RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

7.1 RISK ASSESSMENT

Risk assessment forms an integral part of EIA study. Risk assessment study deals with identifying and evaluating the magnitude of impending risks to which the neighboring population is exposed due to occurrence of accidents involved in the project construction and implementation. This assist in illustrating the guidelines for preparation of disaster management plan which will be executed to handle the situation if any emergency occurs.

1. FIRE RISK

Fire is mainly caused due to carelessness short circuit and malfunctioning of gas regulator, tube and such related products.

At the proposed plotted development, hazard occurrence may result in on-site implications like:

- Fire and/or explosion;
- Leakage or flammable material and catching fire;
- Natural calamities like earthquake, cyclone etc.

There are two worst-case scenarios for fires in building project

- A fire burns out of control on the structure's lower floors at such a high intensity that, once extinguished, the structural damage is enough to cause the building to be structural a constructive total loss.
- A fire originating from the lower floors is able to spread throughout all the levels of the structure.

In spite of the clear gravity of the above scenarios, these types of fire have happened infrequently. More typically, fires in complex yield only partial structural damage. However, losses of life and property can still be substantial.

Emergency prevention through good design, operation, maintenance, and inspection are essential to reduce the probability of occurrence and consequential effect of such eventualities. However, it is not possible to totally eliminate such eventualities and random failures of equipment or human errors, emissions, and unsafe acts cannot be ruled out. An essential part of major hazard control has therefore, to be concerned with mitigating the effects of such Emergency and restoration to normally at the earliest.

It is increasingly acknowledged by safety authorities, such as the Loss Prevention Council, that the use of curtain walls (versus traditional wall construction) in multi-story structures adds to the risk of fire spread in these structures Filler material used in curtain walls is often not adequately fire-resistant, allowing the quick spread of fire throughout a structure in structures fitted with curtain walls, significant losses have been reported in facilities without sprinkler.

In emerging economies where construction has outpaced infrastructural development, fire brigades may not be adequately equipped to deal with high-rise fires.

2. PUBLIC SAFETY

The incidence of fire or other disasters occurs is often endangers the safety of the persons residing in the structure, in the event of an emergency. People present in such

structures often do not know proper emergency procedures, aggravating fire, and/or causing injury and death.

The only way of reducing the damage to public life and property is by conducting fire safety drills and installing well equipped fire safety equipments such as smoke detectors, heat sensors, fire panels, and fire alarms.

It is recommended that mock-drills should be carried out at least once in six months.

3. TERRORISM

Appropriate security measures should be taken in and around to ensure limited access to key areas, such as attached parking garages where bombs can be easily placed. Building management should carry out surprise checks.

4. LEAKAGE FROM A LPG CYLINDER WITHOUT FIRE

- Cordon off the area around 30 meters radius so that no vehicle or source of ignition approached the area. Attempt to close the control/ manual valve.
- Open all windows to increase ventilation and hence prevent build up of vapour cloud.
- Avoid getting entrapped in the vapour cloud.
- Water sprays should be used to disperse the vapour cloud.
- Warn the surrounding areas to put off all naked flames.

7.2 DISASTER MANAGEMENT PLAN

7.2.1 DEFINITION

Disaster Management Plan for any unit is necessarily a combination of various actions which are to be taken in a very short time but in a present sequence to deal effectively and efficiently with any disaster, emergency or major accident with an aim to keep the loss of men, material, plant/machinery etc. to the minimum.

A major emergency in an activity/project is one which has the potential to cause serious injury or loss of life. It may cause extensive damage to property and serious disruption both inside and outside the activity/project. It would normally require the assistance of emergency services to handle it effectively.

7.2.2 SCOPE

An important element of emergency mitigation is planning, i.e. identifying accident possibility, assessing the consequences of such accidents, and deciding on the emergency procedures, both on site and off site that would need to be implemented in the event of an emergency.

Emergency planning is just one aspect of safety and cannot be considered in isolation from the proposed project and hence before starting to prepare the plan, works management will ensure that the necessary standards, appropriate to safety legislation, are in place.

