
 KALYANI	ENVIRONMENTAL, OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM PROCEDURE	Doc. No. : EOHS-EPP-01
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KALYANI FORGE LIMITED, PUNE

ON - SITE EMERGENCY PREPAREDNESS & RESPONSE PLAN (EPRP)

(REVISION 01: 20/07/2012)

	Prepared By	Reviewed By	Approved By
Signature			
Name	Mr. Santosh Kasalkar	Mr.Kiran Ambike	Mr. K.V.L.N. Murty
Designation	Asst. Manager - SHE	EOHS MR & VP-QA, Engg	C.E.O
Date	20.07.2012	20.07.2012	20.07.2012

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ON SITE EMERGENCY PLAN


0.0 INTRODUCTION

An emergency in the factory has potential to cause serious injuries or loss of live or extensive damage to the property and / or environment and serious disruption both inside and / or outside the works. In such cases sometimes outside agencies are required to call for help in handling the situation. The causative factors like plant / equipment failure, human error, earthquake, sabotage etc. will normally manifest in various forms viz. Fire, Explosion, Toxic and Structure collapse etc.

In spite of best design and layout of plant, safe operating procedures and various preventive measures the possibility of a disaster cannot be totally ruled out. During this event timely and organized action must be taken to control the situation and to minimize the damage or loss to the factory, human beings and environment. Hence the need of a proper 'On-Site Emergency Plan (EPRP)'. Such plan gives the guidelines for employees, contractors, transporters and Visitors etc. The EPRP not only defines the responsibilities but also inform about prompt rescue / evacuation / co-ordination operations and some more.

C.E.O, HR & Admin & SAFETY OFFICER is responsible & authorized for preparation, providing information, modification or makes any required changes, into on-site Emergency Preparedness Plan.

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Kalyani Forge Ltd was established in 1979 and it is having three plants namely Hot Forging Division, Metal Forms Division and Precision Auto comp Division wherein mainly forging components are manufactured.

HFD is mainly equipped with hot forging presses and hammers followed by trimming presses, followed by Heat treatment process with continuous and box furnaces for hardening and tempering processes.


MFD has got facility for manufacturing forged machined components by Warm & Cold Forging process followed by trimming the flash. The manufacturing activity also involves improving the quality of components by heat treatment, normalizing and shot blasting facility.

PAD is having the facility for forging and machining facility for Precision Steel forging and machined components required for automobile industries e.g. connecting rods, crankshafts, gears, levers, brackets, etc.

The raw materials mainly used are Carbon Steels, Alloy Steel for finished products and Die Steel for tooling.

Furnace Oil is mainly used as fuel for furnaces, LPG for die heating and HSD for DG sets. Large quantity of hazardous flammable liquid Furnace oil is stored. Hence an incident of Fire to furnace oil cannot be ruled out. Total safety Management system has been declared in safety and Health Policy. However residual risk cannot be eliminated totally and in case there is any deviation in operating procedures or equipments' reliability, some emergency situation can occur, which can cause loss to life and property. But the organization is confident, that if effective preplanned action is timely taken, full potential loss can be avoided. Hence "Onsite Emergency

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Plan” is prepared in order to plan and maintain the emergency preparedness in the factory.

1.0 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. Sometimes the Emergency results into uncontrollable situations and leads towards disaster. 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.

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2.0 NATURE OF EMERGENCY

The emergency has been identified and can be specified in one or more of the followings with source and effect:

Sr. N	Emergency	Source	Effect
1	Fire / Explosion	Electrical Panels, Flammable oil storage tanks, Compressors, coolants, paints, etc.	Small fires, complete equipment loss, complete Area burn out. Air pollution Soil pollution. Dangers to Human beings
2	Spillage of flammable / Hazardous Oils & coolants etc	Hydraulic oil, Furnace Oil, Coolant etc.	Fire Burns Soil pollution. Injury by slippage
3	Electric Shock	Electrical panels, Power Distribution Board, DG Set, Overhead Crane, Voltage stabilizer , Electric Transformer & Machine Operated by electricity , etc.	Burns, suffocation, Death. Toxic chemical ingestion into blood stream

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**ENVIRONMENTAL, OCCUPATIONAL HEALTH AND
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4	Accidents - Factory (Major)	Fall from height & Falling of Heavy Materials, Dies, Bins or other Heavy object.	Fracture
5	Accidents-Transport	Accident due to transportation of man & material	Death or Injury to Body
6	Personal confinement	Toilets, offices, Basement	Suffocation
7	Natural calamities such as storm, earthquakes, etc.	Nature	Structural collapse, Death
8	Structure collapse	Office building, & Any Wall or part Of Factory building.	Serious injury, Major Fracture, Death
9	Riots, Arson, Sabotage	Anti Social elements.	Serious injury, major Fracture, Death.
10	LPG leakage	Fire Hazard	Serious injury, Death
11	TANK DYKE Fire	Fire Hazard	Serious injury, Death
12	Electric fire	Fire Hazard	Serious injury, Death
13	Office fire	Fire Hazard	Serious injury, Death

