## EMERGENCY PREPAREDNESS PLAN & RESPONSE

## FOR

## TUBE INVESTMENTS OF INDIA LTD.

## (UNIT: TUBE PRODUCTS OF INDIA)

## At Post Shirwal, Taluka Khandala,

## District Satara 412801.

* **Multi Location Engineering Company, Manufacturing of ERW & CDW Tubes.**

Emergency Preparedness Plan and response

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## ON-SITE EMERGENCY CONTROL PLAN

# PREFACE

The “On-site Emergency Control Plan” (OSECP) & “Evacuation Plan” are the laid procedures to combat emergency, in case of major accident involving fire, explosion, toxic release, collapse of structure etc. There are many agencies, which are to be involved & informed in case of emergency situation. These agencies are Government bodies, Fire brigade, RTO, Police, Hospitals, etc.

Emergency is a sudden occurrence of accident of such a magnitude which affects normal life inside the factory or in the vicinity causing extensive damage to the life, property and / or environment.

On-Site Emergency Control Plan of the Tube Investment Of India Ltd., At Post Shirwal, Taluka Khandala, and District Satara includes probable emergencies, which can occur and the activities to be undertaken by the various groups and individuals, to reduce the severity of the incidence. This Emergency Control Plan out lined is suitable for round the clock coverage.

It is the responsibility of every employee to be familiar with the “On-site Emergency Control Plan” and “Evacuation Plan”, which will help to avoid chaos at the time of emergency.

* **INTRODUCTION**

An emergency in the factory has potential to cause serious injuries or loss of lives or extensive damage to the property and / or environment and serious disruption both inside and / or outside the works

Hence the need of proper 'On-Site Emergency Control Plan' (OSECP). Such plan gives the guidelines for employees, contractors, transporters etc. The 'On-Site Emergency Control Plan' (OSECP) not only defines the responsibilities but also informs about prompt rescue/evacuation/co-ordination of operations & some more.

* **EMERGENCY**

An emergency is a situation, which may lead to or cause a large scale damage or destruction to life or property or environment within or outside the factory. Such an unexpected severe situation may be too great for the normal workforce in the area within the plant. In any industry emergency can arise at any moment and this depends on the type of

* Structure
* Raw materials
* Machines / Plant
* Nearby Industries etc.
* **NATURE OF EMERGENCY**

The emergency can be specified in one or more of the followings:

* Fire / Explosion
* Release of toxic vapors / gas – tank/lines
* Structure collapse.
* Fall from Height
* Overturning of tanker containing flammable/toxic substances
* Spillage/Leakage of flammable liquid/Chemicals
* Overflow of effluent from collection tank
* Spillage/leakage of chemicals/Rupture of tank/bath
* Natural calamities such as storm, wind, flood, earthquakes, etc.
* Deliberate sabotage, terrorism, civil commotion, air raid, etc..
* Food poisoning.
* Dog Bite
* Snake Bite
* Electrical Shock
* Pandemic (such has Covid-19, Swain Flu etc.)
* **OBJECTIVES**

The primary objective of the emergency procedure is to safeguard the life of the people in the factory and the plant itself. Another objective is to familiarize all employees with the organizational set-up to combat any emergency likely to arise. The OSECP is also to develop a permanent infrastructure of trained personnel and suitable facilities to meet probable eventualities which may affect safety of the people, plant and / or environment. The overall objectives of the 'On-Site Emergency Control Plan' (OSECP) are:

* To control the emergency, localize it and if possible eliminate it as quickly as possible.
* To avoid confusion / panic & handle the emergency with clear-cut actions.
* To minimize loss of life and property of plant as well as adjacent environment.
* To alert the neighborhood.
* To safeguard non-affected areas.
* To arrange head - count and rescue operations.
* To preserve the records.
* To restore the normalcy.
* To investigate and take necessary steps to prevent the recurrence.
* To ensure safety before personnel re-enter and resume the work.
* **COMPONENTS**

The 'On-Site Emergency Control Plan' essentially consists of the following components:

* Emergency Management and Key Personnel
* Emergency Control Center (E.C.C.) –(Security Cabin )
* Safe Assembly Point
* Emergency Operations
* Emergency Services
* Communication System
* **EMERGENCY MANAGEMENT**
* **Refer Annexure 3**

During the emergency situation it is generally seen that chaos and confusion rules over leading to more damage. In Emergency Management just like normal operations there are managers, engineers, supervisors, operators etc., who are assigned specific tasks to run the business, similarly, during emergency also there are persons with specific duties. These persons are known as 'Key Personnel'. Names, Mobile Numbers etc. of all Key Personnel are given in the Annexure 4

* **KEY PERSONNEL**
* **Refer Annexure 4**

Based on organization chart and the capabilities due to experience, key personnel are assigned the specific work. The main key persons are,

* Chief Controller – Plant Head
* Site Controller – Manager On Duty
* Dy. Chief Controller – Head HR & Safety
* Liasoning Officer – Executive EHS

Under the control of Site Controller other three teams will carry out the emergency control operations.

After normal working hours and on weekly-off and holidays, the shift-in-charge or security in-charge whoever is present will act as a Chief Controller and carry out the necessary activities till the nominated Chief Controller or Site Controller reaches to the site.

* **EMERGENCY GUIDELINES: Individuals**

When an emergency occurs, the person who observes it should inform about the emergency giving the details of the occurrence, through telephone or by any other means to the Security Office. The Security Personnel confirms the message and immediately alert the factory personnel through the wailing siren as per alarm code (Annexure-2).

**CHIEF CONTROLLER**

**Plant Head/ Shift in charge / Security officer**

As soon as emergency message is received he will proceed to the emergency control centre to take the charge of all activities pertaining to the emergency.

* Till the emergency is called off, he will remain in Emergency Control Centre, so that his availability is known to all.
* The Site Controller, Dy. Chief Controller, Liaison Officer and all team leaders will be in contact with him during the emergency for communication and co-ordination.
* He will give instructions for arrangement for Civil / Engineering support, Electrical Shutdown etc.
* He is the final authority in this operation. Any decision about fire fighting, rescue operations, calling the outside agencies for help, welfare, liaison etc. will be taken by him.

##### DY. CHIEF CONTROLLER

**Head Maintenance/Head HR & Safety**

The Dy. Chief Controller wills co-ordinate the activities with all the teams and other key personnel in consultation with Chief Controller.

He will….

* Co-ordinate all the teams.
* Arrange control over the entry / exit of people, vehicle etc.
* Arrange for necessary Personal Protective Equipment
* If necessary arrange help from external agencies, in consultation with Chief Controller.
* Arrange for transport.
* Maintain the records of incidence and activities pertaining to emergency.
* In case of failure of power/ telephone services, arrange for messenger for communication purpose.
* Arrange for temporary shelter.

**SITE CONTROLLER**

**Manager- On Duty**

As soon as emergency message is received he will proceed to the Emergency Control Center. After getting the information about emergency and the instructions from Chief controller he will rush to the site, and take the charge of site. In case of fire, explosion, toxic release etc. the area will be cordon off and he will

* Guide for fire fighting, rescue operations and other emergency control operations.
* If necessary request for extra people for help.
* Will communicate in details the site progress and seek advice from Chief Controller.

###### LIASONING MANAGER

**Head Hr & Safety/Executive EHS**

Any information about the emergency to internal / external agencies will be given by the Liaison Manager only. No other person is supposed to talk to anyone about the emergency. This is required to avoid the confusion as well as spreading of the rumours and going wrong information to outside.

