Last updated on: April'2020

EMERGENCY PREPAREDNESS & RESPONSE

(ON-SITE EMERGENCY PLAN)

Site :-

Ankleshwar Rajpipla Road,
Village – Govali, Tel : Jhagadia,
Distt.- Bharuch -393001
Tel.: +91 2645 – 258100, 258131, 258101
Fax: - +91 2645-220163
Email: gborosil@borosil.com Website: www.gujaratborosil.com

[SCHEDULE –8-A]
Gujarat Factory Rules 68-J/12/(1)

DETAILS TO BE FURNISHED IN THE ON-SITE EMERGENCY PLAN

1. Name and address of the person furnishing the information.

Name of Person – Ramaswami Velayudhan Pillai
Designation – Whole Time Director
Name of Company - M/s GUJARAT BOROSIL LTD., Bharuch plant
Address - Ankleshwar – Rajpipla Road, Vill- Govali, Bharuch Gujarat
Phone no. : 2645– 258100, 258101
Fax : +91 2645-220163
E-mail : gborosil@borosil.com

2. Key personnel of the organization and responsibilities assigned to them in case of an emergency

List of the key personnel of Borosil Renewables Plant:

Sr.	Name	Mobile	Short. No	Ext. No.	Residence
1	Mr. V. Ramaswamy	9821015623	562068	205	---
2	Mr. Rajesh Chaudhary	9821627957	562108	105	106
3	Mr. Devrishi Singhal	7043166651		251	
4	Mr. Rajendra Khode	9909980172	562050	151	
5	Mr. Ramesh Chaudhary	7227000765	562017	210	---
6	Mr. Yatendra Sachdev	9427115938	562522	137	---
7	Mr. Sunil Kumar Roongta	9427115947	----	150	116
8	Mr. M V Ramana	8511134955	562328	202	
9	Mr. Vikas Runthala	7600023367	----	231	---
10	Mr. Manish Biyani	9909543696		130	---
11	Mr. Ankur Bhatnagar	9829932909	562046	148	---
12	Mr. Samar Ghoshal	9377410259	562034	178	---
13	Mr. Rajeev Gupta	8511195489	562430	215	---

14	Mr. Avinash Patil	9662508071	562717	211	---
15	Mr. S. Chakraborty	7228880200	562529	214	---
16	Mr. Bhadresh Patel	8511142152		209	---
17	Mr. H. S. Bedi	9687250469	562334	174	---
18	Mr. Kartik Das	9427114662	562027	155	---
19	Mr. Vipul Patel	9426878615	----	176	---
20	Mr. Chhayank Dave	9427115939	562543	206	---
21	Mr. Raju Ghoshal	8511195486	562213	211	---
22	Mr. Shrinivas Panda	9428586820	562336	152	---
23	Mr. P. Venugopal	9324052233	562093	146	---
24	Mr. Jitendra Panchal	8758458299	562484	226	---
25	Mr. Anil K Singh	9427115944	562089	213	---
26	Mr. Sanjay Shah	9662019951	562028	155	---
27	Mr. Ajay Patil	9427115926	562543	152	---
28	Mr. Ashish Gohil	9725524730	562653	183	
29	Mr. K. S. Mahajan	9898511041	562033	149	9067222839
30	Mr. Binay Singh	9429672128	562578	171	---
31	Mr. Santosh Tibdewal	9898048340	562061	139	---
32	Mr. Raju Patel	8511195484	562024	165	9409044730

Responsibilities assigned to them in case of an emergency:

Operational Impacts

- Lost sales and income
- Negative cash flow resulting from delayed sales or income
- Increased expenses (e.g., overtime labor, outsourcing, expediting costs, etc.)
- Regulatory fines
- Contractual penalties or loss of contractual bonuses
- Customer dissatisfaction or defection
- Delay executing business plan or strategic initiative

Technology caused event

- Utility interruption or failure (telecommunications, electrical power, water, gas, steam, HVAC, pollution control system, sewerage system, other critical infrastructure)

Intentional

- Robbery
- Lost Person, Child Abduction, Kidnap, Extortion, Hostage Incident, Workplace violence
- Demonstrations, Civil disturbance
- Bomb threat, Suspicious package
- Terrorism

Financial Impact

Quantify operational impacts in financial terms.

Program Administration Define the scope, objectives, and assumptions of the business continuity plan. Business Continuity Organization Define the roles and responsibilities for team members. Identify the lines of authority, succession of management, and delegation of authority. Address interaction with external organizations including contractors and vendors.

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Manual Workarounds

- Document all forms and resource requirements for all manual workarounds Incident Management Define procedures:
- Incident detection and reporting
- Alerting and notifications • Business continuity plan activation
- Emergency operations center activation
- Damage assessment (coordination with emergency response plan) and situation analysis
- Development and approval of an incident action plan Training, Testing & Exercising
- Training curriculum for business continuity team members
- Testing schedule, procedures, and forms for business recovery strategies and information technology recovery strategies.
- Orientation, tabletop, and full-scale exercises Program Maintenance and Improvement.
- Schedule, triggers, and assignments for the periodic review of the business continuity and IT disaster recovery plan
- Details of corrective action program to address deficiencies.

Appendix

References to Related Policies & Procedures

- Emergency Response Plan
- Information Technology Disaster Recovery Plan (if not included in the business continuity plan)
- Crisis Communications Plan
- Employee Assistance Plan

Property Conservation :

Identify preparations before a forecast event such as severe weather. Identify how you will assess damage; salvage undamaged goods; and cleanup the building following an incident. Identify the contractors, equipment, and materials that would be needed. Update the resource table at the end of this plan.

Support Employee Health after a Disaster:

There are some procedures you can put in place before a disaster, but you should also learn about what people need to help them recover after a disaster. It is possible that your staff will need time to ensure the well-being of their family members, but getting back to work is important to the personal recovery of people who have experienced disasters. Encourage adequate food, rest and recreation. Provide for time at home to care for family needs, if necessary. Have an open door policy that facilitates seeking care when needed. Workplace routines facilitate recovery by providing an opportunity to be active and to restore social contact. Re-establish routines, when possible. Sharing with others can speed personal recovery. Create opportunities for breaks where co-workers can talk openly about their fears and hopes. Offer professional counselors to help coworkers address their fears and anxieties.

Review Insurance Coverage:

Inadequate insurance coverage can lead to major financial loss if your business is damaged, destroyed or simply interrupted for a period of time. Insurance policies vary, so check with your agent or provider about things such as physical losses, flood coverage and business interruption. Understand what your policy covers and what it does not. Ask about any deductibles, if applicable. Consider how you will pay creditors and employees. You should also plan how you will provide for your own income. Finally, find out what records your insurance provider will want to see after an emergency and store them in a safe place.

Prepare for Utility Disruptions:

Businesses are often dependent on electricity, gas, telecommunications, sewer and other utilities. Plan ahead for extended disruptions during and after a disaster. Carefully examine which utilities are vital to your business's day-to-day operation. Speak with service providers about potential alternatives and identify back-up options such as portable generators to power the vital aspects of your business in an emergency.