7.2.3 OBJECTIVE

The overall objectives of the emergency plan will be:

- To localize the emergency and, eliminate it; and

- To minimize the effects of the accident on people and property.
- Effect the rescue and medical treatment of casualties;
- Safeguard other people;
- Evacuate people to safe areas;
- Informing and collaborating with statutory authorities;
- Provide authoritative information to news media;
- Initially contain and ultimately bring the incident under control;
- Preserve relevant records and equipment for the subsequent enquiry into the cause and circumstances of the emergency; and
- Investigating and taking steps to prevent reoccurrence.

Elimination will require prompt action by operations and works emergency staff using, for example, fire–fighting equipment, water sprays etc.
Minimizing the effects may include rescue, first aid, evacuation, rehabilitation, and giving information promptly to people living nearby.

7.2.4 DISASTER MANAGEMENT CELL

The main functions of the Disaster Management Cell are to prepare a detailed Disaster Management Plan, which includes:

- Identification of various types of expected disaster depending upon the type of the industrial unit.
- Identification of various groups, agencies, departments etc. necessary for dealing with a specific disaster effectively.
- Preparation – by intensive training of relevant teams/groups within the organization to deal with a specific disaster and keep them in readiness.
- Establishment of an early detection system for the disaster.
- Development of a reliable instant information/communication system.
- Organization and mobilization of all the concerned departments/ organizations / groups and agencies instantly when needed.

7.2.5 IDENTIFICATION OF HAZARDS

The following types of hazards may be identified from the project:

- Fire in proposed IN Building & Construction project.

To deal the above emergencies, the Emergency Plan is prepared.
In case of any emergency following measures would be taken:

7.2.6 EMERGENCY PLANNING FOR DISASTER DUE TO FIRE

Cable rooms, transformer, unit, auxiliary transformers, oil tanks, etc. within the project are the likely areas for which disaster management plan is to be made to deal with any eventuality of fire. Stores, workshop, canteen, and administrative building will be included.

7.2.6.1 CLASSIFICATION OF FIRE

Class (A)

Fire involving combustible materials like wood, paper, cloth etc.

Class (B)

Fire due to liquid materials like oil, diesel, petroleum products, and all inflammables.

Class (C)

Fires involving domestic and industrial gases like butane and propane etc.

Class (D)

Metal fires etc.

Class (E)

Electrical fires due to short circuiting etc.

7.2.6.2 NEED OF ESTABLISHING A FIRE FIGHTING GROUP

A small spark of fire may result into loss of machines and the damage by fire may account for high economic losses. This type of losses can be avoided by preventing and controlling the fire instantly for which fire–fighting group will be established.

Establish which would house and keep in readiness, the following types of equipment and arrangements.

- CO_2 extinguishers
- Dry powder chemical extinguishers
- Fire brigade
- Fire hydrant

In order to avoid fire in cable galleries, all the power and control cables of FRLS type (Fire Resistant Low Smoke) will be used.

7.2.6.3INSPECTION

Fire alarm panel (electrical) will cover the entire Building & Construction Project. The inspection group will periodically inspect fire extinguishers in fire stations and machines and other places.

The groups will display emergency telephone number boards at vital points.

The group will regularly carry out general inspection for fire.

7.2.6.4 PROCEDURE FOR EXTINGUISHING FIRE

Person noticing the fire should attempt to isolate and extinguish the fire with the available equipment and inform or arrange to inform the security regarding the following:

- Location of the fire
- What is burning
- The Extent of fire
- Callers name and number
- Do not disconnect unless the person on the other side repeats the message or acknowledges it.
- Security on duty coordinators will respond to the scene of the incident
- Arrange to send the necessary firefighting equipment to the scene of the incident
- In the meanwhile, the pipe system will be operated to obtain maximum pressure on output. In case cables are within the reach of fire, power supply will be tripped and the cables shifted.
- Extinguish the fire with the available equipment.

