RISK ASSESSMENT

7.1. INTRODUCTION

Disaster has struck mankind from time immemorial. Disasters continue to strike unabated and without notice and are perceived to be on the increase in their magnitude complexity, frequency and economic impact. These hazards pose a threat to the people, structures or economic assets and assume disastrous proportions when they occur in areas of dense human habitations. This has compelled the need for a comprehensive approach to prevent and mitigate disasters.

7.2. DEFINITION OF DISASTER

A Disaster is called when following one or the other or more incidents occur:

- Risk of loss of human lives-ten or more in one single situation
- A situation which goes beyond the control of available resource of the project
- Loss of property as a consequence of the incident is over Rs. 1 Crore and/or bears a potential to the above
- A situation apparently may not have much loss but its long-term severity can affect loss of life, production and property.

Disaster occur due to

Emergencies on account of:

- Fire
- Explosion
- Electrocution

Natural calamity on account of:

- Earthquake
- Lightning
- Storm
- Epidemics
- Flood

7.3. NEED AND OBJECTIVES OF DISASTER MANAGEMENT PLAN

The Disaster Management Plan is designed to:

- Anticipate the types of disasters that are most likely to occur;
- Identify the possible effects of any disaster that may occur;
- Identify the preventative and mitigating strategies to deal with any possible disaster;
- Involve all role players in a coordinated manner to respond to the challenges posed in disaster situations;
- Procure essential goods and services for disaster management;
- Identify the weaknesses in respect of capacity and skills to deal effectively with disaster situations;
- Provide essential training in skills and to promote awareness and preparedness in respect of the occurrence of disasters
- Plan in advance the relief operations that may be required or to be exercised in disaster situations.

7.4. IDENTIFICATION AND ASSESSMENT OF HAZARDS

This stage is crucial to both on site and off site emergency planning and requires to systematically identifying what emergencies could arise. These should range from small events, which can be dealt with by plant personnel without outside help to the largest event for which it is practical to have a plan. Experience has shown that for every occasion that the full potential of an accident is realized, there are many occasions when some freak event occurs or when a developing incident is made safe before reaching full potential.

- The assessment of possible incidents should produce a report indicating
- The worst events considered
- The route to those worst events
- The time scale to lesser events along the way
- The size of lesser events if their development is halted
- The relative likelihood of events
- The consequences of each event

7.5. DISASTER PREVENTIVE MEASURES

It is not easy to control any disaster if contingency plans are not available. For effective control of disaster adequate manpower, technical know- how, alertness and internal help are the prime

requirements. It is always better to take preventive measures to avoid any disaster. In the proposed project following prevention measures will be taken to prevent disaster:

- Design, manufacture and construction of the building will be as per national and international codes as applicable in specific cases and laid down by the appropriate statutory authorities.
- Routes for escape during disaster are provided.

Legislation: Guideline for High Rise Building *(MoEF dated 6th June, 2013)*

I. All necessary fire fighting equipments shall be in place before the occupancy of building for more than 15 m heights.

II. nearest Fire station is within 10 minutes driving distance from proposed project site.

III. The linking of the minimum width of the road with the height of the building shall be appropriately built in to the rules/ regulations by the state government/ local bodies under appropriate acts/ legislations taking into account local requirements and circumstances.

7.6. GUIDELINES FOR DISASTER MANAGEMENT PLAN

A Disaster Management Plan (DMP) is formulated for better and safe management. The DMP will include the following elements:

- Assessment of the size and nature of the events foreseen and the probability of their occurrence.
- Formulation of the plan and liaison with authorities, including the emergency services.
- Appointment of key personnel and their duties and responsibilities
- Action on-site
- Action off-site
- Declaration of emergency collection point at site
- Display emergency contact number at all prominent places of site like main gate, building blocks, Store area and Canteen etc.

Format of emergency contact numbers

Coordinator	Phone No.
Police control room	100/1090

Fire Station	111
Ambulance	102/108
Nearest Police Station	
Nearest Hospital	
District Hospital	

7.7. APPOINTMENT OF PERSONNEL AND DEFINITION OF DUTIES

Effective emergency plans require that, in the event of an accident, nominated individuals be given specific responsibilities, often separate from their day-to-day activities. The two principal people are the site incident controller and the site main controller. A Senior Management Personnel will be appointed to act as site main controller and a personnel Junior to him as Site incident Controller The site incident controller will take control the incident. He or she will often be the person in charge at the time of the incident.

