

CENTRAL ELECTRICITY AUTHORITY NOTIFICATION

New Delhi, the _____, 2008

No. _____ - In exercise of the powers conferred by clause (c) of Section 73 read with sub-section (2) of Section 177 of the Electricity Act, 2003, the Central Electricity Authority hereby makes the following regulations namely:

1. Short title and commencement

- (1) These regulations may be called the “Central Electricity Authority (Safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations, 2008”.
- (2) These Regulations shall come into force on the date of their publication in the Gazette of India.

2. Definitions:

- (1) In these Regulations, unless the context otherwise requires,--
 - (a) The “Act” means the Electricity Act, 2003.
 - (b) “Authority” means the Central Electricity Authority referred to under Section 70(1) of the Act.
 - (c) “Contractor” means a person or an agency who undertakes to produce a given result, not merely supply of goods or articles of manufacture but including civil works or erection of equipment or testing & commissioning of equipment or operation & maintenance of equipment and includes a sub-contractor.
 - (d) “Owner” means the company or body corporate or association or body of individuals, whether incorporated or not or artificial juridical person who owns or operates or maintains Electrical Plants and/or Electric Lines and includes
 - i) “Occupier” having same meaning as defined in the Factories Act, 1948 and
 - ii) “Employer” having the same meaning as defined in the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996
- (2) All other words and expressions used herein and not defined shall have the meanings respectively assigned to them in the Act

3. Applicability of Regulations

These regulations shall apply to all the electrical plants and electric lines already commissioned as well as those under construction.

4. Objectives

The provisions of “The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996” are applicable to any establishment which employs ten or more building workers either directly or through contractors in any building or other construction work which includes the construction, alteration, repairs, maintenance or demolition, of or, in relation to generation, transmission and distribution of power, electric lines.

Further, the provisions of “The Factories Act, 1948” are applicable to a ‘factory’ whereon ten or more workers are working and in any part of which a manufacturing process is being carried on with the aid of power. The Schedule -I enclosed with the Act includes “Power Generating Industries” in the list of industries involving hazardous processes.

Besides, there are other Acts and Rules as listed in Regulation (5) below which are required to be complied with by Electrical Plants and Electric Lines.

The regulations covered herein are intended to lay down broad safety requirements for construction, operation and maintenance of electrical plants and electric lines with the objective that all the electrical plants and electric lines put in place and implement a sound and scientific safety management system to ensure high level of safety during construction, operation and maintenance.

5. General Safety Requirements

(1) All statutory requirements regarding safety provisions, where applicable, stipulated in the following Acts and rules / regulations made thereunder, as amended from time to time, shall be complied with:

(a) The Electricity Act 2003.

(b) The Building and Other Construction Workers Act, 1996 and rules made thereunder.

(c) The Factories Act, 1948 and rules made thereunder.

(d) Central Electricity Authority (Measures relating to Safety and Electricity Supply), Regulations as and when notified by the Authority.

(e) Indian Electricity Rules, 1956 till Central Electricity Authority (Measures relating to Safety and Electricity Supply), Regulations are notified by the Authority.

(2) In addition, stipulations made under following Acts and rules/regulations made thereunder, as applicable, shall also be complied with:

- (a) The Explosives Act, 1884
- (b) The Explosive Substance Act, 1908
- (c) The Indian Boilers Act, 1923 and Indian Boiler Regulations, 1950
- (d) The Motor Vehicle Act, 1988
- (e) The Petroleum Act, 1934
- (f) The Public Liability Insurance Act, 1991
- (g) The Static and Mobile Pressure Vessel (unfired) Rules, 1981
- (h) The Workman's Compensation Act, 1923
- (i) The Water (Prevention and Control of Pollution) Act, 1974
- (j) The Air (Prevention and Control of Pollution) Act, 1981
- (k) The Environment Protection Act, 1986
- (l) Battery Management and Handling Rules, 2001
- (m) Bio Medical Waste (Management and Handling) Rules, 1998
- (n) Chemical Accident (Emergency, planning, preparedness and response) Rules, 1996
- (o) Explosive Rules, 1983
- (p) Gas Cylinder Rules, 1984
- (q) Hazardous Wastes (Management and Handling) Rules 1989
- (r) Petroleum Rules, 1976

- (s) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
 - (t) Ozone Depleting Substances Rules, 2000
 - (u) Any other rules and regulations in this regard
 - (v) Any specific approvals, permits, clearances issued by any authority under different statutes
- (3) The Owner shall make safety an integral part of work processes to ensure safety for employees including employees of contractors including sub-contractors as well as visitors.
- (4) The Owner shall obtain accreditation of electric plants and electric lines in the organization with OHSAS/IS-18001 certification.