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14	Person on flames	Fire Hazard	Serious injury, Death
15	Food/Water Poisoning	Health Hazard	Poisoning, Death
16	Bomb hoax	Bomb threat	Explosion, Death, fear
17	Burn-Minor	Health Hazard	Burn injury
18	Electric shock casualties	Health Hazard	Injury, Death
19	Non Functioning of STP and ETP	Spillage of untreated water on ground	Land Contamination

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3.0 OBJECTIVES:

The objective of the major emergency procedure should be to make maximum use of the combined resources of the works and the outside services to


- Effect the rescue and treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- Identify any deed and provide for the needs of relatives;
- Provide authoritative information to news media;
- Secure the safe rehabilitation of affected areas;
- Preserve relevant records of equipment by the subsequent enquiry into the cause and circumstances of emergency;

4.0 EMERGENCY MANAGEMENT & KEY PERSONS

During the emergency situation it is generally seen that chaos and confusion rules leading to more damage. In Emergency Management, just like in normal operations where 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'.

FOLLOWING ARE THE PERSONS WHO ARE RESPONSIBLE TO FACE THE EMERGENCIES.

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NAME	DESIGNATION	CONTACT NO	INTERNAL EXT.NO
Mrs. Rohini Kalyani	V.C. & MD	02137-253183	269
Mr. Kiran Ambike	MR & VP-Engg, QA	9552537008	260
Mr. Kishor Singi	AVP-Purchase & Plant Head	9850890695	520
Mr. B B Kumbhar	G.M (Operation)	9850583281	358
Mr. Sandeep Dhavale	G.M (Operation)	8888812542	--
Mr. J.G. Swami	G.M (Operation)	9850969914	333
Mr. Sudhir Varpe	Sr. DGM – HR, IR & Admin	9822494916	284
Mr. Santosh Kasalkar	Asst. Manager-SHE	9850313842	213


If required external help in case of an Emergency will be sought from appropriate sources. The required assistance from the probable sources has already been informed and consent obtained for the same.

5.0 ROLES & RESPONSIBILITIES:

Name & Address of the persons furnishing the information

Mr.Kiran Ambike, VP (QA, Engg) & EOHS MR
Mr. Santosh Kasalkar, Asst.Manager-SHE
Kalyani Forge Limited,
Koregaon Bhima
Sanaswadi, Tal.Shirur, Dist:Pune

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6.1 Any Individuals


When an emergency occurs, the person who observes it must evaluate the gravity of the emergency and he should alert all the factory personnel by activating the Emergency Siren. The emergency siren is activated just by pressing the Emergency Siren push button located at main gate & other different locations. Then he immediately reports to the Emergency Control Centre (Main Security gate) and informs about the Emergency location.

6.2 Site Controller: The Site Controller will assume overall responsibility for the factory/storage site and its personnel. His duties are to:

- i) Assess the magnitude of the situation and decide if staff needs to be evacuated from their assembly points to identified safer areas
- ii) Exercise direct operational control over areas other than those affected.
- iii) Undertake a continuous review of possible developments and areas in consultation with key personnel as to whether shutting down of the plant or any section of the plant and evacuation of personnel are required.
- iv) Liaise with senior officials of Police, Fire Brigade, Medical and Factories Inspectorate and provide advice on possible effects on areas outside the factory premises.
- v) Look after rehabilitation of affected persons on discontinuation of emergency.
- vi) Issue authorized statements to news media and ensures that evidence is preserved for enquiries to be conducted by the statutory authorities.

Mr. Sudhir Varpe, Sr. DGM (HR, IR & Admin) is the Site Controller.

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2) Incident Controller: The Head of the unit will act as incident controller for that unit. Immediately on knowing about an emergency, he will rush to the incident site and take overall charge and report to the Site Controller. On arrival, he will assess the extent of emergency exists and inform the Communication Officer accordingly. His duties will be to:

- i) Direct all operations to stop within the affected area taking into consideration priorities for safety of personnel, minimize damage to the plant, property and environment and minimize loss of materials
- ii) Provide advice and information to the Fire/Security Officers and local fire service;
- iii) Ensure that non-essential workers/staff of the areas affected are evacuated to the appropriate assembly point and the areas are searched for casualties
- iv) Set up communication points and establish contact with the Emergency Control Centre in the event of failure of electric supply and internal telephones
- v) Report on all significant developments to the communication officer and
- vi) Have regard to the need to preserve the evidence so as to facilitate any enquiry into the cause and circumstances which caused or escalated the emergency.


