CHAPTER 9: DISASTER MANAGEMENT PLAN

The arrangements of the Emergency Response Plans required to combat an unplanned incident or emergency situation to bring the situation under control and to minimize any consequences and in the event of a major incident, there are three distinct phases that have to be managed to limit the impact on the business. These are:

a) Emergency Response – to deal with the incident including the necessary action to control the incident, make safe and to rectify / repair the equipment
b) Incident Management – To contain the incident and limit the impact it could have on the MGL business and surrounding environment.
c) Business Continuity – in the event an incident has occurred that has resulted in a loss of a major MGL facility, arrangements are in place that allows the business to continue operating.

MGL has separate plans and procedures for each of the three phases as part of its Disaster Management Planning Process. This document details the arrangements that are in place for the Emergency Response to an incident and the escalation procedure for implementing the Incident management Plan (IMP).

In addition to the plans contained in this document all accidents and incidents are reported and investigated in line with MGL Procedure – Accident, Incident and Near Miss Reporting Procedure- HSE-005

DEFINITIONS

In the MGL Disaster management process, the following definitions are used:

Crisis– an unplanned event that could have a serious impact on the MGL

Disaster – is any sudden unplanned event, which seriously threatens or has the potential to escalate to seriously threaten the commercially viability or reputation of the organization or part of the organization, by interruption of normal business activities.

Emergency– unplanned event that has the potential to cause serious harm to people, property or the environment that needs immediate attention.

Escape- is the unplanned release of gas to the environment.

Hazard – a situation that has the potential to cause harm to people, property or the Environment. Incidental "unplanned event that has caused or has the potential to cause harm to people, property or the environment.

Leak – unplanned release of liquids to the environment**.**

On site– is the area contained within the working area or boundary controlled by MGL.

Risk– is the chance or probability of an event occurring and the consequence as a result.

Mutual Aid: It is an arrangement between the industries in the area under which the company developing Emergency Response Plan exists, depicting the resource sharing which includes manpower, Firefighting devices, gas detection systems, emergency equipments and tools etc. Usually, it is governed by the Directorate of Industrial Safety & Health and also in cities like Mumbai, the Municipal Corporation of city for all natural &security related emergencies.

OBJECTIVES

The objectives of the Emergency Response Plan (ERP) are to ensure any unplanned event is quickly brought under controlled so that it does not cause any harm to people, property, or the environment. To achieve this detailed procedures are in place to respond all the Disaster / Emergency scenarios that could credibly occur.

9.1 Types Of Emergency Occurrences

Details of the Emergency Response Procedures

1	City Gate Stations	NG Escapes, Fire, Explosion and Major Leakage / spillage	All types of Escapes of Natural Gas Escapes on site that could also lead to fires and an Explosion. Leakage of Ethyl Mercapton
2	Piped Natural Gas (PNG)	NG Escapes, Fire, Explosion and Major leakage	All types of Escapes of Natural Gas Escapes from the gas supply piped network that could also lead to fires and an explosion
3	Compressed Natural Gas (CNG)	NG Escapes, Fire, Explosion and Major leakage	Failure of Equipment involved in the compression of Natural Gas operating at 200 bar Pressure.
4	Diesel Generators	Fire and Leakage of fuel	Failure of equipment involved in the generating of electricity
5	Electrical Emergency	Electrocution of single or multiple individuals	Working on High & Low voltage supplies
6	Terrorists Activities	Bomb Threats Terrorist attacks'	Acts of terrorism including Bomb Threats Direct acts on MGL Installations. Kidnap
7	Natural Disasters	Floods and Earthquake	Natural calamity, having potential to cause severe loss of life & MGL Buildings and installations - flooding and earthquakes
8	Un-odourised gas	Escaping gas may not be detected	Resulting in fire and explosions

In addition, MGL has detailed procedures for all its activities in our ISO 9001:2008 Quality Management system, ISO 14,001 Environmental Management system and our OHSHAS 18001 Occupational Health and Safety Management system. All three systems are accredited by DNV an internationally renowned company who undertake regular audits on our compliance.

Classification of Major and Minor Incidents

MGL classifies incidents into three categories, aligned with the PNGRB requirements.

Level 1 – A minor incident that can be managed by the onsite MGL personnel with no requirement to seek support from external resources. The effects are limited to the site and have no impact outside the site, location of the incident or installation. For Level 1-minor incidents, the Incident Management Plan inmost circumstances would not be activated.

Level 2- A Major incident that requires support and direction from senior MGL personnel and the additional resources of an external emergency response resource centre. The incident has an impact on other areas of the MGL and / or is likely to have a major impact on areas outside MGL such as general public, industries, environment etc. In such circumstances, the Incident Management Plan should be activated including the formation of the Incident Management Team.

Level 3- A major incident of such magnitude that is beyond the control of MGL and has to be managed and controlled by External agencies / Emergency services. In such circumstances, the Incident Management Plan shall be activated.

OFF SITE DISASTER / EMERGENCY SITUATIONS

By nature of the City Gas Distribution business undertaken by MGL, the majority of Incidents will NOT be contained inside the perimeter of MGL property.

REPORTING OF EMERGENCIES

MGL operates a 24/7 emergency control room where the general public can call in cost free to report an emergency. In addition, MGL has 12 fully equipped emergency teams with fully equipped vehicles and personnel operating on a three shift 24/7 basis who upon receipt ofa call from the emergency control room will travel to site and attend the emergency. These12 teams are strategically located around the gas supply area and are fitted with vehicle tracking devices so their exact location can be determined.

The person in the Control Room receiving a report of an incident will: Record in the MGL computerized system the:

• Details of the caller – name, address, contact number.

• Nature of the emergency (e.g. Smell of gas, fire, loss of gas supply, etc.)

