Team:-
Shall be responsible to control the incident the team include Maintenance Engineer, Electrician and Fitter. They will be responsible for locking out /isolation of Electrical Power, ceasing the supplies of Gases etc.

First Aid Team:-
Shall be responsible to handle and help to the affected persons and to provide first Aid if any the team include Safety officer/ Security Incharge and one person who is trained in first Aid.ln case of serious injury the affected person/persons shall be taken to the nearest hospital situated in Kundaim Industrial Estate.

NOTE: All the Team would take necessary instruction from main controller

5. COMMUNICATION PROCEDURES

Communication is essential for the effective co-ordination of the response actions among the different response teams and functions during an emergency.

Telephone Sets are available to each function within the response organisation.

5.1 RAISING THE SIREN / HOOTER

The purpose of raising the alarm is to make emergency known within the facility. Raising the alarm is the first step in the implementation of the Disaster Management plan.

6. EMERGENCY RESPONSE ACTIONS

This element of emergency plan deals with the actual actions that should be implemented by personnel in the various functions during the emergency. As and when any emergency happens in the facility, the same is recorded in the near miss accident investigation format EMS-F-11 available with HR officer. Response time and damages are reviewed in the Management Review Meetings and the suitable corrective actions (e.g. Training of Personnel, increase of resources, change in documentation and any flaw observed in execution of the plan) are taken. The corrective actions are verified by Mock drills.

7. **EMERGENCY TRAINING AND EXERCISES**

No Disaster Management Plan, no matter how carefully prepared, can be fully effective if it is not accompanied by a training program and by periodic exercises and drills. The objectives of such approaches to disaster management are to:

- Familiarise personnel with the content of the plan and its implementation periodically test emergency equipment
- Test the preparedness of the response personnel
- Maintain a high training level and good emergency response capability
- Keep personnel informed of any changes in the plan
- Test the validity, effectiveness, timing, and content of the plan, and of the specific implementing procedures
- Update and modify the plan on the basis of experience acquired through exercises and drills
- Maintain a good co-operation capability with local response departments, organisations, and agencies.

8. DRILL AND EXERCISES

Drills and exercises constitute the second basic component of disaster management. They both refer to a re-enactment, under the assumption of a mock scenario, of the implementation of the response actions to be taken during an emergency. Drills are more limited in scope

than exercises, and are intended to test a limited aspect of the whole response capability (e.g.a fire drill). Exercises are more comprehensive, and are aimed at testing the whole response organisations.

The objectives of drills and exercises are to:

- Test the validity of the plan and procedures
- Familiarise the response personnel with the equipment, methodologies, approaches and to controlling an emergency
- Install confidence in the response personnel
- Maintain disaster management

The attainment of such objectives requires a great deal of effort on the part of the team in charge of organising the drills and exercises. A number of steps are involved in the preparation work. These steps include the identification of:

- The specific objectives of the drill or exercise
- The date, time, duration, and location of the exercise
- The response teams involved
- The controllers, evaluators, visitors, and observers
- The methodology and material for evaluation.

The frequency of the drills will vary depending on the severity of the hazard and the degree of complexity of the drill. However it will be done at least once in three months. Drills can be announced or unannounced. The latter type should be attempted only after the response personnel have acquired sufficient proficiency with the basics of the response." operations.

After the drill or exercise is concluded, the evaluators should review it to determine the effectiveness of:

- The overall plan structure
- Communications
- The line of command and direction
- Emergency equipment quality, quantity, and effectiveness
- Detailed implementation of procedures

- Emergency response implementation
- Co-ordination among the different functions
- Evacuation or sheltering procedures

One or more meetings should then be held to critique the results. A written report should be prepared, pointing out:

- Specific weaknesses and strengths of the plan and its implementation
- Areas where immediate action is required to ensure preparedness
- Suggestions for improving the effectiveness of the plan and/or procedures
- Suggestions for the acquisition of additional materials and equipment
- Areas where additional training is recommended.
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9. PREVENTION & MITIGATION OF ENVIRONMENTAL IMPACTS DURING AND AFTER AN EMERGENCY

1. All the remains of fire have to be properly collected, segregated and dumped in the land.
2. The fire extinguishing media not being hazardous have to be collected property and dumped in the pit.
3. As the process of the company does not involve any hazardous chemicals, the run of water used for extinguished can be allowed to go out through storm water drain.
4. All the empty fire extinguishers have to be collected, refilled and placed in the designated area.
5. Clean the area where the Chemical / Mould spillage is occurred, Dispose Chemical/Mould as the procedure in the defined way.
6. Scrap the Cloths and the container used to collect the spilled chemical/ Mould as procedure in the defined way.

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