

# DISASTER MANAGEMENT PLAN

(Effective Date – 28.12.2010)

PREPARED FOR



**P.O. DULIAJAN  
DIST DIBRUGARH  
ASSAM 786 602  
INDIA**

CONDUCTED & PREPARED BY



**GREEN CIRCLE CONSULTANTS (I) PVT LTD.**

*Environmental, Health, Hygiene, Safety, Risk, & Quality  
Consulting Engineers & Trainers  
(An ISO 9001: 2008 Certified Company)*

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|  | ASSAM GAS COMPANY LTD.                                   |  |
|   | DISASTER MANAGEMENT PLAN                                 |   |
|   | REPORT NO.: -GCC IPL/V/AGCL/DMP/2010-11/SEPT/RMS-090/R01 |   |

**QUALITY CONTROL SHEET**



| Rev. | Date     | Reason History                         | Prepared By | Reviewed By | Approved By |
|------|----------|--|-------------|-------------|-------------|
| 00   | 20/09/10 | Draft Disaster Management Plan         | PT          | DD          | YD          |
| 01   | 14/12/10 | Revised Draft Disaster Management Plan | PT          | DD          | YD          |
| -    | 28/12/10 | Final Disaster Management Plan         | PT          | DD          | YD          |

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DD: Ms. Dipali Desai

YD: Yogendra Dave

|                    |                                     |
|--------------------|-------------------------------------|
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| Signature          |                                     |
| <b>Approved by</b> | Yogendra Dave, HOD & Corporate CEO  |
| Signature          |                                     |
| <b>Released by</b> | Nachiket Joshi, Group Manager-A & F |
| Signature          |                                     |



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## **ACKNOWLEDGEMENT**

*WE EXPRESS OUR SINCERE THANKS TO MANAGEMENT & EMPLOYEES OF **ASSAM GAS COMPANY LIMITED, P.O. DULIAJAN, DIST DIBRUGARH, ASSAM 786 602, INDIA** FOR THEIR CO-OPERATION & UNSTINTED HELP WITHOUT WHICH THE '**DISASTER MANAGEMENT PLAN**' COULD NOT HAVE BEEN POSSIBLE. THE COURTESY EXTENDED TO OUR TEAM IS HIGHLY APPRECIATED.*

**For: GREEN CIRCLE CONSULTANTS (I) PVT.LTD.**

**AUTHORISED SIGNATORY**

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AMENDMENT SHEET ( To Issue 01 )

| Sl. No. | Section No. | Page No. | Amendment Particulars | Effective Date | Signature (Amendment incorporated) |
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## ABBREVIATIONS



|                |  |
|----------------|--|
| <b>AGCL</b>    | Assam Gas Company Limited                |
| <b>DMP</b>     | Disaster Management Plan                 |
| <b>PNGRB</b>   | Petroleum & Natural Gas Regulatory Board |
| <b>D.G.</b>    | Diesel Generator                         |
| <b>MSDS</b>    | Material Safety Data Sheet               |
| <b>ECC</b>     | Emergency Control Centre                 |
| <b>CIC</b>     | Chief Incident Controller                |
| <b>SIC</b>     | Site Incident Controller                 |
| <b>ETP</b>     | Effluent Treatment Plant                 |
| <b>OHC</b>     | Occupational Health Center               |
| <b>HOD</b>     | Head of Dept.                            |
| <b>EAP</b>     | Emergency Action Plan                    |
| <b>ERT</b>     | Emergency Response Team                  |
| <b>PPE</b>     | Personal Protective Equipment            |
| <b>CMT</b>     | Crises Management Team                   |
| <b>EPO</b>     | Emergency Planning Officer               |
| <b>P&amp;A</b> | Personal & Administration                |
| <b>SO</b>      | Security Officer                         |

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## DISASTER MANAGEMENT PLAN

### 1.0 OVERVIEW

The Disaster Management Plan (DMP) or emergency plan is been developed to provide procedures for the implementation and continual development of the Emergency action plan (EAP). The EAP is a document which will be continually refined and updated as the operation progresses and is intended to protect facility personnel, the public, the environment and property (asset) should an emergency occur at the facilities. The procedures outlined in the EAP shall be used by both facility operating staff and outside agency personnel for emergency planning and response instruction.

This plan has been formulated to fulfill the requirements of the relevant standards and guidelines set forth by the PNGRB.



On-Site Emergency Plan of AGCL has been developed based upon Risk Analysis carried out by M/s Green Circle Consultants India. Pvt. Ltd., Vadodara. This plan provides local personnel with operational guidance in order to effectively manage resources in response to emergencies involving hazardous materials. This plan is based upon certain assumptions and the existence of specific resources and capabilities which may be subject to periodic change.

This plan addresses the range of potential emergency situations and the appropriate measures to be implemented to minimize exposure of the population through inhalation, ingestion, radiation or direct contact and to minimize exposure to the environment.

The plan will be reviewed and updated as the as and when required. Plan revisions will reflect changes in implementation procedures, improved emergency preparedness capabilities, and deficiencies identified in drills and exercises, and hazards vulnerability analyses for newly identified facilities.

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The Factories Act, 1948 as amended in the year 1987 under section 41B (4) requires that every occupier shall draw up an Disaster Management Plan and detailed disaster control measures for his plant and make them known to the employees and to the general public living in the vicinity of the plant. It is statutory for the industries to submit Disaster Management Plan with relevant details.

Its objective is to reduce the severity of loss following particular hazardous incidents. At the same time, it must be clearly understood that it is not a substitute for maintaining good standards for working consistence with the requirements of safety at Industry.

### 1.1 PURPOSE OF THE PLAN

The Purpose of the plan is to;



- Minimize the risk occurrence (Prevention).
- Rapidly contain Emergency (Emergency response).
- Effectively rehabilitate damaged areas (Restoration).

The main purpose of the emergency response system/ EAP are, to effectively handle emergency situations, which are to minimize the loss and damage to personnel, property (asset) and environment.

This requires the establishment of a response system which makes use of all available resources for speedy containment of the incident, protecting the health and safety of the people, both nearby residents and workers, as well as minimizing damage to the environment and property. The response system includes the following elements:

- Decision and action plan for the emergency response system
- Provision of quick, competent, effective, external help, if required
- Decision on, and implementation of, required protective and remedial measures
- Continuous monitoring of the post accident situation and quick adoption of relevant decisions and measures
- Preparation of plans for rehabilitation
- Post accident analysis and evaluation of response activities
- Preparation of final report on the accident.

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The establishment of “focal point or Emergency Control Centre” for the whole system and each department head or coordinator to coordinate the emergency response activities for the system and within the relevant area respectively is the key to a good response system. The person in the “focal point or Emergency Control Centre” transmits, receives and processes all information from the various agencies, the administration and the public to facilitate speedy provision of all necessary help.

## **1.2 EMERGENCY RESPONSE STRATEGIES**

The development of any emergency plan (at commissioning and operation phase) can be considered in the following way:

- Warning Phase
- Impact Phase
- Rescue Phase
- Relief Phase
- Rehabilitation Phase



### **1.2.1 Warning Phase**

Many disasters are preceded by some sort of warning. For example, with the aid of satellite network of weather stations, many meteorological disasters like cyclone, storms, cloud burst etc. can be predicted and advance actions can be taken to counter them. The population likely to be affected is to be made aware of the developing situation.

For such eventualities the following actions may be taken;

- Stop all hot work on site.
- Reduce personnel on site to a minimum to provide the necessary support to ensure continued safe operation.
- Inform higher authorities/off site. If the emergency is due to flammable leak and possibility of fire/explosion then shift security supervisor will take action to eliminate/stop following ignition sources in nearby area:
  - Hot works like welding, grinding which can generate sparks
  - Electrical transmission lines/lights
  - Hot surfaces

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- Smoking/vehicle movement inside/outside the plant boundary.
- In case of flammable/toxic leakage gas detectors will get activated. The Field Operators shall be alerted to gas leaks or fire via walkie talkies, telephone, or the siren being sounded.

### **1.2.2 Impact Phase**

The period of impact may be short duration up to 15 minutes long where gas leaks, fires or explosions may occur. Weather caused emergencies or major storage tank fires could be for a number of days.

This is the period when the disaster actually strikes causing crisis situations. Very little can be done to lessen the effects, unless advance warning is received and action is immediately taken.

Actions to be taken by all personnel on site are described below. Actions to be taken by key operation personnel are given in the foregoing discussions.

### **1.2.3 Rescue Phase**

The rescue phase starts immediately after the impact and continues until the necessary measures have been taken to bring the emergency under control.

### **1.2.4 Relief Phase**

This phase covers organizing the relief measures that may well include external mutual aid or Government agencies to help provide medical aid, evacuation of personnel, food, other shelters etc.

### **1.2.5 Rehabilitation Phase**

This is the final and the longest phase. It includes rebuilding damaged property, estimating the damages, payment of compensation, facilitating the displaced people in returning to going to their homes and normalizing their lives etc.