• Address of the escape/ incident

• Time of call received give advice to the caller to

• Open all doors & windows

• Turn off gas supply at the meter

• Do not switch on or off an electrical switch

• Extinguish all naked flames

The MGL emergency numbers are Emergency Control Room No - **24012400** Toll Free No– **1800229944.**

NB. ***The internal reporting of an incident will follow the procedure detailed in the MGL procedures HSE-005****.*

MANAGEMENT OF EMERGENCIES

The main control centre for the operation and control of the gas supply system is also at the CGS station at Wadala. The Control Room Gas Supply Section monitors the gas supply network and can control sections of the network remotely and can seek the assistance of the control room of the gas transportation company (GAIL) to shut off / isolate the gas supplies coming into the MGL system.

This Control Room upon receiving a report of a gas escapes, or any other emergency such as those detailed in section 4 above, will coordinate the implementation of the emergency response plans.

They will receive the information detailed in section 6.1 above then:-

- Dispatch an emergency team to site
- Record the time of dispatch
- Record the time of arrival on site by the team
- Receive and record the initial report of the details from the site
- Inform the appropriate Manager in the O&M department.
- Request the assistance of the emergency services, if required.
- Depending on the severity of the initial report they will inform the senior management of MGL – this is normally via a SMS text message to a prepared circulation list.

Resources

The Emergency Control room has detailed lists including contact numbers of the Organizations and personnel that can be called upon if additional resources are required this information is contained in the MGL Stakeholders Contact Directory that is issued to allrelevant personnel and published on the MGL Intranet.

These lists include:

- Senior MGL management
- MGL Middle management and staff
- MGL offices
- Emergency services and general support
- Contractors, plant hire companies and other gas related organizations
- Mutual Aid scheme members

Responsibilities

The management of the Emergency Services of MGL is the responsibility of the HOD - Operations and Maintenance.

9.1.1 The HOD (O&M) delegates responsibility of the management of the Emergency Control room to the O&M Manager after Sales Services.

9.1.2The management of the Emergency Response Teams is the responsibility of the O&M Zonal managers

9.2 Escalation and Implementation of the Incident Management Plan (IMP)

In the event that the situation on site cannot be brought under immediate control, the Control Room Engineer will inform the O&M Zonal Manager who depending on the Circumstances will decide to inform the HOD (O&M). The HOD (O&M) will provide advice and if deemed necessary attend site to control the operations If the HOD(O&M)considers that the situation is of a serious nature that:

- Cannot Be Brought Under Immediate Control
- Requires additional external resources
- Has the potential to escalate and cause harm to people, property or the environment
- Is a major incident – see section 4 above The HOD (O&M) will inform the Technical Director who will decide if the MGL Incident Management Plan (IMP) is required to be implemented. The reporting of the incident will follow the procedure detailed in the MGL procedures

9.3 Training, Emergency Drills and Mock Exercises

All control room operators will be trained in ERDMP procedures with specific focus on Receiving and communicating the relevant information as accurately as possible and being able to distinguish between routine and major emergency calls.

Full scale unannounced mock drills are undertaken to test each one of our Emergency Response Procedures at least every year. The exception will be where a real time event Has occurred and the response plan was put into action.

The testing of the plans is organized by the HOD (HSE). A report will be written by the HOD (HSE) on the results and findings of the Mock Drills and if necessary an agreed action plan is prepared with the HOD (O&M). The report is then sent to the TD for approval.

All the personnel who are required to handle emergencies will be trained on this plan in January each year.

9.4 Mutual Aid

MGL is a part of MUTUAL AID AND RESPONSE GROUP (MARG) of Sevri-Wadala Complex. The members agree to lend assistance across jurisdictional boundaries. Help will be sought from the other Mutual Aid members in an emergency response that exceeds MGL's local resources, such as a disaster or a multiple-alarm fire. Mutual aid will be requested only when such an emergency occurs. The details of the Mutual Aid members is given in **Appendix 11.** The decision to mobilize the mutual aid remains with the Chief Incident Controller and HSE Coordinator and Technical & Operations Coordinator would Initiate the process of mobilization on site. MGL is in agreement through Directorate of Industrial Safety & Health (DISH) and Navi Municipal Corporation MARG Mutual Aid Group and for Natural & Security related emergencies through Municipal Corporations, Industrial & other agencies group (Disaster Risk Management Master Plan (DRMMP) for Mumbai.

9.5 Emergency Siren

A Hooter is installed in various strategic location of CGS & MGL House. The Emergency siren/s is located suitably to cover the whole area with the operational control within the installation.

Emergency siren code is as follows:

(a) **Level 1** - Minor Emergency: A wailing siren for two minutes.

(b) **Level 2 & 3** - Major Emergency : Same type of siren as in case of Minor emergency but the same will be sounded for three times at the interval of one

minutes i.e.(wailing siren 2min + gap 1 min + wailing siren 2min + gap 1min +wailing siren 2min) total duration of Disaster siren to be eight minutes.

(c) **ALL CLEAR**: Straight run siren for two minutes.

(d) **TEST**: Straight run siren for two minutes at frequency at least once a week .The siren is tested every Monday at 10:30am.

9.6 Review

In addition to the audits undertaken as part of our ISO Quality management systems Mentioned in section 4 of this document, a formal review of the complete Disaster Management Plan is undertaken in December every year where any necessary Amendments for improvement will be made.

In addition to the above improvements to the Emergency Response Plan, updates are also made following lessons learnt from the Mock Drills and the ISO audits.

PROCEDURE IN CASE OF ODOURANT (ETHYL MERCAPTAN) SPILLAGE

1. Inform Emergency Control Room.
2. Barricade affected area.
3. Emergency control room will inform & take action as per Emergency Response plan.
4. Onsite incident controller (responsible person at site) will take following action
5. On site incident controller to instruct and guide the firefighting team for fire fighting Till HSE responsible person arrives on site.
6. All operational employees' needs to be wearing all required PPEs.
7. Use neutralizing agent (ekoperl66), to absorb them.
8. Carry out necessary rectification work.
9. Give necessary warning and instruction to nearby residents.
10. Remove the used Ekoperl 66, and send it to authorized agency for proper disposal. Dispose it as per procedure.
11. Fill the required forms (3,8&9) as per hazardous waste management & Handling rules – 1989 & amended in May 2003.
12. Confirm emergency is over/complete, and inform to the Incident Control Team

ACTIONS TO BE TAKEN IN CASE OF FIRE TO ETHYL MERCAPTAN

1. Inform Emergency control room
2. Emergency control room will inform & take action as per Emergency.
3. Onsite incident controller will take following actions

4. On site incident controller to instruct and guide the fire fighting team for fire fighting
1. till HSE responsible person arrives on site.
5. Barricade the affected area.
2. Ensure the operational people on site are required with necessary PPE, and
3. breathing apparatus.
6. Inform Mumbai Fire Brigade.
7. Use ABC type fire extinguishers & try to extinguish the fire
8. Carry out necessary rectification work
9. Send the solid waste to authorized agency for proper disposal
10. Confirm the emergency is over/complete and inform the Incident Control Team.