He will carry out the following activities:

* Maintain liaison with the press, government agencies & the neighborhood regarding the emergency as per the instructions from Chief Controller.
* Disclose all the necessary information in the plant and outside so as to avoid the rumours and confusion.
* Arrange for the head count at assembly point.
* Arrange & communicate for the hospital accommodations.
* **GUIDELINES FOR EMERGENCY RESPONSE TEAMS**

As soon as emergency message is received all the ER Teams will proceed to the Emergency Control Center. After getting the information about emergency and the instructions from Chief controller, respective teams will rush to the site along with Site Controller, and take the charge of site &. will start functioning. The team leaders will co-ordinate and communicate with the Site Controller..

**Fire Fighting Team**

**First Aid Team**

**Utility/ Engg. Team**

**FIRE FIGHTING TEAM**

The members will rush to the site with firefighting equipment to extinguish the fire. If necessary, will request for evacuation of site

* Fight the fire/ emergency
* Send injured to hospital if necessary.
* Start the sprinkler of LPG bullet if necessary.

**ENGINEERING TEAM (Employees in Maintenance department)**

The team ensures the safety of the people and unaffected area. The necessary arrangements of utilities, items required temporarily during emergency i.e. Power, water will be provided by this team. The team members will guide the external agencies.

Engineering team will ensure:

* Safety of the remaining part of the plant.
* Mobilization of necessary tools, equipment to handle any repair work.
* Stop pipe line transfer.
* Close all the valves.
* Start the Fire pump if necessary.
* Main power supply line is cut-off.
* Undertaking of maintenance and repair.
* **EMERGENCY CONTROL CENTRE (E.C.C.)**

For the purpose of handling emergency, Emergency Control Centre is very much essential. In factory, HR Office at the Administration Building Alternatively Security Office at Main Gate are declared as Emergency Control Centers (E.C.C.). All activities pertaining to the emergency will be carried out from E.C.C. and accordingly declared for the information of all employees at the time of emergency.

The Emergency Control Center is equipped with:

* A copy of On-Site Emergency Control Plan.
* Plant Lay-out indicating Internal Roads, Storages of Hazardous Material, Fire Fighting Equipment and First Aid Box Locations.
* Material Safety Data Sheet of all chemicals handled in the premises.
* List of all employees with addresses, telephone number, contact person and if possible blood group.
* List of important telephone numbers such as Key Personnel, DISH Office, Satara & Pune, Collector Office Satara, Shirwal Police Station, Nearest Fire Brigade, Hospitals, Neighboring Industries, Maharashtra Pollution Control Board, MIDC, MSEB etc. -
* Separate list of team members with their addresses and telephone numbers
* Facility of Direct Telephone Line or Mobile Phone.
* Equipment such as Torch, Emergency Light, Rope, and necessary Personal Protective Equipment, whistle, hand operated siren,
* Note pads and pen / pencils and other relevant stationary to record the messages and record of activities pertaining to emergency.
* First Aid Box with proper medicines.

**ASSEMBLY POINT**

During emergency it is likely that entire plant gets affected and all the employees have to be evacuated. The areas have been assigned as an assembly points. In case alternative, assembly point is decided considering the wind direction, which is indicated by the wind socks, will be informed through Evacuation team members and will guide accordingly

Assembly points are specified in the following table.

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Assembly Point** | **Sections** |
| 1 | Front of Canteen/Reception Area | All Factory |

During emergency key persons i.e. all team members will assemble at Emergency Control Center and other employees, visitors and contract employees will be assembled at Assembly Point. Employee’s attendance sheet, visitors register and contractors register will be made available at assembly point for head count. The rescue team leader will carry out the head count under the guidance of Liasoning Officer, and if necessary will start the search/ rescue operation for the missing person/s.

* **WIND SOCKS**

Windsocks have been installed at the conspicuous location near L.P.G. Yard and Administration Building. Wind sock helps to indicate wind direction. In case of toxic release, first the employees should run along the wind direction and not against to avoid the breathing of contaminated air.

* **EMERGENCY RESPONSE AND CONTROL PROCEDURE**

When an emergency occurs, the person who observes it should inform about the emergency giving the details of the occurrence, through telephone or by any other means to the **Security Office.** The Security Personnel confirms the message and immediately alert the factory personnel through the wailing siren as per alarm code

As soon as alarm is heard, the team members will rush to the Emergency Control Centre. and others will assemble at Assembly Point.

After getting the information about emergency he will rush to Emergency Control Center and as per instructions from Chief Controller will proceed to the site with required teams and take the charge of site.

In case of fire, explosion, toxic release etc. may request to cordon off the area

At Emergency Site, Site Controller will:

* Guide for fire fighting and other teams for emergency control operations.
* Arrange for rescue operations.
* If necessary will request to arrange for extra people for help.
* Will keep Chief Controller inform the Emergency status, get advice and any support.

At Safe Assembly point, Head count will be taken, if anybody missing, Evacuation team will search & reconfirm, all people are evacuated.

On reporting control of emergency by Site controller, Chief Controller will assess the situation and then declare the emergency is over. Till then all the team leaders and team members will adhere to the task.

Once normalcy is restored the security will blow whistle & inform verbally to people to go to their workplace. Till that people are expected to be available at the assembly point.

Necessary emergency record / reporting, investigation, Site clearance etc will follow subsequently.

* **ALARM RAISING SYSTEM**

The factory siren will be used for raising the alarm and also for all clear signals. The wailing siren will be sounded intermittently (Up and Down mode) for the duration of one minute in case of emergency. Such alarms will indicate that emergency services will be put into operations.

In addition to the above systems, telephone, public address system also will be used. In case of power failure even the whistles will be used for raising the alarm. Continuous whistling will indicate the emergency is raised.

If situation is beyond the control, the external agencies will be informed accordingly and asked for the help. This may be achieved by direct telephone or through messengers. The effective handling of an emergency will be the result of decision taken at the time based on knowledge and experience.

* **EMERGENCY REPORT**

Chief Controller will assess the situation and then declare the emergency is over. Till then all the team leaders and team members will adhere to the task.

Chief Controller, Dy. Chief Controller, Liasoning Officer & site controller will conduct the investigation of the emergency jointly. Based on this report, information and investigation, a final report will be prepared by the Chief Controller and submitted to the concerned authorities within stipulated time of the occurrence.

* **DO'S AND DONT'S**
* **TELEPHONE OPERATOR**

1. On hearing the Emergency Alarm he / she will be in contact with Chief Controller / Site Controller for further instructions.
2. On advice of Chief Controller / Site Controller, he / she will contact the external agencies for necessary help.
3. Telephone Operator will follow the instructions only from Chief Controller or Site Controller.
4. Telephone Operator will keep the board free for urgent communication and not allow anyone to use the telephone for other business purpose.

* **EMPLOYEES, VISITORS & CONTRACTORS**:

After hearing the alarm employees, visitors & contractors will follow the following steps:

* Give attention to all instructions
* Stop the work. Do not panic.
* Switch off the electrical supply and LPG supply of machinery.
* Evacuate the area without panic if asked.
* Do not wait for personal belongings.
* Assemble at Assembly Point.
* Do not go to the emergency site.
* Do not communicate with external agencies unless instructed by Chief Controller / Site Controller.
* Do not spread rumors & do not engage communication systems.
* **TRAINING**

The employees will be informed about 'On - Site Emergency Control Plan' in details, with the help of training programmes. For the success of this plan not only training will be organized but mock drill also will be organized periodically. Mock drill will help to understand the role to be played by every one during the emergency.

* **MOCK DRILL PROCEDURE**

The success of the “on-site Emergency Control Plan” is very much dependant on planned and unplanned mock drills. A mock drill helps employees to be familiar with their roles & prove the current accuracy of On-Site Emergency Control Plan.

Following is the procedure for conducting a Mock drill.