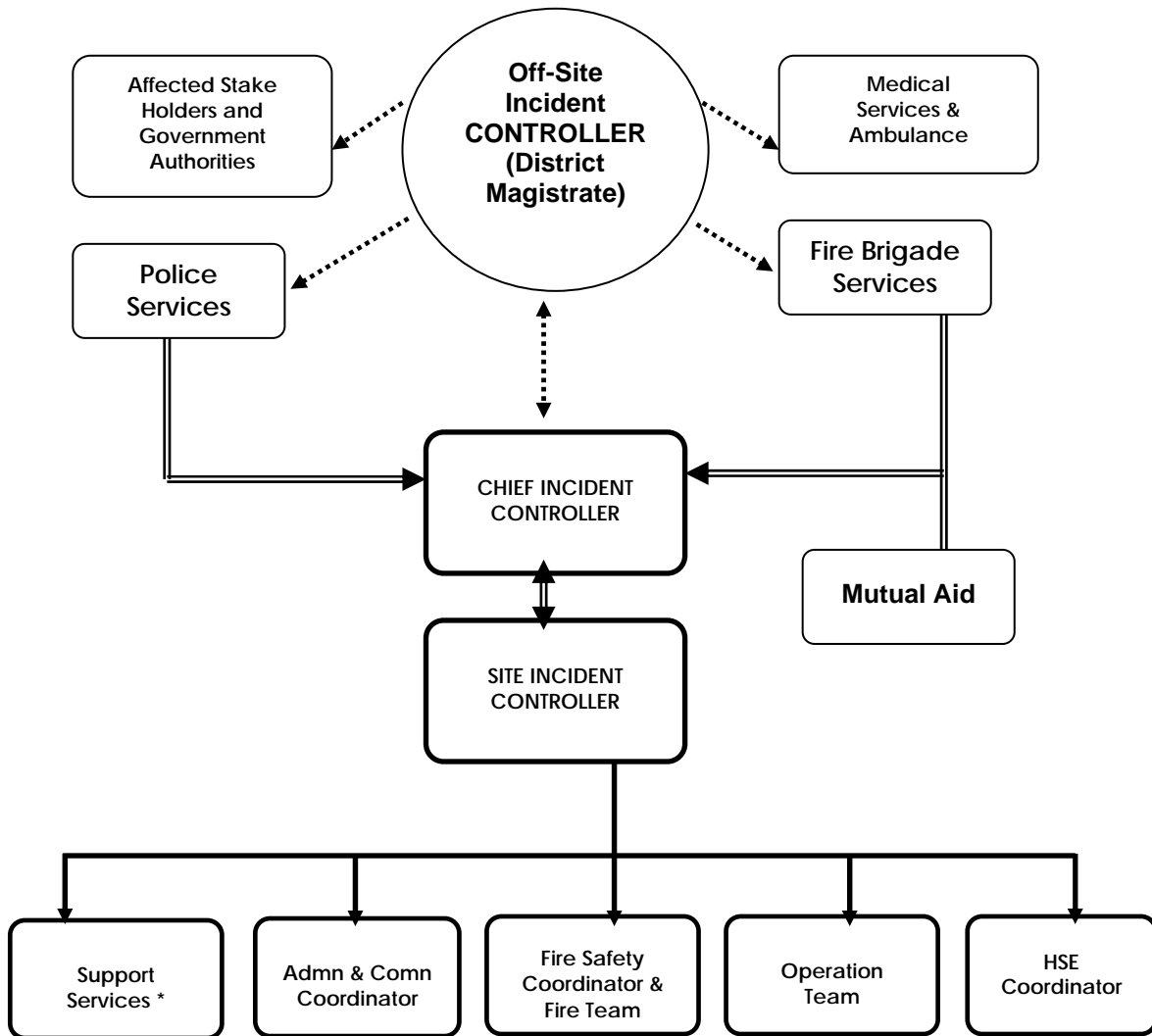
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**2.0 ON – SITE EMERGENCY PLAN:**

The on site emergency plan is to prepare for and activate the emergency time activities so that the emergency arisen after failure of our pre emergency control measures can controlled and contained with in the shortest time.

**2.1 EMERGENCY RESPONSE TEAM**



**Organization Plan:**



**Note:**

- Level – I**      \_\_\_\_\_
- Level II**      \_\_\_\_\_
- Level III**      - - - - -

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## **2.2 Emergency Response Team (Key Persons)**

All Heads of Department (HOD's) have been identified as the member of Emergency Response Team (ERT) headed by CEO at the site. In the absence of HOD's next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of HOD.

## **2.3 Duties & Responsibilities of Key Persons:**

### **A. Responsibilities of Chief Incident Controller (CIC):**

The Chief Incident Controller (CIC) shall have overall responsibility to protect personnel, site facilities and the public before, during and after an emergency or disaster. The CIC shall be present at the emergency control centre for counsel and overall guidance. Responsibilities of the CIC shall include following:-

His responsibilities include:



- (a) Preparation, review & updating of the plan
- (b) Assessment of situation & declaration of emergency
- (c) Mobilize main coordinators & key personnel
- (d) Activate Emergency Control Centre
- (e) Decide on seeking assistance from Mutual Aid members & external agencies like Police, Fire Brigade, Hospitals etc.
- (f) Continuous review of situation & decide on appropriate response strategy
- (g) Take stock of casualties & ensure timely medical attention
- (h) Ensure correct accounting & position of personnel after the emergency
- (i) Order evacuation of personnel as & when necessary
- (j) Decide in consultation with District Authorities when an Off-site emergency to be declared.

### **B. Responsibilities of Site Incident Controller (SIC):**

The site main controller shall be identified by the chief incident controller and will report directly to him. SIC should be nominated

His responsibilities include:

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- (a) The SIC shall maintain a workable emergency control plan, establish emergency control centers, organize and equip the organization with the plan and train the personnel.
- (b) The Site Incident Controller shall organize and direct all emergency control activities before, during and after a disaster or an emergency based on disaster potential.
- (c) The SIC shall be capable of making quick decisions and taking full charge.
- (d) The SIC should communicate to the Emergency Control Centre where it can coordinate activities among groups
- (e) SIC shall be responsible for ensuring that appropriate local and national government authorities are notified, preparation of media statements, obtaining approval from the CIC and releasing such statements once approval received.
- (f) SIC shall also ensure the response to incidents/emergencies is in line with Company procedures, coordinating business continuity or recovery plan from the incident. He must ensure next of kin are notified in a timely manner.
- (g) SIC shall also co-ordinate if any specialist support is required for the above purpose.

**C. Shift In Charge Engineer (Control Room):**

- Immediate information to fire station, hospital, CEO & concern HODs.
- On receiving the information of emergency, the shift in charge engineer shall reach to the incident site. He will be the in-charge of incidence site till the arrival of SIC.
- To identify source of hazard and try to neutralize/contain it.
- To isolate remaining plant and keep it in safe condition.
- To organize safe shutdown of plant if necessary.
- To organize all support services like operation of fire pumps, sprinkler system etc.
- In the absence of Shift in Charge Engineer next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of Shift in Charge Engineer in addition to his normal duties.
- For the purpose of emergency control shift In charge engineer shall report to SIC i.e. CEO in addition to his normal reporting.

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#### **D. Fire Fighting Teams (Headed by HOD Fire & Safety)**

##### **Fire Safety Coordinator and Fire Team**

Responsibilities of the Fire & Safety Coordinator shall include the following:



- Activation of Emergency sirens as per the practiced codes
- To take charge of all fire fighting and rescue operations and safety matters.
- To ensure that key personnel are called in and to release crew of fire fighting operations as per emergency procedure.
- Assess functioning of his team and communicate with the Main Incident Controller & Administrative Controller for any replenishment or, replacement of manpower / firefighting equipment.
- Direct the Fire Brigade personnel & mutual aid members to their desired roles as also proper positioning of the manpower & equipment.
- To decide the requirement of mutual aid and instruct Fire Station, who, in turn will contact mutual aid members through fire control room.
- To coordinate with outside fire brigades for properly coordinated fire fighting operation.
- To ensure that casualties are promptly sent to First Aid Centre / Hospital.
- To arrange requirement of additional fire fighting resources including help from mutual aid partners.
- Where the emergency is prolonged, arrange for the relief of personnel and provision of catering facilities.
- Ensure empty & loaded trucks are removed to safer area to the extent possible so as not to affect emergency handling operations.
- Continually liase with the Chief Incident Controller and implement the emergency combat strategies as communicated by him.
- Ensure adequate hydrant pressure in the mains and monitor water level in the reservoir.

#### **E. Security Team: (Headed by Security In-charge)**

On receipt of information:

- Eliminate all ignition sources at site and around plant boundary in consultation with shift in charge.
- Inform all security guards to arrange for assembly of persons in assembly point.

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- Take head count at assembly points based on attendance register.
- To pass on information's to people gathered at assembly points.
- Report the missing person's information to emergency control centre.
- To permit with minimum delay, the entry of authorized personnel and outside agencies vehicles, fire tenders, ambulance etc who have come to help.
- To restrict entries of unauthorized persons/vehicles by checking identity cards & proper gate passes.

