

ON SITE EMERGENCY CONTROL PLAN



Introduction

Site Emergency Plan

A site emergency plan basically describes the policies and procedures in detail how an organization's can handle an emergency situation, if happen at site (Process plant/factory). The policies and procedures gives the detailed guidelines how an organization will protect people and property at site. Developing the plan is the process of assigning emergency related tasks to individuals within the organization, and outlining protective actions to be taken. A site emergency plan should be coherent with the guidelines of local government's emergency operations plan.

Why Any Organizations Should Plan For Emergencies

Time and history has shown that a well thought plan, coordinated response of the responsible people helps prevent personal injury, property damage, and lessen the resulting effect. It has been observed that during a large scale disaster, local response agencies are unable to respond immediately to the plant site. Employees/Workers will need to know what to do to protect themselves during an emergency.

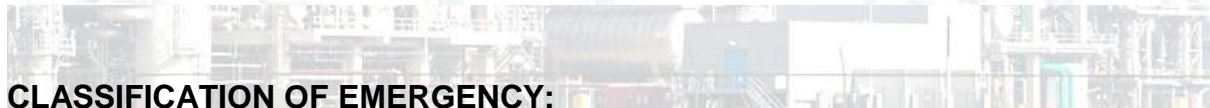
Events Covered By Emergency Plans

The Site emergency plans cover a number of events or possible happenings that may occur at or near the Plant site by natural causes, equipment failure or by human mistake. The following is a list of possible events or happening that will be covered by the emergency plans.

- Personnel injury;
- Construction emergencies;
- Project evacuation;
- Fire or explosion;
- Floods;
- Extreme Weather Abnormalities;
- Earthquakes;
- Volcanic eruption;
- Facility Blackout.

DEFINATION:

An emergency is a calamity of such magnitude as completely disrupt working in the plant and/or in the vicinity which may lead to or cause extensive damage to life and/or property in the plant or which may spread to the neighborhood if immediate control measure are not taken. However the extent of damage to life or property control measure to contain the situation which may otherwise lead to disaster. It will require deployment of all available manpower in the plant together with help from nearby industries, fire brigades, police, civil authorities, factory inspectorate, hospitals and ambulance services.



CLASSIFICATION OF EMERGENCY:

- a) A minor emergency
 - b) A major emergency
 - c) A disaster emergency
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- a) A MINOR EMERGENCY is unplanned event may cause personal injury, property damage, temporary stoppage of work, production loss to the company, a near miss accident, small fires/explosion small leaks/spills, release of gas, corrosive or toxic substance within the installation not affecting the persons outside the boundary of the plant and which can be handled with facilities and manpower in the company without an external help.

b) A MAJOR EMERGENCY is a sudden unexpected, unplanned event resulting from uncontrolled development inside the plant which causes or has the potential to cause.

a) Serious injury or death

b) Extensive damage to property, crop, plants, animal, land, water or air.

A major emergency will have widespread effect both inside the establishment as well as outside the establishment which will lead to evacuation of persons both from the factory as well as local surrounding population. This will require outside help also.

c) A DISASTER is a catastrophic situation which may lead to large scale damage or destruction of life and property either belonging to the factory or to the community or both. People are suddenly plunged into helplessness and suffering and will need protection, shelter, clothing, food, medical and social care.

Disaster can be either from natural phenomenon or manmade:

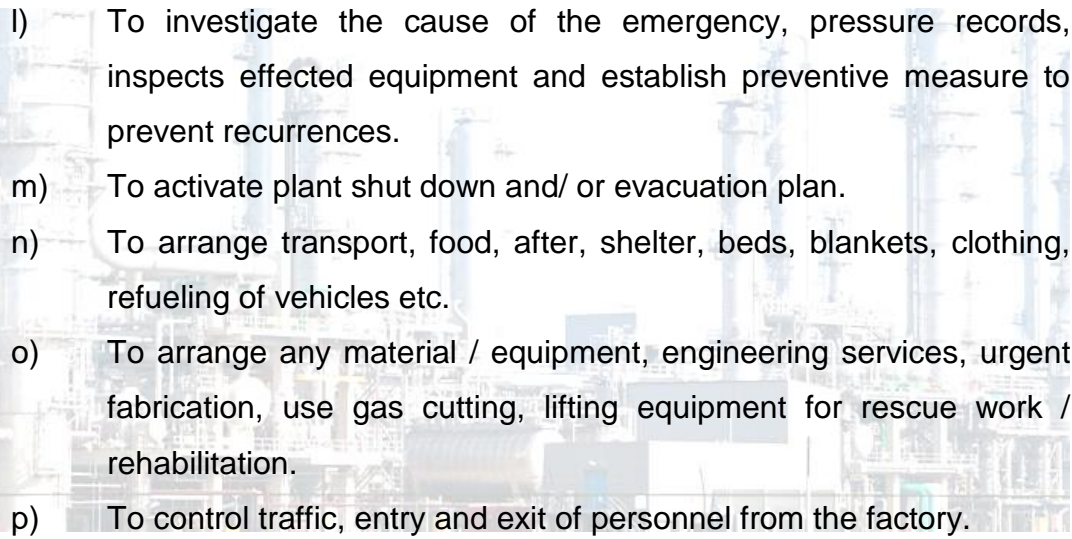
Natural phenomena includes flood, earthquakes, hurricanes, tornadoes and lightings.