* Inform all the employees about mock drill procedures.
* Fix the date at time for mock drill.
* Mock drill will be monitored by observer/s not involved in the exercise.
* Emergency alarm will be raised.
* After hearing the alarm required Emergency Procedure will be followed
* All clear signals will be given after emergency is over.
* Observer/s will note down the activities with respect to the time, Sequence & deviations.
* Lacunas observed in the system will be studied carefully.
* Records of mock drill will be maintained.

After each incidence, drill the plan will be thoroughly reviewed to take account of omission or shortcomings and studied for the improvement

**FACILITIES AVAILABLE TO HANDLE EMERGENCIES**

**Fire Protection Facilities:**

A well laid out fire fighting system consisting of fire hydrants, Dry Chemical Powder Type, Carbon Di Oxide Type Fire Extinguishers, Fire Alarm, Fire Hoses, Foam Trolley, Hose Reels, Sand Buckets etc. have been provided in the plant. A well trained team undergoing fire fighting drills, emergency procedures, and functions for OSECP is available round the clock. Safety kits have been provided wherever necessary.

Fire fighting equipments after its use are checked and action is taken as per the condition of fire extinguisher

Some of the employees have been trained to face and fight emergencies arising out of LPG, Diesel, Thinner, Paint storage areas etc. The fire fighting drill is carried out periodically. The performance of fire hydrant system is regularly checked and all fire appliances are tested as per the prescribed provisions.

The following staff is trained in fire fighting and other emergency handling.

* 12 security staff distributed over three shifts.
* 97 workmen distributed over three shifts.

**Details of the facilities:**

**Water Reservoirs:**

Water reservoir of 2 lakh liters capacity is always full of water for fire fighting.

**Fire Water Pumps:**

Total Number of Fire Pumps - Three

**Fire Hydrant System:**

All the operational areas and the buildings in the works are surrounded by fire water ring header, which is always kept under pressure by a booster jockey pump & Maintain 7 Kg/cm2 Pressure. Diesel Engine pump for the in case of failure power supply. Various types of water hydrants are provided in different areas to allow repair jobs in the specific area without affecting water supply to other areas.

**Total Number of Hydrants Points:**

Single Hydrant : 36 Nos.

Water Monitor : 04 Nos.

Foam Tank : 04 Nos.

First Aid Hose Reel : 26 Nos.

**Water Sprinkling:**

In the event of any fire to the LPG storage tanks or in the vicinity, sprinkler system sprays water on the external surface of the tanks. The sprinkler water supply valves are located well away from the tanks.

**Detection Arrangement:**

LPG detectors have been installed in the LPG Yard at appropriate places.

**Fire Emergency Equipment:**

Utmost care is taken by providing variety of fire extinguisher required for different classes of fire. These fire extinguishers are maintained and inspected regularly under expert and authorized supervision as per IS 2190. List of appliances is as follows:

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Type of Fire Extinguisher** | **No. of Fire Extinguisher** |
| 1. | Foam AFFF | 18 |
| 2. | ABC Type | 100 |
| 3. | CO2 | 25 |
| 4. | W-CO2 | 4 |
|  | **TOTAL** | **147** |

**Alarm System:**

There is well equipped siren system installed at appropriate places for use in case of such emergencies. The purpose of alarm system is to mobilize the works force expeditiously to cope with emergencies, which cannot be controlled by the operating staff.

**Sounding of Alarm:**

The siren switch is provided at the main gate. The security guard on receiving information from Chief Controller / Site Controller sounds the alarm as per type of emergency to indicate the same.

**Alarm Code:**

**Emergency:** Siren up & down mode for continuous one minute.

**Communication System:**

Internal telephone lines exist throughout the plant for easier communication. It is possible to communicate outside on telephone directly or through the telephone operator. Anyone can report the incident to the security or Chief Controller or Site Controller or Team leader giving the details of the occurrence, through the dedicated -99 telephone message or by any other means (Running Coller).

All the work areas have internal telephone connections through which communications can be made faster in case of emergency and concerned personnel can be contacted without delay. There is well equipped siren system installed at appropriate places for use in case of such emergencies.

**Medical help:**

First air boxes have been kept at various locations about 30 employees have been trained in first aid. A well equipped Occupational Health Centre (O.H.C.) is always ready for meeting any emergency. Ambulance van is available round the clock. If required ambulance can be made available. The O.H.C. is managed by the medical officer and qualified male nurse.

* **UPDATING THE PLAN**

As and when required this 'On - Site Emergency Control Plan' will be updated and informed to all. If necessary, after each drill the plan will be thoroughly reviewed to take account of shortcomings.

EVACUATION PLAN

The objective of having a well defined evacuation plan and infrastructure is to mitigate the emergency and minimize the damage to the life, property and environment in case of emergency.

An accidental release of hazardous materials, fire/ explosion, structure collapse etc. sometimes necessitates evacuation of people from certain areas to prevent injury or death. These areas can include those directly affected by toxic fumes/ gases or fire and those areas that may be potentially affected during the course of the accident (e.g. through wind shift, a change of site condition etc.). Evacuation is a complex undertaking.

**MAKING A DECISION ON EVACUATION:**

The first evacuation consideration, determining whether an evacuation is necessary, involves a comprehensive effort to identify and consider both the nature of emergency and circumstances surrounding the released hazardous material and it’s effects on people.

The factors that affect evacuation include fire, amount of released material(s), physical and chemical properties of the released material(s), health hazards etc. It is important to know the type of fire. It is necessary to know the material’s physical and chemical properties. It is also necessary to know the health effects resulting from a short-term exposure.

Atmospheric conditions must also be addressed when determining the appropriate evacuation response to material release, fire, structure collapse etc.

Life safety factors to consider when planning an evacuation include the number of people that require evacuation and the resources needed to conduct a safe and effective evacuation. Whether the people are actually located in the area that contains hazards or areas only threatened by hazards are critical components of the evacuation planning.

**CONDUCTING AN EVACUATION:**

Should it be decided that an area is to be evacuated; the evacuation must be conducted in a well co-ordinate, thorough and safe manner. Shortest & safe Evacuation routes to the safe assembly point need to be planned in advance and informed to all concerned & displayed at prominent locations.

**EVACUATION TASKS:**

The first step is to assign task to evacuation assistance personnel (Rescue/Evacuation Team). These tasks includes concerning:

* The specific area to evacuate.
* Evacuation Warning
* Evacuation Routes
* Protective gears to be worn.
* Instructions to be given to evacuees.
* Necessary assistance
* If exposed to the hazards during an evacuation, emergency medical care

**EVACUATION:**

Evacuation decisions are of necessity, very incident-specific and the use of judgment will be necessary. If the release occurs over an extended period of time, or if there is a fire that cannot be controlled within a short time, or incident which are beyond control, then evacuation may be the sensible option.

It should be understood that following the above guidelines would increase the effectiveness of evacuation plan as a protective action.

In our factory various locations are proned to be dangerous as mentioned in annexure1. The chart shows the possible hazards of the location, which is to be followed in case of evacuation. During evacuation it is necessary to follow do’s and don’ts as mentioned below.

**Do’s:** 1. Stop work on getting information or hearing the alarm.

2. Switch off the machines/LPG.

3. Follow the nearest escape route.

4. Gather at assembly point.

5. Take visitors to safer place

**Don’ts:** 1. Do not get panic.

2. Do not run and prevent others from doing so.

3. Do not go anywhere else.

4. Do not wait to collect personal belongings.

Considering the number of employees at the location and the availability of the escape routes/ doors, it is possible to evacuate the area in minimum available time.

After evacuation it is important for all employees to gather at the assembly point which is marked on the layout and indicated by display board at the location. This is very much necessary for the headcount. The success of the evacuation plan depends on the regular mock drills and discipline. Hence everyone should be serious about the mock-drill operations.