#### **F. Maintenance Team**

(Headed by HOD Technical Services, O&M, Instrumentation & Civil)

- Attend to all emergency maintenance jobs on top priority.
- To take steps to contain or reduce the level of hazard created due to disaster.
- To organize additional facilities as required.
- In the absence of HOD next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of HOD in addition to his normal duties.
- For the purpose of emergency control all heads of departments shall report to CEO in addition to his normal reporting.

#### **H. Administration Team: (Headed by HOD P&A)**



##### **Administration & Communication Coordinator**

Responsibilities of the Administration & Communication Controller shall include the following:

- Inform & coordinate with Mutual Aid members and other external agencies
- Direct them on arrival to respective coordinators / desired locations
- Coordination with Police for control of traffic
- Activate the Medical Centre & render first aid to the injured. Arrange ambulance & coordination with hospitals for prompt medical attention to casualties.
- Ensure head counts at Assembly Points
- Arrange procurement of spares for fire fighting and additional medicines & drugs
- Mobilize transport to various teams for facilitating the response measures

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- Monitor entry / exit of personnel into & out of premises. To ensure only authorized personnel into the premises. With the assistance of the Police, control the mob outside if any & regulate the flow of traffic into & out of premises.
- Provide administrative & logistics assistance to various teams.
- Arrange evacuation as directed by the Main Incident Controller, and in coordination with the civil authorities like Police, Panchayat/ Municipal authorities etc.



#### **I. Transport Team: (Headed by HOD O&M)**

- HOD transport team is authorized to withdraw vehicles from any department as per the requirement to overcome the emergency.
- To make the whole auto base vehicles ready to proceed for evacuation or other duties when asked for.
- To send at least one mechanic at the site of incident to help in attending minor defects in ambulance, Fire Tenders or other vehicles.
- To arrange petrol/diesel supplies.
- Make all arrangements regarding transportation from outside agencies if required.
- In the absence of HOD next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of HOD in addition to his normal duties.
- For the purpose of emergency control head of vehicle maintenance department shall report to SIC in addition to his normal reporting.

#### **J. Communication Team: (Headed by HOD IT)**

- To be available in their officer/working place during the emergency.
- To maintain the communication network in working condition.
- In the absence of HOD next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of HOD in addition to his normal duties.
- For the purpose of emergency control head of IT department shall report to SIC in addition to his normal reporting

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### **K. Head of Account**

- To be available in their officer/working place during the emergency.
- To keep adequate cash & arranging funds for various relief measures as well as emergency purchases of materials.
- In the absence of HOD next senior in the department is identified as member of the Emergency Response Team. He shall have to act in place of HOD in addition to his normal duties.
- For the purpose of emergency control head of finance department shall report to SIC in addition to his normal reporting.

### **Health, Safety and Environmental (HSE) Coordinator**

The HSE coordinator's emergency management role is to provide professional health, safety, environmental and regulatory authority advice to the Chief Incident Controller and for implementing the emergency response actions described below:

- Ensuring that Company procedures are being applied appropriately to the incident or emergency situation.
- Ensuring that appropriate level of Health, safe working and environmental practices are being followed while dealing with the emergency.

### **Operations and Technical Coordinator**

The Operations and Technical coordinator's emergency management role is to provide professional operations, engineering and technical advice to the Site Incident Controller at the time of an emergency and implementing the emergency management actions as below:

- Identifying the type of incident and the level of technical advice and support required
- Mobilizing the appropriate technical expertise from within or outside the company in order to provide advice and support to the emergency location
- Identifying appropriate equipment and personnel to be sent to the emergency location if required

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- Liaising with the Transport & Logistics coordinator in order to arrange for the transportation of equipment and personnel to the emergency location
- Liaising with HR for coordinating contractor representative

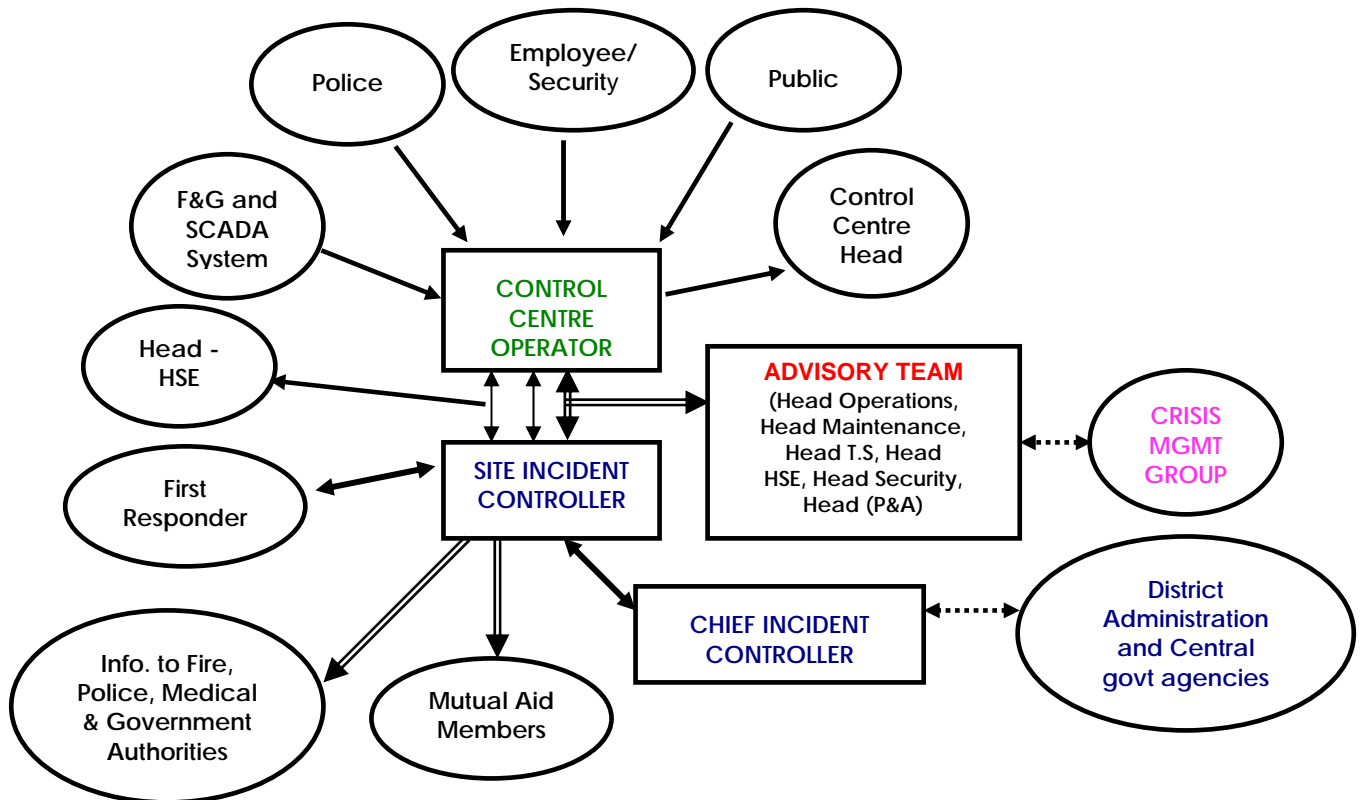
### Communication Services

The Communication Coordinator shall ensure the following actions below:

- Ensuring the ECC equipment and systems are maintained to a high standard to ensure they remain functional throughout the Emergency.
- Ensuring a back-up communication system is available in the event of the ECC Room not being available



Providing quality and diverse communication systems for use in routine and emergency situations.

**Communication Flow Chart**



**Note:** Level I —  
 Level II ==  
 Level III \*\*\*

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**Flow of Information:**

Control centre shall receive the information from field either in person or from the various systems available in the installation.

On receipt of information, the control room shift in charge will actuate the plan and notify the emergency to site incident controller.

Control room shift in charge will act as site incident controller till arrival of designated person.

SIC or CIC depending upon the level of emergency will actuate the plan and inform the concerned authorities as depicted above in the chart.



**2.4 EMERGENCY CONTROL CENTRE (ECC)**

- Each installation shall have the provision of ECC preferably with a back up arrangement.
  - The ECC shall be away from potential hazards and provide maximum safety to personnel and equipment.
  - Preference should be given to a non combustible building of either steel frame or RCC.
  - The ECC should have at least two exits and proper ventilation.
- The Emergency Control Room shall be fully equipped with the facilities. A safe assembly point shall be marked with alternate safe assembly point in case of sudden change of wind direction.

**2.4.1 Facilities to be Available in Emergency Control Centre (Fire Station)**

- Two way intercom telephone.
- Radio sets available on channel/Lan Phone.
- Name, address & telephone numbers of key Persons should be available, all telephone list should be reviewed for accuracy on a scheduled basis and updated as necessary.