All existing electrical plants and electric lines and those under construction shall obtain the above said certification within two years of these regulations coming into force. New installations shall obtain the certification within two years of commencement of construction.

- (5) Nothing contained in these regulations shall exempt or dilute any provisions of existing Acts and Rules.

6. Provisions relating to the Owner

- (1) It shall be the responsibility of the Owner to comply with the requirements of these regulations and safety provisions emanating from various Acts and rules / regulations made there under, as amended from time to time.
- (2) The Owner shall set up a sound and scientific safety management system which shall include :
- a) Formulation of a written statement of policy in respect of safety and health of employees.
 - b) Defining and documenting responsibilities for all levels of functionaries to carry out safety related activities including responsibilities of the contractors.
 - c) Preparing detailed Safety Manual complying with the statutory requirements, manufacturers' recommendations, BIS standards and any other relevant standards and codes.

- d) Establishing procedures to identify hazards that could give rise to the potential of injury, health impairment or death and measures to control impact of such hazards.
- e) Providing adequate human, physical and financial resources to implement the safety management system.
- f) Providing safe working environment and evolving framework for occupational safety and health.
- g) Providing and maintaining medical facilities
- h) Providing adequate training to all employees to keep them aware of safety related issues.
- i) Establishing system for accident reporting, analysis, investigation and implementation of recommendations.
- j) Establishing system for proper communication, documentation and record management in relation to occupational safety and health.
- k) Filing periodic and other returns to the statutory bodies as required under various Acts and Rules within the stipulated time
- l) Formulating emergency management plan for quickly and effectively dealing with probable emergencies that may arise on site as well as off- site.
- m) Establishing methodology for internal and external audit of safety management system
- n) Establishing system for periodic monitoring and review of the safety system by the management
- o) Overseeing the safety performance of contractors

7. Safety Manual

Detailed Safety Manual referred to at Regulation 6 (2) c) above shall be site specific. However, for similar installations common safety manual can be prepared and made applicable to such installations. These Safety Manuals shall at least cover the matters identified in the following schedules appended herewith, as applicable:

Schedule-I: Minimum contents of Safety Manual for Construction of Electrical Plants and Electric Lines

Schedule-II: Minimum contents of Safety Manual for Operation and Maintenance of Electrical Plants and Electric Lines

8. Safety Organisation

8.1 Safety Officer

- (1) The Owner shall appoint one qualified Safety Officer where the number of employees, including contract workers, exceeds five hundred. Where the number of employees is less than five hundred, a suitable officer shall be designated as Safety Officer.

Provided that where number of employees exceeds 1000, one more Safety Officer shall be appointed for every additional 1000 employees or part thereof .

- (2) A person shall not be eligible for appointment as a Safety Officer unless he is qualified

(a) under Section 40-B of The Factories Act, 1948 and rules made thereunder

or

(b) under Section 38(2) of The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and rules made thereunder”

- (3) (a) Where number of Safety Officers appointed exceeds one, one of them shall be designated as Chief Safety Officer and shall have higher ranking than the others. The Chief Safety Officer shall be in overall charge of the safety functions and also other Safety Officers working under his control.

(b) The Chief Safety Officer or the Safety Officer where only one Safety Officer is appointed, shall be given the status of a senior executive and he shall work directly under the control of the Chief Executive. All other safety Officers shall be given appropriate status to enable them to discharge their functions effectively.

(c) The Owner shall provide each Safety Officer with such facilities, equipment and information that are necessary to enable him to discharge his duties effectively.

- (4) The Safety officer (s) shall be appointed before start of construction activities. Safety organization chart shall be prepared and properly displayed at conspicuous place.
- (5) The Safety Officer shall advise and assist the Owner in fulfillment of his obligations, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe working environment.
- (6) The Safety Officer shall be authorized to stop the execution of any of the works which in his judgment are unsafe and may result in injury to any person. He shall also have the power to remove the employees or contract workers from the site, if they are found not using personal protection equipment or indulging in unsafe practice or procedure.
- (7) The Safety Officer shall develop and organize safety training programmes at regular intervals in order to impart proper safety training and shall also create safety awareness among the employees.