The responsibilities of the site incident controller include the following:

- To assess the scale of the incident (both for internal and external emergency Services)
- To initiate the emergency procedures to secure the safety of persons and minimize loss of material;
- To direct rescue and fire-fighting operations until (if necessary) the fire brigade arrives;
- To search for casualties;
- To arrange evacuation of the building
- To assume the responsibilities of the site main controller pending his or her arrival;
- To provide advice and information as requested to the emergency services.

The site main controller will be chosen from the senior management of the works with general responsibility of directing operations from the emergency control center after relieving the site incident controller of the responsibility for overall control.

The specific responsibilities of the site main controller include:

- To decide (if not decided already) whether a major emergency exists or is likely, requiring the emergency services and the off-site emergency plan;
- Continually to review and assess possible developments to determine the most probable course of events;

- To ensure that casualties are receiving adequate attention;
- To liaise with Chief Officers of the fire and Police services.
- To arrange for a log of the emergency to be maintained;
- To issue authorized statements to the news media;
- To control rehabilitation of affected areas after the emergency.

DISASTER MANAGEMENT CYCLE

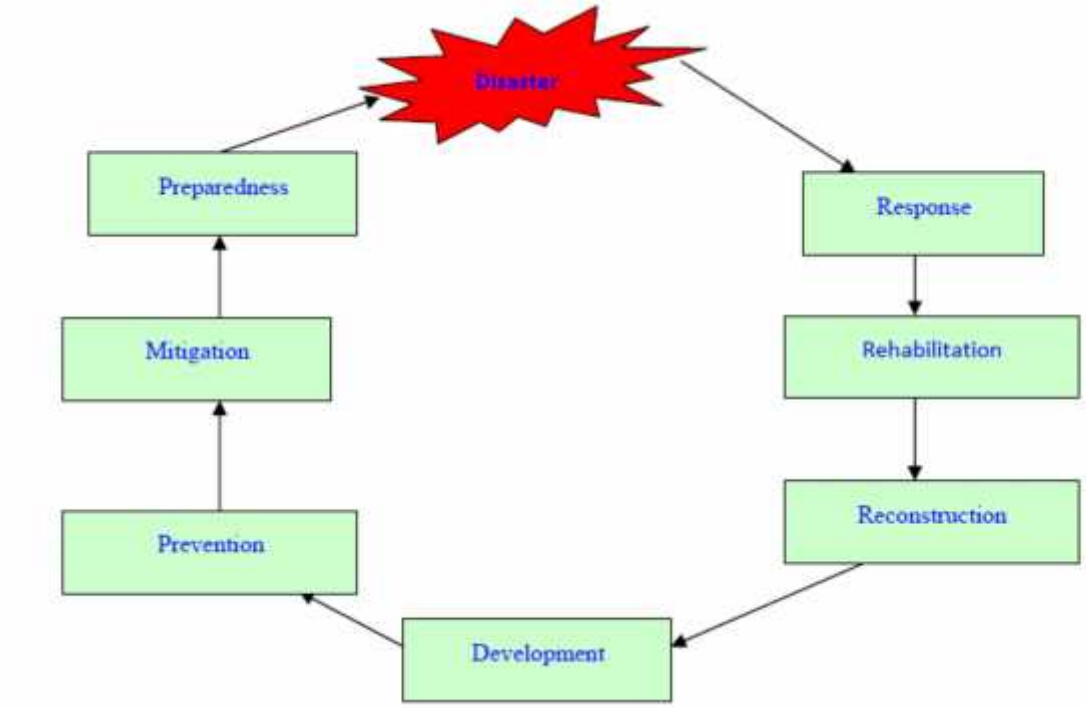

Figure 0.1: Disaster Management Procedure & Response method

7.8. RISK ASSOCIATED WITH THE PROPOSED PROJECT

Main hazards identified for the project include.

- Fire due to LPG/PNG leakage
- Hazard pertaining to Fire in Building
- Fire in diesel storage area/ Garbage storage area
- Electrical accidents
- Earthquake

- Flood in case of breaches in flood enbankments.