Manmade disaster includes major accident, fire, explosion, release, of corrosive, toxic substance, river/air pollution, structure collapse, air, sea, rain, road accident, air craft/rocket crashes, collision of vehicles carrying inflammable substances warfare and civil strike.

OBJECTIVES OF THE ON SITE EMERGENCY CONTROL PLAN:

The objective of the on-site Emergency Control Plan is:-

- a) To define, assess all possible situation which may lead to an emergency.
- b) To plan effective control measure to handle the emergency
- c) To safe guard employees and people in the vicinity.

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- d) To minimize damage to property and environment
 - e) To inform employees, people in the vicinity and authority on the hazards, risks assessed, safeguards provided and the role to be played by them in the event of an emergency break-out.
 - f) To arrange/lineout communication methods with internal and external services (blowing siren, intercom, telephone, Hooter etc.)
 - g) To line out rescue, treatment and transportation or casualties.
 - h) To identify and list of injured or dead.
 - i) To inform and help relatives.
 - j) To rehabilitate affected areas and restore normalcy.
 - k) To release information to news media.
 - l) To investigate the cause of the emergency, pressure records, inspect effected equipment and establish preventive measure to prevent recurrences.
 - m) To activate plant shut down and/ or evacuation plan.
 - n) To arrange transport, food, after, shelter, beds, blankets, clothing, refueling of vehicles etc.
 - o) To arrange any material / equipment, engineering services, urgent fabrication, use gas cutting, lifting equipment for rescue work / rehabilitation.
 - p) To control traffic, entry and exit of personnel from the factory.
 - q) To liaise with local police Authorities , Factory Inspectors, Collector, Fire brigades, civil defense , hospitals, Ambulance Service, water and power authorities.
 - r) To establish Emergency Control Center and assign duties and responsibilities to all employees to handle the emergency & avoid chaos.
 - s) To establish an Emergency Medical Center.
 - t) To handle emergency with the help of planned nock drill and update the plan as and when required for better effectiveness & to minimize damage to the life, property and environment.
 - u) To ensure safety of the work area before the commencement of work.

TYPES OF EMERGENCIES / IDENTIFICATION:

The types of emergency are:

- 1) Work accident
- 2) Fire and explosion
- 3) Heavy leak, spillage or release of combustible /toxic/corrosive liquid gas.
- 4) Floods, Earthquake, hurricanes, Tornados and lighting affecting the plant.
- 5) Warfare, civil strike, debris falling from air craft/rocket.

AGENCIES CAUSING THE EMERGENCY:

The agencies causing the emergency are:

- a) Equipment, structural or human failure.
- b) Ignition of flammable gas or liquid.
- c) Excess pressure build up, uncontrolled reaction, bursting of vessel, pipe line or gasket, over flowing or draining of equipment.
- d) Natural calamities
- e) Manmade disaster.

COMMUNICATION SYSTEM

4 **EMERGENCY WARNING SYSTEM**

Any employee who notices an emergency will promptly raise an alarm by shouting or activate the fire alarm from the nearest point and also report it to the supervisor of the concerned area and/or Fire & Safety Control Room on the emergency number of the internal telephone (Number to the allotted later.)

A major emergency, a disaster, evacuation of section of a plant or entire plant will be declared by the General Manager / dy. General Manager/ Works Manager during general shift hours/ normal working hours.

A minor emergency will be denoted by activating the fire alarm or on emergency telephone.

Evacuation of a section of plant will be notified by the siren, which will be operated in a continuous blast for 2 minutes.