Mr. BB Kumbhar, GM (Operations) is the incident controller for HFD

Mr. JG Swami, GM (Operations) is the incident controller for MFD

Mr. Sandeep Dhavale, GM (Operations) is the incident controller for PAD

3. Communication Officer: He will also work as Liaison Officer and will be stationed at the main entrance (Gate House) during the emergency. He will, handle police, Press and other enquiries, receive reports from roll-call leaders from assembly

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points and pass on the absentee information to the Incident Controller. He shall maintain regular communication with the Incident Controller. He will:

- i. Ensure that casualties receive adequate attention/ to arrange additional help if required and inform relatives;
- ii. Control traffic movements into the factory and ensure that alternative transport is available when need arises; and
- iii. When emergency is prolonged, arrange for the relief of personnel and organize refreshments/food.
- iv. Advise the Site controller of the situation, recommending evacuation of staff from assembly points if necessary.
- v. Maintain proper agreed inventory in the control room.
- vi. Maintain a log of the incident on tape
- vii. In case of a prolonged emergency involving risk to outside areas by wind blown materials, he shall contact local meteorological office to receive early notification of changes in weather conditions.

Mr. Kiran Choudhary, Officer Admin, shall look after as a communication officer in case of emergency.

4. Security Officer- Security Officer will be responsible for fire fighting. On hearing the fire alarm, he shall reach the fire station immediately and advise fire and security staff in the factory of the incident zone. He will convey the message to the communication officer, Incident Controller and Site Controller about the incident zone. He will direct the emergency services. He shall

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1) Announce over the PAS in which zone the incident has occurred and on the advice of the Shift Executive In-charge inform the staff to evacuate the assembly service.

2) Inform the Shift Executive In-charge

3) Call Incident Controller, Engineering/ Production Manager, Personnel and Administrative Manager, Departmental Head in whose plant the incident occurred.


Security Supervisor for each unit will act as the Security officer for that unit.

5. Receptionist: On hearing the emergency alarm, the receptionist shall immediately contact Site Controller and on his advice will call the local Fire-brigade and or Police station and safety committee members.

In case the PAS and telephone system becomes inoperative, she shall inform the communication officer through the messenger. In case fire is detected and the alarm is not in operation, she shall receive information about location from the person who detected the fire and immediately consult the Incident Controller. On his advice she shall contact the Security Guard and advice him to make announcement on PAS about the incident and the location of the incident and to evacuate to their assembly point. She will continue to operate the switch board advising the callers and pass all calls connected with the incident to the Communication Officer.

6. Departmental Heads: The HODs will report to Incident Controller and provide assistance as required. They will decide the staff they require at the incident site.

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7) Maintenance In-Charge and Electricians: They will report the scene of the incident and close down the services as directed by the Incident Controller

8) Shift Executive In-charge:


As soon as he becomes aware of the emergency and its location, he will proceed to the scene. He shall assess the scale of the incident and direct operations within the affected areas with the following priorities:

- a) Secure the safety of persons, which may require evacuation to the assembly points in the event of escape of materials if the wind is from an adverse direction.
- b) Minimize damage to plant, property and the environment.
- c) Prevent spreading and damage to outside the premises.
- d) Minimize loss of materials;
- e) Have regard to the need for preserving evidence that may facilitate subsequent enquiry.
- f) Inform shift engineer-in-charge as to what services are needed or not needed.
- g) Hand over charge of operation to the Incident Controller when he arrives at the site.
- h) Advise the Security Officer at Gate whether to make an announcement on PAS or not to call the Senior Staff to the factory, if necessary.

9) First-Aid Teams:

The Personnel Manager shall keep the roll call lists for the fire and First Aid team on duty. The First Aid team is appointed by each Departmental Head for his shift team.

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Roll call leaders shall check their rolls as member of the services and report for emergency duty. Name of unaccounted persons or absentees will be informed to the Security Officer. Members of First Aid teams will report to the shift Executive In-Charge or Incident Controller on hearing the alarm and follow his directions.