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- FAX.
- Copy of Disaster Management Plan/Emergency Response Plan.
- Material Safety Data Sheet.
- Plant Layout & Route Map.
- Emergency lights.
- Personnel Protective equipment.
- Wind Socks located at easily observable points.
- Public address system.
- E-mail connection/Internet.
- List of employees.
- Name, address & contact telephone numbers of nearby hospital and nursing homes.
- Name, address & contact telephone numbers of mutual aid organization.
- Evacuation plan.



#### **2.4.2 Assembly Points**

There should be pre-designated areas in safe zone as per Quantitative Risk Assessment, where the personnel like workers, staff, contractor workers etc. not involved in emergency operations shall assemble in case of an emergency. Depending on the location of the emergency, the assembly point can vary. For each potential hazardous zone, a specific assembly point(s) shall be identified and clearly marked on the zones/maps. During emergency, Pre-designated persons would take charge of this point and take the roll call of the people reporting. Provisions should be made for assembly points, communication and headcount facilities at assembly points, and personnel to control the movement of assembled employees.

#### **2.4.3 Emergency Contact Numbers**

Emergency Contact Numbers (External Government Authorities):

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## **2.5 TYPE OF EMERGENCIES:**

The emergency preparedness for various kinds of disaster is as mentioned below:

### **2.5.1 Fire**

1. The campus shall be designated "No Smoking" zones
2. No explosives or highly inflammable material (e.g. diesel) shall be stored inside.
3. Fire extinguishing systems are in place, which are inspected regularly.
4. The electrical system is built in with circuit breakers, which help in preventing fires due to short circuits.
5. Two sumps with adequate water holding capacity shall be provided that will be dedicated for fire fighting.
6. Electrical panels are provided in each building so that fire occurring at any point of time does not spread and will get localized.
7. Fire hydrant point



### **2.5.2 Floods, cyclones & lightning**

1. The site shall be provided with good drainage systems to prevent entry of water into the buildings.
2. Storm water drains shall be well designed and are adequate for the anticipated peak capacity.
3. Storm water drains and sewage systems shall empty out in areas meant for drainage.
4. Suitable lightning arrestors shall be in place.
5. The return path for the discharge of a lightning strike is separate from that of power earthing pits. The earthing pits and material used for lightening discharge meet the respective standards.
6. Suitable lightning discharge tubes are installed to prevent damage by lightning to voice communication systems.

### **2.5.3 Earthquakes, Building Collapse & Accidents**

1. In earthquake prone areas, construction material used in buildings is as recommended by experts.
2. Buildings are designed such that damage in case of earthquake would be minimal.

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3. All construction shall be as per the advise/design of architects and engineers.

**2.6 CO-RELATED ACTIVITIES.**



The Scope of The On Site Emergency plan is to prepare for and activate the emergency time activities so that the emergency arisen after failure of our pre emergency control measures can be controlled and contained with in the shortest time, following are the three stage activities which are co related and provide better points for emergency preparedness, emergency actions and subsequent follow up.

**2.6.1 Pre emergency activities:**

The Following are the details of pre emergencies activities.

- (i) Internal safety survey: It shall be conducted to identify various hazards in plant and operational area. Checking of personal protective equipments shall be done for its workability.
- (ii) Third party survey: The survey shall be carried out every year by 'third party' .i.e. experts to study & identify various hazards associated and checking of the safety system for its adequacy.
- (iii) Non destructive testing: It shall be carried out as per the requirement and records are maintained.
- (iv) Safety /relief testing: List of the safety / relief valves in plants shall be available and periodical schedule testing shall be done record maintained.
- (v) Fire system testing: List of the fire fighting equipments and fire hydrants shall be available and periodically /daily testing shall be done and records are maintained.
- (vi) Mock drills: Mock drills shall be conducted for training the personnel internally and records shall be maintained.
- (vii) Training: programmes on various subjects shall be conducted and record maintained.
- (viii) Protective equipments: Adequate number of personal protective equipment shall be kept in stock and training for use of PPE shall be given to workers.

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- (ix) Communications: Internal/ external communication system shall be maintained in good working condition .siren /alarm organization shall be displayed in factory and people are conservant with that.
- (x) Emergency lights: Alternate power arrangement is to be maintained.
- (xi) OHC facilities:
  - a) Well equipped O.H center shall be maintained. Pre employment and subsequent periodically medical checks shall be done and records maintained.
  - b) Emergency Time Activities: Well – planned emergency organization shall be set up to meet the emergency situation and duties/responsibilities of each person are well defined.
  - c) Post Emergency Activities: Steps shall be established to take care of post emergency activities.

**2.6.2 Controlling Emergency:**

The successful handling of the emergency depends on the correct decision and action on site. To overcome this well trained and qualified person shall be employed for successfully handling the emergency.

**2.6.3 Evacuation and Transportation:**

Non essential personnel are evacuated from the incidence area and also from adjacent area to the assembly points in safe part of the works. Assembly points are fixed to take care of wind direction and they are clearly marked. Ambulance and other vehicles are available at site to transport affected people for better medical care and facilities.

**2.6.4 Safe Close Down:**



Safe closedown procedure for each plant shall be made.

**2.6.5 Use of Mutual Aid:**

Mutual aid scheme from near by factories and other agencies is available and can be used in case of emergency.

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### **2.6.6 Use of External Authorities:**

Outside authorities like police, factory inspector etc. can be contacted and utilized as per need.

### **2.6.7 Medical Treatment:**

People shall be trained to give first aid treatment and ambulance round the clock at the site to transport affected people to hospital for further treatment if required.

### **2.6.8 Roll Call of Personnel:**

It is necessary to know that everyone on site has been accounted for and that the relatives of casualties, if any have been informed. Roll call shall be maintained of employee normally and differences can be known to take necessary action. Normal roll of the contractor employees normally present on the site shall be also maintained and can be checked at the time of emergency.

### **2.6.9 Access to Records:**

A List of names and address of all employees shall be maintained at the gate near to emergency control centre. The list shall be updated to take count of change of address etc.

### **2.6.10 Public Relations:**


HOD of Public Relation of the company shall be appointed as sole authoritative source of information to the press and public. All other employees are instructed not to divulge information themselves, which may, in the event, be misleading or inaccurate.

### **2.6.11 Rehabilitation:**

Re- entry procedure in the factory and affected or contaminated area in vicinity is the prescribed and follows.

- ❖ Fire water contaminated is derived & sign boards are placed at locations for diverting contaminated fire water to FWRB. This water after testing shall be taken to ETP by pump and treated or incinerated based on quality of the effluent.

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- ❖ Any soil contamination shall be cordoned for remediation purpose. Soil shall be analyzed for extent of contamination & either treated chemically to neutralized or incinerated site. Soil after neutralization or incineration shall send to approved landfill site with prior permission of statutory authority.
- ❖ Air pollution in case of fire followed by some chemical toxic in nature. Company shall distribute booklet under section 41 b & c intimating for immediate line of action to all surrounding industries, nearby villages & authorities. Company is well-equipped for handling disaster emergencies.

### 3.0 OFF SITE EMERGENCY PLAN

If the accident is such that it affects inside the factory are uncontrollable and it may spread outside the factory premises, it is called as Off-site Emergency.

**Objectives:** - The main objectives of an emergency plan are-



- a. To control and contain the incident/ accident and if possible, eliminate it and
- b. To minimize the effects of the incident on person, property and environment.

Each major hazardous factory should prepare an emergency plan incorporating details of action to be taken in case of any major accident/ disaster occurring inside the factory. The plan should cover all types of major accident / occurrences and identify the risk involved in the plant. Mock drills on the plan should be carried out periodically to make the plan foolproof and persons are made fully prepared to fight against any incident in the plant. The plan will vary according to the type of industry and emergency.

#### 3.1 Need of The Off-Site Emergency Plan:

They may affect areas outside the works, depending upon the sensitivity of the emergency perhaps the most significant risk to outside areas is that associated with large releases of toxic vapors. It may be necessary to prepare in advance simple chart to tables relating to the likely spread of the vapor cloud taking into account its expected buoyancy, the local topography and all possible weather conditions during the time of release.

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The fact of a major emergency and the spread or potential spread of its effects outside the work may require that road and rail traffic past the works has to be halted or divert. The next effect can be for those who have a real need to get to he works including the key personnel and outside agencies, who have been called out.

The off-site emergency plan is made based on the events which could affect people and the environment outside the premises.

The off-site plan is largely a matter of ensuring co-ordination of existing services and their readiness, as far as possible, for the specific hazards and problems which may rise in an incident. This means that Key personnel have been given identified, their duties and proper training achieved. Emergency control center exists. Thus, in brief, the two main purpose of the off-site emergency plan are:



- ❖ To provide the local/district authorities, police, fire bridge, doctors, surrounding industries and the public, the basic information of risk and environmental impact assessment and to appraise them of the consequences and the protection/prevention measures and control plans and to seek their help to communicate with the public in case of a major emergency.
- ❖ To assist the district authorities for preparing the off site emergency (contingent) plan for the district or particular area and to organize rehearsals from time to time and initiate corrective actions based on the lessons learnt.