FIRE FIGHTING WITH WATER

Adequate and reliable arrangement is required for fighting the fire with water such as:

- Provision for Fire brigade and Fire hydrant.
- Arrangement of pipelines along and around all vulnerable areas.
- Provision of valves at appropriate points to enable supply of water at the required place/area or divert the same to another direction/pipe line.
- Provision of overhead tanks which will be providing with the water during power failure and it would work by the gravitational force.
- The water required for fire reserve will be stored in underground and terrace tanks.

FIRE FIGHTING WITH FIRE EXTINGUISHERS

To deal with fire – other than carbonaceous fires, which can be deal with by water – suitable fire extinguishers are required to do the job effectively. It is therefore, necessary to keep adequate number of extinguishers in readiness at easily approachable places. Adequate number of fire stations would be:

- Further, other spray groups from the system will be diverted to the spot.
- After extinguishing the fire, the area will be well prepared for reuse.
- Use of extinguishing media surrounding the fire as water, dry chemicals (BC or ABC powder), CO, Sand, dolomite, etc
- Special Fire Fighting Procedures; Keeping the fire upwind. Shutting down of all possible sources of ignition, keeping of run-off water out of sewers and water sources. Avoidance of water in straight hose stream which will scatter and spread fire. Use of spray or fog nozzles will be promoted, Cool containers will be exposed to flames with water from the side until the fire is out.

7.2.7 ACCIDENTAL RELEASE MEASURES;

For Spill Cleanup well Ventilation, Shutting off or removal of all possible sources of ignition, absorbance of small quantities with paper towels and evaporate in safe place like fume hood and burning of these towels in a safe manner), Use of respiratory and/or liquid-contact protection by the Clean-up personnel will be promoted.

7.3 ONSITE EMERGENCY PLAN

7.4.1 INTRODUCTION

The views of the possible hazards that can be arise various measures shall be adopted to prevent the occurrence of a major accident. This comprises of:

- Built in safety measures, alarms, trips and interlocks etc.
- Standard safe operating and maintenance procedures permit system etc.
- Training of all the involved staff in normal and emergency operating procedures.
- Training of all employees in safety, firefighting and first aid.

However, in spite of these precautions, it is required to foresee situation of major accident and plan for taking timely action to minimize the effects of such incident on the safety and health of the worker as well as those living around the premises.

7.4.2 EMERGENCY SITUATIONS

These are defined as the following

- Any fire or explosion in the premises
- Any smoke outside / inside premises
- Strong persisting smell of LPG within the Building & Construction.
- Exercise fire drill.

7.5 PREPARATION OF PLAN

7.5.1 ALARM SYSTEM

A siren shall be provided under the control of Security office. In case of emergencies this will be used on the instructions to shift in charge that is positioned round the clock. The warning signal for emergency shall be as follows:

- Emergency Siren: Waxing and waning sound for 3 minutes.
- All clear signal: Continuous siren for one minute.

7.5.2 COMMUNICATION

Internal telephone system EPBX with external P&T telephones would be provide for communication purpose. The other shortlisted basic actions to be taken are as under:-

- Immediate action is the most important factor in the emergency control because the first few seconds count.
- Immediate steps to stop fire and raise alarm simultaneously.
- Personnel without any specific duties should assemble at the nominated place.
- All vehicles except those that are required for emergency use should be moved away from the operating area in an orderly manner at pre nominated route.
- Electrical system except the lighting and fire fighting system should be isolated.
- If the feed to the fire cannot be cut off, the fire must be controlled and not extinguished.
- Start water spray systems in the areas involved in or exposed to fire risks.
- In case of leakage of LPG without fire and inability to stop the flow, take all precautions to avoid source of ignition.
- Block all roads in the adjacent area and enlist police support for the purpose, if warranted.

7.5.3 FIRE PROTECTION SYSTEM

7.5.3.1 FIRE FIGHTING SYSTEM

The fire protection system for the unit is to provide for early detection, alarm, containment, and suppression of fires. The fire detection and protection system has been planned to meet the above objective an all–statutory and insurance requirement of Tariff Advisory Committee (TAC) of India. The complete fire protection system will comprise of the following.

(a) Fire Hydrant

Fire hydrant will be provided at all around in the project as per TAC Norms.