10) Factory Fire Fighting Personnel;

The duty of the Fire Fighting personnel under the command of the Security Officer shall be responsible for fire fighting and rescue. On hearing the alarm they shall proceed to the place of incident, if know, or otherwise they shall report to the Security Gate. The men at security Gate shall find the location of the emergency, the equipment and proceed to the site or occurrence. At the site, the team will respond to the directions given by the Incident Controller

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ROLES & RESPONSIBILITY (FOR INDIVIDUALS)

EMERGENCY

TRY TO MITIGATE THE EMERGENCY IF POSSIBLE. ACTIVATE THE EMERGENCY SIREN IF IT IS SEVERE

PROVIDE MESSAGE TO MR / CEO / SAFETY OFFICER/PLANT HEAD

PROCEED TO EMERGENCY CONTROL CENTRE TO DECLARE LOCATION OF EMERGENCY

CO-ORDINATION & COMMUNICATION WITH TEAM LEADERS / MEMBERS

CEO

- Take charge of the situation
- Co-ordination/communication with all team members.
- Arrangement for civil work, engineering work, electrical shutdown.
- Decision for external help.
- Arrangement for Fire Fighting


SAFETY OFFICER

- Report to C.E.O
- Rush to site.
- Maintain discipline & order.
- Guide for fire – fighting
- Control over entry / exit
- Arrange for necessary P.P.E.
- External help in consultation with safety leader.
- Maintenance of records & activities.
- Messenger arrangement.

MR

- Evaluate the hazards /situations.
- Advice to the C.E.O
- Arrangements of temporary shelter, If required
- Co-ordination with all teams.
- Maintain continuous surveillance of the Emergency equipments & facilities
- Arrangement for the hospital accommodation.

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**6.0 ROLES & RESPONSIBILITIES:
FOR SAFETY TEAMS**

After confirmation of the emergency location from the Emergency Control Centre, concerned teams will start functioning. The team leaders will co-ordinate and communicate with the management.

The team member fights the emergency under instructions of the leader. The team will ensure that:

- The emergency does not spread.
- The head count is taken in consultation with Liaison Manager and if necessary search operation for missing person/s. is under taken.
- Every member of the team uses the required Personal Protective Equipment while operation is going on.
- First aid is arranged.
- Additional fire fighting equipments for the fire fighting team are arranged.
- Smooth rescue operation is facilitated.
- Emergency will be informed to fire brigade, neighboring industries.
- Medicines are provided.
- Send injured to hospital if necessary.
- Records of first aid and hospitalization are maintained.
- Help of other people is taken to control emergency.
- Remaining part of the plant is safe.
- Area is cordoned off.

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- Necessary tools, equipment to handle any repair work are mobilized.
- Main power supply line is cut - off if necessary.
- Maintenance and repair are undertaken.
- Conduct safety committee meetings every 3 months or in case of any emergency.

Team members of safety committee:


7.0 EMERGENCY CONTROL CENTRE

For the purpose of handling emergency, Emergency Control Centre is very much essential. In factory, Security Office at the Main Entrance is declared as Emergency Control Centre. All activities pertaining to the emergency will be carried out from this centre:

The emergency Control Centre will be equipped with

- Plant Layout indicating storages of hazardous material and 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, tel. No., contact person and if possible blood group.
- List of important telephone numbers such as police, fire brigade, hospitals, Directorate of Industrial Safety and Health, Maharashtra Pollution Control Board, MSEB, MIDC etc.
- Separate list of team members with their addresses and telephone numbers.
- Facility of Direct Telephone Line.
- Equipment such as Torch, Rope, and necessary Personal Protective Equipment, whistle, etc.
- Note pads and pen / pencils to record the messages and record of activities pertaining to emergency
- First aid box with proper medicines.

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8.0 ASSEMBLY POINT

Assembly point is displayed at front of main gate and known to every one which is ensure at time of safety audit. The area of assembly point have been set at farther from the location of likely hazardous events, where employees, contractors and visitors must assemble in case of emergency. Up- to date list pre -designated employees must be available with the Site in charge at the assembly point in case of assembly of the employees. The site in charge shall then do the roll call of the people present so that their presence can be marked.


9.0 ALARM RAISING SYSTEM

The factory Main “Emergency Siren” is located at main gate. This will be used for raising the alarm and also for “All Clear” signals in case of emergency.

10.0 EMERGENCY RESPONDING PROCEDURE

In case of Fire / Explosion / natural calamity etc. any person noticing it must evaluate the severity of the emergency and he should alert all the factory personnel by activating the Emergency Siren. The emergency siren is activated just by pressing the Emergency Siren push button located at main gate. Then he immediately reports to the Emergency Control Centre and informs about the Emergency location. As soon as alarm is heard, the safety team members will contact to the Security office at the Main Entrance and the safety team will rush to the Emergency location. The safety Team & others team members will assemble at assembly point.


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Communication System:

Alarms should be followed by an announcement over Public Address System or verbally by shouting. In case of failure of alarm system communication should be by the security guard who will make announcement through Public Address system. Mobile Phones, landlines etc could be used as mode of communication for emergency. If everything fails a messenger could be used for sending the information.


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11.0 ACTION PLAN FOR VARIOUS EMERGENCIES.