ACTIONS TO BE TAKEN IN CASE OF ESCAPE OF GAS OR FIRE ON CNG FACILITY

The CNG facility CGS consists of compressors and filling facility of the Light Commercial Vehicles (LCV) used to transport the CNG to the Daughter Booster stations.

Compressors

In the case of an escape of gas or a fire on one of the compressor installations, the Emergency Isolation switch will be depressed and the compressors shut down.In case of fire on the compressor, this will be extinguished by use of Fire Extinguisher located around the site.

CNG Filling Facility

In case of an escape or fire on the filling hose / equipment this can be isolated by operating the isolation valve In case of an escape or fire on the LCV where possible the damaged component will be isolated and small fire can be extinguished by a fire extinguisher. In case of a major fire on a vehicle, this can be extinguished by operating the Fire Hydrant system.

ACTIONS TO BE TAKEN IN CASE OF ESCAPE OF GAS OR FIRE ON THE CGS INSTALLATION.

Dependent on the severity of the escaping gas it may be isolated by control of the appropriate valve on site. A Diagram of the valve arrangements are displayed on a large Notice board in a dominate position on the site.

In case of a major release, GAIL may be requested to isolate the station by remote operation of the station isolation valve

ACTIONS TO BE TAKEN IN CASE OF FIRE ON THE CGS INSTALLATION

1. The fire will be extinguished when considered by the senior person on site to be safe to do so.

2. On site incident controller to instruct and guide the firefighting team for fire fighting till HSE responsible person arrives on site.

3. Minor fires can be extinguished by use of the hand held Dry Powder Fire Extinguisher

4. In Case of Major Fires, the Fire Hydrant System may be used to: extinguish the fire and to cool the installation and neighboring buildings.

5. In the event of a major Fire that cannot be brought under control by use of extinguishers or the Fire Hydrant system then the GAIL will be requested to isolate the station by remote control of the station isolation valve

ACTIONS TO BE TAKEN IN CASE OF HUGE USED OIL SPILLAGE

1. Inform to emergency control room.

2. Emergency control room to inform the concerned personnel and take action as per Emergency Response Plan.

3. Onsite incident controller (responsible person at site) to take following action.

4. Barricade the affected area.

5. Ensure the operational people on site are equipped with necessary PPE.

6. Give necessary warning and instruction to nearby personnel to restrict the Vehicle/personnel movement in oil spilled area.

7. Cover the spilled oil with Saw Dust / Sand to absorb Oil.

8. Collect Saw dust / Sand contaminated with Oil and send it to authorized agency for Proper disposal.

9. Fill the required forms (3, 8 & 9) as per Hazardous Waste Management & handling Rules.

10. Confirm emergency is over/complete, and inform to the Incident Control team

PNG EMERGENCY PROCEDURES

PROCEDURE IN CASE OF PE LEAKAGE

1. Emergency control room to inform the concerned personnel and take action as per Emergency Response Plan.

2. Onsite Incident controller (responsible person at site) to take following action.

3. Use gascoseeker& Barricade the gas affected area.

4. Ensure the operational people on site are equipped with necessary PPE.

5. Isolate the section. Close up-stream, downstream valves and all branch valves from The section

6. Depressurize the section to atmospheric pressure taking safety measures.

7. Assess the situation to see any probable loss to life & property.

8. Carry out necessary rectification work of the line.

9. Purge the affected section (*MGL CoP Section-8 to be followed*).

10. Re-commission the section to operating pressure (*MGL CoPSection-8 to be Followed*)

11. Inform Emergency Control room and HOD (O&M) about the completion of Emergency.

12. Collect solid wastes and other scraps and deposit it in CGS scrap yard.

13. Confirm emergency is over / complete and inform it to emergency control room.

PROCEDURE IN CASE OF STEEL LINE LEAKAGE

1. Inform emergency control room.

2. Initial information to be given by District technician in shift

3. Emergency control room to inform the concerned personnel and takeactions as per Emergency Response Plan.

4. Onsite incident controller (responsible person at site) to take followingaction.

5. Barricade the affected area.

6. Ensure the operational people on site are equipped with necessary PPE.

7. Assess the situation to see any probable loss to life & property.

8. Isolate the section. Close up-stream, downstream valves and all branch valves From the section.

9. Depressurize the section to atmospheric pressure taking safety measures.

10. Carry out necessary rectification work of the line.

11. Purge the affected section (MGL*CoP Section-8 to be followed*)

12. Re-commissioning the section to operating pressure (MGL*CoP Section-8 to be followed*).

13. Inform emergency control room and HOD (O&M) about the completion of emergency.

14. Collect solid wastes and other scraps and deposit it in CGS scrap yard.

15. Confirm emergency is over/complete and inform it to emergency control room.

ACTIONS TO BE TAKEN IN CASE OF FIRE ON STEEL/PE LINE

1. Inform Emergency control room.

2. Emergency control room will inform & take action as per Emergency Response Plan.

3. Onsite Incident Controller (responsible person at site) will take following action.

4. Barricade the affected area

5. Ensure the operational people on site are required with necessary PPE.

6. Assess the situation to see any probable loss to life & property.

7. Isolate the section. Close up-stream, downstream valves and all branch Valves from the section

8. If necessary co-ordinate with Mumbai Fire Brigade to cool the affected area by spraying water and extinguish the fire.