The mock-drill will be carried out periodically for the understanding of the various operations involved in the evacuation of the employee

**EVACUATION FLOW CHART**

**EMERGENCY**

**CONFIRMATION**

**DECLARATION**

**EVACUATION OF PEOPLE**

**ASSEMBLY POINT**

**HEAD COUNT**

**RESCUE OPERATION**

**IF NECESSARY**

**Emergency preparedness response plan for Fire:**

## *A. Procedure for Handling Fire While Welding / Gas Cutting*

* Monitor the oxygen, acetylene cylinder pressures during welding
* Check for leakage at fittings/hoses (visually/sound)
* If minor leaks are found, take corrective action immediately
* Check whether NRV is there in the torch.
* In case of major leaks, inform maintenance for replacement of parts (hose, gauge, regulators etc.)
* Always keep a bucket of sand while welding to douse fire
* Keep inflammable material away from welding area
* Take precautions to cover the sensitive parts of equipment while welding / cutting
* Always were safety goggles provided during welding /cutting.

## *B. Procedure for Handling Fire in Packing Material Stores*

* Check oil spillage near the spot
* Use foam or dry powder fire extinguisher or sand from bucket sand which ever available near the area
* Inform line supervisor / security about fire
* Identify the root cause for the fire accident
* Take corrective action and preventive action to prevent fire
* Ensure corrective and preventive action

## *C. Procedure for Handling Fire in HT Transformer*

* Switch off the main incoming supply to the transformer.
* Switch off the capacitor bank at main panel.
* Inform line manager / security immediately.
* Put off the fire using ABC Type & Co2 Type fire extinguisher.
* After the fire is put off, check the electrical circuits using testers.
* Check earthlings and oil level. If oil level is low top up.
* If all are normal, switch on the supply.
* Check output of the transformer voltage.
* Handover the fire extinguisher for refilling.
* Record the fire incident in the log book.
* Identify the root cause of the fire incident and take preventive action to control the fire.

## *D Procedure for Handling Fire in Sub Station*

* Switch of incoming supply to sub station.
* Inform immediately to line manager / Security.
* Put off the fire using B or C class fire extinguisher.
* After the fire is put off, check GOS Switch, CTPT, lighting arrester with suitable tester.
* If all are normal switch on the supply.
* Handover the fire extinguisher for refilling.
* Record the fire incident in the log book.
* Identify the root cause of the fire incident and take preventive action to control the fire.

**Emergency preparedness response plan for leak from LPG Cylinder / lines**

|  |  |  |
| --- | --- | --- |
| Location | Hazard | Properties of LPG |
| Storage cum LPG manifold | Leakage of LPG gas  Burst of LPG cylinder  Fire | 1. Colorless  2. Flammable, Highly Dense with rotten egg odor  3. Flash Point : 0oC  4. Soluble in water |

Detection of leakage of LPG Characteristic mercaptans odour (rotten egg),

Formation of patch of ice or while liquid around the leaking point

## *Procedure for Handling Fire from LPG Cylinder in Canteen*

**While Taking Delivery**

* Check whether valve sealing tag is intact and safety protection cap is in position
* Check leakage from valve/joints by applying soap solution

## *Safe Storage & Manifold*

* No LPG cylinder should be stored in horizontal direction.
* All LPG cylinders in upright position and connected in the manifold in ear-marked area
* Avoid electrical installation within 1 meter of storage cylinders.
* Avoid storage of inflammable material within 1 meter distance
* Don’t allow smoking near the storage area

## *Safety while changing cylinders*

* Leave changing of a new cylinder to experienced person
* Don’t drag, roll or drop the cylinder
* Open windows for free ventilation
* Preserve safety protection caps

## *Safe Use*

* When the Stove is not in use, keep cylinder valve closed.
* Never try to repair or adjust any part of gas installation or allow untrained person to do so.

## *In case of LPG Leakage*

* Any leakage of LPG is detected by foul odor / patch of ice / white liquid around the leaking point.
* Immediately close the valve.
* Open windows for free ventilation
* Do not touch electrical switches or operate mobile phones
* Extinguish any open flames. Don’t light match or bring other ignitable material
* Do not tamper with the installation
* If any leakage is detected (by any employee), report immediately to maintenance for repair.
* In case of fire, Inform line manager & security immediately.
* Close burner knobs and cylinder valve and re-fix safety caps
* Wash the area with lots of water since LPG is a heavy gas and tends to settle down

**Emergency preparedness response plan for major leakage/spills of oils (HSD/ RPO/ Lube oils) and chemicals**

* Using appropriate PPE, try to stop the source of leakage/spillage, taking appropriate measures as mentioned in the MSDS of the chemical.
* Collect the spilled material (in case of Liquid) in suitable containers.
* If the spillage is on floor, use spill kits to prevent run-off of the chemical. If spill kits are unavailable, make a barricade with sand to prevent further spread.
* If the liquid cannot be collected it should be soaked with absorbent pads or sand/saw dust. The soaked sand/saw dust waste material shall be identified and handled as hazardous waste sent for incineration later on.
* Flushing with water may also be carried out to clean the area.
* If the liquid or its flushing has entered the storm water drain or any other drain, inform the Effluent Treatment Department Personnel.
* Close the blockade valve provided in the storm water drain to prevent the spillage flushing’s from going outside the company premises.
* Point Nos. 1 to 6 will apply for leakages/spills of Furnace oil, Transformer oil, leakage from any tanker, vessel, container, storage tank etc. within the premises of the company.
* Collection of spilled material as mentioned in point 2 should be carried out in the dedicated collection arrangement where provided.

**Preventing and Mitigating Environment Impact:**

* The spilled or leaked oil is collected in a drum and sent to ETP dept for further disposal.
* Block the storm water drain to prevent oil contaminating the drain. The nearby storm water drain is checked for any contamination by oil and cleaned completely with sawdust to ensure oil free surface.
* If the oil spill is over the bare land, the polluted soil to be removed to that extent and the area to be filled with fresh sand / concrete as required. The oil-contaminated soil has to be removed to civil dept for disposal as oily sludge to authorized parties.

**In case of Fire incident**

* Block the nearby storm water drain with the sand bags available near Civil Department to prevent used water, foam or chemical powder entering the drain.
* Collect the used water in a drum and send it to ETP for treatment and disposal.
* Sweep the dry chemical powder, collect it in a cane and dispose it in green color bin, meant for biodegradable waste.
* Collect the used foam residue in a PVC carboy and send it ETP for treatment and disposal.
* Remove the extinguished residue particles and dispose it in red colour bin.
* The contaminated soil if any has to be collected and sent to ETP for treatment and disposal.

**Emergency preparedness response plan for fall from height**

An operative who has suffered a fall and is suspended in his harness is a true medical emergency. Just because they are hanging in a harness doesn't mean there is plenty of time to perform a rescue. Rescue has to be planned, practiced and performed quickly and effectively or the victim may very well die before the rescue finally occurs.

Person who sees the incident first must:

* Raise the alarm and inform area in charge immediately.
* Lower person to the ground if able to do so. Evacuate all personnel from the area.
* Advise person to continually wriggle legs and feet to try to delay the effects of blood pooling in the lower extremities (suspension trauma).
* Maintain caution and look out for other hazards falling from above.
* The Area supervisor shall ensure that the area is evacuated and prevent entry of personnel in the area.
* Information shall immediately be passed to the Emergency controller and the Security team, including the medical team.
* On arrival at the site, the Security shall evaluate if external assistance is required and accordingly summon for assistance from the Fire & Rescue department.
* The Medical personnel shall provide first-aid assistance, where required.
* If the person is injured during the fall, the medical personnel shall take adequate care to ensure that the affected parts are cleaned well.
* In case of fractured limbs, adequate action shall be taken to ensure that the limb (s) are held tightly by using a wooden log and the person is carefully moved to a waiting ambulance for movement to a hospital
* The safety officer shall, in the meantime, initiate investigations into the incident, consult the witnesses to the incident, and identify the root causes leading to the incident. Adequate corrective actions shall be taken.