(b) Portable fire extinguishers

Various areas of the project will have one or more of the above system depending upon the particular nature of risk involved in that area.

(c) Portable Chemical Fire Extinguishers

These are intended as a first line of defense, and hence will be stationed at strategic locations in different buildings and also for outdoor facilities. Portable fire extinguishers will be foam type; carbon dioxide type and multipurpose dry chemical (MPDC) type.

(d) Fire Detection and Alarm System

Automatic / manual fire detection & alarm system.

Fire detection and alarm system an effective means of detection, visual indication of fire location and audible alarm of any fire at its incipient stage. This system will comprise fire alarm panels, automatic fire detectors, manual call points and fire siren (hooter).

The main fire alarm panel will provide both visual and audible alarm of fire in any protected areas of the project.

Manual break glass type fire alarms will be provided at strategic locations where high hazards exits.

Automatic fire detectors will be provided for coal handling areas and in project areas such as control rooms, switchgear rooms, cable galleries etc.

7.5.4 FIRST AID

A first aid facility has been be provided. Provision for medical check-up and tie up with the local hospital has been made. An Ambulance sis also provided at site to carry affected people to hospital.

7.5.5 SECURITY

The security requirements of the company premises shall be taken care of by CSO assisted by the in charge. The team, apart from the normal security functions will manage the role required during a disaster management operation as a part of the crisis control team.

7.5.6 SAFETY

The required safety appliances shall be distributed at different locations of the project to meet any eventualities. Poster/placards reflecting safety awareness will be placed at different locations in the project area.

7.5.7 EVACUATION PROCEDURE

As the major hazard is only due to fire, which has more or less localized impact no mass evacuation, procedures are required. Evacuation would involve only the people working very close to the fire area.

7.5.8 EMERGENCY CONTROL CENTER

Provision is made to establish an Emergency Control Centre (ECC) from which emergency operations are directed and coordinated. This centre is activated as soon as on–site emergency is declared.

The ECC consists of one room, located in an area that offers minimal risk being directly exposed to possible accidents.

During an emergency, the Emergency Management Staff, including the site controller will gather in the ECC. Therefore, the ECC is equipped with adequate communication systems

in the form of telephones and other equipments to allow unhampered organisations and other nearby facility personnel.

The ECC provides shelter to its occupants against the most common accidents; in addition, the ECC's communication systems are protected from possible shutdown. The ECC has its own emergency lighting arrangement and electric communication systems operation.

Only a limited and prearranged number of people are admitted to the ECC, when in use. This eliminates unnecessary interference and reduces confusion.

The ECC is always ready for operation and provided with the equipment and supplies necessary during the emergency such as:

- Updated copies of the On–site Disaster Management Plan.
- Emergency telephone numbers.
- The names, phone number, and address of external agencies, response organizations and neighbouring facilities.
- The adequate number of telephone (more than two) at security gate.
- List of fire extinguishers with their type no. and location, capacity, etc.
- Safety helmets – List of quantity & location.
- Several maps of the facility including drainage system for surrounding area showing:
  - ❖ Plot plans of storage tanks, routes of pipelines, all water permanent lines etc.
  - ❖ The position of pumping stations and other water sources.
  - ❖ Roads and project entrances/exit.

7.5.9 COMMUNICATION EQUIPMENTS AND ALARM SYSTEMS

This kind of equipment is absolutely vital for notifying accident; make the emergency known both inside and outside of the facility, and coordinating, the response actions among the various groups involved in response operations.

In particular, this equipment is used to communicate within the facility; communicate between the facility and outside organizations; and inform the public.

Different communications systems can vary in effectiveness, depending on the task. The most common types installed in the project are given below.

7.5.9.1 SIRENS

These are audible alarm systems commonly used in facilities. In case of any emergency siren will be operated short intermittently for 1.5 minutes.

An alarm does more than just emergency warning. It also instructs people to carry out specific assignments, such as reach to assembly point for further instructions and actions, or carry out protective measures; this can be achieved only if the people are familiar with the alarm systems and are trained to respond to it.