Sr. No	Emergency	Actions to mitigate the emergency	Responsibility to Respond
1	Fire / Explosion	Raising emergency alarm	One who observes Fire or explosion
		Shut down machines and Main power supply	One who observes Fire or explosion / Prod incharge
		Evacuation, Assembly at Assembly Point.	All employees
		Fire fighting	All employees
		Rescue Operation	All employees
		First aid or Hospitalization	All employees
		Final Declaration of "All Clear" Situation	MR / CEO
2	Major Spillage of flammable/ hazardous oils	Raising emergency alarm	One who observes the major spill
		Switch Off Power Supply of the equipment	Concerned supervisor, Maintenance engineers
		Evacuation, Assembly at Assembly Point.	All employees
		Isolate & Barricade the area of spill	Security
		Control the spillage to avoid spread	DH - PRD
		Stop all the work of welding, electrical etc	DH - PRD

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		Fire fighting	Fire fighting team
		Final Declaration of "All Clear" Situation	MR
3	Electric Shock	Switch Off Power Supply of the equipment	Concerned supervisor, Maintenance engineers
		Rescue the person.	Concerned supervisor, Maintenance engineers
		Call the ambulance, provide first aid	Departmental Head
4	Accidents - Factory (Major)	Contact company doctor/hospital	Departmental Head
		Rescue Operation	Safety team
5	Accidents- Transport	Contact Ambulance/ Hospital, provide first aid Inform HR Dept Inform Police	Concerned Person HR dept
6	Personal confinement	Call fire brigade	Departmental Head
		Raising emergency alarm	One who observes the calamity such as storm, earthquake
7	Natural calamities Such as storm, earthquakes, etc.	Evacuation, Assembly at Assembly Point.	All employees
		Raising emergency alarm	One who observes the sabotage, terrorism or civil commotion
		Isolate & Barricade if necessary	Security

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		Fire fighting	All Employees
		Rescue Operation	All Employees
		Hospitalization	All Employees
		Evacuation, Assembly at Assembly Point.	All Employees
		Final Declaration of "All Clear" Situation	Chief controller
8	Structure collapse	Raising emergency alarm	One who observes the calamity such as storm, earthquake
		Evacuation, Assembly at Assembly Point.	All employees
		Isolate & Barricade if necessary,	Security
		Rescue Operation,	Rescue team
		Hospitalization,	First aid team
		Final Declaration of "All Clear" Situation	Chief controller
9.a	Riots, Arson, Sabotaging (Inside the premises of the organization)	<p>Inform HR Head, Plant Head, MD, Security, Immediately.</p> <p>Inform the Police immediately.</p> <p>The Security shall isolate the area of Rioting with its total force.</p> <p>All work should stop immediately. The employees from rest of the premises shall be evacuated immediately.</p> <p>The ambulance should be kept in Stand</p>	<p>Concern Person.</p> <p>HR Head</p> <p>Security In charge</p> <p>Admin In charge.</p>

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		<p>by to meet any eventually.</p> <p>Inform Hospital immediately to prepare for any emergencies.</p> <p>As soon as police arrives the area of rioting should be handed over to police.</p>	
9.b	Riots, Arson, Sabotaging(Outside the premise)	<p>Inform HR Head, Plant Head, MD, Security, Immediately.</p> <p>Inform the Police immediately.</p> <p>The ambulance should be kept in Stand by to meet any eventually.</p> <p>Inform Hospital immediately to prepare for any emergencies.</p> <p>The gates should be closed and no person and vehicle should be allowed to leave the company premises.</p> <p>Security should man the gates with full force and should prevent entry of any unauthorized person in side the company premises.</p> <p>In case of more than 8 hours of riot situation the Admin should ensure</p>	<p>Concerned person</p> <p>HR Head</p> <p>HR dept</p> <p>HR dept</p> <p>Security In charge</p> <p>Security In charge</p>

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		adequate food and water is available for the employees. Once all clear signal is received from the police, normal operation shall resume in the organization	Admin In charge Dept HOD
10	c. LPG leakage (Common for Both with fire as well as without fire)	<ol style="list-style-type: none"> 1. Take immediate steps to stop LPG leakage 2. Stop all operations 3. All out effort should be made to contain the spread of leakage/fire 4. Saving the human shall get priority in comparison to stock/assets. 5. Plant personnel without specific duties should assemble at the nominated place 6. All vehicles except those required for emergency use should be moved away from the operating area, in orderly manner at pressure -nominated route 7. Depending upon severity, electrical 	Fire Fighting Team