9. Carry out necessary rectification work as per MGL Code of Practice

10. Inform Emergency Control room and HOD (O&M) about the completion of Emergency.

Collect solid wastes and other scraps and deposit it in CGS scrap yard.

12. Confirm emergency is over/complete and inform emergency control room

ESCAPE INSIDE DOMESTIC CUSTOMER PREMISES

1 Open all Doors and Windows to ventilate the building

2 Turn off your gas supply at the meter

3 Turn off all gas appliances

4 – Do not switch on or off any electrical switch. Extinguish all naked flames

5 Call emergency service no (022) 24012400 or 1800229944

FIRE INSIDE DOMESTIC CUSTOMER PREMISES

1. Call MGL emergency control room and request services of Fire brigade and MGL Manager

2. Isolate the gas supply by means of operating the external isolation valve

3. If possible without putting yourself in danger attempt to remove any occupants from the building and try to extinguish the fire by use of the Fire Extinguisher

CNG EMERGENCY PROCEDURES

TYPES OF EMERGENCIES IN COMPRESSOR

1.1 Failure of high pressure tube/fittings

1.2 Failure of gas seals

1.3 Failure of oil seals

1.4 Failure of coolant seals

1.5 Failure of gas hose

1.6 Failure of coolant hose

1.7 Rupture of safety disc in stationary cascade

1.8 Cracking of filter

1.9 fire in compressor

LCV FILLING AREA

1.10 Failure of filling hose at LCV point

1.11 Rupturing of cylinder safety disc in mobile cascade

1.12 Failure of high pressure tubes and fittings of mobile cascade

1.13 In case of fire at LCV filling point.

BY DISPENSER

1.14 Failure of hose

1.15 failure of valve seal

1.16 failure of high pressure tube/fittings

1.17 in case of fire in dispensing area.

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF HIGH PRESSURE

TUBE/FITTINGS

1. Switch off the compressor

2. Close the gas suction valve

3. Identify the gas leakage location

4. Vent the gas inside the compressor

5. Open the damaged fitting/ tube

6. In case there is a crack in tube, cut the damaged portion, recrimp the tube in fitting by New tube

7. In case there is a crack in fitting, replace the fitting by new one

8. Reassembling it with appropriate torque.

9. Open the suction valve

10. Start the compressor and check for leakage, if any.

11. If there is a leakage, repeat the above mentioned actions.

12. In case of no leakages, start normal operation.

13. Deposit the cut tube portion/ failed fitting in “metal scrap” bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF GAS SEALS

1. Isolate electrical supply

2. Switch off the compressor by pressing ESD

3. Close the gas suction valve

4. Vent the gas inside the compressor

5. Open the compressor part having the failed seal.

6. Remove the failed seal and replace it by new one

7. After replacing the seal/s assemble the compressor parts by applying required torque Recommended by the manufacturer

8. Open the suction valve

9. Start the compressor and check for leakage

10. If there is a leakage, repeat the above mentioned actions.

11. In case of no leakages, start normal operation.

12. Deposit the damaged seal in “solid waste” bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF OIL SEALs

1. Isolate the electrical supply

2. Switch off the compressor

3. Place the tray immediately at the point of oil leakage

4. Close the gas suction valve

5. Vent the gas inside the compressor

6. Drain the oil if required as per the draining procedure (EMS-OCP-CNG-04)

7. Open the compressor part having the failed oil seal.

8. Remove the failed seal and replace it by new one

9. After replacing the seal/s assemble the compressor parts by applying required torque Recommended by manufacturer

10. Top up oil if required by following filling procedure (EMS-OCP-CNG –04)

11. Open the suction valve

12. Start the compressor and check for leakage

13. If there is a leakage, repeat the above mentioned actions.

14. In case of no leakages, start normal operation.

15. Deposit the damaged seal in “solid waste” bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF COOLANT SEALS

1. Place the tray immediately at the point of coolant leakage
2. Switch off the compressor
3. Close the gas coolant valve and suction valve
4. Vent the gas inside the compressor
5. Drain the coolant if required, precautions to be taken not to spill the coolant (by Collecting the coolants in mugs/ buckets)
6. Open the compressor part having the failed coolant seal.

Remove the failed seal and replace it by new one

8. After replacing the seal/s assemble the compressor parts by applying required torque Recommended by the manufacturer
9. Top up the coolant, if required
10. Precautions to be taken not to spill the coolant while filling by the way Of using buckets and mugs etc.
11. Open the suction valve and coolant valve
12. Start the compressor and check for coolant leakage
13. If there is a leakage, repeat the above mentioned actions.
14. In case of no leakages, start normal operation.
15. Deposit the damaged seal in 'solid waste' bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF GAS HOSE

1. Switch off the compressor
2. Close the gas suction valve
3. Close the butterfly valve, in case of Sulzer compressor
4. Vent the gas inside the compressor
5. Remove the damaged hose and replace it by new one
6. Open the suction valve and butterfly valve in case of Sulzer compressor
7. Start the compressor and check for leakage
8. If there is a leakage, check tightening of the hose.
9. In case of no leakages, start normal operation.
10. Deposit the damaged hose in "solid waste" bin for disposal

ACTIONS TO BE TAKEN IN CASE OF RUPTURING OF SAFETY DISCS IN STATIONARY CASCADE CYLINDERS

1. Identify the cylinder where safety disc has ruptured
2. Close the valve of that particular cylinder

3. Remove the ruptured safety disc after complete release of gas in that particular cylinder

4. Replace the safety disc by new one.

5. Open the cylinder valve and check for leakages

6. If there is a leakage, check tightening of the safety disc nut.

7. In case of no leakages, start normal operation.

8. Deposit the ruptured safety disc in "metal scrap" bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FIRE IN COMPRESSOR