Secure Facilities, Buildings and Plants:

While there is no way to predict what will happen or what your business's circumstances will be, there are things you can do in advance to help protect your physical assets. Install fire extinguishers, smoke alarms and detectors in appropriate places. Consider the ways in which people, products, supplies and other things get into and leave your building or facility. Secure ingress and egress. The nation's battle against terrorism takes place on many fronts, including the mailrooms of U.S. companies. Plan for mail safety. Identify what production machinery, computers, custom parts or other essential equipment is needed to keep the business open. Plan how to replace or repair vital equipment if it is damaged or destroyed. Identify more than one supplier who can replace or repair your equipment. Store extra supplies, materials and equipment for use in an emergency. Finally, plan what you will do if your building, plant or store is not usable.

Plan Distribution & Access

The Plan will be distributed to members of the business continuity team and management. A master copy of the document should be maintained by the business continuity team leader. Provide print copies of this plan within the room designated as the emergency operations center (EOC). Multiple copies should be stored within the EOC to

ensure that team members can quickly review roles, responsibilities, tasks, and reference information when the team is activated. An electronic copy of this plan should be stored on a secure and accessible website that would allow team member access if company servers are down. Electronic copies should also be stored on a secure USB flash drive for printing on demand.

Secure Your Equipment:

The force of some disasters can damage or destroy important equipment. Conduct a room-byroom walk through to determine what needs to be secured. Attach equipment and cabinets to walls or other stable equipment. Elevate equipment off the floor to avoid electrical hazards in the event of flooding.

Assess Building Air Protection:

In some emergencies microscopic particles may be released into the air. For example, earthquakes often can release dust and debris, a biological attack may release germs, and a dirty bomb can spread radioactive particles. Many of these things can only hurt you if they get into your body. A building can provide a barrier between contaminated air outside and people inside, but there are ways to improve building air protection. Building owners or managers, and employers should take a close look at the site's Heating, Ventilating and Air-Conditioning (HVAC) system and be sure it is working properly and is well maintained. Be sure any security measures do not adversely impact air quality or fire safety. Start by developing and practicing shut down procedures. Then, make sure outdoor air intakes are secure. HVAC systems can be an entry point and a means of distributing biological, chemical and radiological threats. Air intakes at or below ground level are most vulnerable because they can be easily accessed. Consider relocating or extending an exposed air intake, but do not permanently seal it. Finally, determine if you can feasibly upgrade the building's filtration system. Increasing filter efficiency is one of the few things that can be done in advance to consistently protect people inside a building from biological and some other airborne threats. Carefully consider the highest filtration efficiency that will work with a building's HVAC system.

Improve Cyber Security:

Protecting your data and information technology systems may require specialized expertise. Depending on the particular industry and the size and scope of the business, cyber security can be very complicated. However, even the smallest business can be better prepared. Use anti-virus software and keep it up-to-date. Don't open email from unknown sources. Use hard-to-guess passwords. Protect your computer from Internet intruders by using firewalls. Back up your computer data. Regularly download security protection updates known as patches. Make sure your co-workers know what to do if your computer system becomes infected. Subscribe to the Department of Homeland Security National Cyber Alert System, www.us-cert.gov, to receive free, timely alerts on new threats and learn how to better protect your area of cyberspace.

An investment in planning today

will not only help protect your business investment and your livelihood, but will also support your employees, customers and stakeholders, the community, the local economy and even the country.

ROLE OF KEY PERSONNEL ON HEARING EMERGENCY SIREN:-

1. Factory Head will reach to Emergency Control Centre (ECC) or Alternate Emergency Control Centre depending upon wind direction & situation of emergency if ECC is affected.

2. HODs of Maintenance / Technical / Stores / P & A / F& A / Non affected Plant will report to Chief Emergency Controller [Factory Head]

3. Sectional Heads of Maintenance / Work Shop / Civil / Instrument / Electrical / Non Affected Plant will report to their normal work places if not demanded by Incident. Controller / Site Main Controller / Chief Emergency Controller; accordingly instruct staff Under their control to report to Incident place & or / plant to be present at their normal Work place or to go to declared Assembly Point at the time of Emergency for further Instruction & or if evacuation is needed.

4. All other Sectional Heads will report / remain at their normal work places with their staff And shall work as per the instruction of Chief Emergency Controller or role allotted in Emergency action plan.

5. All the non-essential employees will contact their Sectional Heads / Area In charge for Further instructions.

6. All Contractor's Labor will follow safe route after seeing the wind direction and reach The assembly point for further instructions.

ROLE OF INCIDENT CONTROLLER: Shift In-charge of Affected Plant/Area (Production)

On receiving the information of emergency the shift In charge concerned will direct his staff To control the situation by available gears. He will assess the scale of emergency likely to Exist i.e. L1, L2, and OR L3. Categorize the risk and

Inform Emergency Control Center - (222/131/101) if ERT did not reach till that time.

Inform Plant Dispensary (111 / 222) if personnel injury is reported / observed.

1. Decide whether to stop or continue the process and take technical decision to control the incident and inform / instruct next person to inform Factory Head regarding incident and consult senior officers as per requirement. Inform Factory Head / Dept. Head / Sectional Head for declaration of emergency and activating emergency plan.

2. If emergency of L2 or L3 level, or L1 level is turning to L2 / L3 level and need arises to Activate emergency action plan by giving information / intimation to Emergency Control Center In-charge (phone 222 /101 / 131) for blowing emergency Siren for Gas leak / Fire If Dept. Head / Sectional Head (Site Main Controller) does not reach to the site.

3. Instruct next person to inform Factory Head regarding incident. Also inform required key Personnel

4. INCIDENT CONTROLLER HAS TO EXECUTE FOLLOWING RESPONSIBILITIES.

a) Direct evacuation of plant and areas likely to be affected by the emergency.
b) Ensure required key personnel are called in.
c) Advice firefighting, rescue team and provide additional manpower / material From non-affected plant.
D) Direct for search of causalities.
e) Evacuate non-essential workers to assembly points.
f) Preserve evidence for subsequent inquiry in to the cause of emergency.

5. He will hand over the charge to Site Main Controller when he reaches the scene of Incident.

ROLE OF SITE MAIN CONTROLLER: PRODUCTION
(HOD / SHD of Affected Plant / Area)

After receiving information from Incident Controller, inform Plant Head about incident if not already informed by Incident Controller and reach to the scene of incident and assess the level of emergency.

Take charge of Site from Incident Controller.

Decide whether to stop or continue the process and take technical decision to control the Incident. Consult Chief Emergency Controller (Factory Head) for declaration of emergency and activating emergency plan if need arises & if not declared by Incident Controller than,

Declaration of major emergency & inform to Fire Control room In-charge (phone 131 / 101) For blowing emergency Siren for Gas leak / Fire.

Direct Incident Controller in co-ordination with Chief Emergency Controller to control the Emergency and safe shut down of plant as situation demands.

Site Main Controller has to execute following responsibilities.

a) Direct evacuation of plant and areas likely to be affected by the emergency.
b) Ensure that the required key personnel are called in.
c) Advise firefighting, rescue team and other emergency services.
d) Direct for search of causalities, if any.
e) Evacuate non-essential workers to assembly points.
f) Brief chief emergency controller on the developments.
g) Arrange for additional help for fire crew as per requirement of fire service In charge
h) Preserve evidence for subsequent inquiry in to the cause of incident / emergency.

After consulting the Fire & Safety Section In-charge, declare all clear at site & inform Chief Emergency Controller to declare all clear by blowing hooter.