7.9. OBJECTIVE OF EMERGENCY RESPONSE PLAN (ERP)

The overall objective of an emergency response plan (ERP) is to make use of the combined resources at the site and outside services to achieve the following

1. To localize the emergency and if possible eliminate it
2. To minimize the effects of the accident on people and property
3. Effect the rescue and medical treatment of casualties
4. Safeguard other people
5. Evacuate people to safe areas
6. Informing and collaborating with statutory authorities
7. Initially contain and ultimately bring the incident control
8. Preserve relevant records and equipment for the subsequent enquiry into the cause and circumstances of the emergency
9. Investigate and take steps to prevent reoccurrence

The ERP has therefore to be related to the identification of sources from which hazards can arise and the maximum credible loss scenario that can take place in the concerned area. The plan takes into account:

1. The maximum credible loss scenario
2. Actions that can successfully mitigate the effects of losses / emergency need for good planning so that with minimum effort resources, the emergency can be controlled.

7.10. LPG/PNG

Risk Assessment-Methodology

Risk assessment involves identification of a list or “Range of representative incidents” and assessing the consequences of the same and estimating the probabilities.

A. Range of Representative Incidents

Typically, a spectrum of events exists ranging from the high probability-low consequence events to the low probability-higher consequence events. Total avoidance of risk (zero risk) is an unattainable goal; however, risks can be managed and minimized through engineering design, good management practices, and the implementation of response measures.

B. Estimated Probabilities: The releases from pipelines can be from a number of sources and can vary in leak size. The risk assessment typically does not include very small continuous release or short duration limited releases as the past experience shows that such release do not contribute to the overall risk levels. The categories that are usually considered are small leaks and large or catastrophic leaks.

Safeguards Taken in Design Stage

All Critical gas piping would be confirming to IS: 1239 with piping designed in accordance with ASTM, ANSI and equivalent codes and standards within built margin of safety.

Emergency Response for LPG/PNG

A. Basic Actions

- Immediate action is the most important factor in the emergency control because the first few seconds count.
- Take immediate steps to stop Gas leakage / fire and raise alarm simultaneously.
- Stop all operations and ensure closure of all isolation valves.
- As fires develop and spread quickly, so all out efforts should be made to contain the spread of leakage/fire.
- Members of Disaster Response team should assemble at the nominated place.
- Electrical system except the lighting and fire fighting system should be isolated. If the feed to the fire cannot be cut off, the fire must be controlled and not extinguished.
- Start water spray systems in the areas involved in or exposed to fire risks.
- In case of leakage of gas without fire and inability to stop the flow, take all precautions to avoid source of ignition.
- Block all roads in the adjacent area and enlist police support for the purpose, if warranted.

B. Actions in the Event of Fire

- Basic actions as detailed above.
- Extinguishing fires: A small fire at a point of leakage should be extinguished by enveloping with a water spray or a suitable smothering agent such as CO_2 or DCP. Fog nozzles should be used.

- Fire fighting personnel working in or close to un-ignited vapor clouds or close to fire, must be protected continuously by water sprays. Fire fighters should advance towards the fire downwind if possible.
- In case the only valve that can be used to stop the leakage is surrounded by fire, it may be possible to close it manually. The person attempting the closure should be continuously protected by water sprays, fire entry suit, water jet blanket etc. The person must be equipped with a safety belt and manned lifeline. In case of rapid increase in decibel level or lifting sound from a relief valve, evacuate the area as there would have been over pressurization.

Response sequence for Gas in dangerous situations

1. Person noticing the fire should attempt to isolate and extinguish the fire with the available equipment and inform or arrange to inform the leader/senior representative regarding the following.
    - Location of the fire
    - What is burning
    - The extent of fire
    - Callers name and number

    Do not disconnect unless the person on the other side repeats the message or acknowledges it.
2. Security on duty coordinators will
    - Respond to the scene of the incident
    - Arrange to send the necessary firefighting equipment to the scene of the incident
    - Extinguish the fire with the available equipment
3. Security officer will
    - Sound the siren as per the siren code
    - Inform the site main/incident controller and act as per his instructions
    - To ensure closure of gates immediately to regulate traffic in such a way that free movement of outside assistance like fire tenders, ambulance etc is available
    - Ensure that under no circumstance do any pumping operations involving gas is to continue. Restrict entry of unauthorized persons.