1. Stop the compressor by pressing ESD

2. Switch off the compressor main supply in electric room.

3. Inform control room

4. Control room to inform and take action as per Emergency Response Plan.

5. Close the gas inlet valve.

6. Extinguish the fire by using fire extinguishers. (Use co2 in case of fire in electrical paneland use DCP/ABC powder in case of fire in compressor)

7. Once the fire is fully extinguished, collect the extinguish powder and deposit in Designated location for disposal

8. Segregate the fire waste in to hazardous and nonhazardous waste and store it Accordingly in the demarcated bins.

9. Dispose the extinguisher powder to Mumbai Waste Management Ltd. and fill form no. 3,8, & 9 as per Hazardous Waste Management rule 1989

FAILURE OF RUPTURE DISC DURING TRANSPORTATION TO DAUGHTER BOOSTER STATION

1. Park the LCV safely on the left hand side of the road

2. Identify the cylinder where safety disc has ruptured

3. Close the valve of that particular cylinder and wait near the LCV till the gas is completely vented from that particular cylinder

4. Inform the control room at City gate station

5. Take the LCV to the daughter booster station for decanting

6. After coming back from DBS to CGS, get the rupture disc changed by new one

7. Open the cylinder valve and check for leakages

8. If there is a leakage, check tightening of the safety disc nut.

9. In case of no leakages, start normal operation.

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF HIGH PRESSURE

TUBE/FITTINGS OF MOBILE CASCADE

1. Park the LCV safely on the left hand side of the road
2. Close all the cylinder valves
3. Wait near the LCV till the gas is completely vented from the tubes.
4. Inform the control room at City gate station
5. Bring back the LCV to city gate station
6. After coming back get the damaged tubes and fittings changed
7. Open the cylinder valve and check for leakages.
8. In case of no leakages, start normal operation.
9. Deposit the damaged tubes/fittings in "metal scrap" bin for disposal.

ACTIONS TO BE TAKEN IN CASE OF FIRE IN LCV FILLING POINT

1 Stop the gas filling.

2 Inform control room.

3 Control room to inform and take action as per Emergency Response Plan.

4 Extinguish the fire by using DCP/ABC type fire extinguishers.

5 Once the fire is fully extinguished, collect the extinguish powder and

Deposit in designated location for disposal.

6 Segregate the fire waste in to hazardous and non hazardous waste and store it

Accordingly in the demarcated bins.

7 Dispose the extinguish powder to Mumbai Waste Management ltd. and fill form no. 3,8,& 9 as per Hazardous Waste Management rule 1989.

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF DISPENSER GAS HOSE

1. Stop dispensing and immediately close the isolation valve on the dispenser
2. Remove the damaged hose and replace it by new one
3. Open the isolation valve
4. Start the dispenser and check for leakage
5. If there is a leakage, check the tightening of the hose fittings.
6. In case of no leakages, start normal operation
7. Deposit the damaged hose in "solid waste" bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF HIGH PRESSURE

TUBES /FITTINGS IN DISPENSER

1. Stop the dispenser and switch off power
2. Close the two way valve at the dispenser inlet
3. Vent the gas from the three way filling valve

4. Change the damaged tube/fitting by new one

5. Open the two way at the dispenser inlet

6. Check for gas leakages

7. If there is a leakage , follow the above steps.

8. In case of no leakages, start normal operation.

9. Deposit the damaged tubes/fittings in “metal scrap” bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FIRE IN DISPENSING AREA

1. Isolate the electrical supply

2. Press ESD

3. Inform control room

4. Control room to inform and take action as per emergency Response plan.

5. Stop the gas filling.

6. Switch off dispensing power

7. Extinguish the fire by using DCP/ABC type fire extinguishers. Once the fire is fully Extinguished, collect the extinguish powder and deposit in designated location for Disposal.

8. Segregate the fire waste in to hazardous and non-hazardous waste and store it Accordingly in the demarcated bins.

9. Dispose the extinguish powder to Mumbai Waste Management Ltd. and fill form no. 3,8,& 9 as per Hazardous Waste Management rule 1989.

EMERGENCY PROCEDURES INVOLVING DG SETS

ACTIONS TO BE TAKEN IN CASE OF FAILURE OF DIESEL HOSE (DIESELSPILLAGE)

1. Place the tray immediately at the point of diesel leakage

2. Switch off the load

3. Switch off the DG set

4. Close the diesel outlet valve

5. Remove the failed hose and replace it by new one

6. Precautions to be taken not to spill the diesel while replacing failure hose by the way of using buckets and mugs etc.

7. Open the diesel outlet valve

8. Start the DG set and check for leakage

9. If there is a leakage repeat the above-mentioned actions.

10. In case of no leakages, start normal operation.

11. Deposit the damaged hose in “solid waste” bin for disposal

ACTIONS TO BE TAKEN IN CASE OF FIRE IN D.G SET

1. Inform control room
2. Control room to inform and take action as per emergency Response Plan.
3. Stop the DG.set.
4. Switch off the DG set main
5. Extinguish the fire by using fire extinguishers. (use co2 in case of fire in electrical panel and use DCP/ABC powder in case of fire in DG.set)
6. Once the fire is fully extinguished, collect the extinguish powder and deposit in designated location for disposal
7. Segregate the fire waste in to hazardous and non hazardous waste and store it accordingly in the demarcated bins.
8. Dispose the extinguish powder to Mumbai Waste Management Ltd. and fill form no. 3,8,& 9 as per Hazardous Waste Management rule 1989

ELECTRICAL EMERGENCY PROCEDURES

Actions to be taken in case of an electrocution of single or multiple persons on electrical system are as follows.

- Immediately isolate the supply
- Do not try to touch the victim in charged condition
- Immediately contact the control room & give the information to be conveyed to HOD (O&M) and concerned Manager
- Call the 1252 for calling TOPSLINE for emergency shifting in Ambulance to MGL approved hospitals
- Before shifting MGL trained first aider shall try to give first aid to the injured
- Ensure that the area is barricaded and all open switches closed so that the other employees working near by do not get affected.

PROCEDURES FOR HANDLING TERRORIST ACTIVITIES

BOMB THREAT EMERGENCY.