FIRE & SAFETY SERVICES

SHIFT INCHARGE (HSE/Security):

- As soon as, notified about the location of Fire / Gas leak,
- Inform all Shift In-charge (By Phone) / Shift Supervisor (In order of Priority) Regarding Fire / Gas leak and inform to take charge of F& S Control Center.
- Put Fire Pumps on Auto mode.
- Ask for guards from Security Officer.
- Proceed immediately to the scene of incident with fire equipment's & crew.
- Position the Firefighting depending on the wind direction.
- Decide the course of action in consultation with the Shift In-charge (Incident Controller) And take suitable measures to extinguish the fire / assist in controlling gas leak/molten glass leak/fire
- Direct Rescue operation if needed
- Seek the help of trained employees from Incident Controller for controlling the Emergency Situation.
- Ensure that crew members are provided with proper safety equipment for tackling the Emergency.

- Asses the severity of the incident, and inform Incident Controller to call for additional Vehicles, equipment, extinguishing media or and help from mutual aid.
- Till the arrival of Sectional Head (F&S), guide the fire crew in firefighting and rescue Operation by giving clear instruction.

SHIFT INCHARGE (Fire Control Room after Message of Emergency)

[Shift In-charge / Shift Supervisor (In order of Priority] (Security)

On request of Fire & Safety Shift In-charge, Shift In-charge / Shift supervisor (In order of Priority will work as Shift In-charge of Fire Control Room till emergency exist / All clear hooter blown :

Inform Sectional Head (Admin Head) about the incident.
Ensure that ambulance goes to the place of incidence.
Inform Security Officer.

After getting information from Incident Controller (Shift In-charge of Affected Plant / Site Main Controller - HOD / SHD of affected plant) blow the emergency Siren as per required. I.e. Fire / Gas Leak/Molten Glass leak. Confirm the Name & Designation who is instructing for blowing the siren.

Ensure that the pressure in the fire hydrant system is maintained, if required put available Pumps in auto system and still if pressure is not available in hydrant system request help of Maint. Service Staff for smooth running of Fire pumps.

Record all the messages received in a register and work as per the direction of Incident Controller till arrival of Chief Emergency Controller (Factory Head)

ROLE OF SECTIONAL HEAD OF FIRE & SAFETY: (HSE)

- After receiving information from Fire Control Room Inform Factory Head / HOD about Incident and reach to the scene of Incident.
- Direct the firefighting, emergency operations with Fire Crew & other trained persons.
- Keep constant touch with Chief Emergency Controller for additional help if necessary till Arrival of Site Main Controller.
- On arrival of Site Main Controller, inform him regarding additional help for incident Control action who in turn will convey to Chief Emergency Controller.
- Ensure that all equipment & PPEs required are available at site and if required arrange For additional requirement.
- Direct Rescue operation and send the victims to First Aid Center for treatment.
- Inform Site Main Controller to get help from Jhagadia, Bharuch, Ankleshwar Municipality Fire Brigades.

- Direct the Crew members at the scene of Emergency and reinforce, replenish Equipment / extinguishing media & firefighting crew.
- Consult the Site Main Controller and both will take decision for declaration of all clear.
- Direct Fire Crew & Mutual Aid members to wind up the equipment.

MAINTENANCE SERVICES

ROLE OF Sectional Heads of Mechanical / Workshop / Civil / Electrical / Instrument.

Sectional Heads of Mechanical / Workshop / Civil / Electrical / Instrument are required to Remain present at their normal work places and shall follow the decision made by Incident Controller / Site Main Controller / Chief Emergency Controller in the light of information Received by them on the developing situation of emergency. Keep constant contact with Site Main Controller / Chief Emergency Controller.

They shall guide the staff under their control for providing assistance/ support for controlling The emergency situation and evacuation of personnel.

HOD OF MAINTENANCE SERVICES:

Mobilize staff and necessary tools & tackles for help if required by Incident Controller / Site Main Controller for emergency Maintenance work at the place of Incident. Direct concerned Personnel for providing necessary help for tackling the Emergency. Keep constant contact With Chief Emergency Controller at ECC & act as per instruction received from him.

Depute one person from each discipline i.e. Mechanical , Electrical , Instrument to look after the services of Fire Pumps till all clear siren is blown.

SECURITY SERVICES

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE / SECURITY GUARDS

A) SECTIONAL HEAD / SHIFT IN-CHARGE :

- On request from Shift In charge of Fire Control room depute four security guard, three for tackling emergency with fire equipment and one in Fire Control room for assistance.
- After hearing Siren, inform the location of fire / Gas leak to the essential key personnel And guide the personnel coming to plant.
- During non-General Shift hours, inform All HODs regarding emergency i.e. Fire / Gas Leak
- Guide statutory authority to go to Emergency Control Centre.

- Depute Security Guard for manning the gates & traffic control at the scene of incident.
- Prevent unauthorized entry in the Factory.
- Render assistance as requested by Fire & Safety In charge / Incident Controller at the Scene of Incident.
- Mobilize additional Security for help if required.
- No vehicles should be allowed inside the plant except Ambulance, Fire Tenders &

Emergency vehicles along with essential personnel & also direct them to the scene of Incident.

- Help to evacuate the persons at the scene of incident.
- Arrange to provide list of contractor workers working, visitors & vehicles for evacuation purpose if required by Assembly point in charge / Chief Emergency Controller.
- To operate Jeep with Public Address system to warn surrounding public as directed by Chief Emergency Controller.

B) SECURITY GUARDS :

On hearing the emergency Siren contact Shift Security In Charge & work under his Instructions.

HR,ADMINISTRATION & PERSONNEL SERVICES
ROLE OF HOD / SECTIONAL HEAD

On getting information of emergency immediate report to Chief Emergency Controller at Emergency Control Centre (ECC).

- Arrange vehicles to shift causalities from plant site to Hospitals & evacuation of persons from assembly points to outside shelters.
- In addition to our vehicles arrange for hired vehicles and additional drivers if necessary for other services such as Welfare / Stores / Purchase.
- Give direction to Security Chief for Manning Main gate, traffic control, to operate Jeep with public address system for alerting peoples. Arrange for additional Security if required.
- Ensure that telephone operator is deputed to convey messages .Keep board free to the extent possible for incoming calls. Convey messages to Senior Officials / Organisation Head etc as directed by Chief Emergency Controller.
- Organise canteen services for hot drinks / snacks / food as required & other welfare services etc at the scene of incident & required locations.
- A messenger /runner is to be kept ready to pass the messages in case of failure of communications.
- Keep in touch with local Govt. Authorities and near by fire services for their help.
- Inform District Collector, Sr. Insp. of Factories, Police Deptt., GPCB etc. as per statutory requirements.
- Ensure that the media is properly guided and authentic news made available for

  press and media.
- Arrange round the clock availability of persons at hospital to look after the affected persons.
- Prepare records of affected personnel with local and permanent addresses & inform their nearest relatives.

- Take necessary action for compliance of statutory need such as information / reports etc to concerned authority as per existing guidelines.
- Depute one person for manning Assembly Point & maintain records of evacuated persons at various shelters / locations.