7.5.10 PERSONAL PROTECTIVE EQUIPMENTS

This equipment is used mainly for three reasons; to protect personnel from a hazard while performing rescue/accident control operations, to do maintenance and repair work under hazardous conditions, and for escape purposes. Effective command and control accomplish these functions necessitates personal trained in this On–site Disaster Management Plan with adequate facilities and equipments and equipment to carry out

their duties and functions. These organizations and the facilities required to support their response are summarized in the following subsections.

7.5.11 PROCEDURE FOR TESTING & UPDATING THE PLAN

Formulation of a Disaster Management Plan cannot possibly be an end by itself. It needs to be tested by holding of periodical mock emergency simulation and drill. Any shortcomings revealed during such exercise should thereafter be corrected by amending the plan. The plan should be for times to come; hence it must be reviewed at periodic intervals. The plan should be also reviewed and updated when:

- Major alteration or extension of existing structure is carried out.
- Major change in habitation or land use of the neighborhood takes place.
- Important telephone numbers used are altered.

Mock drills activating the Disaster Preparedness plan should be conducted periodically for ensuring its efficiency during emergency as well as for refinement and up gradation. These drills based on the plan will help achieve its objectives of the Disaster Management Plan.

Simulated emergency preparedness exercises and mock fire fighting exercises including mutual aid scheme resources and in conservation with district emergency authority to be carried out time to time.

7.5.12 POST EMERGENCY FOLLOW UP

- All cases of fire occurrence, no matter how small, must be reported promptly to the Coordinator for follow up.
- Under no circumstances should fire extinguishing equipment once used be returned to its fixed location before it is recharged/ certified fit by the Fire chief/ Safety Manager.
- Used fire extinguishers must be laid horizontally to indicate that they have been expended.

7.5.13 DISCLOSURE OF INFORMATION TO WORKER & PUBLIC AWARENESS SYSTEM IN EXISTENCE & ANTICIPATED

- Safety awareness among workers by conserving various training programmes and Seminars, competition, slogans etc.
- Practical exercise.
- Distribution and practices of safety Instructions.
- Safety Quiz contests.
- Display of Safety Posters & Safety Slogans.
- Developing Safety Instructions for every Job and ensuring these instructions/ booklets or manuals by the workers.

7.6 FIRE & ELECTRICAL SAFETY MANAGEMENT

- Fire Fighting Design: As per National Building Code (NBC) 2005.
- Fire Tender route with access to each Tower.
- Provision of emergency fire exits, fire escape staircase as per NBC requirements.
- External yard hydrants with hose cabinet.

- Fire Sprinklers & Fire Alarm system.
- Fire fighting equipments will be divided into water and foam based fire fighting depending upon the nature of fire.
- Fire System shall cover the following:
- External Fire Hydrant System in galvanized steel fire hose cabinet (weather proof).
- Wet Riser System; Hose real; Yard Hydrant
- Portable Fire extinguisher
- Automatic Fire Sprinkler System
- Fire Pumps near UG tanks. In addition One main fire hydrant pump, One main sprinkler pump; One no. jockey pump will be provided

Following measures have been ensured for Electrical Safety:

- ACB/MCCB/MCB shall be installed for protection of equipments.
- Microprocessor relays shall be installed for power system protection
- Proper degree of protection of enclosures for low/high voltage switchgear shall be selected.
- Capacitor panel shall be installed with Automatic Power Factor correction relay to control Power Factor.
- All the DG sets have AMF operation.
- Rubber mats, hand gloves, danger plates, fire extinguisher & fire buckets shall be installed wherever required.
- All the non-current carrying metal parts of electrical insulations are properly earthed with GI/copper plate earthing with grid earthing system so that resistance of earth system is less than one Ohm.
- All the entire insulation has been tested with following tests:
  - Wiring continuity test
  - Insulation resistance test
  - Earth continuity test
  - Earth resistivity test
- Optical fibre cable (OFC) has been installed for High speed internet.
- Aviation light shall be installed.
- Lighting protection system with grid earthing shall be installed.
- Building Management system (BMS) will be installed.
- Additional fire extinguishers of suitable type shall be provided in the plant rooms and utilities in accordance with IS:2190 'Code of Practice for selection, installation and maintenance of portable first-aid fire extinguishers'.
- Manual/automatic fire detection and alarm system shall be provided in accordance with NBC2005 norms as elaborated above.
- Portable hand appliances in form of fire extinguishers shall be provided in all parts of the buildings. It is proposed to provide following fire extinguishers [ISI marked] at each floor level near the fire hose cabinets:
- Provision of fire escape staircase as per NBC requirements