All bomb threats will be taken seriously. The Chief Incident Controller will consult with theteam members to determine the appropriate course of action.

In most cases, the fire alarm should not be activated in the event of a bomb threat. The people in the building should be evacuated to a safe distance from the building toprotectthem against debris and other flying objects in the event of an explosion The EmergencyResponse Coordinator may mobilize the Emergency Response Team without making useof the general alarm system

The co-ordinators main responsibilities are as follows.

a) Devising and maintaining a search plan.

b) Devising and maintaining an evacuation plan.

c) Assessing a long term and short term threat.

d) Making decision to evacuate.

e) Liaison with police. (Bomb Squad)

f) Liaison with building management representatives.

g) Arranging staff training and security drills.

BOMB THREAT EVACUATION PROCEDURES

Every threat must be taken seriously and reported to the Chief Incident Controller for subsequent Action,

a) The Emergency Response Coordinator will notify by telephone all Assistant Emergency Response Coordinators who in turn will contact Floor wardens within their areas of responsibility. These instructions must be obeyed promptly.

b) Employees should check (SCAN) their immediate work area for any unusual or suspicious items as they leave their workstation.

c) Floor wardens and Facilities Management personnel should check their assigned areas such as restrooms, office areas, stairwells, and other common areas.

d) Any suspicious items should be reported immediately.

If a suspicious object/item is located: Clear the area where the suspicious object is located, and then evacuate the rest of the building.

a) Employees should take all personal belongings with them (i.e., car keys, coats, purse, and bags or backpacks). If a suspect item is found, the employees may not return to the building until it is found clear. This may take considerable time.

b) All employees should exit through a designated evacuation route that has been checked for any devices, and proceed to their designated assembly area.

c) Parking lots and garages should be avoided, as they may contain a vehicle bomb.

SUSPICIOUS OBJECT OR PACKAGE

Some Physical Characteristics of Suspicious Packages and Letters Include The Following:

Excessive postage	Protruding wires or aluminum foil
• Handwritten or poorly typed addresses	Excessive security material such as masking tape, string, etc
	Visual distractions
• Incorrect titles	Ticking sound
• Title, but no name	Marked with restrictive endorsements, such as “Personal” or “Confidential”
• Misspellings of common words	Shows a city or state in the postmark that does not match the return address
• Oily stains, discoloration or odor	Foreign Mail, Air mail and Special Delivery
• No return address	
• Excessive weight	
• Lopsided or uneven envelope	

When A Suspicious Object or Package Is Discovered:

a) Remain calm.

b) The finder must not disturb or move the suspected object.

c) Clear all persons from the immediate vicinity.

d) Call the Emergency Response Coordinator

e) Retreat to a safe distance and warn others to avoid the area. Be available to provide the whereabouts of the suspected object to the police.

f) Wait for further direction from the Emergency Response Coordinator.

g) Do not spread rumors.

Other Terrorist Acts on a MGL Installation including Hostage Taking/ Kidnap and Civil Unrest

In case of a incident involving any of the above situations, upon becoming aware, the person will immediately inform the MGL HOD (Security) who will evoke the appropriate MGL Security Procedure

PROCEDURES FOR HANDLING NATURAL DISASTERS

The MGL is located on a low risk area for earthquakes and being constructed from flexible materials such as Polyethylene and Steel and it will be able to withstand earthquake that is likely to occur in the Gas supply Area.

The majority of the Gas Supply Network is buried below ground and will not be affected by flooding. Small localized area may be affected should the water level exceed one metre in depth.

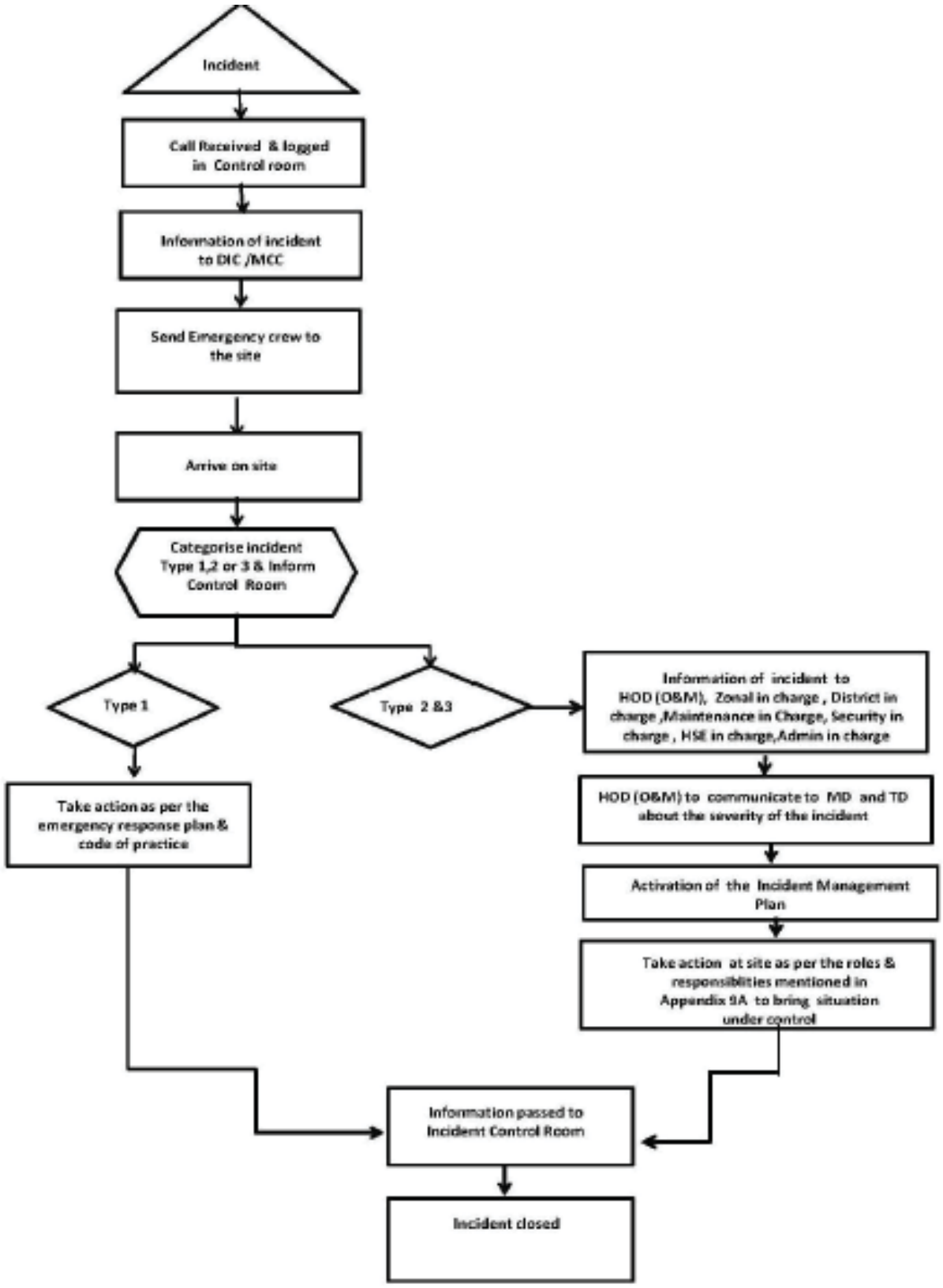
In the case of a major earthquake or flood the most likely occurrence would be the loss of building in which case the MGL BCP would be initiated.