Situation	Code	Duration	Location	operated by
Minor emergency	Fire plan	30 sec	As described	shift in-charge
Major emergency/disaster	Work Siren		On admin. block	security
Evacuation of a section of a plan	P.A.S			
Evacuation of the entire plant	Work Siren	continuous blast for 2 min.		


All clear for minor emergency will be given on the fire alarm with a continuous blast for half a minute.

All clear for major emergency / disaster will be given on the works siren with a continuous blast for half of minute.

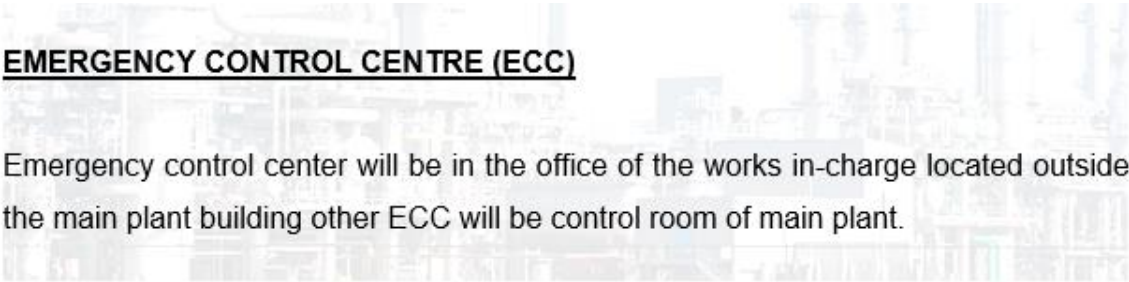
In case of Power failure, messengers will be used / Hand operated work siren.

Nearby industries and population will be warned by telephone / P.A.S./etc.

In case of a major emergency or disaster the following person will be informed:

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- a) General Public in the Vicinity
 - b) Nearby Industries
 - c) Local authorities
 - d) Chief Inspector Of Factories
 - e) Key personnel/outside normal working hours
 - f) Outside emergency services
 - g) Mutual aid members
 - h) Local Fire brigades
 - i) Police
 - j) District Emergency authorities
 - k) Ambulance services
 - l) Hospitals
 - m) Civil Defense
 - n) Controller of explosives
 - o) Labor Commissioner
 - p) Pollution Control Board.
 - q) Insurance company

EMERGENCY CONTROL CENTRE (ECC)



Emergency control center will be in the office of the works in-charge located outside the main plant building other ECC will be control room of main plant.

The Emergency Control Center will have the following:

- 1) Map of the area
- 2) Factory layout
- 3) Separate external telephones.
- 4) Internal telephones
- 5) A separate list of important telephone numbers

- 6) A list showing inventories of hazardous materials stored and in process.
- 7) Extra supply of personnel protective equipment like self-contained breathing apparatus, gloves (Rubber, cotton, weather, asbestos, electrical etc.). Goggles, chemical handling suit, face shield, ear plugs, dust masks, safety belt, gum boots, ropes, fire axe, spades, wooden plugs, etc.)

On declaration of a major emergency all key personnel and others called in to assist shall immediately report to the Emergency Control Center. Officers and authorities of outside agencies arriving for help in controlling the emergency shall be directed to the Emergency Control Center. Necessary accommodation shall be provided for all such persons at the Emergency Control Center.

INCIDENT CONTROLLER/DY. INCIDENT CONTROLLER

(Deputy General Manager)

The AGM will be the Incident Controller. The DGM will be the Deputy Incident Controller and take over the duties of the Incident Controller in the absence of AGM).

The DGM will assume charge at the scene of the incident.



DUTIES AND RESPONSIBILITIES:

Immediately on being aware of an emergency the Incident Controller will proceed to the scene of the incident. He will;

1. Assess severity of the emergency
2. Disseminate the Emergency warning system.
3. Relieve the Fire Squad Members from the plant direct them to report to firefighting duties.
4. Arrange to operate the fire pumps and maintain it as required. At the end of the emergency arrange to stop the pumps.
5. Direct firefighting and rescue operation until the arrival of the outside fire brigade when he will relinquish control to the chief of the Fire Brigade.