### **3.2 Structure of the Site Emergency Plan:**

It includes the following

- a. Organization set up incident controller, site main controller & key personnel, etc.
- b. Communication facilities –list of key telephone Nos. etc.
- c. Specialized emergency equipments – fire fighting equipments & PPE etc.
- d. Specialized knowledge -Trained people etc.
- e. Voluntary organization – details of organization etc
- f. Chemical information – details of the hazardous substances stored or processed.
- g. Meteorological information –Weather condition, wind velocity etc.

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- h. Humanitarian arrangements transport, First aid, Ambulance etc.
- i. Public information – arrangements for dealing with Media press, informing relatives etc.
- j. Assessment – collecting information on the cause of emergency, reviewing the emergency & effectiveness of all aspects of the emergency plan.

**3.3 Role of the Factory Management:**

The on site & off site plans are dovetail so that emergency services are summoned at the appropriate time & are provided with accurate information & a correct assessment of the situation.

**3.4 Role of the Emergency Coordinator Officer (Eco)**

The various emergency services will be coordinated by an emergency co ordination officer who is likely to be collector. The ECO will liaison closely with the site main controller.

**3.5 Roll of the Local Authority:**



Generally the duty to prepare the off site plan lies with local authorities. They may have appointed an emergency planning officer (EPO) to carryout this duty as part of the EPOS role in preparing for whole range of the different emergencies with the local authority area. The EPO will be needed to liaise with the works to obtain the information to provide the Basis for the plan. This liaison will need to be maintained to ensure that plan is continually kept update EPO has to ensure that all those organization which will be involved off site in handling the emergency known of their role & are able to accept by having sufficient staff & equipments.

EPO has to organize rehearsals for off site plan. It will be the duty of local authority to inform public, rail / road traffic, news media etc while operating off site plan.

**3.6 Role of Fire Authorities:**

The control of a fire is normally the responsibility of the Senior Fire Bridge Officer who would take over the handling of the fire from the Incident Controller on arrival at site. He will also have a similar responsibility for other event, such as explosions or toxic

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releases. They should have familiarized themselves with the location of site, water and other fire fighting equipments.

### **3.7 Role of the Police and Evacuation Authorities.**

The overall control of an emergency is normally assumed by the police with a senior officer designated as emergency coordinating officer. Formal duties of the police public during an emergency include protecting life and property and controlling movements.

Their function includes controlling and evacuating the public, identifying the dead & deal with casualties & informing relatives of dead or injured.

For evacuation, an early decision will be required in many cases and the advice to be given with range of the accident in particular whether they should be evacuated to safe place or told to go indoors. In the later case the decision can be regularly reviewed in the event escalation of the incident the shelters for evacuated persons & their welfare shall also be arranged.

### **3.8 Role of the Health Authorities:**

Health authorities including doctors, surgeon hospital Ambulances and so on. They have a vital part to play following a major accident & they should form an internal part of any emergency plan.



Major off site incidents are likely to require medical equipments & facilities additional to those locally and a medical mutual aid scheme should exist to enable the assistance of neighboring authorities to be obtained in the event of an emergency.

### **3.9 Role of the 'Mutual Aid' Agencies:**

Various types of mutual aid available from the surrounding factories and other agencies should also be utilized as per need.

The factory inspector are likely to want to satisfy themselves that the organization responsible for producing the off site plan has made adequate arrangements for

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handling emergencies of all types. They wish to see well documented procedures & evidences of exercises undertaken to test the plan.

In the event of an accident, the factory inspector will be assisting the district emergency authority for information & help in getting mutual aid from surrounding factories. They may wish to ensure that the affected areas are rehabilitated safely. In addition, they may require items of plant & equipment essential for any subsequent investigations to be impounded for expert analysis & also may want to interview witness as soon as practicable.

### **3.10 Role of the Pollution Board:-**

Will remain at the place of incident to monitor the environmental pollution in that area and report to District Authority.

### **3.11 Role of the Railway Board:-**

Railway will control the situation & traffic during the event to avoid escalation and also arrange emergency seats for seriously injured patient to be shifted.

### **3.12 Role of the Bus Service (State Transport):-**

Bus service will be provided, empty buses along with two conductors & drivers for the evacuation and shifting the public to the shelter place and control the movement of the buses.

### **3.13 Role of the Traffic Police:-**

The main role of traffic police is to control the traffic in accident area and help the movement of fire tenders, Ambulances, VIP vehicles, at the place of incident.



### **3.14 Role of the Regional Electricity Board:-**

Keep their staff ready to cut off electricity supply if required in the incident place.

### **3.15 Role of the Civil Defense and Home Guard:-**

Cordon off the area and help the local police in the evacuation and maintaining peace and harmony. Small injured person will be treated as primary health center.

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## 4 TRAINING, REHEARSAL AND RECORDS

### 4.1 Need of Training and Rehearsal

Extensive experience in chemical industry has provided the need and value of rehearsal of emergency procedures.



The exercises will help to refine the procedure by indent team deficiencies and difficulties. Each exercise should be monitored by number of independent observers located varies positions.

Rehearsals or exercises are important for all personnel likely to be involved in an incident ON or OFF the site because:

- a. They familiarize with their rolls, their equipments and the details of the plan.
- b. They give experience and build confidence in the team members
- c. They prove to update the plan and the requirement of special equipment.
- d. They allow the professional emergency services to test the par of the plant.

After each rehearsal or practice the plan should be reviewed to take account of any short coming highlighted by the exercises.

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#### **4.2 Some Check Points:**

Following points can be checked at the time of training/ assessing the adequacy of the emergency plan.

- a. Does the plan cover range of incidents that can realistically be anticipated?
- b. Have the consequences of the various incidents considered been adequately assessed?
- c. Are their sufficient resources in terms of personnel and equipment on the site to carry out the emergency plan for the various incidents in consumption with public emergency services?
- d. Have the time scale be assessed correctly.
- e. Is there a logical sequence of actions for each person given role in the plan?
- f. Is there 24hrs cover to take account of absences due to sickness and holidays, minimum shift manning shut down period etc.?

#### **4.3 Records and Up Dating the Plan**

All records of on site emergency plan and modifications by experience and suggestions, the rehearsal and conclusions of such plans and enquiries shall be well maintained and preserved.

New information and the deficiencies identified during the rehearsals should be reviewed and incorporated in the document for continual updating of the plan and such information should be communicated to the concern authorities.

#### **4.4 Emergency Instruction Booklet:**



Emergency instruction booklet under section 41b and c of Factories Act, 1948 in local language shall be prepared and given to concerned employees. Some main points shall be displayed in notice board. It shall be distributed all near by industries, local public, and gram panchayat and concern authorities.

#### **4.5 Fire Fighting System**

The fire fighting system consists of Hydrant System and Fire extinguishers. Along with that foam stock, and water tenders are also provided.

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The Fire Fighting Water Storage system shall consist of an underground storage tank, however the same shall be fine tuned as per the PNGRB guideline once it is made available.

**Fire Extinguishers**

Fire Extinguishers like Carbon Di-Oxide; Dry Powder Cylinders of sufficient capacity is provided through out the public areas of the building as required by statutory bodies.

**Fire Fighting Arrangements:**

The fire fighting equipments to be provided are as under.



- Chemical extinguisher of foam
- CO2 Extinguisher
- Dry Powder type Extinguisher
- Sand buckets
- Fire hydrants shall be in addition and not in substitution of the above requirements.

**For details refer Fire control Plan**

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| Name of the possible Hazards or Emergency | Its Sources & Reasons  | Its effects on persons, property and environment   | Place of effect   | Control Measures Provided  |
|---|--|--|---|--|
| Fire                                      | Electrical short circuit due to failure of electrical line and equipment.              | Electrical power failure production hindrance loss of business   | Transformer near power control center or electrical lines | <ul style="list-style-type: none"> <li>• Fire fighting equipment</li> <li>• Gravel bed for oil spillage or soaking isolate fenced area.</li> <li>• Lighting arrestor near by</li> <li>• Alternate arrangement for power supply</li> </ul>  |
| Fire & Toxic Chemical Spillage            | Natural Disaster Earth Quakes & lighting. Man made war, sabotage & fire in industries. | Production hindrance, trapping under debris, death, chemical burns, & toxic chemical spillage          | Whole factory & population near by                        | <ul style="list-style-type: none"> <li>• Hydrant System</li> <li>• Sprinkler system in storage area</li> <li>• Lighting arrestor at building</li> <li>• First aid &amp; ambulance is available</li> <li>• Smoking is prohibited in side the factory</li> <li>• Security at all the time is guarding the important location</li> </ul>  |
| Fire & Smoke                              | Gas fire in gas compressor station.  | Burns, Explosion, Injuries due to fire, production hindrance, loss of business & damage to environment | Gas compressor station.                                   | <ul style="list-style-type: none"> <li>• Hydrant system.</li> <li>• Mobile foam unit 100 lit capacity</li> <li>• Gas compressor is 20 m Away from residential building.</li> <li>• Un authorized person not allowed to enter</li> <li>• Breathing apparatus for rescue operation</li> <li>• Alarm system for indicating unusual incident</li> <li>• Gas leak detector</li> </ul> |

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#### **4.6 Medical Facilities**

When a disaster strikes, timely medical help and assistance would make the difference between life and death to an employee. A disaster preparedness plan in this regard shall be put in place as follows:

- A medical practitioner is available for full time along with 2 Nurses, 1 Pharmacist.
- A first aid kit shall be provided at adequate locations.
- Ambulance is available for the movement of the injured in case of emergency.
- First Aid training shall be imparted to a cross section of employees.