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		<p>system except for control supplies, utilities, lighting and fire fighting system, should be isolated</p> <p>8. If the feed to the fire cannot be cut off, the fire must be controlled and not extinguished.</p> <p>9. Start water at areas involved in or exposed to fire risks.</p> <p>10. In case of leakage of LPG without fire and inability to stop the flow, take all precautions to avoid source of ignition.</p> <p>11. Block all roads in the adjacent area and render internal/external support for the purpose if warranted.</p>	
	b. LPG leakage without fire.	<p>1. Follow the general instructions given above if escaping LPG is not on fire, close any valve which will stop the flow.</p> <p>2. In some cases like a leakage from cylinder without a fire, it may be desirable to move the cylinder to some</p>	Fire Fighting Team

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		remote area such as block of isolated roadway or open field where it can be allowed to leak safely without a source of ignition nearby. However, if this is to be done, the vessel must be moved in an upright position. Never drag the vessel in a manner which might damage valve or pipeline. Any attempt to turn a cylinder back upright to move it to some remote location should be done carefully to avoid damage to valve and pipelines.	
	c. LPG leakage with fire	1.Take basic action as detailed in as above 2.Extinguish fires - A small fire at the point of leakage should be extinguished by enveloping with a water spray or a suitable smothering agent such as carbon dioxide or dry chemical powder. However, it is against, stressed that LPG fire should not except in special circumstances explained earlier, be extinguished until the escape of	Fire fighting team

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		<p>product has been stopped.</p> <p>3.Fire Fighting Procedure: Fire fighting procedures would be vary depending upon various factors such as nature, sources sizes, location, etc. of fire. Basic fire fighting techniques have been explained earlier section. However, for the purpose of guidelines, fire fighting techniques for few common are as follows:</p> <p>4.Fire on cylinder: If a cylinder is exposed to radiant heat from external fire, it should be kept cool by water sprays to prevent excessive pressure rise in the vessel. Water must be applied without delay in the heat affected area. Cooling the cylinder with the water reduces the heat input to the vessel and thereby reduces the pressure, thus reducing the rate of discharge.</p> <p>5.Fire on vapour escaping from the pipeline /fittings (Flame not playing on</p>	
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		<p>vessel)</p> <p>6.Try to shut off the LPG supply by closing the valve.</p> <p>7.Try to extinguish the fire. If not possible.</p> <p>8.Allow fire to continue till exhaustion</p> <p>9.Spray vessel with water to cool it if vessel is being heated by radiation from the flame or if flame is endangering other plant equipment. Cool adjacent cylinder and structures.</p>	
11	Tank Dyke Fire	<p>1.In case fire occurs in the dyke area due to flange leak in manifold area, the fire is to be extinguished with the help of foam.</p> <p>2.Use of DCP if the fire is small, otherwise use water spray or foam.</p> <p>3.Cooling of lines /flanges is to continued till incident/site controller gives the instructions to stop.</p> <p>4.If tank collapses and product is spread in the dyke area with fire.</p> <p>5.Withdraw manpower in and around the</p>	Fire fighting team

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		<p>tank dyke area.</p> <p>6. Use foam monitors of vehicles to spray and spread foam in the affected dyke area</p> <p>If tank dyke area is on fire and full product is in the dyke then water to be used judiciously otherwise flooding of dyke area may cause overflow of oil from the dyke area to open drains.</p>	
12	Electrical Fire	<p>1. Disconnection of the electric supply of the affected area.</p> <p>2. Attempt to extinguish the fire with the help of DCP/CO2 fire extinguishers</p> <p>3. If the fire still persists, ensure complete isolation of electric supply of that area and use of water.</p>	Maintenance and fire fighting team
13	Office fire	<p>1. Disconnection the electric supply of the affected area.</p> <p>2. Attempt to extinguish the fire with the help of DCP/CO2 fire extinguishers</p> <p>3. Save all records from fire.</p>	Office staff and fire fighting team

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14	Person on Flames	<ol style="list-style-type: none"> 1. Bring the water gel blanket 2. Open the bag inside the container to remove blanket. If the bag is already open such blanket should not be used for burn victims 3. The blanket can be held as a screen between the victim and the fire 4. If possible lay down the victim and wrap the blanket around the victim. Leave the victim wrapped in blanket and seek medical help 	Fire fighting team
15	Food/Water Poisoning	<ol style="list-style-type: none"> 1. Persons observing the symptom should inform the location in charge for assessing the situation 2. Shift in charge should call the doctor and ambulances and also alert all hospitals to meet any exigencies 3. To render first aid and induce vomiting to the affected persons 4. The ambulances and vehicles available should be mobilized to be in readiness to 	First Aid team