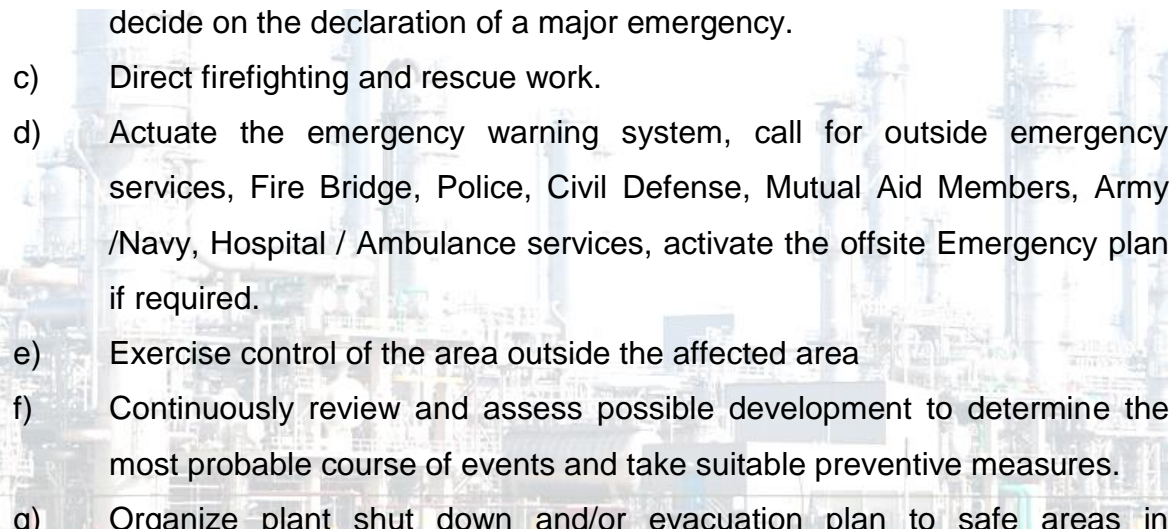
6. Restrict the use of water to the minimum for conservation of water for handling the emergency.
7. Make arrangement to maintain interrupted water supply and keep additional water supply ready when required.
8. Provide all the necessary firefighting and personnel protective equipment's.
9. Pending arrival of the Site Main Controller, he will hand over his duties to the Deputy Incident Controller and proceed to the Emergency Control center and perform the duties of site Main Controller until relieved by the Site main controller
10. Direct the shutting down and evacuation of the plant/areas which are likely to be affected by the emergency.
11. Ensure that the outside emergency services including the Mutual Aid Members have been called in and proper direction/coordination's given to them.
12. Ensure than the key personnel have been called in.
13. Direct all operations within the affected area with the following priorities:
 - i) Secure safety of personnel.
 - ii) Minimize damage to plant property and the environment.
 - iii) Minimize loss of material
 - iv) Account for all personnel working in the plant and points
14. Search for casualties.
15. Evacuate non-essential workers to the nearest assembly point
16. Set up a communication port and establish telephone / messenger contact as appropriate with the Emergency Control Center
17. Civil advice and information as requested to the chief of the Fire Brigade and other emergency services.
18. Preserve evidence so as to facilities any inquiry in to the cause/circumstances which caused the emergency and preventive measures.
19. Report all significant developments to the site Main Controller.

SITE MAIN CONTROLLER

The site main controller will be overall responsible for the plant and its personnel. He will be in charge of directing operations and calling outside help from Emergency Control Centers. He will coordinate between Senior Officers of outside agencies. He will take ultimate decision on the following execute the same.

DUTIES AND RESPONSIBILITY:

Immediately on being informed of an emergency he will go to the Emergency Control Center. On arrival he will,

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- a) Relieve the Incident Controller of responsibility for overall main control.
 - b) Assess the magnitude of the situation along with the Incident Controller to decide on the declaration of a major emergency.
 - c) Direct firefighting and rescue work.
 - d) Actuate the emergency warning system, call for outside emergency services, Fire Brigade, Police, Civil Defense, Mutual Aid Members, Army /Navy, Hospital / Ambulance services, activate the offsite Emergency plan if required.
 - e) Exercise control of the area outside the affected area
 - f) Continuously review and assess possible development to determine the most probable course of events and take suitable preventive measures.
 - g) Organize plant shut down and/or evacuation plan to safe areas in consultation with Incident Controller and key personnel If necessary arrange for evacuation of neighboring population in consultation with local district authorities, Fire Brigade, Police, civil, Defense, Army, Air Force, factory Inspectorate.
 - h) Ensure that casualties are receiving adequate attention, arrange for hospitalization, evacuation and relief camps of injured / affected persons and arrange additional help if required. Ensure that relatives are informed and necessary help extended.
 - i) Keep in touch with the local meteorological on changes of weather condition, wind direction to establish risk to outside areas.
 - j) Divert maximum supply of water from bore well to fire water storage tank. Ensure the accounting of personnel and rescue of missing persons.