**Emergency preparedness response plan for overflow of raw effluent collection tanks / pipelines**

Emergency conditions such as overflow of untreated / treated effluent on the land are possible that would cause a serious breach of compliance to the environmental legislations and also place a bad mark on the image of TPI. To pre-empt such situations, regular monitoring of the STP/ETP is done.

In case of an emergency condition of overflow either in the raw effluent /equalization sumps, the concerned shift operator should immediately

* Stop the transfer pumps that bring the sewage/effluent to the above mentioned sumps.
* Inform his immediate supervisor or the Manager of the situation.
* Suitable action would accordingly be taken either to temporarily reduce/stop the production.
* The production floor personnel would also take utmost care to ensure that no back up of effluent into the operational areas.
* Similarly, care shall be taken to ensure that the toilets are not used to prevent the inflow of raw sewage.
* In case, the canteen is occupied, information shall be passed to the canteen in-charge to ensure that no washing of plates/utensils is done to prevent generation of waste water, as long as the emergency situation persists.
* In case of overflow of raw sewage collection sumps, the operator shall use the standby pump also, simultaneously; communication shall be made to the relevant personnel, as mentioned in step 1.
* The ETP/STP facility would, however, continue to operate without fresh inflow of raw effluent. Once normalcy returns, the STP/ETP operator would switch on the transfer pumps and normalize the treatment process.
* Clean-up of the area affected by effluent spill would be done as per the instructions of the Head – Civil & Environment. Use of appropriate PPE would be made to prevent occupational health hazards to the personnel.

**Emergency preparedness response plan for spillage / leakage of hydrochloric acid / rupture of bath**

|  |  |  |
| --- | --- | --- |
| Location | Hazard | Properties of Hydrochloric Acid |
| Storage Area, Push Pull pickling process & CDW tanks, Spent acid storage tanks, Pipe lines | Spillage / Leakage of Hydrochloric acid  Over flow of acid, Rupture of pipelines and Storage tanks | 1. Colorless to pale yellow liquid  2.Boiling Point :-84.8oC  3. Soluble in water |

The following actions need to be taken in case of the above mentioned emergency:

* Inform the Emergency Controller of the concerned area on phone immediately.
* Evacuate all the persons from the area of spillage/ leakage or rupture to assembly point.
* The Emergency team shall wear relevant PPE (Respirator mask, gumboots and hand gloves) and contain the spillage/leakage by forming a bund with lime. The team should approach the area from upwind side.
* Block the storm water drains, if exists near the area, with sandbags available near Civil Department to prevent entry of acid into the storm water drain.
* In case of storage tank rupture / overflow, ensure the Dyke wall drain valve is closed to prevent the Acid from going to storm water drain.
* Barricade the area to prevent exposure to other employees.
* The maintenance team shall arrest the leakage/ spillage or rupture of tank if any.
* Arrange to collect the acid spill by using absorbent pads/ car buoys and transfer it into PVC carboys for further disposal to ETP.
* In case of storage tank rupture / overflow, use transfer pumps for transferring the acid to road tankers or other tank.
* Help of First Aid team/ dispensary should be sought in case anybody is injured.
* Roll call is taken in assembly point to check if all the evacuated persons are present.
* Ensure the area of spillage is completely cleared for occupancy by employees.
* Clean the storm water drain, in case of acid contamination, to keep it dry.
* Inform the Emergency Controller on clearance of the spillage.
* Allow the occupancy by employees on clearance from Emergency Controller.
* Remove the carboys with spilled acid to ETP for further treatment and disposal.
* Check for presence of acid fumes, before clearing / calling off emergency**.**
* The spilled acid is collected in PVC carboys and should be sent to ETP for further disposal along with spent acid to authorized party. Neutralize the affected area with lime and kept dry.
* Acid soaked soil if any to be sent to ETP for treatment and disposal / storage.

**Preventing and Mitigating Environment Impact**

* The spilled acid is collected in PVC carboys and should be sent to ETP for further disposal along with spent acid to authorized party. The area of spillage is neutralized with lime and kept dry. The nearby storm water drain is checked for contamination if any and cleaned.
* Acid soaked soil if any to be sent to ETP for treatment and disposal / storage.

**EMERGENCY RESPONSE PROCEDURE FOR LPG LEAK/FIRE**

Tube Products of India Shirwal uses LPG for furnace heating in annealing operations. The Liquid LPG is stored in mounted bullets in three storage tanks, each of 4.8MT capacity. The storage yard is well protected with fire hydrant ring and a sprinkler system. Additional resources such as Leak detector cum alarm system and flame-proof fittings and motors are provided.

**Purpose**

The purpose of these emergency procedures is to ensure that any form of emergency that interrupts normal and safe working conditions in the plant can be dealt with quickly in a safe and systematic manner.

The operational requirements are spelt out to enable a coordinated plan of action to be carried out to control the emergency situation and restore it back to normal.

**Objectives**

**•** Preserve the health and safety of employees, contractors, visitors, response personnel, and the public;

• Minimize the risk of damage to or destruction of property;

• Minimize environmental impacts;

• Ensure that employees at all levels plan and work in a safe manner;

• Ensure that emergency response personnel are aware of all risks associated with the facility and its operations;

• Guide response personnel in deciding which measures to take and in implementing them quickly and efficiently;

• Minimize the amount of time and money required to resume normal operations;

• Inform citizens who may be affected by the event;

• Control and/or extinguish the fires;

• Contain leakage of LPG.

• Effect the rescue and treatment of casualties;

**Scope:**

This procedure is applicable to the TPI Shirwal location which has a total storage capacity of 14.4 MT contained in three tanks in mounted bullets. These measures apply to all personnel, individuals and organizations involved in our emergency procedures.

**Responsibility**

This procedure is the responsibility of Safety/Security officer

**Procedures**

The following describes the procedure to control conditions that could arise out of such emergencies

**Types of Emergency with regard to Liquid LPG storage and handling**

**The following are some of the most common situations that may lead to an EMERGENCY in the plant:**

**•** Fires

• BLEVE (Boiling Expanding Vapor Explosion)

• Spills

• Toxic gas leaks

• Explosions

• Cold burns

**Description of Liquid LPG Storage Facility**

LPG – Basic Information

LPG is a colourless gas with a faint odour at high concentrations. Fuel grades contain mercaptans that give LPG an unpleasant odour. LPG is an extremely flammable gas. It is a compressed gas. It is also a simple asphyxiant, which means that it could replace the oxygen available for breathing. When there is fast evaporation of liquid LPG from acylinder, frostbite may occur. When subjected to fire, tanks, cylinders and tankers can rupture violently and project fragments.

In its natural state, LPG is a gas with a boiling point of -42°C (-44°F). One liters of liquid LPG is equivalent to 270 liters’ of LPG gas. In the event of a liquid LPG leak, a large quantity of LPG gas is produced in very little time. Because LPG gas is denser than air, the LPG spreads over the ground and follows the contours of the terrain until its temperature reaches the ambient temperature. This means that LPG gas is not easily dispersed. LPG tends to form a dense cloud of gas in normal atmospheric conditions.

When LPG is spilled in an enclosed space, the gas accumulates at the lowest points before slowly dispersing to fill the rest of the space. LPG-related risks are higher in an enclosed space because it can explode when exposed to an ignition source. It is also classified as a simple asphyxiant. The level of oxygen in an enclosed space must be higher than 19.5% for a person to remain conscious without experiencing symptoms of oxygen deprivation. LPG is slightly soluble in water (62 ppm at 25°C).