The implementations of above measures are depicted in the plans below:

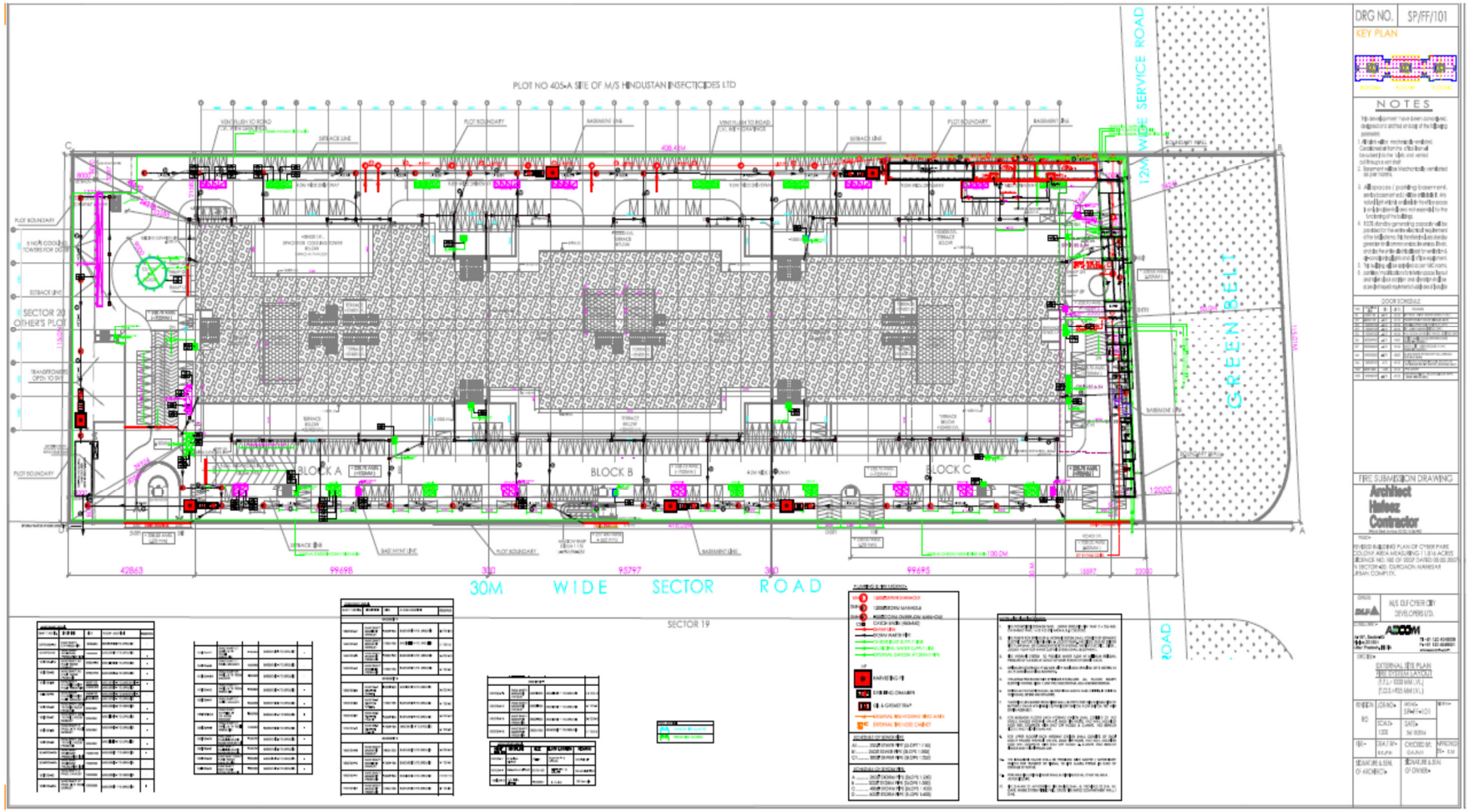

FIGURE 7.1: FIRE FIGHTING SYSTEM SHOWING EXTERNAL FIRE HYDRANTS

7.7 HEALTH & SAFETY POLICY

Health and Safety are the two most important aspects of DLF work environment. DLF is committed to create a future free of incidents and injuries, where:

- All stakeholders, activities create safe environments;
- Leadership, passion and commitment are present at all levels;
- Working safely enhances Quality, improves Productivity and generates value;
- Attitude and behavior replaces statistics as a measure of success;
- People are enabled to make safe choices about their own and their neighbors' safety and to challenge the environment in which they work;
- Good safety behaviors is admired, respected and recognized across the organization;
- Peer pressure has replaced policing acting unsafely is anti-social.
- We have a well trained and fully competent workforce who actively contribute to the safe planning of their work;
- Our commitment to safety and long term health contributes to making us the employer of first choice;
- Our business only welcomes those who support our vision and are willing to change – no compromise on safety.

We take pride in everyone returning home safely every day.

The company recognizes the importance of discharging all its statutory obligations and duties. Our minimum health and safety obligations are those required by relevant legislation and authoritative guidance. DLF Cyber City Developers Limited will take appropriate steps to meet and in many cases enhance these requirements. We will make DLF Cyber City Developers Limited the company of first choice for all stakeholders, to challenge and change the image of construction in India.

The Board of Directors of DLF Cyber City Developers Limited fully endorse this policy. They will ensure that a documented Health and safety Management System is maintained, containing the arrangements and organizational details of how these requirements will be achieved. The Board will ensure that the Health and safety Management system is periodically reviewed to ensure it remains legally compliant, achievable, relevant and credible.

Continual improvement will be achieved by effective implementation of the above. Everyone working for DLF Cyber City Developers Limited is required to support and promote this Policy and comply with the requirements and duties contained in the Health and safety Management System.