- k) Arrange for chronological record traffic movement to be maintained, preservation of evidence and investigation of the emergency.
- l) Where the emergency is prolonged, arrange for the relief of personnel, the provision of catering facilities, and deployment of additional off duty personnel.
- m) Maintain essential communication, Issue statements to news media deal with other public relations and external services.
- n) Arrange for demolition and repairs.
- o) Make emergency arrangement for shifting of raw materials and finished product if needed.
- p) Arrange trucks etc. for bulk transportation if needed.
- q) Maintain a list of all employee including contractor personnel inside the factory at Assembly Point, those who have been rendered First Aid/ hospitalized.
- r) Control rehabilitation of affected areas and vicinities after the emergency.
- s) Restart operations only after ensuring it safe to do so.



MANGER (SAFETY)

- a) On hearing of an emergency, he will rush to the scene of emergency and charge of firefighting, rescue operations and control of hazards, toxic chemical release/spillage/leakage. He will assess the magnitude of outside help require and the site main controller.
- b) Ensure safety of personnel, plant, property, environment and minimize the effected of emergency and loss of material.
- c) Organize the security staff along with fire squad members for firefighting, rescue, first aid and any other operation required to restore normalcy.
- d) Ensure adequate for the key personnel for coordination work in connection with firefighting, safety of plant, property, environment, rescue, first aid and evacuation of persons to the assembly point.
- e) Keep in touch with all the key personnel for coordination work in connection with firefighting, safety of plant, property, environment, rescue, first aid and evacuation of persons to the assembly point.

- f) Coordinate, advice and organize outside parties arriving for help.
- g) Organize search parties for rescue of casualties / trapped persons.
- h) Keep site main controller informed of development and requirements.
- i) Decide the method of disposal / containment of spillages e, leakage or escape of hazards material
- j) Advise Plant Operation Crew in carrying out operations/repairs safely.
- k) Investigation with the help of the plant personnel the investigation when required.

PERSONNEL / TRANSPORT

MANAGER – PERSONNEL/ OFFICER –PERSONNEL

- a) Report to the Site Main Controller and get instructions.
- b) Arrange canteen services for personnel engaged in emergency duties.
- c) Arrange canteen services for affected/evacuated employees / public and proved shelters in Guest House, Sports Club etc.
- d) Keep liaison with Private Doctor/Medical Centers. Collect information regarding hospitalized and affected persons and communication to their family members/relatives.
- e) Inform Statutory authorized such as Chief Inspector of Factories, Insurance companies, Controller of Explosives, Labor Commissioner, pollution Control Board, District Magistrate, Nearest Police Station, etc.
- f) Organize transportation for affected / evacuated employees, public and their failure.
- g) Arrange for hospitalization of affected / evacuated employees, public and their families.
- h) Ensure sufficient cash availability for emergency purchase/requirements.
- i) Take roll call of all personnel in Assembly point and account for all, department – wise.(e.g. no: of persons present, absent, involved in emergency, affected, rendered first aid and sent home / rendered First Aid and hospitalized etc.) The copy of the roll call must be sent to the site Main Controller.

- j) Arrange evacuation of personnel from the Assembly point, if necessary. The list of the persons evacuated must be available in the Emergency Control Center.
- k) Disseminate authentic information to public and press in consultation with Site Main Controller
- l) Contact Blood Bank and organize blood supply / blood donors and set help of social services organization or Mutual Aid Members for this purpose.
- m) Keep in constant touch with Site Main Controller.

ENGINEERING: In Charge- Maintenance

- 1. He will provide necessary engineering services/equipment like welding / gas cutting sets, jackets, chain pulley blocks, water pumps etc and men to operate these equipment's.
- 2. Ensure continuous and trouble free operation of fire water pumps.
- 3. Arrange and provide personnel to do civil, mechanical jobs like sand building excavation, repairs, support of civil structure and removal, demolishing of structures etc.
- 4. Keep in constant touch with Site Main Controller.

ELECTRICAL / INSTRUMENTATION: Off Site Engineer

- 1. He will arrange to provide light/flood lights/emergency light/street lights when and where required.
- 2. Ensure electric power supply and disconnection as may be needed on emergency situation. Provide alternate source of lighting in case of power failure.
- 3. Ensure safety of personnel against electrocution hazards from ruptured, exposed, fallen or submerged electrical wires/cables.
- 4. Ensure continuous operation of fire water pumps.
- 5. Ensure proper functioning of telephones, alarms and other communication systems.
- 6. Provide necessary electrical tools and man power to operate them.