The following additional steps shall be taken in this area:



- Availability of a doctor on call on a 24-hour basis.
- Contract with major hospitals of the city to enable hospitals to provide first aid in the case of an emergency / admittance.
- All water tanks will be closed and locked. Terraces will also be locked.

#### **4.7 Voice Communication**

Voice and data communication is highly critical during any emergency. Any disruption in voice or data communication would result in a major crisis.

- Connectivity shall be in cyclic loops, which provides for redundancy in networking. Depending on the magnitude of the disaster, this cyclic loop will be helpful in communicating to the external world.
- A highly efficient support from vendors and services providers shall be ensured.
- Efforts shall be made to provide 100% uptime for communications.
- The best possible technology shall be used to provide accessibility for voice communication including voice mail service, auto attendant facility, VPN, etc.
- A highly efficient ECC, to provide 24 x 7 supports for voice communication.
- Mobile communication independent of the wired communication, provided.
- All efforts shall be made to ensure that the communication network has been installed with every precaution to prevent damage by any disaster including lightning, floods or cyclones, etc.

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- The communication lines shall be protected. The protection is meant to protect against fire and human shock hazard and is enough to protect sensitive electronics.
- Grounding: To achieve true total protection, all components of the communication system shall be properly grounded to a single point ground reference. When wiring, the shortest and most direct route to ground shall be taken and sharp turns and kinks in ground wires be avoided.
- Ongoing Maintenance / service: Once the protectors will be installed and the system properly bonded and grounded, all conductive paths will be checked and rechecked to make sure all equipment are being protected. This shall be done periodically.
- Security personnel shall be networked with separate communication channels. This communication option also offers redundancy in the eventuality off the EPABX system shutting down for any reason, at least for critical functions.

## 5.0 THE FACILITIES EVACUATION PLAN

The critical success factor with regards to the Disaster Recovery plan is the soundness of its evacuation plan. The following evacuation plan is formulated:

- The disaster recovery representative is a person who would be present at a particular location rather than somebody identified by name.
- The support personnel including security guards, facilities executives, office attendants and house keeping personnel from the building core team to assist the DR (Disaster Recovery) Representatives in evacuating the public during emergency.
- The DR representative and building core team members are trained extensively on the evacuation technique and are fully conversant with mock drills.
- A proper evacuation signage system shall be in place in all the units and places of occupancy. Signage shall include direction to exits, photo luminescent direction signs to lead people in the absence of light to the nearest exit, etc.
- One or more of the following options are available in this regard
  - Emergency Alarm Sirens

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- Flash message on PCs
- Hand held megaphones
- In the case of major calamity affecting the whole area the security officer shall make a suitable announcement over the hand held megaphone and sound the emergency siren to evacuate the building in an orderly manner. Electrician on duty shall ensure that the electrical system is shut down completely.
- The DR Representatives and the building core team shall swing into action. They shall guide and direct all the employees to evacuate to a safe assembly point, which are open areas away from the buildings.
- They check every toilet and closed cabins to ensure that all people are evacuated.
- In case of fire the DR representatives guide the fire fighting team to the exact spot of the incident.
- They provide assistance and first aid to injured and feeble.
- Once the building has been evacuated of all people, if there is no danger to the lives of the DR representatives and the building core team efforts will be made to combat fires if applicable and/or make efforts to safeguard valuable assets within the affected area along with the salvage party of the fire fighting team.
- A situation report is given to the DR control room.
- Assistance is provided to the rush injured employees to hospitals if required and to transport people to their residence.

### **5.1 Staff Handling**

Electronic checking of visitors, their baggage will be as per security norms. The number of visitors including security and organisers who shall visit the industry. While such visitors are required to comply with rules pertaining to entry checking, in the case of any disaster, the management / company will take care of the situation.

The company enters into service level agreements with organisers according to which organisers are required to have their own disaster recovery plans. This is

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because the company could find itself in a difficult situation to handle large crowds in the eventuality of a disaster.

### **5.2 Mock Drill**

The efficacy of EPP would depend on the quality and frequency of the training, which the disaster recovery and core team members undergo. The following schedules of training and mock drills shall be laid down.

- Training for the fire fighting team and essential maintenance personnel shall be conducted once in three month.
- Mock drills for evacuation shall be conducted once in six months.



A person who is trained on disaster recovery and evacuation plan is empowered as follows:

- Is vigilant to notice outbreak of fire etc.
- Responds immediately and escalate matters.
- Carries out action items in order of priority.
- Raises alarms and broadcasts messages in an emergency.
- Is able to guide people to evacuate a building in a disciplined manner.
- Responds to fire alarms which may have been raised by other people.
- Is aware of emergency contact numbers.
- Is trained to provide first aid.
- Carries out rescue operations of people who are immobilized, injured or unconscious.

### **5.3 Post- Emergency Waste Disposal**

- Solid waste generated during an emergency shall be segregated and disposal as per the waste management chart.
- Wastewater generated will be directed to disposal.

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## 6.0 DUTIES OF SHIFT PERSONNEL FOR EMERGENCY ACTION AND EVACUATION

Anyone Discovering/noticing flammable/toxic Leak, Fire or Injuries to Personnel (Field Operator or Maintenance Personnel).

### 6.1 In Case of Injuries to Personnel:

Inform medical center & clearly state the name, the location of the injured person and the type of assistance needed i.e. ambulance, rescue at height etc.

### 6.2 In Case of Small Fire

(Note: small fire is defined as fire that can be extinguished by portable fire extinguishers)



- If the fire is small and if you have received training in the use of portable fire extinguishers, try to extinguish the fire, keeping you safe.
- If not trained on fire fighting, activate the fire alarm by shouting Fire ---fire
- Contact fire station and clearly state your name, the location of the fire and if possible some description of fire and contact emergency control room.
- Upon extinguishing the fire, standby with a new portable fire extinguisher until Emergency Services (fire tender and ambulance) arrive on site.

### 6.3 In Case of Major Fire

(Note: Major fire is defined as fire that can not be extinguished by portable extinguishers)

- Activate the fire alarm by shouting fire----fire
- Contact fire station and clearly state your name, the location of the fire and if possible some description of fire and contact emergency control room.
- Standby at safe location to direct the Emergency Services (fire tender and ambulance).
- Assemble at nearby assembly points on hearing the evacuation sirens. (Location of assembly points are to be decided)
- Wait at respective assembly point until all clear siren has sounded.
- In case of Flammable /Toxic Significant Gas Leak: (Note: Significant leak means forming visible vapour cloud):

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- Contact fire station and clearly state your name, the location of the leak and if possible some description of leak and contact emergency control room.
- Standby in safe location to direct the Emergency Services (fire tender and ambulance).
- Assemble at nearby assembly points on hearing the evacuation sirens.
- Wait at respective assembly point until all clear siren has been sounded.

#### **6.4 Anyone on Receiving Bomb Threat**

- Keep the caller engaged in conversation as long as possible.
- Try to get maximum information from caller and background noise.
- Do not cut the phone from your side.
- Any new or doubtful thing should not be touched.
- Immediately inform emergency control centre, Security head, CEO & concerned HOD.

### **7.0 SAFETY AND MITIGATING MEASURES**

Safety considerations in the design & important mitigating measures are provided to contain and control the emergency are outlined below:

#### **7.1 Fire Precautions:**



In case of fire, personnel should wear self contained breathing apparatus when working in an area containing bromine compounds.

#### **7.2 General Safety Considerations:**

1. Adherence to international engineering standards in the design, construction and testing of the storage tanks, equipments and other hard wares.
2. Statutory approvals of hazardous storage, waste treatment and disposal stack emission etc.
3. Storage tanks containing hazards material are located away from the main plant.
4. Full fledged fire protection system.

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### **7.3 Equipment and Storage Safety**

1. Safe work systems in place like permit to work system.
2. Various permits for different jobs like (Hot work, Vessel entry & Confined Space, working at height etc.)
3. All storage tanks shall be located in the dykes with flame arrestor and breather valve.
4. Spillage and leaks from the storage tanks/pipe lines can be collected and transferred out and treated for safe disposal.
5. Floor washing is collected and disposed in proper manner.
6. The hazardous equipments shall be provided with seal arrangement, which will prevent leak.
7. Safety valves, rupture disk shall be provided to the high hazardous equipments.

## **8.0 SAFETY MEASURES TO BE TAKEN**

### **NATURAL GAS SAFETY TIPS**



Here are some key words to help you remember what to do if a natural gas leak is suspected:

Leave - Leave the area immediately. Do not try to find or stop the leak.

Don't touch - Do not smoke, Do not use a cell phone or flashlight, Do not turn on or off any lights or appliances or operate any kind of vehicle or equipment that could create a spark.