8.2 Safety Committee

- (1) A Safety Committee shall be constituted by the Owner which shall be represented by equal number of representatives of management and employees, where the number of employees, including contract workers, exceeds two hundred and fifty. During construction, the Safety Committee shall also include representatives of Contractors and their employees with equal representation. The representatives of the management shall include the Safety Officer and Medical Officer.

Provided that where number of employees, including contract workers, is 250 or less, Safety Committee shall be constituted by the Owner for a group of electrical plants or electric lines.

- (2) The Safety Committee shall promote co-operation between the workers and the management for maintaining proper safety and health at work.
- (3) The Safety Committee shall meet at least once a month during construction stage and once in three months during operation & maintenance of electrical plants and electric lines. The decisions and recommendations of the Safety Committee shall be complied with by the Owner within a reasonable time.

9. Provisions relating to the Contractor

- (1) The Owner shall incorporate the requisite safety provisions in the contract document which are required to be complied by the Contractor's personnel during execution of the contract to facilitate safe working during execution of the works.
- (2) The Contractor shall observe the safety requirements as laid down in the Contract as well as comply with statutory requirements as provided in the existing Acts/Rules. In case of sub contracts, it shall be the responsibility of main Contractor that all safety requirements are followed by the employees/ staff of the sub- contractors.
- (3) The Contractor deploying 200 employees including contract workers, shall have a safety co-ordinator in order to ensure the implementation of safety requirements of the contract. Other Contractors with lesser number of employees, including contract workers, shall nominate one of their employee to act as safety coordinator. The safety co-ordinator shall liaison with the Safety Officer on matters relating to safety. His name shall be displayed on the notice board at a prominent place at the work site.
- (4) The Contractor shall be responsible for non-compliance of any of the safety measures, implications, injuries, fatalities and compensation arising out of such situations or incidents.
- (5) In case of any accident, the Contractor shall immediately submit a statement of such accidents to the Owner and the Safety Officer showing the details of the accident, any injury or casualties, extent of property damage and remedial action taken to prevent recurrence. In addition, the Contractor shall submit a monthly statement of various accidents to the Owner at the end of each month within a week.

10. Reporting of Accidents

- (1) Notice of any accident, which results in death of any person or in such bodily injury which is likely to cause death or prevents the injured person for working for a period of 48 hours or more, shall be sent to the statutory authorities within the prescribed time as per the Factories Act and Rules or the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act and Rules, as applicable.
- (2) The cases of outage of an electrical plant or an electric line of following nominal rating due to any accident related to any equipment (e.g. fire, explosion of pressure piping or pressure vessel, implosion, turbine, emission of hazardous chemicals, collapse of transmission tower,

flooding of power house area) shall be reported to the Authority within 24 hours, whether or not any death or disablement is caused to any person:

Thermal Generating Units:	200 MW and above
Hydro-electric Generating Units:	50 MW and above
Electric Lines/Sub-stations:	132kV and above

11. Emergency Management Plan

- (1) An on-site emergency management plan shall be formulated for a) each Electrical Plant, b) each sub-station and c) group of electric lines for quickly and effectively dealing with probable emergencies like fire, explosion, gas leakages, land slides, floods etc. and reducing response time.
- (2) The provisions to be made for the on-site emergency management plans shall conform to the Schedule –III (Elements of On-site Emergency Plan for Electrical Plants and Electric Lines) appended herewith.
- (3) The on-site emergency management plan shall be prepared by the Owner of electrical plants and/or electric lines before the commencement of trial operation except that for existing electric plants and electric lines, the on-site emergency management plan shall be prepared within 90 days of notification of these regulations.

Provided that in case of construction of electrical plants and electric lines, emergency action plan shall be prepared, before commencement of construction activity, to handle emergencies like fire, explosion, collapse of lifting appliances and transport equipment, collapse of building or structures, gas leakages, land slides, floods etc.