7. Provide power connection for welding machines, pumps and other equipment in emergency.
8. Keep liaison with State Electricity Board.
9. Keep in consult touch with site Main controller.

STORES: Stores Officer

1. He will keep all the stores open with necessary staff and give instructions for prompt delivery of material at the site of emergency.
2. Arrange emergency purchase of material required for meeting the emergency.
3. Keep in constant touch with Site Main Controller.



SECURITY SUPERVISOR (ON DUTY)

On hearing the works siren declaring a major emergency/disaster/evacuation or on receiving a message from an authorized person about the same, the security supervisor will

1. Keep the telephone free for handling messages related to the emergency /disaster/evacuation.
2. Be quick, precise and attentive in receiving, noting and conveying the messages.
3. Inform the following persons in same priority.
 - i) Manager (Safety)
 - ii) Works Manager
 - iii) First Aid/Hospital / Ambulance
 - iv) Personnel officer/Manager
 - v) Maintenance In Charge
 - vi) Stores Assistant

SECURITY OFFICER

- 1) He will arrange to give emergency alarm on instruction from Site Main Controller.
- 2) Organize the Security staff along with fire squad members for firefighting, rescue, evacuation and first-aid operations.
- 3) Arrange traffic control at the Main Gate and inside the factory.
- 4) Arrange entry and exit restrictions except for authorized persons, emergency vehicles and personnel/vehicles.
- 5) Require or called for controlling emergency.
- 6) Informing by P.A.S> surrounding factories and the public as directed by the Site Main Controller
- 7) Ensure that plant security is effective and ensure that all visitors / contractors, non-essential staff are withdrawn to Assembly Point on instruction by the site Main Controller.

- 8) Provide the necessary fire and Safety Equipment
- 9) Work in coordination with outside parties helping to control the emergency.
- 10) Keep in touch with key persons handling the emergency.
- 11) Ensure safety of personnel, plant and environment before giving “ALL CLEAR “siren on instruction by the Site Main Controller.

SEARCH SQUAD TEAM

A team constituted by Site Main Controller will go to search and trace out the missing employees as revealed from assembly points counting and muster roll.

EMERGRNCY EVACUATIONPLAN

On getting instructions from Site Main Controller the Shift In-charge will call for an evacuation of any area of a plant when an emergency has occurred that presents a threat to the employees including contractor persons of that area.

As far as practicable, all the employees should shut down equipment and close all values in his area so as to leave the area safe. Employees will then proceed for the predetermined assembly point & wait for instruction.

If it becomes necessary to evacuation the entire plant, then the SOL will instruct the security to activate the works siren which will sound a continuous blast for two minutes. Each supervisor should make sure all employees of his area of responsibility leave the area in an orderly manner to the assembly point.

If the emergency presents a threat to the neighborhood outside the plant area, warning will be announced by mobile address system or messengers.

The shift in charge shall determine the assembly point depending on the wind direction, type magnitude of the emergency.

All other employees from non-affected plant/areas who do not have specific duty assignments will remain in their own areas till order to be available for direction connecting their or plant safety.

Assembly point shall be selected so as to avoid passing through or near an affected area. In case it is not possible to avoid passing through or an affected area, suitable personnel protective equipment shall be provided to the persons. We have two assembly points i.e. AP-1: Administrative Building ground floor and AP-2; near factory In-charge Office. However while evacuating the plant/area, the Plant in-charge will determine other safe assembly point depending on the wind direction, type magnitude of the emergency.

Man in charge of the Assembly Point shall take a roll call of all the persons assembled there and send the list of persons to the Site Main Controller. He will keep in constant touch with the Site Main Controller and keep him informed of any changes at the Assembly point.

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MUTUAL AID

The names of the nearby companies who will co-operate to form a mutual aid scheme

Sr.NO.	Name	Ph No.
1	abc Engineering	
2	xyz Mill	
3	aaa Industries	
4	.	
5	.	



IN CASE OF FIRE

1. Give alarm
2. Try to put out the fire from windward side.
3. Keep clear when the fire brigade takes over
4. Stop all hot work
5. Persons not required must leave and stand designated safe assembly point.
6. Persons in unaffected area without emergency duties must remain in their own area.



PREPARED BY ENGINDMART