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		transport large number of people if required Assistant Manager-SHE to report to location in charge for required sanitation and medical assistance.	
16	Bomb Hoax	1.Person noticing on object like bomb, should bring it to the notice of the nearest available officer. 2.The officer should carefully observe the same from a distance and raise alarm 3.The area should cordon off. 4.Police control and fire control to be informed for their arrival and inspection of the area. After the bomb is diffused, all clear siren should be sounded by the watchmen.	Concerned person/ Admin dept
17	Burn -Minor	1.Pour cool water on the burn area till the burning sensation is reduced. 2.Cover it lightly with a clean cotton cloth. 3.Do not apply butter, oil, ointments or any home remedies 4.Get Medical help	First aid team

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18	For Electric shock casualties	<p>Electric shock results in irreversible damage to brain cells followed by deterioration of the other organs</p> <p>Rescue and first aid</p> <p>Do first thing first, quickly and without fuss or panic. Switch off the supply if this can be done at once. If not possible, use a dry stick, dry cloth or other non conductor to separate the victim of electrical contact. The rescuer must avoid receiving shock himself be wearing gloves or using a jacket to pull the victim.</p>	First aid team
19	Non Functioning of STP and ETP	<p>In case STP or ETP is not working properly, the abnormality of so should be informed to maintenance department.</p> <p>In case the maintenance department closes the ETP or STP plant, the untreated water should be stored in Sock pit in case</p>	ETP/STP operator and Maintenance Dept


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		<p>of STP and Septic tank in case of ETP.</p> <p>After the STP and ETP starts functioning normally the water from the sock pit and septic tank should be treated before discharge.</p>	
--	--	--	--

List of Portable Fire Extinguishers:

Type	D.C.P.			CO ₂		ABC			Foam		Total
	5 Kg	10 Kg	25 Kg	4.5 Kg	6.5 Kg	5 Kg	1 Kg	2 Kg	9 lit	50 lit	
HFD	29	18	2	11	2	2	1	0	1	3	69
MFD	10	5	2	6	2	10	0	5	0	1	41
PAD	21	13	0	19	6	0	0	8	3	3	73
Total	60	36	4	36	10	12	1	13	4	7	183

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12.0 DO'S AND DON'T'S

• ALL COMPANY EMPLOYEES

<u>Do's</u>	<u>Don't's</u>
<ul style="list-style-type: none"> ❖ Stop work on getting information or hearing the alarm. ❖ Switch off the machines and main power supply. ❖ Gather at assembly point. ❖ Contact Management ❖ Take visitors to safer place. 	<ul style="list-style-type: none"> ❖ Do not panic & cause stampede. ❖ Do not run and prevent others from doing so. ❖ Do not go anywhere else. ❖ Do not wait to collect personal belongings.

12.1.1 VISITORS & CONTRACTORS


After hearing the alarm they will follow the following steps:

1. Give attention to all instructions.
2. Stop the work. Do not panic.
3. Do not wait for personal belongings.
4. Assemble at assembly point.
5. Do not go to the emergency site.
6. Do not spread rumors.
7. Do not engage communication systems.

13.0 TRAINING

The employees will be informed about 'On-Site Emergency Plan' in details, with the help of training programmes. For the success of this plan not only training will be organized but mock drills also will be organized minimum once a Year. Mock drills

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will help to understand the role to be played by every one during the emergency. The Core members of the Disaster / Emergency control will be given the refresher training at the interval of every One Year.

14.0 MOCK DRILL PROCEDURE

The success of the “On-site emergency plan” is very much dependent on planned and unplanned mock drills. Mock drills help employees to be familiar with their roles, and ensure accuracy of the onsite Emergency Plan.

Following is the procedure for conducting a Mock drill.


- Inform all the employees about mock drill procedures.
- Fix the date and 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, 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.
- Lacunae observed in the system will be studied carefully.
- Records of drills will be maintained.

After each drill, the plan will be thoroughly reviewed to take into account of the omissions or shortcomings for improvement.

15.0 Details of liaison arrangement between the Organization:

All the organization involved in assisting during the emergency were contacted and apprised of the details of the plant, like process; hazardous material

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handled; likely emergency incidents; steps taken to avoid/reduce risk mitigation methods, resource availability etc. The details are as follows

a) COLLECTOR OFFICE : (020) 26361068

: (020) 26114949

b) POLICE

Sr.No	Name of Police Station	Tel.No
1	Office of Commissioner of Police, 2,Sadhu Vaswani Road, Camp, Pune - 411001.	020-26126296,26122880, 26208250
2	D.S.P, Daund	(02117) 262314
3	Shikrapur	(02137) 272333
4	Talegaon Dhumdhare	(02317) 232333
5	Shirur	(02138) 222139
6	Yerwada	(020) 26696210
7	Ramwadi	(020) 26680649


c) FIRE BRIGADE STATION

1	Fire Station	101
2	Fire Station Pune	(020) 26696400
3	Fire Station Shirur	(02138) 222218, 222262
4	Ranjangaon Fire Station	(02138) 232659