**Description of Site:**

**SURROUNDING AREAS**

East - Vacant Land

West – Vacant land

North – River

South – Main Plant Building (60m)

Maximum Temperature - 42 deg C

Minimum Temperature - 10 deg C

Average Rainfall - 174 mm

Maximum Relative Humidity - 66 %

Minimum Relative Humidity - 35 %

Wind Speed - 4.5- 6 m / sec

Predominant wind Direction - N/E

Floods - Nil

Reporting an Emergency

The person who discovered a fire or any emergency shall immediately inform the Emergency control room & Site controller by using the emergency no. (99). The reporting person should ensure that only trained fire-fighting personnel proceed to fight the emergency situation while waiting for assistance and arrival of the Site controller & CSO.

**Action during an Emergency**

Site controller on receiving the information of an emergency, the Site controller shall immediately proceed to the scene of the incident to assess the seriousness of the emergency. If an emergency is confirmed, he shall:

Immediately raise the alarm and inform all employees as follows:

**Specific Response Procedures**

**A. PROCEDURE FOR A FIRE DURING LPG TRANSFER TANKER to TANK**

**If you discover a fire:**

**1.** Stay calm and do not yell fire;

2. If possible, shut off the following valves, without putting yourself at risk:

• Transfer motor (pump) / truck engine

• Supply valve

• Emergency valve

3. Evacuate everyone from the danger zone and notify anyone at the site of the situation;

4. DO NOT attempt to extinguish the fire. However, if life is in jeopardy, extinguish the gas fire by Operating fire hydrant Deluge valve and wet the surrounding area with fog to prevent re-ignition.

5. However, never operate any valves & electrical switches within the vicinity: Turning the wrong valve could create an emergency in another area worse than the one at hand and further endanger life or property.

6. Check for gas accumulation in nearby building and sewers. Burning gas will not normally explode, but if the gas source is underground, do not assume that all escaping gas is being consumed by the fire. Gas detection instruments are required to check in, under and around surrounding buildings for presence of gas.

7. Remove containers from vehicle not in area of fire, or remove other materials to prevent spread of fire

8. Move people from area. Move upwind

9. Follow fire-fighting instructions

10. If fire gets out of control, evacuate area and warn against entry.

11. Call 911 to notify the fire department. Specify when the fire was found and whether it has spread to LPG cylinders or tanks;

12. Inform personnel who may be affected by the event;

13. Move away and go to the meeting point;

14. Notify the nearest fire station, police station and the local authority.

Never:

15. Take time to collect personal effects or clothing;

16. Go back inside for any reason.

**B. LPG Leaks**

Leaks in LPG can normally be determined by a characteristic smell of mercaptans which is introduced as a smell indicator. Any personnel sensing this smell can report the leakage.

1) Avoid exposure to vapour and contact with liquid or gas

2) Approach the nearest landline phone and call up the concerned department personnel, and the security control room. Do not use a mobile in the area for calling.

3) If you are trained only, close the upstream and downstream valves to stop gas flow to the affected area.

4) However, never operate any valves within the vicinity: Turning the wrong valve could create an emergency in another area worse than the one at hand and further endanger life or property.

5) Ensure no smoking, no switch on/off of naked lights, start of vehicle/other engine or other engines and/or operate electrical equipment.

6) Prevent spillage or entering underground drain by banking with sand or earth

7) Phone fire brigade (insert telephone number of local fire station)

8) Phone (insert LPG distributor's name and all-hours number)

9) If gas leakage out of control, evacuate area, warn against entry and inform control room.

C. PROCEDURE IN THE EVENT OF A RUPTURED HOSE

Assessment of the situation:

1. Evidence of a leak

• Visible LPG cloud

• Liquid LPG puddle

• Sound of leaking gas

• Activation of the remote emergency switch

2. Emergency communications – do these things first

• Call 99, depending on the size of the leak

• Notify residents in the affected area

• Call local authorities

• Alert employees

• Alert the LPG supplier

3. Goals of the response

• Rescue

• Evacuate

• Eliminate ignition sources

• Control vapors/liquids

• Ventilate the area

4. Contain hazards – liquid LPG

• Shut off supply

• Dispenser nozzle; Remote controller; Main valve; PTO

• Shut off the vehicle’s fuel supply

• Contain liquid LPG to prevent it from entering into sanitary and storm sewers, low points, etc.

• If it can be done safely, spray water to dissipate liquid and contain vapours.

• Spray water mist to dissipate vapours.

• Cover sewers inlets that could be exposed.

• Notify municipal authorities if liquid LPG enters a sewer.

5. Control Vapours

• Shut off the supply source

• Spray water mist to dissipate vapours and move them away from buildings, vehicles, and ignition sources

• Control and plug leaks

• Eliminate gas from the area

**First Aid Procedure**

**Gassing**

1) Remove patient to fresh air, lay down and rest

2) If patient is not breathing, make sure airway is clear and applies artificial respiration. Oxygen may be given, but only under supervision of a trained person

3) Keep patient warm and

4) Call doctor at once or transport to doctor or hospital

**Eyes**

1) Hold eyes open and wash continuously with water for at least 15 minute and

2) Transport to doctor or hospital

**Skin**

1) Immediately wash affected area with water to prevent frostbite and

2) Transport to doctor or hospital.

**In case of evacuation on hearing wailing siren, please assemble at the nearest assembly points viz.**

**Emergency Response to Food Poisoning**

Symptoms of food poisoning may include vomiting, diarrhea, fever and stomach cramping, and usually begin 3 to 36 hours after eating tainted food. Symptoms usually last from 12 hours to several days. Although food poisoning usually has to run its course, the following symptoms will be visible within minutes of food consumption. These symptoms could include development of rashes, vomiting etc. Based on the number of personnel who have taken food in the canteen and the severity of immediate symptoms, the following actions need to be taken.

**Immediate actions:**

* As soon as the symptoms are reported, information shall be passed to the HR head and the canteen in-charge on the incident.
* The HR personnel shall immediately inform the canteen in-charge to suspend the food service operations and tactfully handle the situation by intimate all personnel present in the canteen to stop taking any more food.
* Adequate samples of food and water shall be taken and sent to the laboratory for analysis to understand the nature of poisoning, which will form a basis in identifying the root causes and taking adequate corrective actions.
* Meanwhile, the affected personnel shall be directed to the dispensary for immediate first-aid action.
* If the patients develop severe abdominal pain, the HR department may organize for the hospitalization of the employees for further medical attention.
* Some important tips to be followed by the affected employees could include:
* Sip clear fluids. Dehydration is the primary concern when experiencing vomiting or diarrhea.
* Take small amounts of fluid frequently. Electrolyte replacements (such as sports drinks) are your best options
* Introduce food slowly after vomiting stops
* Eat bland, easily digestible foods such as Bananas, rice and toast if diarrhea still persists.
* Avoid milk, fatty foods, high fiber and caffeine for a few days until you are feeling better' these foods are harder to digest

**Emergency response for Dog bite:**

* On hearing the incidents inform Dispensary & contact trained First Aider.
* Encourage nervous system along the nerves, as not in snakebite.
* Keep the bitten part low.
* Wash the affected area with mild soap water.
* Bathe the wound with running water.
* Seek Doctor’s advice.

**Emergency Response for Snake bite:**

* On hearing the incidents inform Medical center. Contact trained First Aider.
* Identify the exact point of snakebite and let the blood to ooze out.
* Bathe the wound with running water and use Bectospect solution readily available in the First Aid kit.
* Apply a constrictive bandage on the heart side of the bite 2” to 3” above the would tight enough to stop the circulation through veins of the bitten limbs for half an hour with relaxation for half a minute till getting proper medical care
* Remove the fear from the casualty and give encouraging words.
* Never allow the casualty to run or walk fast.
* Keep the limbs downwards thereby restricting the speed of the flow of blood to heart
* Shift the injured person through the Ambulance & do not let the casualty to lie down.
* Give warm tea or coffee and keep person warm.