MEDICAL SERVICES

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE PLANT DISPENSARY / MEDICAL STAFF

SHIFT INCHARGE PLANT DISPENSARY:

- On receipt of instruction from Incident Controller / Fire Control room direct Ambulance to the scene of incident OR on Hearing hooter send Ambulance and advice to follow Fire crew to the scene of incident.
- Inform Sectional Head regarding incident.
- Be ready for providing First Aid to Victims / Injured.

HEAD OF MEDICAL SERVICES: (Factory Medical Officer)

On receipt of information from Plant Dispensary immediately report to the first aid centre of plant and take following actions.

- Keep all necessary Medicines, artificial respiration equipments etc. ready.
- Render first Aid to Victims / Injured Persons & send them in time for further treatment if Required.
- Inform all Hospitals / Doctors of Bharuch district regarding Incident and gear up Hospitalization and treatment of Victims / Injured persons.
- Advise HOD of Technical for additional Medical Assistance from outside if necessary.
- Contact Chief Emergency Controller for further situation.

MEDICAL STAFF :

After receiving information or hearing Siren contact Sectional Head / Shift In charge and Work as directed by them.

SECTIONAL HEAD (Production) :

- After getting information of emergency remain present at your normal work places.
- Ensure that Shift In-charge has taken charge of Fire & Safety Control room as a shift In-charge of F&S and send another manpower if he requires. Follow the decision made by Incident Controller / Site Main Controller / Chief Emergency Controller or HOD in light of information received by them on the developing situation at emergency. Keep constant touch with HOD
- Arrange to carry out ambient air and effluents samples test as directed by Chief Emergency Controller / HOD (If required)
- They shall guide the staff under their control for developing situation at emergency for work / evacuation etc.

ASSEMBLY POINT / EVACUATION & MEDICAL MANAGEMENT

ROLE OF HOD OF ENGINEERING DEPTT

ROLE OF SECTIONAL HEAD / SHIFT INCHARGE

On hearing the Siren or intimation of Emergency immediately proceed to Emergency Control Centre and after reporting to Chief Emergency Controller take the charge of Assembly Point and act as under till arrival of additional help from **HOD OF TECHNICAL DEPTT.**

- Manning the Assembly Point and get help from Sectional Head of (P&A) and maintain the record of Persons & causalities reported at assembly points and transfer them to other places.
- Arrange the evacuation of all non essential staff from Assembly Point to Shelters as per

instruction received from Chief Emergency Controller.
- Call all non essential staff to Assembly Point by informing other Key Personnel depending upon the situation / Emergency.
- Causalities to be shifted to First Aid Post.
- Direct the victims / injured persons to hospitalization available ambulance / vehicle as per advise of Chief Medical Officer.
- Arrange for further Medical Aids as per the requirement of First Aid in-charge.
- Direct Sectional Heads (Production) to carry out ambient air and effluents samples test as directed by Chief Emergency Controller / Site Main Controller. (If required)
- Keep in constant touch with Chief Emergency Controller & Co-ordinate other related activities as per requirement.

ROLE OF CHIEF EMERGENCY CONTROLLER: (Factory Head)

- He on receipt of information about the emergency or hearing the siren, he shall proceed to Emergency Control Centre and take charge of Incident.
- has overall responsibilities of directing operation and calling out side help from emergency control room. **OR** An alternative ECC in case of adverse condition which is Admin office.
- Assess the situation quickly and decide the level of emergency (L2 or L3) after getting information from Incident / Site Main Controller and act accordingly.
- If emergency of L3 level or L2 is turning to L3 level inform District Authorities for operating Offsite emergency plan.
- Keep contact with Site Main Controller and direct him for handling emergency. Ensure that all services for tackling emergency are in line and advise them accordingly.
- Ensure that one person from each discipline is deputed to look after the services of Fire Pumps till all clear is blown.

- Direct all emergencies within the affected area with following priorities.
  a) Personnel Safety
  b) Plant, Property & Environment Safety.
  c) Minimum loss of production.
- Direct safe shut down of plants in consultation with incident controller & key personnel, if necessary.
- Ensure that all non essential workers, visitors, contractors are evacuated to assembly points.
- If necessary arrange for evacuation of neighboring population with the help of District Collector, Dy. DSP, Dy. Director (IS&H).
- Ensure that search for causalities within the affected area has been carried out and arrange for hospitalization of victims.
- Seek outside help from Mutual Aid and others if required by Site Main Controller.

- Ensure that HOD (P&A) liase with outside agencies such as Police, District emergency authorities i.e. Collector, officials of Directorate of Industrial Safety & Health and Local Pollution Control Board. Provide advice on possible effects to areas out side the factory.
- Arrange for up to date recording of emergencies as per Annexure - 30 of On Site Emergency Plan.
- Ensure that press note is prepared and released to press & media.

SUPPLY AND REPLENISHMENT MANAGEMENT

ROLE OF HOD (Stores/Purchase) / (F&A):

- On receipt of information about the emergency or hearing the siren, Immediately report to Chief Emergency Controller at Emergency Control Centre (ECC).
- Direct all other Sectional Heads under their control to remain at their normal work places with their staff and work as per the instruction of Chief Emergency Controller for further action.
- Arrange additional man power for handling Store items etc.
- Arrange to issue items / equipments required during emergency.
- Take immediate action of emergency procurement and arrange additional manpower for local purchase etc. If required.
- Co-ordinate with Chief Emergency Controller.

MUTUAL AID SCHEME
ROLE PLAYED BY MEMBERS OF MUTUAL AID SCHEME

- On receiving the call they proceed immediately with fire crew and Fire Tender.
- The place of incident will be guided by GBL MAIN GATE SECURITY OFFICER.
- Fire Crew In-charge will report to Sectional Head / Shift In-charge (F&S) and assist the emergency operation as guided.
- Safety of Fire Crew will be ensured by In Charge of Assisting Fire Brigade in emergency.

3. Outside organization if involved in assisting during onsite emergency.

(a) Type of accidents.

At GBL.Govali plant, following major types of accidents envisaged;

- Major LPG leak due to catastrophic rupture of LPG storage tanks.
- Heavy LPG and NG leak from pipe lines in process plants.
- Failure of unloading arm at FO/ LDO and LPG Storage area.
- LPG leak in LPG Transfer pump area.
- LPG leak from transfer line from Storage Tank to Plants.

- Natural Gas leak at Main distribution at main gate.
- Heavy Melting Glass Leak from Furnace.
- Major fire in Furnace Oil Tank area.
- Major fire at Empty Bags Storage area.
- Severe natural calamities.
- Damage during war.

(b) Responsibility assigned:

At GBL.Govali plant, regular mocks are being conducted to ensure preparedness for handling emergency. For detailed information on the key responsibilities please refer point 2 of this schedule.

Besides this following administrative agencies and organizations shall be involved to perform their respective activities to bring the emergency situation under control.

District Collectorate – Bharuch.
DSP- Bharuch.
Dy. Director (IS&H) – Bharuch
Mamaltdar – Jhagadia

4. Details of liaison arrangement between the organizations.

There is no mutual agreement among the industries in nearby area. But it has mutual understanding with nearby Vyline Glass, Vardhman Acrylic, Birla Century, UPL and Gulbrandson to assist each other in case of any fire and other emergency with possible available resources and district administration authorities are involved in handling emergency situation.