4. Security should cordon off the area and local city fire fighting staff should be notified. The project will have the fire fighting water system but may not be equipped with staff to operate it. Local fire fighters will need to be notified.
5. All other Management / Asst./Labor staff on hearing the siren, should STOP their operations / work, switch off lights, fans engines, air conditioners etc. close all doors, pipeline valves and line up in front of their working places and meet at a pre-arranged location. These people will assist in evacuating the residents if necessary.

Post Emergency Follow Up

1. All cases of fire occurrence, no matter how small, must be reported promptly to the coordinator for follow up.
2. Under no circumstances should fire-extinguishing equipment once used be returned to its fixed location before it is recharged/certified fit by the fire chief/Safety Manager.
3. Used fire extinguishers must be laid horizontally to indicate that they have been expended.

Early Warning/Alarm System

An audible electric alarm (siren) should be located in the main gate. The different sounds that should be generated by the alarm are.

Small Fire	**:**	**No siren**
Major Fire	**:**	A wailing siren for two minutes. Sirens will be sounded three times for thirty seconds with an interval of 15 seconds in between
Emergency	**:**	Same type of siren as in case of major fire but the same will be sounded for three times at the interval of two minutes
All clear (For-Fire)	**:**	Straight Run Siren for two minutes
Mock	**:**	Straight Run Siren for two minutes

7.10.1. INSTRUCTIONS FOR RESIDENTS (DURING FIRE/ SMOKE IN APARTMENTS)

- Get out of buildings as quickly and as safely as possible.
- Use the stairs to escape. When evacuating stay low to the ground.
- If possible, cover mouth with a cloth to avoid inhaling smoke and gases.

- Close doors in each room after escaping to delay the spread of the fire.
- If in a room with a closed door.
- If smoke is pouring in around the bottom of the door or if it feels hot, keep the door closed.
- Open a window to escape or for fresh air while awaiting rescue.
- If there is no smoke at the bottom or top and the door is not hot, then open the door slowly.
- If there is too much smoke or fire in the hall, slam the door shut.
- Stay out of damaged buildings.
- Check that all wiring and utilities are safe.

7.11.EARTHQUAKE MANAGEMENT

The proposed project falls in earthquake sensitive zone IV on the MSK Scale (IS 1893: 2002) which indicates the area to be prone to moderate intensity of earthquake as shown in **Figure** Likewise, the structures of the present scheme will be designed in accordance to the following guidelines:

- IS: 1893-2002 “Criteria for Earthquake Resistant Design of Structures (Fifth Revision)
- IS:13920-1993 “Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice”
- IS:4326-1993 “Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)”
- IS:13828-1993 “Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines”
- IS:13827-1993 “Improving Earthquake Resistance of Earthen Buildings - Guidelines”

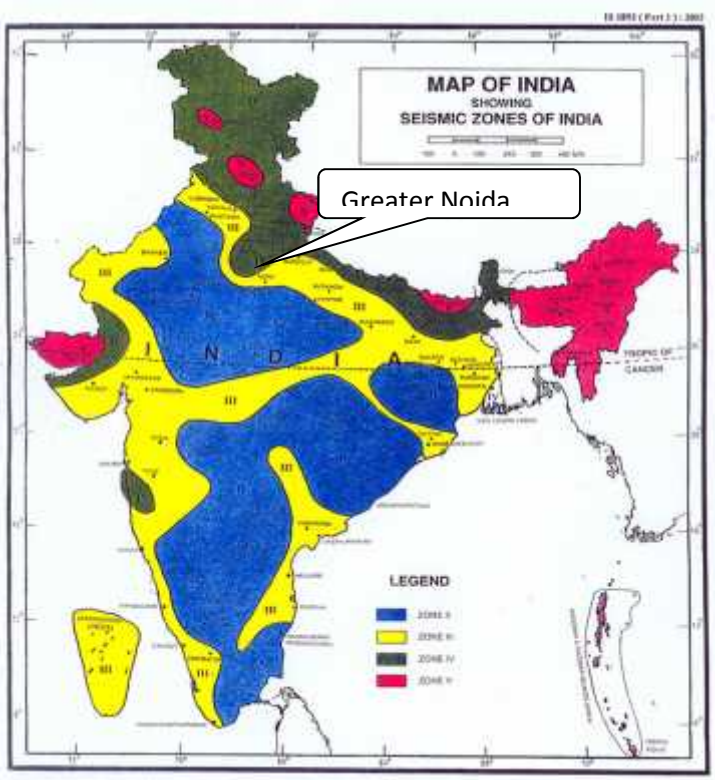

Figure 0.2: Seismic zones of India

7.11.1. Response in Case of Earthquake

7.11.1.1. RESPONSE PROCEDURE FOR RESIDENTS

If Indoors

- Take cover under a piece of heavy furniture or against an inside wall and hold on.
- Stay inside: The most dangerous thing to do during the shaking of an earthquake is to try to leave the building because objects can fall on you.