PROCEDURE FOR HANDLING UNODOURISED GAS

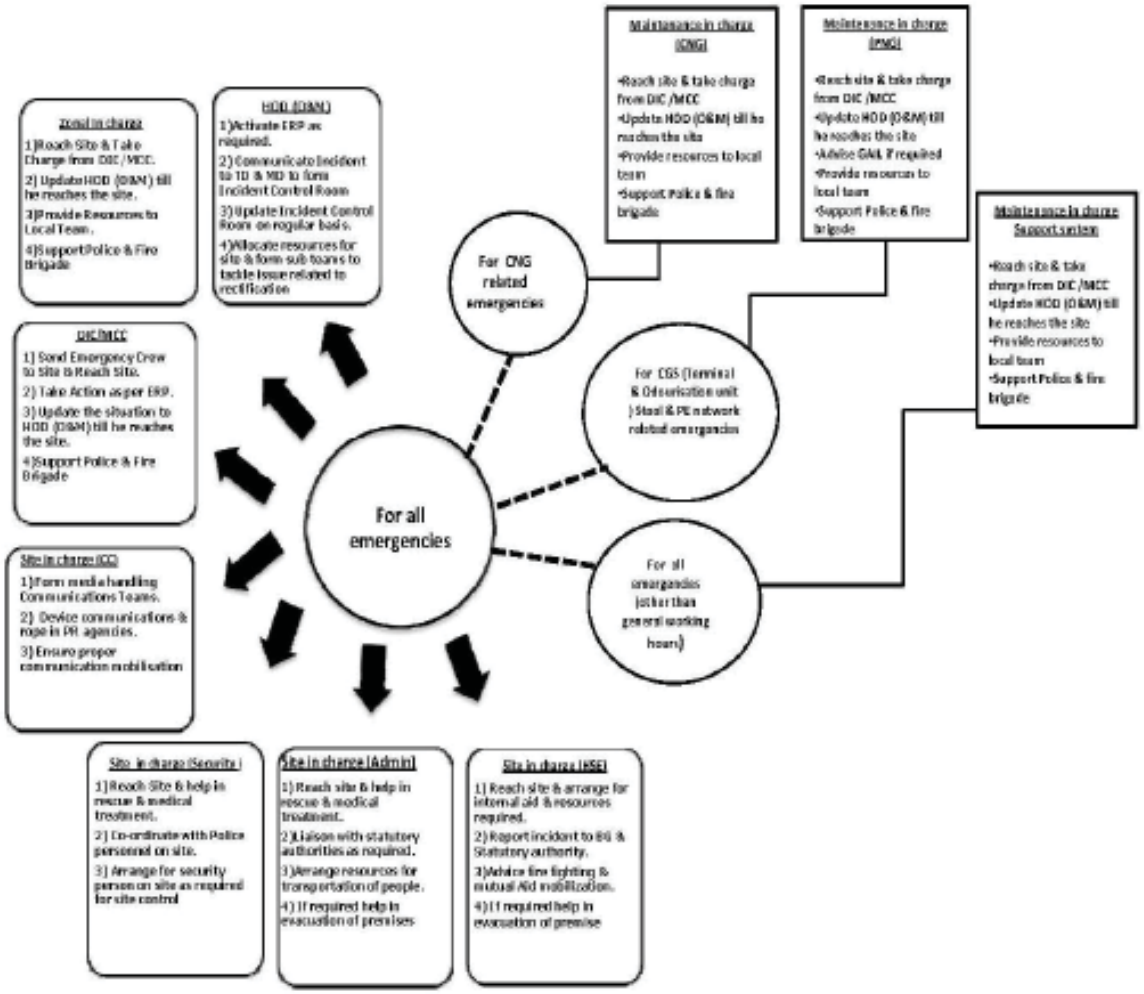
MGL injects odorant into the gas at its City Gate stations (CGSs) feeding into the MGL 19bar steel pipe network to enable any leakage from the gas supply network to be detected by the human nose. MGL undertakes regular sampling of the gas in its pipe network to ensure the odorisation level is appropriate. To ensure Un-odorised gas does not enter into the MGL gas supply, MGL maintains the odorisation equipment in line with the manufacturer's recommendations and maintains a stock of equipment spares. Odorant is replenished from the supplier on a regular basis so that stock levels does not reduce below 15 days of consumption. Tests have shown that the pipe wall of the gas supply network absorbs the odorant from thegas, in the case of polyethylene and absorbs the odorant in the case of steel. When unodorised gas enters into the existing gas supply network the reverse happens and the gas absorbs the odorant from the pipe wall. This process as be shown to effectively odorizethe gas for a period of three days. From this, we can accept that failure to inject odorant into the gas for a short period of time will not present a problem of customers receiving unodorised gas. Therefore, any failure to odorize must be rectified and odorisation recommenced within a 12 hour period. In the event that the odorisation equipment cannot be re-commissioned and odorizing recommenced within this 12 hour period then the following actions will be undertaken:-