**Electrical Shock –**

The danger from an electrical shock depends on the type of current, how high the voltage is, how the current traveled through the body, the person's overall health and how quickly the person is treated.

An electrical shock may cause burns, or it may leave no visible mark on the skin. In either case, an electrical current passing through the body can cause damage inside the body, cardiac arrest or other injury. Under certain circumstances, even a small amount of electricity can be fatal.

* Don't touch an injured person who is still in contact with an electrical current.

Call 99 to Main Control Center if the source of the burn is a high-voltage wire or lightning. Don't get near high-voltage wires until the power is turned off. Overhead power lines usually aren't insulated. Stay at least 20 feet (about 6 meters) away — farther if wires are jumping and sparking.

Don't move a person with an electrical injury unless there is immediate danger

### When to seek emergency care

* Severe burns
* Confusion
* Difficulty breathing
* Heart rhythm problems
* Cardiac arrest
* Muscle pain and contractions
* Seizures
* Loss of consciousness

Take these actions immediately while waiting for medical help:

* Turn off the source of electricity, if possible. If not, use a dry, no conducting object made of cardboard, plastic or wood to move the source away from you and the injured person.
* Begin CPR if the person shows no signs of circulation, such as breathing, coughing or movement.
* Try to prevent the injured person from becoming chilled.
* Apply a bandage. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth. Don't use a blanket or towel, because loose fibers can stick to the burns.

Preparedness for epidemics such as Covid 19, SWAIN Flu.

* Authentic information from Government agencies, Local Authorities will be

gatherd by HR dept. and will be circulated.

* Guidelines given by above will be followed.
* Necessary checking, preventive measures will be initiated and maintained such as Daily checks such as temperature, Oxygen % level by Oximeter, while entering the premises are done. Sanitizers / Washing facilities with soap are provided. And use of mask and social distancing is insured.
* Special attention will be given to pregnant ladies, handicap, and those having

known illness.

* Quarantine center / Room provision made within the premises.
* Necessary actions will be taken under Company’s “Doctor” as per directives from Local Governance.
* Vaccination for those as applicable, as per Local administration directives to be done

**Emergency Response for Covid 19 infections within Company Premises:**

* In case anybody is uncomfortable, having any symptoms or even a doubt are asked to immediately report to the supervisor/ Security.
* Supervisor/ Security personnel will guide him upto to Quarantine area / room by taking all precautions. Local Covid Center will be contacted for further testing arrangement and the suspect will be send to hospital for necessary treatment by calling special ambulance.
* The area where the suspect was working, will be vacated & will be sanitized before putting back in use.
* The persons in close contact & within the vicinity of the suspect, will also be isolated and advised to undergo test and will be kept under observation as per Doctor’s advice.
* If number of such persons are more, and suspect found to be positive the whole section / work area will be isolated, vacated and sanitized.
* Necessary information is communicated to the Local Administration and advise sought from them for further course of action.

**ANNEXURE 1**

**Hazardous Locations, Hazardous Materials & Hazard**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Location | Material / Cause | Storage & Use | Possible Hazards |
| 1. | LPG yard | L.P.G. | LPG used as fuel for furnace for annealing Tubes. | Fire / Explosion |
| 2. | Canteen | L.P.G. | LPG Cylinder used for cooking. | Fire / Explosion |
| 3. | DG Room | Diesel / Oil | HSD used as a fuel for DG set. Oils are used for hydraulic power packs. | Fire |
| 4. | Briquette Store Behind VAC. | Storage of Briquette (combustible). | Briquettes are stored & used as a fuel for heating water | Fire |
| 5. | Administration Building | Combustible material such as Stationary, furniture etc. | Stationary & furniture used in office | Fire |

**Hazardous Locations, Hazardous Materials & Hazard**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Location | Material / Cause | Storage & Use | Possible hazards |
| 9. | Anywhere in Premises | Structure collapsing | -- | Serious Injury / Deaths |
| 10. | Anywhere in Premises | Earthquake | -- | Serious Injury / Deaths |
| 11. | Anywhere in Premises | Air Raid | -- | Serious Injury / Deaths |
| 12. | Anywhere in Premises | Flood | -- | Serious Injury / Deaths |
| 13. | Pressure Vessels | Air Receiver | -- | Serious Injury / Deaths |
| 14. | Canteen | Food | -- | Food Poisoning |

**Types of Possible Accidents**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Area / Location / Equipment | Type Of Accident | Remark |
| 1. | Incoming Raw Material (Mother Coil) | Unsafe unloading & stacking of the coil may lead to major injury. | --- |
| 2. | Crane Operations | Unsafe use of the crane may lead to major injury. | --- |
| 3. | Slippery Floor | Slippery floor may lead to serious accident. | --- |
| 4. | Machine Operations | Improper use of machines / bypassing machine guards may lead to serious injury. | --- |
| 5. | Working at Height / Working in confined space | Unsafe work conditions and/or methods may lead to serious injury. | --- |
| 6. | Vehicle Traffic | Unsafe speed / vehicle may lead to serious injury. | --- |

**ANNEXURE 2**

**FACILITIES AVAILABLE TO HANDLE EMERGENCIES**

Facilities available to handle emergency situation are as follows

1. Fire extinguishers of different classes.
2. Fire hydrant system
3. Emergency control centre
4. Occupational Health Centre
5. Ambulance Van
6. Doctor & Male Nurse
7. Trained persons round the clock.

Plan showing FE locations, Hydrant Locations, Emergency Exits, Evacuation Routes, ECC is available in the emergency control centre.

**ANNEXURE 3**

**EMERGENCY MANAGEMENT CHART**

**CHIEF CONTROLLER**

E. C. C

LAISIONING MANAGER

Mr. Santosh Shettye sShettye

SITE CONTROLLER

Milind Apte

DY. CHIEF CONTROLLER

Mr. N. Dabhade

E. C. C.

SITE

OTHERS

ASSEMBLY POINT

**FIRSTAID TEAM**

🟑

**FIRE FIGHTING TEAM**

🟑

**ENGINEERING**

**TEAM**

🟑

Task Completion

Report to E.C.C.

🟑 Leader

Investigation & report Preparation

**Note:**

1. In absence of leader, deputy leader will lead the team.
2. After normal working hours, the shifts in charge and or Security in charge

act as a Chief Controller and carry out the necessary

activities till the nominated Chief Controller, Chief Co-ordinator or

Site Controller reaches to the site.