d) HOSPITALS AND DOCTORS

Sr.No	Name of Hospital	Tel No
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1	Vignhatra Multi special Hospital, Shirur	02138-224741,224570, 690055
2	Surya Hospital, Shikrapur	02137-286285
3	Jijamata Hospital, Shikrapur	02137-272089
4	Niramaya Hospital	9270181294/95
5	Chaitanya Hospital, Koregaon Bhima	9960595757
6	Dr Napte	9960595757
7	K.E.M. Hospital, Vadhu (Shirdi Sai Baba Rural Hospital)	8888891174
8	K.E.M. Hospital, Pune	(020) 26125224,6603730 66037408

e) OFFICE OF ADDITIONAL DIRECTOR, INDUSTRIAL SAFETY & HEALTH,
PUNE

Sr.No	Name	Tel. No
1	Mr. BD Chavan, Additonal Director	9422423032
2	Mr. SM Karande, Jt Director	9892189338
3	Mr. S. G. Phadtare, Deputy Director	7507355566
4	Mr. V. V. Kathalkar, Joint Director	020-24266918
5	Office of DISH, Pune	020-24266918

16.0 INFORMATION ON PRELIMINARY HAZARD ANALYSIS(PHA)

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The F O facility has been designed and installed as per OISD-STD is code however the exposed parts like safety relief valve vents, drain valves, flanges joints, pipe lines may be chances of leakage of F O and if not controlled in time, can in contact with source spark from area in the vicinity to cause fire/explosion.

About 60 LPG cylinders of 33kgs capacity (30 no's full and 30 no's empty) in Precision Auto Components Division and above 6 LPG cylinders (3 no's full and 3 no's empty) are connected to the manifold which is located at isolated area in the plant. The same is cordoned off and with enclosure and in possession of responsible person.


In addition to this about 200 liters of thinner is being stored in stores in a container which is required for cleaning the components.

About 4 KL of F O is stored in two above ground tanks in the plant to facilitate smooth supply of fuel to production area.

17.0 DETAILS OF SAFETY RELEVANT ELEMENTS RELATED TO ENGINEERING CONTROLS

- i. The installation has sound design and located away from production area.
- ii. The area of storage tank is cordoned off from all sides by fencing and entry inside is restricted.
- iii. Dyke wall is provided around the tank along with the sump.
- iv. The earthing /bonding has been provided for vessels. The flame-proof electric motor provided for unloading pump
- v. The tank is provided with all safety gadgets like safety valves, manholes etc.
- vi. The tank is tested by a competent person before filling

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Type of Accidents	System Element or Events causing Major Hazard	Hazard	Safety Relevant Component
EXPLOSION	Leakage at LPG cylinder Storage area	Formation of an Explosive atmosphere due to- faulty safety valve overfilling leakage at drain valve corroded bullet	Safety Valve High Level Alarm Proper continuity of Static charges by Providing jumpers Pressure Gauge Safety Popup Valve
FIRE	Leakage from LPG gas Pipelines	Formation of gas/air mixture within the explosive limits due to Loose joint or leaking pipeline	Flange/Welded joints Proper Hose Connection
FIRE	Leakage through pipelines, Failure of tank	Formation of vapors within the explosive limits due to Loose joint or leaking pipeline	Flange/Welded joints Proper Hose Connection Vegetation

18.0 Location of Dangerous substances:

- The Hazardous chemicals which can cause emergency is F O is stored in vertical storage MS tank of 232 KL capacity in front of office building about 50 meters away.
- LPG cylinders at HFD and PAD having 6 nos and 60 nos connected to manifold located at isolated place outside the production shed
- Oxygen and Acetelene cylinders about 5 nos at stores.
- HSD storage for DG sets near DG Area.

	Prepared By	Reviewed By	Approved By
Signature			
Name	Mr. Santosh Kasalkar	Mr.Kiran Ambike	Mr. K.V.L.N. Murty
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Date	20.07.2012	20.07.2012	20.07.2012

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- About 200 liters of thinner in drum in storage area

19.0 LIKELY DANGERS TO THE PLANT & THE EXTENT OF EFFECTS

- Fire/ Explosion at F O tank farm. The effect of heat stress will be up to max. 50 M
- Fire/ Explosion at LPG area: The fire will be localized limited to fenced area only.
- Fire/Explosion in production area: F O and LPG leaked in production area and not controlled in time can cause fire / explosion. Exposure will be limited to the respective shop
- Fire due to thinner/ Acetelene Leakage etc: Exposure will be limited to the respective shop

20.0 UPDATING THE PLAN

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

	Prepared By	Reviewed By	Approved By
Signature			
Name	Mr. Santosh Kasalkar	Mr.Kiran Ambike	Mr. K.V.L.N. Murty
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