7.7.1 ENVIRONMENTAL POLICY

DLF is committed to the protection and adding to the environmental richness including the natural resources (water, air, energy and raw materials) and bio-diversity of the ecosystem.

To support this goal, our policy is to

- Comply with or exceed the requirements and spirit of applicable environmental legislation and regulations

- Optimize the use of natural resources in order to reduce pollution, minimize wastage and maximize reutilization/ recycling
- Enrich the bio-diversity of the nature surrounding our areas of business.

DLF will strive to achieve this by:

- Aligning organizational processes, establishing quantifiable targets, as appropriate, reviewing programs and processes for continuous compliance and improvements.
- Continually improving the environment sustainability performance of our end-products (such as using energy efficient lighting and HVAC systems, using feasible renewable energy sources, treatment and recycling of wastewater, harvesting rainwater)
- As far as possible, purchasing products and services that minimize the damage on environment on a lifecycle basis, encouraging the use of energy efficient raw materials containing recycled materials, minimizing the generation of solid wastes, recycling the reusable wastes and disposing the excess waste through environmentally safe manner
- Enriching the biodiversity by maximizing the green landscape in our real estate projects and encourage tree plantation
- Engaging our employees, suppliers and vendors to reduce risks from environmental health or safety hazards for themselves and others in the vicinity of our operations. Training employees, associates and other stakeholders to promote environmental awareness and encouraging them to work in an environmentally responsible manner
- Communicating the environmental commitment and performance of the organization to our clients, customers and public to raise awareness and encourage public participation

Periodically update the Environmental Policy based on review and feedback

7.7.2 PERSONAL PROTECTIVE EQUIPMENT

DLF Cyber City Developers Limited has agreed that all persons working or visiting our work areas must wear safety helmets, safety footwear and a high visibility jacket as a minimum requirement and this is to be strictly adhered by all concerned.