# ANNEXURE 4

# KEY PERSONNEL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Name** | **Designation** | **Internal No.** | **Mobile No.** |
|  | Mr. Nitin Parkhe | Plant Head | 1701 | 8669264993 |
|  | Mr. Santosh Joshi | Head HR &Safety | 1710 | 9822082770 |
|  | Mr. Parag Panday | Head Manufacturing | 1900 | 8552901318 |
|  | Mr. Santosh Chalikwar | Head Quality | 1916 | 7057878741 |
|  | Mr. Sameer Wankhade | Head Maintenance | 1904 | 9130043947 |
|  | Mr. Atul Kolhatkar | Head Purchase | 1807 | 9860192062 |
|  | Mr. Anshul Gupta | Head Electrical | 1904 | 7276051412 |
|  | Mr. Digambar Dongare | HR Officer | 1712 | 9130023330 |
|  | Mr. Avadhut Suryawanshi | Executive EHS | 1803 | 9673739462 |
|  | Mr. Bhagawat Kasurde | Security Officer | 2002  2003 | 8698217751 |
|  | Main Gate |  | 2002  2003 | 9730073443  9730073444 |
|  | Emergency Dial |  | 99 |  |
|  | LPG Cabin |  | 1919 |  |

**ANNEXURE 5**

**List of Trained Fire Fighters**

|  |  |  |  |
| --- | --- | --- | --- |
| SR No | Name | Designation | Department |
| 1 | Bhagwat Kasurde | Security Officer | Security |
|  | Security Team | Security | Security |
| 2 | Santosh Bhargude | Operator | Maintenance |
| 3 | Santosh Nevase | Operator | ERW |
| 4 | Dattatraya Pawar | Operator ERW | ERW |
| 5 | Chandrakant Jadhav | Operator | Slitter |
| 6 | Ajit Thorat | Operator | Furnace |
| 7 | Baliram Rakhonde | Operator | ERW |
| 8 | Mahesh Adsul | Operator | ERW |
| 9 | Dattatraya Mane | Operator | CDW |
| 10 | Liyakat Shaikh | Operator | CDW |
| 11 | AR Sayyad | Operator | CDW |
| 12 | Dattatraya Jadhav | Operator | Furnace |
| 13 | Kiran Mane | Operator | Furnace |
| 14 | Arvind Kanse | Operator | CDW |
| 15 | Suresh Dalvi | Operator | QA |
| 16 | Sachin Gaikwad | Operator | QA |
| 17 | Prabhakar Kodlinge | Operator | Maint- Elect |
| 18 | Rajendra Nanaware | Operator | Maint-Elect |
| 19 | Ramesh Shirtode | Operator | Maint Elect |
| 20 | Vitthal Chavan | Operator | Maint Elect |
| 21 | Dipak Chavan | Operator | Tool Room |
| 22 | Sameer Kalhane | Operator | QA |
| 23 | Jayendra Asalekar | Contract Worker | CDW |
| 24 | Vijay Survey | Contract Supervisor | Balaji |
| 25 | Sushat Mavale | Contract Supervisor | Green Circle |
| 26 | Sharad Sawant | Contract Supervisor | SKW |
| 27 | Umesh Arsul | Contract Supervisor | Avoodut Entrp. |
| 28 | Bharat Gade | Contract Worker | Balaji |
| 29 | Nitin Khochede | Contract Worker | Robocob |
| 30 | Yogesh Pawar | Contract Worker | VAC |

**ANNEXURE 6**

**List of Trained First Aiders**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No** | **Employee Name** | **Designation** | **Department** |
| **1** | Avadhut Suryawanshi | Sr. Executive | EHS |
| **2** | Majhar Khan | Contract Supervisor | CDW |
| **3** | Sushil Achegawe | Sr. Executive | ERW |
| **4** | Satywan Chavan | Sr. Executive | CDW-VAC |
| **5** | Yogesh Pawar | Contract Supervisor | VAC |
| **6** | Sunil Dhadave | Contract Supervisor | ERW |
| **7** | Sudhir Bhandhvalkar | Workmen | ERW TM-2 |
| **8** | Abhijeet Nale | FTE | ERW |
| **9** | Amol Khutwad | Security Guard | Afexco - Security |
| **10** | Sachin Bansode | Security Guard | Afexco - Security |
| **11** | Sushant Mavale | Contract Supervisor | ETP |
| **12** | Vitthal Dhavan | Workmen | CDW |
| **13** | Anil Bhosale | Workmen | Tool Room |
| **14** | Suraj Bhosale | FTE | Maint |
| **15** | Shubhash Mishra | FTE | Maint - Elect |
| **16** | Suresh Dalvi | Workmen | Production |
| **17** | Kiran Jadhav | Workmen | Production |
| **18** | Arvind Kanse | Workmen | Production - ERW |
| **19** | Bhaskar Chavan | Workmen | ERW |
| **20** | Santosh Bhargude | Workmen | Maint - Mech |
| **21** | Bhagwat Kasurde | Security Supervisior | Security |
| **22** | Aman Kumar | Maintenance | Maint - Mech |
| **23** | Rajendra Nanaware | Maintenance | Maint - Elect |

**ANNEXURE 7**

**List of Evacuation & Utility Team**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No | Name | Designation | Department |
| 1 | Bhagawat Kasurde | Security Officer | Security |
| 2 | Yatin Wagh | Operator | Maintenance |
| 3 | Sandip Jadhav | Operator | ERW |
| 4 | Madhav Jadhav | Operator | Maintenance |
| 5 | Goraksha Batule | Operator | ERW |
| 6 | Kishor Bhonde | Operator | Furnace |
| 7 | Umesh Bhise | Contract Labour | Furnace |
| 8 | Sunil Kambale | Operator | ERW |
| 9 | Shivaji Dhumal | Operator | ERW |
| 10 | Sandip Jadhav | Operator | CDW |
| 11 | Rahul Makhamale | Operator | CDW |
| 12 | Baban Kundekar | Operator | CDW |
| 13 | Kiran Mane | Operator | Furnace |
| 14 | Sagar Jamdade | Operator | CDW |
| 15 | Mhasku Kamthe | Contract Labour | CDW |
| 16 | Suryakant Rout | Operator | QA |
| 17 | Rahul Mahangare | Operator | QA |
| 18 | Prabhakar Kodlinge | Operator | Maint- Elect |
| 19 | Rajendra Nanaware | Operator | Maint-Elect |
| 20 | Ramesh Shirtode | Operator | Maint Elect |
| 21 | Vishwanath Bhairat | Operator | Tool Room |

**ANNEXURE 8**

**IMPORTANT TELEPHONE NUMBERS**

|  |  |  |
| --- | --- | --- |
| **Agency** | **STD Code** | **Telephone No.** |
| **POLICE STATION SHIRWAL** | 02169 | 244133 |
| MSEB Shirwal | 02169 | 244129 |
| MSEB Shindewadi |  |  |
| Gram Pachayat Office – Shirwal | 02169 | 244148 |
| Telephone Exchange Shirwal | 02169 | 244000 |
| **FIRE** |  |  |
| Fire Brigade – Wai | 02162 | 220022 |
| Fire Brigade – Pune | 020 | 24458950 |
| Central Fire Brigade Station | 101 | 26351707 |
| Erandawane F.B.S. | 020 | 25468373 |
| Suburban F.B.S. | 020 | 26122545 |
| Hadapsar F.B.S. | 020 | 26870207 |
| **HOSPITAL** |  |  |
| Dr.Jogalekar Hospital, Shirwal | 02169 | 244276  244110 |
| Jehangir Hosital, Pune 411001 | 020 | 26122551 |
| Poona Hospital, Pune-411002 | 020 | 24331706 |
| Ratna Hospital, Pune-411007 | 020 | 25657564 |
| Ruby Hall Clinic, Pune-411001 | 020 | 26123391 |
| Sancheti Hospital, Pune-411005 | 020 | 25533333 |
| Sasoon Hospital, Pune-411001 | 020 | 26128000 |
| Hardikar Hospital | 020 | 25535326 |
| Joshi Hospital, Pune-411004 | 020 | 24331706 |
| Maharashtra Pollution Control Board Satara | 02162 |  |
| DISH (Factory Inspectorate), Satara | 02162 |  |
| DISH (Factory Inspectorate), Pune | 02162 |  |
| Labour Office – Satara | 02162 |  |
| **NEIGHBORING UNITS** |  |  |
| Associated Capsules | 02169 | 244001-5 |
| Godrej & Boyce Manufacturing Pvt. Ltd. | 02169 | 284170-74 |
| Rieter India Ltd. | 02169 | 284301 |
| Lawkim Motors Ltd. | 02169 | 244401-7 |