- (4) The Owner shall ensure that a mock drill of the on-site emergency management plan is conducted at least once every six months.
- (5) While it shall be the responsibility of District Emergency Authority designated by the State Government, in whose jurisdiction the respective electrical plants and electric lines are located, to prepare off-site emergency management plan as per The Factories Act/Rules, the Owner shall arrange to furnish relevant information pertaining to industrial activities under his control, including the nature, extent and likely effects off-site of possible major accidents as well as any additional information the competent Authority (District Collector or District Emergency Authority) may require in this regard. The minimum information to be furnished by the Owner is given as under:

- (a) Details of the key personnel of the emergency team and their responsibilities
- (b) Liaisoning arrangements with neighbourhood organisations
- (c) Risk assessment information giving possible nature of incidents, events, mis-happenings which may give rise to emergency conditions in the vicinity of the premises, risk analysis and impact assessment
- (d) Information regarding type of hazardous chemicals and fuels at plant site :
 - i) Chemicals (Quantities and toxicological data)
 - ii) Fuels (Quantities and storage method)
 - iii) Material Safety Data Sheets
- (e) Internal and external communication plan in case of emergency
- (f) Details of facilities available at site:
 - i) Fire fighting equipment
 - ii) Details of diesel generating sets and dewatering facilities available
 - iii) Rescue equipment available
 - iv) Medical resources available
 - v) Type of vehicles, mobile cranes, dumpers etc.
 - vi) List of contractors and details of resources available with them
 - vii) List of private caterers providing canteen facility
 - viii) List of emergency material suppliers like tents, pumps, diesel generating sets, tarpaulins etc.
 - ix) Water resources available

12. Medical Facilities

- (1) The Owner shall provide medical facilities:
 - (a) to prevent and control occupational diseases
 - (b) to prevent and reduce disability
 - (c) to provide immediate relief to accident victims
- (2) An Occupational Health Centre with the services and facilities as per scale laid down hereunder shall be provided for all electrical plants and electric lines and maintained in good order: -

- (a) Where number of employees, including contract workers, working at one premises are 50 or less -
- i) The services of a Medical Officer on retainer-ship basis, in his clinic. He will carry out the pre-employment and periodical medical examination and render medical assistance during any emergency.
 - ii) A minimum of 5 persons trained in first-aid procedures amongst whom at least one shall always be available during the working period;
 - iii) A fully equipped first-aid box.
- (b) Where number of employees, including contract workers, working at one premises are between 51 and 200 -
- i) An Occupational Health Centre which shall have the facilities for health examination, diagnosis, treatment and maintenance of health records.
 - ii) A part-time Medical Officer as overall charge of the Centre who shall visit the premises at least twice in a week and whose services shall be readily available during medical emergencies;
 - iii) One qualified and trained dresser-cum-compounder on duty throughout the working period;
 - iv) A fully equipped first aid box in all the departments;
- (c) Where number of employees, including contract workers, working at one premises are more than 200 -
- i) An Occupational Health Centre which shall have the facilities for health examination, diagnosis, treatment and maintenance of health records.
 - ii) One full-time Medical Officer for premises employing upto 500 workers and one more Medical Officer for every additional 1000 workers or part thereof;
 - iii) One nurse, one dresser-cum-compounder and one sweeper-cum-ward boy through out the working period;

- iv) The Occupational Health Centre shall be suitably equipped to manage medical emergencies.
- (3) The Medical Officer of occupational health center shall be involved in planning the emergency handling of large number of injured employees in the event such as fire, explosion, natural calamities and man-made disasters. All the equipment required for providing immediate relief to the injured during emergencies should always be kept in readiness in Occupational Health Center.
- (4) The Owner shall ensure that a fully equipped ambulance van is provided at the site for transportation of serious cases of accident or sickness to the hospital promptly and such ambulance van is maintained in good condition and equipped with necessary facilities.

Provided that where less than 200 workers are employed, the Owner may make arrangements for procuring such facility at short notice from a nearby hospital or other places, to meet any emergency.

- (5) The Owner shall put in place programme for periodic medical check up of employees. At least following periodic medical check-ups shall be carried out and records maintained:
- (i) Once before employment to ascertain physical fitness of the person to do the particular job
 - (ii) Medical check-ups of all employees at intervals not exceeding twelve months
 - (iii) Colour vision tests/ eye sight examinations for drivers, skilled workers, technicians, supervisors & crane operators annually for less than 45 years old and every six months for more than 45 years old.
 - (iv) Tests for respiratory disorders for employees exposed to dusty environment (viz. coal dust in thermal power generating stations) once every six months.

13. Safety Training and Awareness

- (1) Regular safety training programmes to be conducted for employees shall include at least the following:
- (a) General safety awareness
 - (b) First aid

- (c) Emergency procedures including shock treatment
- (d) Use of personal protective equipment
- (e) Safety precautions while handling electro-mechanical equipment
- (f) Use of different types of fire fighting equipment
- (g) Response in the event of emergencies including fire, floods, landslides, earthquakes etc.
- (h) Site specific hazards
- (i) Relevant Safety acts, rules and regulations

At least ten hours training per year shall be given to each employee.