If outdoors

Move into the open, away from buildings, streetlights, and utility wires. Once in the open, stay there until the shaking stops.

If in a Moving Vehicle

Stop quickly and stay in the vehicle. Move to a clear area away from buildings, trees, overpasses, or utility wires. Once the shaking has stopped, proceed with caution. Avoid bridges or ramps that might have been damaged by the quake.

After The Quake

1. After the quake be prepared for aftershocks.
2. Although smaller than the main shock, aftershocks cause additional damage and may bring weakened structures, down. Aftershocks can occur in the first hours, days, weeks, or even months after the quake.

Figure 7.3: Escape routes in case of emergency

Help Injured or Trapped Persons

- Give first aid where appropriate. Do not move seriously injured persons unless they are in immediate danger of further injury. Call for help.
- Remember to help those who may require special assistance-infants, the elderly, and people with disabilities.
- Stay out of damaged buildings.
- Use the telephone only for emergency calls.

7.11.1.2. RESPONSE PROCEDURE FOR EMERGENCY TEAM

1. Formulate an Emergency Response Team for earthquake response. Using the public address system, inform residents of response procedures discussed above.
2. Inform the necessary authorities for aid.
3. Ensure no residents are stuck beneath any debris, in case of a structural failure.
4. Ensure that all residents standing outside near the buildings are taken to open area.
5. Ensure that the first aid ambulance and fire tender vehicles are summoned if necessary.
6. Inform the nearby hospitals if there are any injuries.
7. Check the utilities and storage tanks for any damage.

7.12.EMERGENCY ACTION PLAN

In order to combat emergencies an organizational chart assigning different responsibilities to be carried out during emergency shall be prepared by EMC. The chart shall be periodically reviewed and updated. Following coordinators shall be identified to coordinate various activities during emergency. Each coordinator shall identify a Disaster Response Team, which shall step into action in the event of a disaster.

Table 7.1: In-House Coordinators

S. No.	Coordinator	Name	Phone No.		Address
			Office	Residence	
1	Chief Coordinator				
2	Fire Fighting Coordinator				
3	Safety Coordinator				
4	Security Coordinator				
5	Communication Coordinator				
6	Medical Coordinator				
7	Transport coordinator				

8	Public Relation Coordinator (for providing relief and rehabilitation)				
9	Provisioning Coordinator				

The responsibilities of the Safety Officer/Coordinator are as follows:

- To arrange mock drills and periodical fire fighting exercises periodically.
- To inspect periodically all fire fighting equipments, sprinklers, fires detectors along with respective alarms, water pumps, if these remain in working state and ready to use.
- To convene meetings of coordinators periodically, to discuss various aspects such as in house maintenance, safety, health services, availability of emergency materials, emergency training, external services etc. to be required in case of an emergency.
- To maintain upto date information of local, district, sate and central organization and voluntary bodies whose are likely to be required during emergency as highlighted in the following table.

Table 7.2: Information on Local, District, Sate And Central Organization And Voluntary Bodies

S. No.	Coordinator	Name	Phone No.		Address
			Office	Residence	
1	D.M				
3	S.P. /D.S.P.				
4	Emergency Contact No./Ambulance				
5	Police control room				
6	Nearest Police Station				
7	Fire Brigade				
8	C.M.O				
9	District Hospital				
11	Meteorological Department				

PROCEDURE FOR TREATMENT

On getting a signal of an emergency, the site incident controller officer will take control of the situation. First aid parties will render first aid to casualties at the place of occurrence and those requiring further treatment would be transported to the nearest hospital by ambulance. The following phone numbers will be prominently displayed in the proposed academic block:

- Fire Office
- Police Station

- Nearest Hospital
- District Administration

First Aid

It is necessary to give first aid to the persons injures in the disaster. Doctor and paramedical staff will be made ready during emergency. There will be adequate first aid facility available to meet the workload.