5. Information on the preliminary hazard analysis:

(a) Type of accidents

The types of accident, where “Onsite Emergency Plan” is to be involved, during the course of manufacturing of glass sheets of solar/patterned/figured/AR coated and tempered glass with the help of raw material Quartz Sand, Dolomite, Soda Ash, Calcite Alumina hydrate , Sodium – Sulphate, Sulpher Nitrate, Carbon, Lime stone and Sulpher Dioxide and Fuel Natural Gas Furnace oil, LDO and LPG such as may be considered as listed below :

1. Fire
2. Explosion
3. Molten Glass leakage
4. Food Poisoning

However, types of personnel injuries may include: Burn injury, cut/ blunt injuries, or fracture injuries during the course of industrial activity.

(b) System elements or events that can lead to a major accident

The following types of accident hazards are find out which may lead to major potential accidents: -

- Release of huge quantity of LPG/ Natural Gas due to failure of unloading pipeline or transfer pipeline.
- Release LPG/ Natural Gas from joints / flanges.
- Release of huge quantity of LPG due to rupture of tank.
- Release of huge quantity of LPG/ Natural Gas due to rupture of piping.
- Release of LPG due to failure of unloading arm.
- Explosion in pipeline/ tank.
- Major fire in Furnace Oil Tank, Diesel Tank, Surrounding Jungle and Empty bags storage area.
- Destruction during war.
- Occurrence of severe natural catastrophes or Earthquake beyond design considerations

(c) Hazards :

Glass manufacturing process involves as fuel of hazardous chemicals like Natural Gas, LPG, and Furnace Oil. Handling and storage of these hazardous chemicals and their use in the process may lead to a hazardous situation.

A brief on types of accidents may happen are as follows;-

1. Injury due to inhalation of LPG/ Natural Gas.
2. Burn injury accident due to attending electrical faults.
3. Burn injury accidents due to handling of melting glass.
4. Hit / cut type accidents due to various maintenance jobs.
5. Falling from height.
6. Cut injury accident due to handling of breakage glass.

7. Food Poisoning.
8. Snake Bites.

(d) Safety relevant components:

Design stage is much more important in any installation. It is the stage where inbuilt safety can be considered, which will be more effective and as a result, failure of equipment's or an accident can be eliminated. Selection of material of construction, planning proper layout, safety valves, gas detector and other sophisticated instrument control for measurements of various parameters for safe operations are the factors which were considered for the fail safe arrangement in LPG/Furnace Oil storage and handling process at – GBL, Govali.

Some Safety relevant components are mentioned below:-

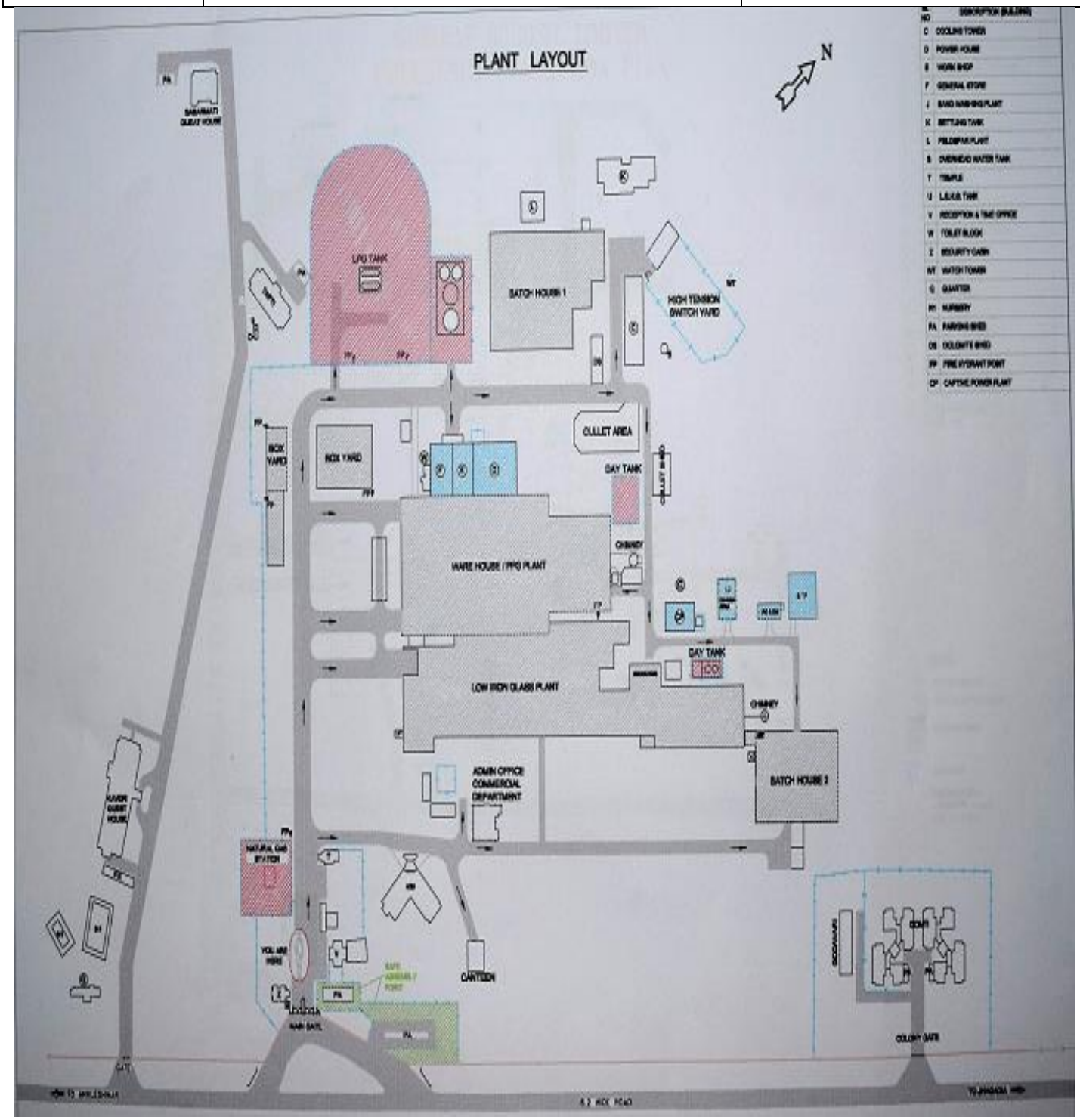
1. Safety relief valves on tanks, pipeline.
2. Tank pressure indicator.
3. Manual level indicator
4. Wind indicators.
5. Lighting arrestors.
6. Earthing of the tanks.
7. Pressure controller at transfer line to plant etc.
8. Anti venom available at Main Gate.

6. Details about the site:

(a) Location of dangerous substances:

Plant is situated away from town and the population around the plant is also very less. One side of the plant is surrounded by the Vyline Glass Company near to Boridra Village. The wind direction at Bharuch is normally from South - East to North - West for eight months and opposite for remaining four months. Hence the location of LPG storage is selected at the south corner of the plant. In case of leakage, the vapor

Cloud will not affect the employees and surrounding population.
Natural Gas is running online from distribution point of GAIL India Ltd.
Furnace oil is stored in storage tanks in dyke wall area.



(b) Seat of key personnel

All key personnel as per the role of Onsite emergency plan are sitting in plant area.

(c) Emergency Control Room

At GBL, Bharuch, Fire Control Room at Security Section is Emergency Control Room and alternate Emergency Control Room is Administration office if wind direction is towards Security Office.