- (2) The Owner shall ensure that adequate safety training is provided by the Contractor to his personnel.
- (3) Safety promotional activities shall be organised periodically to create awareness and enthusiasm among the employees. Such activities shall include organising safety day, safety week, fire safety day, fire safety week, safety competitions, posters, slogans, safety calendars and displays depicting possible consequences of unsafe acts and conditions in conspicuous locations in the plant etc.

14. Power to remove difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Authority, by order, may make such provisions as may be necessary for removing the difficulty.

Schedule-I: Minimum contents of Safety Manual for Construction of Electrical Plants and Electric Lines

- A) Common to all electrical plants and electric lines
1. Safety policy
 2. Safety organization
 3. Responsibilities of contractor
 4. Responsibilities of employees
 5. Reporting of accidents
 6. Enquiry of accident / dangerous occurrences
 7. Occupational health and medical facilities
 8. Emergency management plan
 9. Location of safety equipment and emergency facilities in the plant
 10. Safety inspections / audits
 11. Safety training , awareness and promotion
 12. Hazard identification and risk assessment
 13. Personal protection equipment
 14. Communication facilities
 15. Fire prevention and protection
 16. Emergency escape routes
 17. Working at height
 - a) Scaffolds
 - b) Ladders
 - c) Working platform
 - d) Fall arresting equipment
 - e) Temporary stairs
 - f) Suspended jhoolas
 - g) Floor openings
 18. Safe working environment
 - a) Illumination & emergency lighting
 - b) Noise pollution
 - c) Harmful gases & dust pollution

- d) Thermal radiation
 - e) Ventilation
 - f) Confined spaces
19. Protection against hazardous chemicals/gases
 20. Safety in handling oils
 21. Safety in painting works
 22. Safety in transportation, earthmoving equipment and other construction equipment/machinery
 23. Safety in use of electricity
 24. Safety in handling electrical equipment such as:
 - a) Earthing of equipment
 - b) Working on bus-bars, transformers, circuit breakers, insulators etc.
 - c) Working on lines during installation of insulators, stringing of conductors, jumpering and fixing of spacers / vibration dampers
 - d) EHV/HV static capacitor banks
 - e) Opening or splicing de-energised conductors or over-head ground wires
 - f) Storage batteries
 - g) Testing of MV/HV/EHV equipment
 - h) SF6 gas filled equipment
 25. House keeping
 26. Safety in material handling
 27. Safety in use of lifting machines & tackles
 28. Safety while lifting heavy equipment
 29. Frequency and type of tests for safety equipment
 30. Fencing of rotating machinery
 31. Safety during demolition
 32. Safety during excavations
 33. Safety while working in rainy and foggy environment
 34. Safety during blasting
 35. Safety in tunneling works
 36. Safety in trenches works

37. Handling and use of explosives
38. Handling of flammable gases
39. Safety in pilling
40. Safety in structural steel works
41. Safety in concreting work
42. Safety in welding and cutting operations
43. Safety in grinding and machining
44. Safety in the use of hand tools and power-operated tools
45. Safety in waste disposal
46. Safety in road cutting works
47. Working adjacent to rail tracks
48. Working adjacent to live roads
49. Site perimeter fencing
50. Traffic management
51. Prevention of unauthorized entry

B. Additional requirements specific to Hydro-electric Generating Stations

1. Safety in construction of Dams and Cofferdams
2. Safety in quarries/gravel pits/borrowed areas
3. Rescue equipment for prevention from drowning
4. Control of dust, silica and noxious gases in underground works (including ventilation of underground works)
5. Safety in grouting, guniting, shot creting
6. Safety against flooding and flash floods
7. Working in gassy tunnels
8. Safety while simultaneous working in different elevations/locations in hilly areas
9. Suitable preventive measures against landslides
10. Suitable safety measures to minimize the effect of mishaps resulting on account of geological surprises

Schedule-II: Minimum contents of Safety Manual for Operation and Maintenance of Electrical Plants and Electric Lines

Following safety features shall be additionally covered in 'Safety Manual for Operation & Maintenance' in addition to those covered in Schedule-I:

A) Common to all electrical plants and electric lines:

1. Procedure for obtaining permission to work for carrying out operations and maintenance of equipment
2. Safety in operation & maintenance of various electro-mechanical equipment as per recommendations of manufacturers
3. Safety of structures/buildings
4. Safety in workshops and garages
5. Safe handling , collection and disposal of hazardous waste
6. Safety in Sub-station/Switchyard/Switchboards

- Safe working clearance
- Guarding of live apparatus
- Operation on live apparatus
- General provisions relating to maintenance
- Working in areas containing exposed live HV & EHV conductors
- Demarcation of work areas
- Working on remotely controlled and automatically controlled equipment.
- Working on equipment operated by or containing compressed air.
- Working on circuit breakers, transformers, isolators, surge arresters, instrument transformers, storage tanks etc.
- Handling failed SF6 circuit breaker
- Working on or near to low, medium, HV& EHV equipment.
- Procedure for adding/removing equipment-to/from the EHV/HV system

B. Additional requirements applicable for Thermal Generating Stations

1. Safety in conveyors, belts, cableways etc.
2. Safety in storage and handling of materials

C. Additional requirements applicable for Hydro-electric Generating Stations

1. Guarding of hydraulic works and mechanical equipment
2. Maintenance of scroll cases and draft tubes

D. Additional requirements applicable for Electric Lines

1. Safety measures in Over Head Lines
2. Inspections and Maintenance of steel towers and structures.
3. Norms for Patrolling of lines.
4. Classification of terrain of Electric Lines i.e. Normal Terrain and Vulnerable Terrain.
5. Tower top patrolling.
6. Thermo Vision Scanning.
7. Punctured insulator detection.
8. Off-line Fault location, signature analysis.
9. Maintenance schedule of Electric lines.
10. Safety in washing of live insulators and testing of insulators on live lines.
11. Hot line maintenance.
12. Safety in working in underground systems

Schedule-III: Elements of On-site Emergency Plan for Electrical Plants/ Electric Lines

1. On-site Emergency Management Plan shall be developed to deal with all probable emergencies which can occur at the premises such as:
 - A) Common to all electrical plants
 - (a) Major fire in cable gallery
 - (b) Major fire in transformer yard
 - B) Specific to Thermal Generating Stations
 - (a) Fire in coal handling/ conveyor system
 - (b) Toxic gas dispersion caused by uncontrolled chlorine toner leakage
 - (c) Major leakage in Natural Gas pipelines(e.g. full bore rupture of gas pipe line) resulting in unconfined natural gas leakage leading to vapour cloud explosion and fire
 - (d) Major Hydrogen gas leakage from generator leading emergency situation that can lead to fire and explosion
 - (e) Boiler drum burst
 - (f) Implosion / explosion of boiler furnace
 - (g) Large scale fire in fuel oil area , coal storage, naphtha / LNG storage area
 - C) Specific to Hydro-electric Generating Stations
 - (a) Flooding of Powerhouse
 - (b) Landslides
2. On-site Emergency Management Plan shall include the following:
 - (a) Name and address of the Chief Incident Controller
 - (b) Alarm System and method of Reporting/ declaring emergency
 - (c) Emergency Response Procedure including response to Off-Site Emergency Management Plan and Crisis & Disaster Management Plan
 - (d) Details of the key personnel of the emergency team and their responsibilities
 - (e) Addresses and contact numbers of outside organizations (including local administration, police, hospitals, organizations

located nearby) involved in assisting during emergency with their role.

- (f) Risk assessment information giving possible nature of incidents/events giving rise to emergency conditions, risk analysis and impact assessment
- (g) Details about the site :
 - (i) Locations where emergency can arise
 - (ii) Emergency control room/Alternate Emergency Control Room
 - (iii) Demarcation of safe assembly zone relevant to each type of emergency condition
- (h) Description of hazardous chemicals and fuels at plant site :
 - (i) Chemicals (Quantities and toxicological data)
 - (ii) Fuels (Quantities and storage type)
 - (iii) Material Safety Data Sheets
- (i) Internal and external communication plan during emergency
- (j) Details of fire fighting and other facilities available to deal with emergency conditions
- (k) Details of first aid and hospital services available and their adequacy
- (l) Post emergency activities :
 - (i) Collection of records
 - (ii) Conducting enquiries and concluding preventive measures
 - (iii) Making insurance claims
 - (iv) Preparation of enquiry report and suggestion scheme
 - (v) Implementation of enquiry report recommendations
 - (vi) Rehabilitation of affected persons within plant
 - (vii) To re-start the plant