Repair Services

Repair of damaged parts of the buildings will be taken up. Essential public utility services viz. water, electricity and sewerage system will be maintained in the case of a disaster.

Fire Fighting Services

Required fire fighting arrangements will be provided in the proposed Academic block. All regulations for prevention of fire will be enforced. The following provisions will be made like Automatic Fire Alarm and detection system, Manual fire Alarm, Sprinkler System, Wet riserand Hose reel. Following three teams will be created

• Fire Fighting Team

• Rescue / Salvage Team

• Picket / Cordon Party

In case of Emergency following will be the duty of the different teams

7.12.1. DUTIES OF FIRE FIGHTING TEAM

• On hearing the fire alarm rush to the scene of Fire.

• Try to rush the fire with the help of fire extinguishers, Hose reels and Hydrants (Internal / External)

• Act as per the directions of i/c Fire Officers at site

• The members of fire fighting teams shall enter the building in pairs

• The exit routes shall be marked.

• Do not open the doors / windows, it will fan the fire.

• Direct the jet of water at the seat of fire

• If the room is full with smoke, Do Not walks. Tie a wet cloth on mouth and crawl towards the exit.

• Help in fire fighting to the Fire Brigade Personnel.

7.12.2. DUTIES OF RESCUE / SALVAGE PLAN

• On hearing the fire alarm rush to the scene of Fire

• Rescue the trapped person if any inside the building

• Salvage the important documents / materials and keep them away at a safer place.

• Always enter in pairs

• Mark the Exit points

• Help the fire fighting team after work of Rescue / Salvage is over.

7.12.3. DUTIES OF PICKET / CORDON PARTY

- On hearing the fire alarm reach the site of accident
- Cordon the area of Fire (Building involved in Fire) as some miscreants tries to
- Steal the material.
- Do not allow to crowd the persons who are not the members of Fire Fighting /
- Salvage / Rescue party
- Keep vigil on all persons assembled at the site.

7.12.4. TRAFFIC CONTROL

The free movement of the fire vehicle and ambulance at the scene of fire / emergency is very important and therefore, the security personnel on the duty ensures that all the roads at the scene of fire /emergency are kept clear and free from obstruction. Persons arriving by motor transport at the scene of fire / emergency will not be allowed to park their vehicle within 100 meters of fire.

7.12.5. RESPONSIBILITIES OF CHIEF COORDINATOR

The responsibilities of the chief coordinator are as follows.

(a) To maintain a list of different coordinators and updating it periodically.

(b) To assign responsibilities to different coordinators.

(c) To convene meetings of coordinators periodically, to discuss various aspects such as in house maintenance, safety, health services, availability of emergency materials, emergency training, external services etc. to be required in case of an emergency.

(d) Display emergency contact numbers at all prominent places of site.

7.12.6. RESPONSIBILITIES OF FIRE FIGHTING COORDINATOR

- To arrange mock drills and periodical fire fighting exercises periodically.
- To inspect periodically all fire fighting equipments, sprinklers, fires detectors along with respective alarms, water pumps, if these remain in working state and ready to use.
- On receiving formations of emergency to ensure if all the in-house fire fighting and safety materials are adequate or some additional fire tenders are needed to combat the emergency.
- To inform the chief coordinator, the information regarding time and place of occurrence, casualties, loss of property, methods adopted to combat the fire, if fire effectively controlled, what external help required etc.
- To contact the outside agencies for necessary additional help to control the fire hazards.
- To inform the medical office about the tentative assessment of casualties happened and likely to be happen, who in turn will inform the medical coordinator for provision of external or in house medical help, ambulance, etc. if any loss of life or injury to occupants is apprehended.
- To supervise the control and rescue operation as directed by the chief coordinator.
- To ensure that no information is passed on to outside agencies without the clearance of the chief coordinator.

7.12.7. RESPONSIBILITIES OF SAFETY COORDINATOR

- Systematic search for and recognition of damagers and their origin.
- Compliance of statutory requirement.
- Training of personnel.
- To-arrange audio-visual programme and safety awareness among occupants through their involvement and participation.
- To ensure that all accidents and incidents occurring in the township are duly investigated, reported and corrective measures implemented.
- To identify needs for suitable safety programme to bridge up the gap on information concerning safety.
- To review effectiveness of personal protective appliances and their use.

