CHAPTER - VII

DISASTER MANAGEMENT PLAN

1. The emergency management plan gives a broad idea of the detailed emergency preparedness in case of an accident. The detailed emergency preparedness plan should be prepared on commissioning of the plant with the help of staffs working at the plant.

2. The Emergency Management Plan (EMP) envisages the need for providing appropriate action so as to minimize loss of life/property and for restoration of normalcy within the minimum time. Adequate manpower, training and infrastructure shall achieve this. An appropriate fire protection system is also developed to meet any emergency.

3. The emergencies are classified as construction hazard, natural hazard and operational hazard. During the construction time good construction practice and safety requirement should be enforced by the contractor at site. The construction manager can be the co-ordinator for the emergency management. Depending on the severity of the injury/ disaster outside medical help can be obtained. Before commencement of the work the hospital facilities should be identified and the address and phone numbers to be available to the contractor as well as the construction manager. During natural hazard the emergency plan to be implemented with the help and guidance from the district collector, who is the co-ordinator for such activity. During operation, the plant manager become the co-ordinator for the emergency activity and the emergency cell will be acting in accordance with the disaster management plan (DMP).

4. During construction phase proper measures should be taken to ensure safety at heights. Fencing/railing should be provided at construction openings to prevent physical injuries and fall of construction workers.

5. The following important elements in the disaster management plan (DMP) are suggested to effectively achieve the objectives of emergency planning:

   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 EMP
   g) Proper training of the concerned personnel.

SEQUENCE OF ACTION

6. In order to handle disaster/emergency situations, an organisational chart entrusting responsibility to various plant personnel has been prepared along

with their specific roles during an emergency. The possible composition of the management team is given in Figure VII.1.

INFRASTRUCTURE

7. Following infrastructure & operational systems should be provided to meet emergencies.

a) First aid boxes
b) Gas masks
c) Telephone line with STD facility
d) Loud hailers
e) Emergency lighting system
f) Stretchers
g) Transport facility
h) Fire-fighting machinery
i) Fire-tenders
j) Ambulance

ASSEMBLY POINTS

8. Assembly points are to be set up farthest from the location of likely hazardous events, where pre-designated persons would assemble in case of emergency. The location near to the entrance gate is one of the safest place. This can be the assembly point.

EVACUATION PATH

9. The road straight to the entrance gate is quite wide and no hazardous installation besides the road. This road can be taken as the evacuation path.

COMMUNICATION SYSTEM

10. Different types of alarms to differentiate types of emergencies should be provided. In case of failure of siren, placards of various colours should be used to indicate the situations. If everything fails, a messenger should be used for sending the information and the various placards mentioned would also be used.

11. Alarms should be followed by announcement over Public Address System. In case of failure of alarm system, communication should be by telephone operator who will make announcement in plant through Public Address System, which should be installed. Walkie-talkie and paging systems using predetermined codes of communication are very useful during emergency.

WARNING SYSTEM AND CONTROL

12. The control centers shall be located at an area of minimum risk or vulnerability in premises concerned, taking into account the wind direction, areas which might be affected by fire/explosion, toxic releases etc.

EMERGENCY SERVICES

13. This includes fire-fighting system, first aid center, hospital etc. Alternate sources of power supply for operating fire-pumps, communication with local bodies, fire-brigade etc. should also be clearly identified. Adequate number of external and internal telephone connections should be installed.

FIRE PROTECTION SYSTEM

14. The fire protection system for the proposed plant is to consists of :

a) Hydrant system for all the vulnerable areas of the plant.

b) Portable carbon-dioxide extinguishers for the control room.

c) Portable hand appliances of suitable types/ capacities for extinguishing small fires in selected areas of the plant.

15. The emergency plan will have the key personnel of the organisation and responsibilities assigned to them in case of an emergency and their telephone numbers. These telephone numbers and persons will be finalised after commissioning of the plant.

16. Depend on the severity of the emergency outside agency will be called for the assistance. The following information will included in case outside organizations are involved in assisting on-site emergency:

a) Type of accidents.
b) Responsibility assigned to each of the organisation.
c) Liaison arrangement between the organisations.

17. The safety equipment installed and fire-fighting equipment available will be mentioned in the detailed DMP.

18. Small size maps should be available in control tower, fire station, rescue and fire-fighting and all other supporting vehicles responding to an emergency.

19. The map should contain the site related details such as:

a) Location of dangerous substances.
b) Seat of key personnel.
c) Location of emergency control room.
d) Quantity of the chemicals stored.
e) The parking points of Ambulances and Fire-fighting vehicles must be located such that no hindrance will be posed at any time of the day.

Figure VII.1
Structure of Disaster Management Team