Dial - If a leak is suspected near a natural gas transmission pipeline, call the number on the pipeline marker. If the smell of gas is particularly strong, or no number is available, then immediately inform to nearest Police station center, because pipelines are underground, line markers are used to indicate the approximate location of the pipelines. However, these markers do not indicate how deep the pipeline is buried. The pipeline route can also take twists and turns between markers. Never assume the pipeline lies in a straight line. Always dial before dig.

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## 8.1 Meeting Safety Standards and More

The design and construction of transmission pipelines are done by following the best engineering practices prevailing in the world; PNGRB standards regulate pipe wall thickness, protective pipe coatings, depth of burial, operating pressures, public safety and system integrity management. These standards are mandatory in India.

AGCL Pipeline prides itself on implementing safety measures that meet all statutory regulations, we took many precautions in the design and construction of the Natural gas pipelines Pipeline – because no business objective is more important than the safety of people living and working around the pipelines. Our pipelines include a broad array of safety features:



- High quality steel and testing at manufacture.
- Application of a 0.37 mm fusion bond epoxy coating to protect the pipeline against corrosion.
- Cathodic protection (impressed current on the pipeline) to protect against corrosion.
- Specialized welding techniques.
- X-ray or ultrasonic testing of each weld.
- Installation of pipe 50% deeper than required, to a depth of 0.9 meters. (Regulations require the pipe be buried 0.6 meters.)
- Pre-operation hydrostatic tests to verify structure integrity under extreme pressure.

## 8.2 Safety in Operations

In addition to the features built into the pipeline are safety practices followed in operations to protect the installed pipeline:

- 24 hr/day, 7 days/week monitoring of gas flow pressures.
- Plan for rapid pressure loss on the pipeline through a series of valves along the route.
- Pipeline marker signs to identify the area where the pipeline is buried.

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- Public awareness program to remind people to call before they dig near the pipeline
- Regular patrols to guard against unauthorized activity.
- Leakage surveys
- Periodic in-line inspections using sophisticated electronic equipment will check for changes in the steel pipe wall
- Security management plan, including random patrols of cell above ground facilities and the use of other modern security protocols
- Emergency Response Plan, developed with input from local and provincial emergency responders
- Ensure first responders have the training needed to deal with pipeline emergencies
- Always follow "Dial before dig"

## **9.0 FIRE CONTROL PLAN**



Fire can occur anytime from many causes. It can take place by itself or as result of other disasters. The single most important requirement to combat fire is the ability to immediately raise the alarm. After that comes the need to respond quickly in order to extinguish it at its incipient stage.

### **General Procedures:**

In the event of a fire emergency, it is imperative that proper response is initiated immediately to prevent injury to personnel and minimize property damage.

1. Even if no fire or smoke is on sight but the scent of burning material permeates in the air, alert your Floor Manager. Immediately dial ECC and calmly report the location of the smoke or fire.
2. If smoke or fire is discovered, stay calm. Do not panic.
3. Alert the other employees in your area and activate the nearest fire alarm bell. Always give priority to the reporting of the fire.

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4. Where possible and if trained to fight the fire, use the nearest portable fire extinguisher in the area, otherwise, wait at a safe distance and direct the responding Emergency Response Team to the Scene of the fire.
5. Do not put yourself in danger. Never attempt to fight the fire if not trained. Do not open the door to a room believed to be on fire.
6. Evacuate yourself via the nearest Fire Exit. Follow the instructions of your Floor Manager. Wait for instructions from your floor brigade team of evacuation announcement over the PA system.
7. Proceed to the Assembly area at the respective locations and report to your concerned officer for staff accounting. Do not return to the office until clearance is given.

**Emergency brigade response procedures:**

**Fire is inside the occupied floor:**

1. Upon confirming the presence of fire, ECC immediately alerts the Security Manager and the Emergency Brigade (EB) members through a coded PA Announcement.
2. Security manager instructs ECC coordinators to alert the Fire Department and proceed to the fire alarm scene with the Emergency Brigade members and attempt to extinguish the fire. Cut off power and gas supply.
3. Floor Brigade members of the affected floor initiate immediate evacuation of employees from the floor.
4. Other floor brigades stand by for further instructions from the EB Coordinate through the PA system.
5. If the instruction is given to evacuate the whole office floors / building, EB Coordinator instruct ECC to make the appropriate PA announcement. Floor Brigade implements evacuation procedures for their respective floors.
6. Medical / First Aid Team sets up First – Aid stations at the respective locations.

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7. Security Assistant meets responding Fire Department and escorts them to the scene of the fire. EB Coordinator (SM) briefs Fire Dept. Team Leader upon arrival.
8. Emergency Brigade turns – over fire fighting activities to the Fire Department and evacuates themselves. Only security personnel shall remain in the area to escort the Fire Department and secure the entrance against unauthorized access, e.g. looters, etc. However, they must immediately leave the area upon instruction of the Fire Dept. and / or if their safety is endangered.
9. Upon arrival at the assembly area, EB members report to their respective Departments for staff accounting.
10. After the fire has been controlled, EB and DRT (Disaster Recovery Team) members return first to the building to assess the damage and initiate restoration activities.
11. Depending on the assessment of the damage and as recommended by the local Fire authorities, SMC decides whether to order the return to the building and resumption of operations or the temporary closure of the facility.
12. Security strictly restricts access to the offices. Any inspection by outside parties should be escorted by Security Officers.

**Fire is on out side officer floor:**



1. If the fire alarm is outside occupied floors, Security Managers to coordinate with the Building Administrator to confirm the presence of fire and closely monitor the situation. EB to announce the fire alarm in the PA system indicating the exact floor location and advise employees to secure their things and prepare for possible evacuation. Emergency Brigade stands by for further instructions.
2. If Building Administration orders evacuation of the whole building. Security Manager instructs ECC to announce the evacuation over the PA system.
3. Floor Brigade members initiate evacuation of their respective floors.

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4. Emergency Brigade members inspect all floors to ensure that no one left behind before evacuating themselves securely to ensure that all main entrances are locked and the emergency exit doors are closed after leaving the floor.
5. Ensure that elevators are grounded and shut off at the ground floor.



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**Roles & Responsibilities:**

| Employee  | Emergency Control Center (ECC)   |
|---|--|
| <ul style="list-style-type: none"> <li>• Don't Panic, remain Calm.</li> <li>• Listen to the announcement made through the PA system.</li> <li>• After the order of evacuation, all the employees should evacuate and assemble in the designated assembly area.</li> <li>• Never use Elevators during evacuation.</li> <li>• Always use Staircase.</li> <li>• If you know that some body is buried inside immediately inform the rescue team.</li> <li>• Never enter the facility until a go-ahead is given.</li> <li>• Do not spread rumors.</li> </ul> | <ul style="list-style-type: none"> <li>• Immediately inform SO.</li> <li>• Make announcement on the PA system, to keep employees updated on the situation.</li> <li>• Coordinate the evacuation, after the receipt of orders from SO.</li> <li>• Intimate the local Fire Department, nearest hospital, Ambulance etc., for necessary help.</li> <li>• During the evacuation count the number of persons evacuating, with the help of Security.</li> <li>• Check all the toilets and meeting rooms, if any body is left behind.</li> <li>• Make sure that after evacuation, access to the facility is restricted. No unauthorized person can access the facility.</li> <li>• If a person from some outside agency is required to access the facility, he should be accompanied by a person of ECC.</li> </ul> |
| Crises Management Team (CMT)  | Emergency Response Team (ERT)  |
| <p><b>Head – Facility Sponsor</b></p> <ul style="list-style-type: none"> <li>• Make decision required, due to immediate occurrence of the disaster / crises.</li> </ul> <p><b>P&amp;A Head</b></p> <ul style="list-style-type: none"> <li>• Provide access to the employee Personal</li> </ul>  | <p><b>Security Manager</b></p> <ul style="list-style-type: none"> <li>• Chairman of the ERT and coordinates the Emergency Brigade.</li> <li>• Provides regular updates.</li> <li>• Brigade the CMT &amp; ERT activities.</li> <li>• Directs the evacuation activities.</li> </ul>  |

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| <p>data.</p> <ul style="list-style-type: none"> <li>Advise on Human Resource Policy.</li> </ul> <p><b>Accounts Head</b></p> <ul style="list-style-type: none"> <li>Ensure availability of cash for emergency expenditure.</li> <li>Financial approvals on expenditures.</li> <li>Determine potential or actual liabilities and determine insurance status.</li> <li>Setup financial plan for business restoration.</li> </ul> <p><b>Security Manager – SO Leader</b></p> <ul style="list-style-type: none"> <li>Ensure the security of the facility during the emergency period.</li> <li>Liaison with the outside agencies.</li> </ul> <p><b>Facilities</b></p> <ul style="list-style-type: none"> <li>Assess and inform the Finance Head on the damages suffered by the facility.</li> <li>Directs the facility restoration activities.</li> <li>Actively participate in the rescue function.</li> </ul> | <p><b>Floor Manager – Team Leader</b></p> <ul style="list-style-type: none"> <li>Supervise and directs the team activities.</li> <li>Ensure proper implementation of ERP.</li> <li>Identify the shortest and safest escape route.</li> <li>Maintain order at the Evacuation Assembly Area.</li> <li>Ensures no employee returns back to the floor.</li> </ul> <p><b>Contract Security</b></p> <ul style="list-style-type: none"> <li>Assists in initial fire fighting with the help of a Fire Extinguisher.</li> <li>Evacuation of employees and visitors.</li> <li>Inspection of offices, cubicles, conference rooms, rest rooms etc.</li> <li>Assists in maintaining order at the evacuation Assembly Area and during return.</li> </ul> |
|--|--|

**10.0 FIRST AID PROVISIONS:**

- The fully equipped first aid boxes at required locations shall be provided.
- The Ambulance van equipped with equipments is provided and manned by a full time driver cum mechanic, trained in first aid. The Ambulance van shall not be used for any other purpose and will normally be stationed at or near to the Occupational Health Center.