- Conducting mock drills in order to keep the equipments and personnel in readiness to face the crisis.
- Arrange display safety posters and efficient communications of the safety awareness through display of posters and slogans.
- On hearing the information of emergency he will reach immediately to the emergency site and coordinate safety of personnel in consultation with fire fighting and medical coordinators.
- To ensure that the danger is completely eliminated before allowing all clear signal for resumption of activity.
- To ensure that the concerned authorities are kept informed about progress of the situation.

7.12.7. RESPONSIBILITY OF SECURITY COORDINATOR

On hearing / receiving emergency signal/message he shall immediately proceed to the emergency site and perform the following duties.

- To instruct all security personnel to help in maintaining the law and order.
- To find out the circumstances which have been responsible for the emergency and ensure whether correct methods have been employed.
- To ensure that the man engaged in combating the hazard has taken proper safety precautions.
- To ensure that efforts launched are systematic an effective and those engaged do not create “free for all” situation.
- To arrange for additional emergency fighting aids. If it is apparent, that the situation would go, out of control and greater danger is imminent, to take immediate action to move out all the men involved to safety as far as he can.
- To close all visitors’ gate control traffic and allow only authorized persons to enter.
- To inform Plant Medical Coordinator for first-aid.
- To send out all those who are not involved in emergency operations.
- To pool departmental transport with the help of transport coordinator and keep vehicles ready for use.
- To cordon off the area of accident and coordinate with external security coordinators if additional security measures required.
- To direct the external help/authorities to respective coordinators.

- Visit by media men to the spot of accident to be only arranged through public relation coordinator if it is safe and permitted by chief coordinator.

7.12.8. RESPONSIBILITY OF COMMUNICATION COORDINATOR

On hearing/receiving emergency signal/message he shall immediately report at emergency control room (where message can be imparted to outside organizations/departments on telephone, telex, radio etc) to perform the following duties.

a) To keep contact with the chief coordinator to act on his instructions based on the level of emergency.
b) In case of major emergency to inform all the local authorities from whom help is required specifying the requirement and the place of requirement.
c) To inform the security superintendent at emergency gate about arrival of nay external help of outside personnel/VIP/consultants, etc. for assisting in the emergency, if prior information is received.
d) To attend the local calls and impart suitable reply regarding persons who are inside the disaster zone.
e) The following points may be kept in mind.

- If possible, communication should take place in privacy so that it is not interrupted and distorted by others. Information impacted should be factual and prompt.
- The calling person should be ensured that additional information will be supplied as and when available.
- Media should be advised to ignore any information other than from the official spokesman. Newsmen may be permitted to use telephone, telex etc. if requested.
- Reasons for any restrictions imposed on the media persons may be explained.
- The safety achievement may be pointed out to the media so that they may project a balanced image.
- Do not give wrong information or cover up facts since the correct picture will in any case emerge.
- Do not release estimates of damage.

7.12.9. MEDICAL COORDINATOR AND EMERGENCY SERVICES

(a) The responsibility of providing medical care should be invested in first aid central first aid facility to be set up within the campus. Medical aspects can be planned for minor disasters. In case of major disaster, where whole campus is involved, extraneous help from all sources has to be taken.

(a) The medical coordinator has to identify in the city, the full-fledged emergency services with facilities to look after emergent cases. Proper liaison shall be maintained with these and they will have communication links with the medical services at the site.

(b) During normal/non emergency days, to organize suitably trained first-aiders force to handle such emergency situations. Mack drill shall be carried out from time to time so that the system is kept toned up at all times.

(c) On getting information of the disaster and its level, he will inform the in-house first-aid facility to report at incident site immediately. For major emergency he will request for necessary external aid for medical services.

(d) He will arrange hospitalization of the injured persons and post mortem of fatal casualties and keep count of persons injured sent to hospitals from time to time.

(e) He will inform authorities of major hospitals for treatment of serious cases, if any.

(f) He will communicate to the transport coordinator for requirement of vehicles.

(g) To remain at his place of duty until clearance is given by chief coordinator.

7.12.10. ROLE OF TRANSPORT COORDINATOR

(a) On hearing or getting information of the emergency he will keep all the vehicles and drivers in readiness and will send vehicles as per the requirement of different coordinators and officials.