7. Description of hazardous chemicals at plant site:
(a) Chemicals (Quantities and chemical data)

Sr No.	Name of chemicals	Types of storage tanks	Storage capacity of each tank	No. of tanks/bags
1	Liquefied Petroleum Gas (Stand by fuel)	Horizontal 02 Bullets, Atmospheric Pressure Tank	T- 01 – 30 T- 02 – 28 = 58 MT	02
2	Natural Gas	Online distribution through pipelines	Through pipeline	-----
3	Furnace Oil/LDO	Vertical MS Tanks with insulation.	T-01 – 375 KL T-02 – 375 KL DT-03 – 50 KL DT- 04 – 50 KL T- 05 – 20 KL (New) DT – 06 – 10 KL (New) Total – 880 KL	06

Chemical data:

As it clear that hazardous chemicals responsible for initiating on –site Emergency plan are LPG, Natural Gas and FO/LDO. The MSDS (Material Safety and Data Sheet) of these chemicals is enclosed as **Annexure- I.** A brief description and safety precautions about these hazardous chemicals are given below :

1. **LPG**

Liquefied Petroleum Gas is the stand by fuel for producing glass. Total LPG storage capacity at GBL – Bharuch is 58 MT.

Hazards of Liquefied Petroleum Gas:

- High concentration causes asphyxiation. Liquid o skin Causes frostbite.
- Concentration in air greater than 10% causes dizziness

Vapour Concentration (PPM)	General Effect	Exposure Period
1000	Odour detectable to some persons.	Threshold Limit Value maximum for 8 hours working period.

- Exposure to concentrations above 100% of the LEL such as 5% or 50,000 ppm may sensitize heart and cause irregular heartbeat.
- High concentrations may exclude oxygen and cause dizziness and suffocation.
- Exposure to concentrations above 10% of the LEL may cause a general central nervous system (CNS) depression typical of anesthetic gases or intoxicants.
- Aliphatic hydrocarbon gases may build up in confined spaces and may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in narcosis, unconsciousness, and possibly lead to death.

First aid measures:

Eye Contact: Immediately flush eyes thoroughly with warm water for at least 15 minutes. Remove contact lenses. Rinse with water. Take victim immediately to hospital. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. If eye irritation persists, seek medical attention.

Skin Contact: For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). In case of massive exposure, remove contaminated clothing while showering with warm water. Obtain medical attention.

Ingestion: Ingestion is considered unlikely. If swallowed, obtain medical attention.

Other: Symptoms: Dizziness, Headache, Nausea, Frostbite, Vomiting, Discomfort Hazards: This material may be a cardiac sensitizer; avoid the use of epinephrine. Treatment: Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

2. Natural Gas:

Natural gas is main fuel for melting glass in furnace through burners.

Hazards of Natural Gas:

- In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
- Low concentrations of CO2 cause increased respiration and headache.

First aid measures:

Inhalation: Remove victim to uncontaminated area wearing self contained breathing apparatus Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

Eye Contact: Adverse effects not expected from this product.

Skin Contact: Adverse effects not expected from this product.

Ingestion: Ingestion is not considered a potential route of exposure.

3. FO/LDO:

FO/LDO is main fuel for running furnace for glass manufacturing.

Hazards of FO/LDO:

Routes of Entry: (Inhalation, Skin, Mucous Membranes, Eye Contact and Ingestion

Effects of Exposure / Symptoms: Spontaneous Vomiting, Oil Acne.

a) First aid measures:

Do Not Induce Vomiting If Ingested. Affected Body Parts Should Thoroughly Be Washed With Water and Soap.

(b) Transformation if any, which could occur.

Forms of chemical stored and expected release in atmosphere.

Sr.	Name of Chemical	Form under normal condition	Expected form of

No			Chemical under abnormal condition
1	Liquefied Petroleum Gas	Gaseous state @ 15 C^0 at atmosp. Pres.	Vapor/ Gaseous form
2	Natural Gas	Gaseous state @ 15 C^0 at atmosp. Pres.	Vapor/ Gaseous form
3	Furnace Oil/LDO	Liquid @ atmospheric condition	Liquid form
4	Silica	Solid powder @ atmospheric condition	Powder form

(c) Purity of hazardous chemicals.

A brief resume of purity of these chemicals and analysis is given below:

Name of hazardous chemicals	Formula	State	Purity / Analysis
Liquefied Petroleum Gas	C3H6 – C3H6 – C3H6 (mixure)	Gas @ 15 C^0	Propane – 98 % Butane – 97 % Propylene – 07 %
Natural Gas	Cn H2n+2,	Gas @ 15 C^0	95% methane, 3% other fossil fuels, 2% nitrogen
Furnace Oil/LDO	A complex mixture of Hydrocarbons	Liquid	Residual - 99.90 %
Silica	SiO_2 (ca. 99.2-6 %)	Powder	99 %

8. Likely dangers to the plant:

In spite of possibilities of fire, explosion and / or release during start-up shutdown or normal operations the following dangers to the plant can not be ruled out;

NATURAL CALAMITY

1 Earthquake
2 Flood
3 Storm
4 Volcano

DUE TO HUMAN ERROR

1. Civil War
2. Bombardment of enemy
3. Sabotage

However, the technological risks posed by this glass factory constitutes threat to
(i) Its workers.

(ii) To a third party who may be present either in the factory or in its vicinity at the time of accident.

(iii) Inhabitants living in the immediate neighborhood of the factory and their property

9. Enumerate effects of:

(i) Stress and strain caused during normal operation:

These risks manifest due to accidental failure, break down or rupture of equipment, tank ages or pipelines. These may also result from undetected loss of confinement. Because of which liquids or gas contents gradually leak out in sufficient quantities to create dangerous situations. The major substances involving loss of confinement or posing risk or likely dangers to the plant is LPG (Stand by fuel) (refer MSDS in Annexure-I for details).

Design of Storage & Handling system of Liquefied Petroleum Gas (Stand by Fuel):

Design stage is much more important in any installation. It is the stage where inbuilt safety can be considered, which will be more effective and as a result, failure of equipment's or an accident can be eliminated. Selection of material of construction, planning, proper layout, Gas detector, safety valves and other sophisticated instrument control for measurements of various parameters for safe operations are the factors which were considered for the fail safe arrangement in LPG storage and handling process at GBL, Bharuch Plant.

Material of Construction:

Material of construction is very important aspect in construction of storage and handling system of any chemicals. Although LPG is not normally aggressive to steel but the presence of minute quantities of oxygen in liquid LPG can cause stress corrosion cracking. As LPG is stored at very low temp. acceptable resistance to stress corrosion cracking are to be considered for the selection of material of construction. Atmospheric storage tank are constructed with IS 2825 of material SA 515 GR.70 (Unfired Pressure Vessels) latest addition. Design pressure 21.1 kg/Cm, Design temp -0-55 C^0, Hydraulic Test pressure – 27.95kg.

General Information:

For effective & workable disaster planning the list of facilities available around the plant which can be used in emergency should be ready with the coordinator. The information regarding strength of public, route of evacuation & rescue, location of fire station, hospital, police station, assembly point etc., should be known to every- body.

Total strength of residence surrounding area and GBL employees who can be effected by LPG if disaster strikes are as under.