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**List of Annexure:**

| Sr. No. | Annexure No. | Details                      |
|---------|--------------|------------------------------|
| 1       | Annexure-1   | Plant Lay out                |
| 2       | Annexure-2   | Organization Plan            |
| 3       | Annexure-3   | Important Telephone Numbers  |
| 4       | Annexure-4   | Fire Fighting System Layout  |
| 5       | Annexure-5   | Fire fighting equipments     |
| 6       | Annexure-6   | Medical Facilities available |
| 7       | Annexure-7   | Transport Facility provided  |

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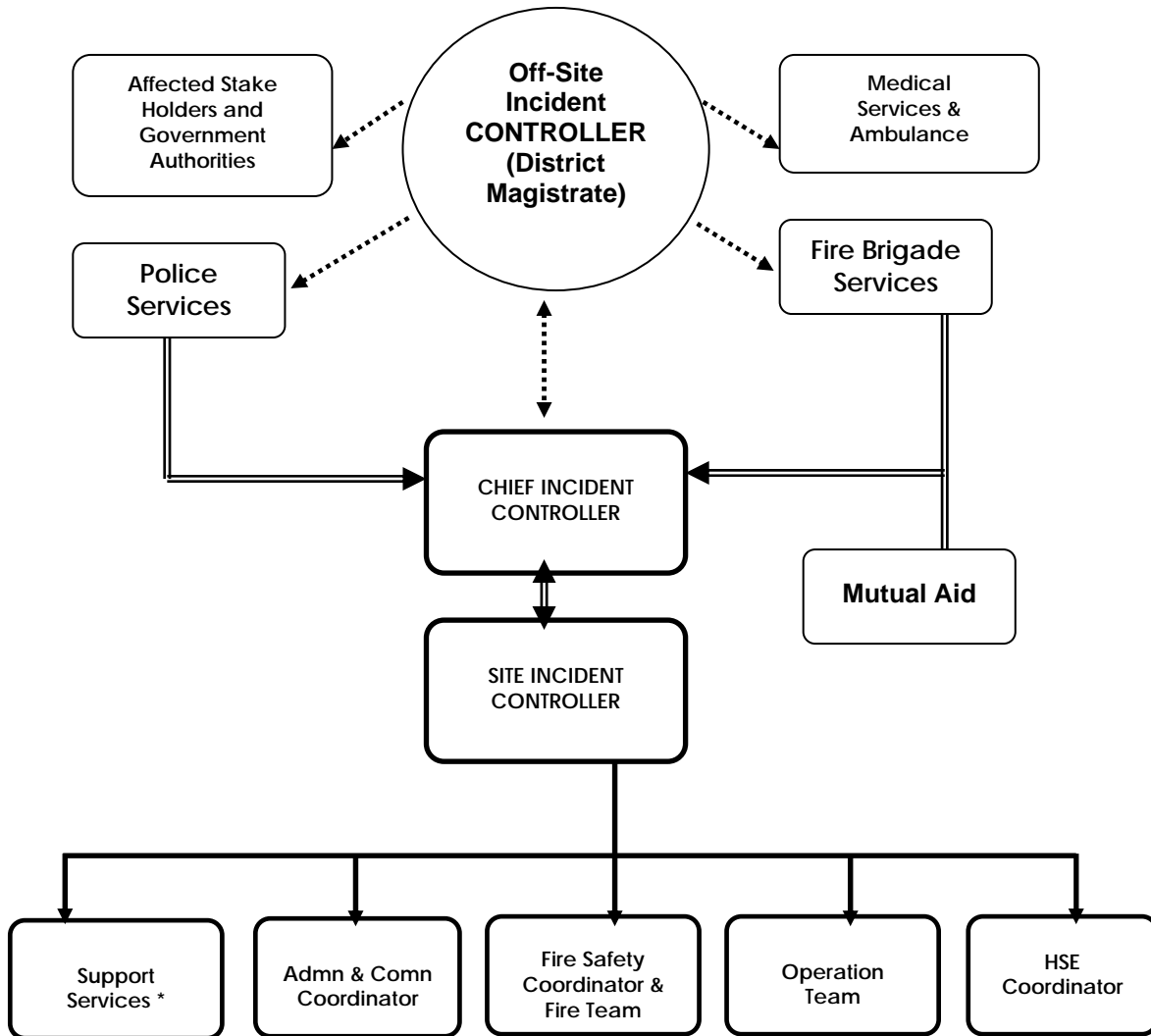
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## Annexure 1: Plot Plan



|                       |                              |                      |
|-----------------------|------------------------------|----------------------|
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**Annexure 2:**

**Organization Chart:**



|                       |                              |                      |
|-----------------------|------------------------------|----------------------|
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### Annexure 3:

#### Important Telephone Numbers



| Sr. No. | Name                   | Designation / Department         | Contact Number |
|---------|------------------------|----------------------------------|----------------|
|         | Shri B. Borpatragohain | Managing Director                | 9435038143     |
| 1       | Shri Aditya Kr. Sharma | DGM – Finance                    | 9435038141     |
| 2       | Sri Surya Tamuli       | Sr. Manager – Technical Services | 9435036142     |
| 3       | Shri K. Mazumder       | Manager O&M                      | 9435038144     |
| 4       | Sri R.J.Borthakur      | Sr. Manager – P&A                | 0374-2800556   |
| 5       | Sri Kishore Kr. Saikia | Sr. Manager – Materials          | 9435039843     |
| 6       | Sri Diganta Kr. Dutta  | Sr. Manager – Civil              | 9435039471     |
| 7       | Sri Gunakanta Sarmah   | Manager (Inst. & TGG)            | 9435007840     |
| 8       | Sri D. C. Phukan       | Manager – Marketing & PR         | 9435530268     |
| 9       | Sri Vijay Kumar        | Manager - Accounts)              | 9435038532     |
| 10      | Sri N. H. Hazarika     | Manager – IT                     | 0374-2800452   |
| 11      | Shri B.Saikia          | OIC (Fire & Safety)              | 9435039849     |
| 12      | Dr. B. Gogoi           | Dy. Manager - Medical            | ---            |
| 13      | Sri G. Baruah          | Dy. Manager – Security           | 9435038145     |

|                       |                              |                      |
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## Annexure 4 - Fire Fighting System Layout



|                       |                              |                      |
|-----------------------|------------------------------|----------------------|
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### Annexure 5 - Fire fighting equipments

| Sr. No. | Appliance & Man Power      | AGCL (On Site) |
|---------|----------------------------|----------------|
| 1       | Fire Tender                | 01             |
| 2       | Fire Hose (Length in Mtr.) | 386            |
| 3       | Foam Stock (Ltrs.)         | 100            |
| 4       | Crew Members               | 16             |
| 5       | Fire Extinguishers         |                |
|         | a) DCP                     | 27             |
|         | b) CO2                     | 15             |



|                       |                              |                      |
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### Annexure 6: Medical Facilities

| Sr. No. | Appliances & Manpower | AGCL (On Site) |
|---------|-----------------------|----------------|
| 1       | No. of beds           | 04             |
| 2       | Doctors               | 01             |
| 3       | Nursing staff         | 02             |
| 4       | Pharmacist            | 01             |
| 5       | Ambulance             | 02             |
| 6       | Life saving drugs     | As reqd.       |
| 7       | Emergency Vehicle     | 01             |

|                       |                              |                      |
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### Annexure 7: Transport Facilities

| Sr. No. | Appliances & Manpower | AGCL (On Site) |
|---------|-----------------------|----------------|
| 1       | School Bus            | 04             |
| 2       | Mini truck            | 02             |
| 3       | M/Vans                | 03             |
| 4       | M/Cars                | 02             |
| 5       | Tata Sumo             | 03             |
| 6       | Bolero/ Other car     | 01             |

|                       |                              |                      |
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|               |                                      |
|---------------|--------------------------------------|
| Approved By   | B. Borpatragohain, Managing Director |
| Signature     |                                      |
| Controlled By | S. Tamuli, Sr. Manager – TS          |
| Signature     |                                      |



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