- Zonal emergency response teams will be directed to undertake additional sampling of the gas at the extremities of the network
- the maximum flow will be taken from the CGS where the odorisation equipment is working.
- temporary / portable injection equipment will be fitted at the CGS where the equipment has failed.
- temporary / portable injection equipment will be fitted at the DRSs at the
- zones where the additional sampling mentioned above has indicated a lack of detection.
- In the event of the above failing, consideration will be given to isolating the
- supply in the DRS Zone where there is a lack of detection of odorant. This will
- be undertaken under as per the Incident Management Plan.

EMERGENCY RESPONSE - FLOW CHART



ROLES & RESPONSIBILITIES



Information available on the MGL intranet for the following:-

- MGL senior personnel contact numbers
- MGL employees contact numbers
- MGL office addresses and contact numbers Please refer to stakeholders contact directory For the following:-
- Emergency services and other support Organization contact numbers
- Contractors and other gas companies contact Numbers
- Mutual aid scheme members contact nos

Safety Measures

All precautionary measures will be implemented in the proposed laying of pipeline station

According to guidelines issued by oil industry safety Directorate, GOI. Some of the safety measures which will be adopted are as below:

Proper barricading & sign for the control of the traffic at City gate Station

• No smoking, naked flame, use of mobile phones or any other source of ignition within six meter from the City gate Station

• Maintaining sufficient clearance between adjacent vehicles in line (minimum 1.25). No vehicle is parked in staggered manner & there is a free escape path in an emergency situation.

• Control of vehicle movement at refueling place to protect against possible damage to dispensing unit as well as injury to dispensing staff.

• Separate entry & exist at the station.

• Only certified staff having valid STC card shall carry out City gate Station into the vehicle

as per "Safe Operating Procedure".

• Display of warning signs & emergency contact numbers at City gate Station.

• First aid facilities shall be maintained with adequate contents & replaced at regular intervals.

• No electric power lines shall be installed over the City gate Station compressor area & dispensing island ,where its failure may cause an Incident /fire.

• The electrical wiring to various switchgears installed in electric room shall be routed neatly& clamped properly .The maintenance of switchgears shall be taken up periodically& any non – conformity shall be rectified immediately.

• Portable DCP type fire extinguisher shall be maintained in adequate numbers near the dispenser& compressor for gas fire fighting.

• Carbon Dioxide type fire extinguisher shall be kept near electrical installation in adequate numbers.

• The staff shall be trained in methods of firefighting, first aid treatment & incident handling.

• The telephone numbers of the nearest Police station /fire Brigade/ Hospitals shall be prominently displayed at the City Gate station. These shall be updated regularly so that the agencies can be contacted immediately in case of any eventuality without loss of time.

• In case of emergency, all means of communication shall be always made available at the

disposal of the operation staff of the refueling station.

• All the staff at refueling station shall be adequately trained to be aware about locations of emergency isolation of any CNG leak.

• Periodic work place inspection & safety audits shall be done in accordance with the existing regulations.

LIST OF MUTUAL AID RESOURCE GROUP (MARG) & CONTACT NOS.

Sr.No	Name of the Industry Group	CONTACT NOS
1	Hindustan Petroleum Corp. Ltd., Wadala	**24128598 (TM) / 24129801**
2	Godrej Ind. Ltd., Wadala (E). (Foods Div.) -	**-24164602 / 24164605 /24126322**
3	I. B. P. Co. Ltd., Wadala II -	**24123901**
4	Indian Oil Corporation Ltd., Wadala I -	**24175423 / 24183068**
5	Bharat Petroleum Corpn. Ltd., K. C., Wadala	**24143477**
6	6. Castrol India Ltd., Wadala	**66101800**
7	Mahanagar Gas Ltd, OppAnik Depot, Sion (E)	**24031721 / 24031698 / 24031720 / 24012400 (Emergency)**
8	Bharat Petrol. Corpn. Ltd., (Benzene), Sewree-	**24146400 / 24123640**
9	Hindustan Petroleum Corpn. Ltd., Sewree – I -	**24143700 (TM) / 24180227 (B)**
10	Hindustan Petroleum Corpn. Ltd. Sewree – II -	**24184338 (TM)**
11	Bharat Petrol. Corpn. Ltd., (B/O), Sewree -	**24158902 / 24123640**
12	Hindustan Petroleum Corpn. Ltd. Mazagoan-	**23713870 / 71 / 75**
13	Indian Oil Corporation Ltd., Sewree -	**24175425 / 24175427 / 24150078**
14	Bharat Petrol. Corpn. Ltd. -	**24117831 / 2370670**

LIST OF MARG MEMBERS- Navi Mumbai

Sr.No	LIST OF MARG MEMBERS	CONTACT NOS.
1	SI group India Limited , Thane Belapur road, Opp. Juinagar Rly. Station, Navi Mumbai-	**022-66732011/09** Mr. RajendraChandrashekar - **9920805656** Mr. Vilas Thakur – **9821260145.**
2	MIDC Fire and emergency response station, Thane Belapur road	**022-27780207/ 27780208** Chief fire officer – **9820788209**
3	L&T – **Mr. SarangdharDeshmukh- Admin I/C, Control and Automation , Mahape**	**022-67226200 extn,. 516 022-67226516 9967552570** Security- **022-67226211**
4	Unique chemicals, Mahape,	**Mr. V.H Kulkarni, Production manager - 022-27782423**
5	Glenmark Pharmaceuticals limited , Mahape,	**022-6772000 extn. 3295 and 3394 - Mr. UdayLugade- 9619797952**
6	DISH Thane (Joint Director)	**– Mr. Shendge- 9821309925**