GBL Employees – Maximum 366.
Other employees at plant - Maximum 400.
Hut men residence - Maximum **NIL**.

Maximum people required to be evacuate may be around – 200

(ii) Fire and explosion inside the plant and effect if any, of fire and explosion out side.

Keeping in view, the inventories of different hazardous material, plant process parameters etc. following are the selected failure case which may be considered for consequence analysis. This includes the worst case scenario i.e. catastrophic failure of LPG storage tanks and from the system handling LPG. This can occur as given below:

Incident	***Consequence***
Catastrophic rupture of LPG storage tank or major leakage from the LPG handling system	Liquid LPG spill or dispersion
Pipeline fracture / Nozzle failure	Liquid spills at vaporizer or pump delivery pressure and dispersion.
Gasket failure .	LPG leakage due to gasket failure and the leakage catch fire.

System elements or events that can lead to major accident.

a. Catastrophic rupture of LPG storage tank or major leakage from the LPG handling system.
b. Catastrophic failure of FO / Diesel Storage Tanks or major leakage from the handling systems of these materials catching fire.
c. Pipeline fracture / Nozzle failure.
d. Gasket failure leading to flange leakages

Gas dispersion concentration

The detailed procedure to be followed to carry out the consequence analysis, damage criteria needed to be adopted for meaningful interpretation in consequence analysis. The consequence analysis has been carried out for the possible failure cases at GBL, Bharuch. Consequence analysis quantifies zones of influence for conceived incidents and once the vulnerable zones are quantified for an incident the measures are proposed to minimize damage to plant and personnel.

The LPG storage tank shell rupture will occur only in the rare circumstances such as due to attack by missile or bomb during war. The type of hazards possible at GBL, Bharuch are LPG leakage due to failure of outlet line of storage tank, tanker unloading suction

vapour line failure at LPG tanks etc. There may be other failure cases also for LPG release but these have been considered most credible.

The zone of influence have been calculated for LPG pipeline failures, sudden rupture of storage vessel shell, etc. In order to quantify the zone of influence worst meteorological conditions have been used. These conditions are as follows:

Ambient Temperature – 30 C^0
Wind Speed - 1 m/s
Relative Humidity – 66 %

LPG hazards at high concentration causes asphyxiation and Concentration in air greater than 10% causes. Liquid or skin Causes frostbite.

10. Details regarding:

(i) Warning, alarm and safety and security systems.

Emergency hooter coded on high and low pitch is available as warning alarm system. In the case of Emergency the Emergency Central Control will blow the Emergency hooter in wailing sound for Two Minutes and repeating Twice after every 30 Seconds as shown below.

--------STOP----------STOP----------STOP----------
10 Second 2 Second 10 Second 2 Second 10 Second 2 Second 10 Second

This hooter indicate the disaster and all concern should activate on their duties of emergency including the evacuation of the people. The siren is located at E.C.C. & various different locations in the plant area. If the situation is critical and Emergency Central Control is not formed the Incident Controller can asked to blow the siren if required.

The hooter is tested for 30 sec on first date of every month at 10.00 hrs to check its effectiveness as per On-site emergency action plan.

Plant security personnel are present on all gates of premises and strategic location for the security of the plant. Any person or employee or contractor personnel is not allowed without proper gate pass.

(ii) Alarm and hazard control plans in line with disaster control and hazard control planning, ensuring the necessary technical and organizational precautions;

i) Reliable measuring instruments, control units and servicing of such equipments. Built in Safety Measures:

Pressurised storage Tanks :

For safe unloading, storage and transfer of LPG so many measures are being taken care. These are as follows.

- Before starting of unloading in order to get good unloading flow rate and less vapour generation in tank, the unloading line is being cooled down to the temp. of about -33 0C a day before start up of unloading operation.

- The Pressurised storage tank has been provided with numbers of safety devices and instruments are as below.

S.No. Type Purpose

01. Tank pressure indicator (Direct) Tank vapour pressure.
02. Tank pressure indicator (Manual Operated) mounted for tank vapour pressure.
04. Level indicator (Manual Operated) To measure liquid level of tank in % of volume.
05. Level indicator (Manual Operated l) To measure liquid level of Tank in mm.
06. Level indicator (Manual Operated) To measure level of the liquid in the annular space between two tanks.
09. Safety Valves To blow off at excess pressure.
10. Safety Valve (auto)To blow of excess vapour manually in emergency.
11. Continuous tank temperature indicator To check tank liquid condition at all times.

(ii) Precautions in designing of the foundation and load bearing parts of the building.

All the structures, foundations of equipment, pedestals, frames, etc. are designed and erected as per relevant standards and codes of practices. Most of the foundations are erected on piling and all the Storage Tanks constructed on piling foundations.

(iii) Continuous surveillance of operations.

Plant control panel are equipped with DCS (Distributed control system), where computers are installed for continuous surveillance and monitoring of all parameters required to be controlled for smooth operation of a plant.
Audio alarms with trip system are provided to stop any segment of plant to bring under control at any point of time. On line data recorder are provide to monitor the parameters of the process plants. The operators and supervisor are continuously

taking round of the plant and monitoring the processes parameters through local monitoring instruments provided in the field.
LPG detector also provided in LPG storage area with audio alarm system.

(iv) Maintenance and repair work according to the generally recognized rules of good engineering practices.

Periodical Inspection :
Third Party Safety Audit and Testing / Inspection, from Government Authorities like Factory Inspectores & other various statutory bodies & the periodical inspection by committee of company's official are being carried out. Inspection / Testing of tanks, equipment's, pipe lines, valve etc. is carried out periodically at regular intervals. The inspection of LPG

storage tanks is carried out at regular interval as per international standard. The LPG storage tanks are being inspected by following test. Ultrasonic thickness measurements.. Hydrostatic test. Hardness test & other required testing etc. Periodical & regular maintenance of all safety equipment's, pump etc. being carried out. Electrical earthing resistance measurement and continuity is checked. Electrical earth resistance measurement and continuity test for storage tank is carried out quarterly.

Low Inventory of LPG and Alternate Storage availability:

The important factor which determines the degree of hazards is the inventory of flammable chemicals. So low inventory of LPG in each tanks is being maintained. Both tanks are inter connected with each other to transfer LPG from one tank to other in emergency. It is recognized as per good engineering practices and also insisted by statutory authorities to have some alternative arrangement for storage of hazardous chemicals in case any leakage is observed in a tank/vessel. For this purpose we are having two Bullets for liq. LPG storage which are operating under appropriate pressure with inter transfer facilities.

11. Details of communication facilities available during emergency and those required for an off-site emergency.

Internal Telephone No. 02645-258100, 101, 131, 222.
Mobile No. 9427115926, 8511195493.

12. Details of fire fighting and other facilities available and those required for an offsite emergency.

Fire hydrant system with 7- 9 kg/cm2 pressure having fire pumps working on manual is provided all over the plant & around the LPG storage tanks to create water curtain in case of LPG leakage. The Water curtain can prevent the spreading of LPG in surrounding area of plant premises. Water monitors, water sprinklers system.. Around 22 Nos. of Fire Hydrant, 01 Nos water Monitors, 41Nos. DCP Fire Extinguishers 31Nos. ABC Fire

Extinguishers, 35 Nos. CO2 Fire Extinguishers, 7 Nos. Foam Fire Extinguishers provided in the plant. And 22 trained & certified employees are always ready to fight with any emergency round the clock. All type of personnel protective equipment's including Breathing Apparatus sets are available at surrounding hazardous area.