(b) The permission of chief coordinator is to be – sought under following condition:

- To provide vehicle for transporting casualties.
- To provide vehicles to necessary non-supervisory staff.

(c) To keep a list of local transport agencies and be in touch with them.

(d) If there is any additional requirement of vehicles, he will requisite vehicles from outside agencies on telephone or through some volunteer.

7.12.11. RESPONSIBILITY OF PUBLIC RELATION COORDINATOR

(For Providing Relief and Rehabilitation)

On hearing or receiving emergency he will proceed to the site and take following action:

- To assist in in-house evacuation operation and neighboring people, necessary.
- To make known the latest situation to communication coordinator and chief coordinator.
- To receive media people and government officials and other outside VIP/consultant and impart information keeping in mind the points discussed in para-6.5.5(e) above.
- To provide relief and rehabilitation to the affected persons in coordination with provisioning coordinator.
- To call insurance people to assess the damage.
- To arrange rebuilding damaged property estimating the damages, payment of compensation, etc.
- To remain in touch, continuously, with concerned authorities (in-house or external) to provide relief and rehabilitation to the affected persons (this activity may be coordinated with provisioning coordinator.

7.12.12. RESPONSIBILITY OF PROVISIONING COORDINATOR

- To Provide financial/material help for the victims.
- To provide essential items such as eatables, drinking water, etc during emergency.
- To provide immediate finance for the purchase of fine fighting and safety material, for hiring transports and labour and keep provision for unforeseen financial assistance.
- To estimate and sought approval of the annual budget for incurring expenditure on Environment Management Plan and likely on Disaster Management Plan.

7.12.13. DISASTER RESPONSE TEAM

Responsibilities of Disaster Response Team are:

1. Conduct initial damage assessment and take preliminary actions.

- Enter the damage zone.

- Use extreme caution when entering the area where disaster has occurred. It may be necessary to wait until safety officials have determined that fire has been completely extinguished, the building is structurally sound, and there is no danger of electric shock in wet areas.
- If entry is delayed, use this time to begin contacting based on the question below – Begin keeping a detailed visual record (photographs video) of the damage and the recovery process.

I. What types of materials has been damage?

II. What is the nature of the damage? Fire damage is the most common forms. How extensive and severe is the damage? While it is not appropriate to inspect every item at this point, select precious materials that can be salvaged with rapid action.

2. Inform insurance and legal representatives of the nature and extent and damage.
3. Investigate financial resources for recovery efforts.
4. Determine what commercial recovery services and supplies are needed and contact vendors.
5. Organize, trained, and supervise recovery volunteers.
6. Coordinate communications among staff and with the public and news media.
7. Keep records of all decisions made and activities undertaken.

7.12.14. SALVAGE PLAN

The most important variables influencing the extent of damage in a disaster are the rapidness and the rapidness and appropriateness of first response. In an emergency, the persons at the place of incidence must know whom to contact, and those contacted must know what to do. The Environment Management Cell (EMC) shall frame a Disaster Response Team and outlines its membership and responsibilities.

Once an emergency has been brought under, the Disaster Response Team will gather information and form an action plan. Depending on the nature of the emergency, certain measures can be taken immediately to minimize further damage.

In a major disaster multiple areas of the proposed activities may sustain damage. If there are insufficient resources to salvage everything, following established priorities will ensure that the most significant materials receive attention first.

Salvage Procedures

In the event of a major disaster, recovery activities may be turned over to a commercial firm, but in case the decision is made to perform recovery work in house, the salvage instruction of the chief coordinator shall be followed.

Supplies and Services

The EMC shall establish a disaster supply system to contain the materials most needed for the initial response and for setting up a salvage operation. Depending on the magnitude and nature of the disaster, the EMC may also need to arrange for outside services and expert advice.

Termination of Salvage Operation

1. Based on the initial damage assessment, it shall be decided whether to withdraw or attempt salvage of damaged materials. Severe fire damage is generally irreversible, salvage is not possible.
2. It shall be decided whether the building or any party of it should be closed and whether hours and services should be curtailed. While it is important to maintain services if possible, the success of any salvage effort will depend on the availability of adequate numbers of staff and their ability to work without distraction. The damage area shall be cordon off and discourage disaster sightseers.
3. It shall be checked frequently to make sure that measures taken to stabilize the emergency are still working.