Requirement from Off-site Emergency Agencies

Availability of Fire Tenders with fire crew members to render assistance mainly from Jhagadia Fire station and nearby industry like Birla Century, UPL, Lanxess, Ankleshwar Nagarpalika and Bombay fire & safety the Self Contain Breathing Apparatus and protective equipments, Foam compound, DCP Powder etc. Availability of expertise from Pollution Control boards to minimise the effect on environment.

13. Details of first aid and hospital services available and its adequacy.

Occupational Health Centre is working round the clock with all facilities including Emergency vehicle and Health Centre at GBL. All the required medicine available in the health centre.

BHRUCH: **(STD: 02642)**

Sr.No	Description	Telephone Numbers
1	Civil Hospital, Bharuch	02642 -243515 (Ambulance-102)
2	Sevashram Hospital, Bharuch	02642 -243493
3	Dr.J.J.Khilwani, Bharuch	02642 -240986 (R)-240232,266891 (M) 9377410614
4	Dr.Sunil Nagrani (Rangoli Hospital) , Bharuch	02642 -244091
5	Dr.Yusuf (Roshni Hospital), Bharuch	02642 -264036
6	Blood Bank (Red Cross)	02642 -243603, 1052
	Healing Touch Hospital	02642 – 262500 (M) 9825306787
7	Gurunanak Medicals	02642 -268322, (M) 9825357596
8	Shreenath Medicines	02642 -570091, (M) 9825467123
9	Puja Clinic(for X-Ray)	02642 -243637
10	Sheth Clinical Lab. (Patho.Tests)	02642 -263829, (M) 9824723032
20.	Emergency Cell	02642 -243556

21.	Collector Office	02642 -240500, 240600, (R) 240700
22.	Safety Health & Env. Association	02642 -245282
23.	Control Room	02642 -242300

JHAGADIA: **(STD: 02645)**

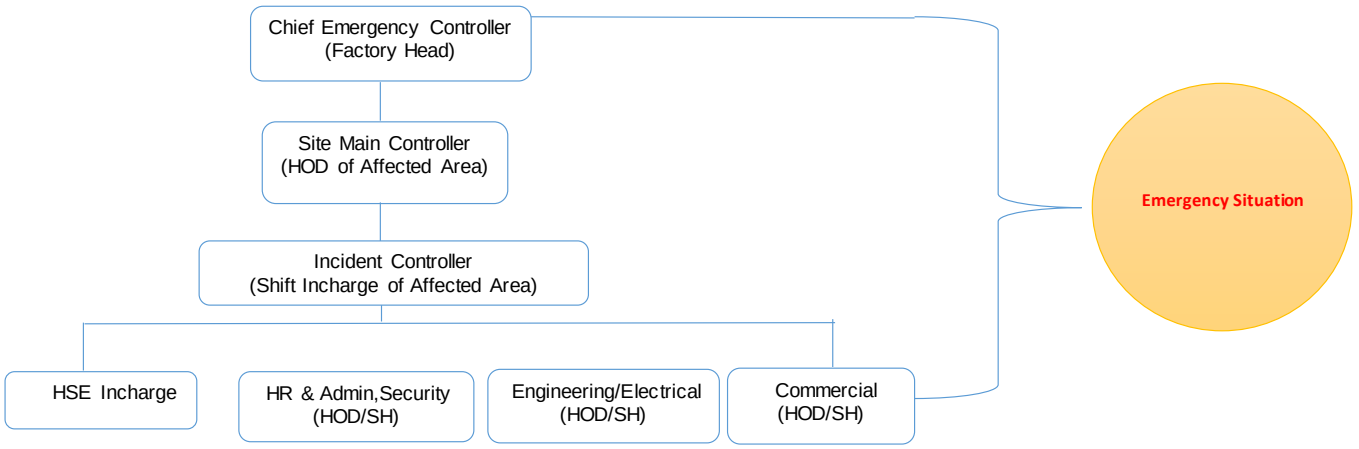
Sr.No	Description	Telephone Numbers
1.	Fire Station	02645 -226108
2.	Police Station	02645 -220033
3.	Control Room(Police)	02645 -220039
4.	Referal Hospital	02645 -220078, 220079
5.	Ambulance	02645 -220006
6.	Seva Rural	220006
7.	GEB	220015
8.	Search Chem	226011
9.	DCM	223055, 226031,226021-27
10.	Swill	226054
11.	GIDC Office	226108
12.	Huber	226081-84
13.	Vardhaman Acrylics	226079-80

ANKLESHWAR : **(STD:02646)**

Sr.No	Description	Telephone Numbers
1.	Fire Station(Municipal)	101,223817
2.	Fire Station (GIDC)	226101,220229,224613
3.	Police Station	Town-257352, GIDC-225551
4.	Civil Hospital	257806

5.	Smt. Jayaben Modi Hospital	222220, 224550
6.	Ambulance	257020
7.	G.E.B	256703

Emergency Flow Chart



Prepared as per Schedule 8-A as per Gujarat Factory Rules 68-J/12/(1), previously it was Prepared as per old format.

Updating record
April– 2020

Evacuation Plan updating in process.

Mitigation & Immediate Action Plan

Execution of the Gujarat Borosil_Emergency Preparedness & Response Plan is conducted as a sequence of staged actions. The person discovering the Fire/ gas Leakage / spillage/Molten Glass leakage from furnace will normally initiate this sequence. The immediate actions are to isolate and contain fire/ gas leak / spillage / Molten Glass leak (**only if safe to do so**) and summon assistance. Mitigation & Immediate Action Plan (MIA) are to be prominently positioned at all locations where *gases / bulk LPG/FO/LDO/Molten Glass* are stored. During normal working hours the shift manager will be called to attend all fire/gas leak/ spillages/ Molten Glass leakage at incident location. During silent hours, the person discovering the fire/ gas leak / spillage/ Molten Glass leakage is to inform either the Security/shift incharge who will activate the callout procedure. Dependant on the seriousness / complexity of the fire/gas leak /spill/Molten Glass leak the concerned shift incharge/security may require the services from outside agencies. Even though every incident will be different; action plans based on practiced scenarios and fire/gas leak/ spillage/molten Glass leak response history should be used as guidance.

Action to be taken by person(s) discovering a Fire/gas leak/spill/Molten Glass leak

- Attempt to prevent further leakage if considered safe to do so by closing valves or ceasing operations.
- Eliminate any potential sources of ignition.
- Ventilate the area.
- Evacuate to appropriate muster point UPWIND of the gas leak area.
- Establish safety cordon until the area is safe.
- Raise the alarm by ringing and give the following

  Information to ECC:
- Name, Rank and Telephone Number.
- Exact location of gas leak
- Type and size of gas leak (cylinder, bulk vessel & product if known).
- Number of casualties (if known).
- Any additional information.
- If possible, and safe to do so, contact the gas supplier emergency telephone number

REMAIN AT THE LOCATION UNTIL RELIEVED BY THE INCIDENT CONTROLLER

To be affixed onto gas cylinder / bulk LPG compound fence or other applicable location.

Abbreviation:

ECC- Emergency Control Center

Reference documents :

Accident /Incident Report -HSE/L4/014