7.7.3 DRUGS AND ALCOHOL POLICY

DLF Cyber City Developers Limited as a core business value is committed to creating a future free of incidents and injuries. The effective elimination of drug and alcohol abuse is an integral part of this.

It is the policy of DLF Cyber City Developers Limited.

- To comply with applicable legislations.
- To no knowingly permit any employee, or anyone engaged directly or indirectly, to report for work o allow in the work premises under the influence of alcohol or drugs, or to consume these whilst on duty or on the premises.

- To implement control measures to prevent, as far as reasonably practicable, such people reporting for work or attending work premises:
  a) When affected by drugs or excess alcohol; or
  b) Consuming drugs or alcohol at work.

The above Policy will be reviewed in line with changes to legislation and any subsequent issue of related company procedure.

7.7.4 SCAFFOLDING AND SCAFFOLDERS

Scaffolding will be designed, erected, used, maintained and dismantled in accordance with the Building and Other Construction Workers (Regulation of employment and Conditions of Service) Central Rules, 1998' Chapter II5.(2), (3), (4),(5), (6) & (7) and Chapter XIX Scaffold.

Persons responsible for the supervision and erection of scaffold will be competent and provided with sufficient management information, instruction and training in order to ensure that they are competent to carry out their duties. (The Building and Other Construction Workers (Regulation of employment and Conditions of Service) Central Rules, 1998' Chapter XIX, 18 (Supervision by a responsible person)

7.7.5 TRANSPORT DRIVERS AND PLANT OPERATORS

Drivers of vehicles of any class or description operating on DLF Cyber City Developers Limited construction site must comply with, and hold a valid driving license under the Motor Vehicle Act, 1988 (Chapter II).

Operators of Cranes and other Lifting Appliances will be competent and provided with sufficient information, instructions and training in order to ensure that they are competent to carry out their duties.

Operators of excavators and other earth moving equipment/Vehicles will be competent and provided with sufficient information, instruction and training in order to ensure that they are competent to carry out their duties.

TRADE	DLF
Bulk Excavation Works	Excavator Operator : Driving Licence Certificate of Competence Truck Operator : Driving Licence (HMV) Banksman : Training Certificate
Scaffolders	Certificate of competence
Crane Operator	Driving Licence Certificate of Competence Medical Fitness Certificate
Slingers / Signaller	Certificate of Competence

7.7.6 INFORMATION FOR CONTRACTORS

This plan must be issued to all sub-contractors.

7.7.7 SELECTION PROCEDURES

All sub-contractors, plant and machinery must be obtained from sources approved by the DLF Cyber City Developers Limited Procurement System.

(Any plant and machinery which does not comply with this policy will not be permitted on site – rejected at site entrance).

7.7.8 COMMUNICATION AND CO-OPERATION

Site personnel will be told about safety issues by the person in charge by means of:

1. Induction - Prior to commencing work on Site.
   - Re-induction following formal disciplinary action.
2. Toolbox Talks - Prior to commencing new work activity.
   - Scheduled weekly.
3. Task Specific - Prior to commencing new work activity.
   Briefings - Following review/revision of Method Statement
   - Risk Assessment.
   - Following incident / accident.
4. Safety Signs - Site entrance and at other strategic location.
5. Safety Notice Board (Posters, Safety Alerts, Safety information notices).
6. Safety Awareness Programme.
7. Safety Committee Meeting Minutes

7.7.9 ARRANGEMENT FOR DEALING WITH ACTIVITIES WITH RISK TO HEALTH & SAFETY

7.7.9.1 SIGNIFICANT RISKS:

The significant risks identified at Pre-contract stage or in the Pre-contract Health and Safety Plan are

Risks	Precautions
Interfaces with the Public/Others – Unauthorized person on site. – Unauthorized vehicle on site. – Injuries to workers, visitors and public. – Damage to vehicle and property. – Theft – Vandalism and Arson. – Loss of Company right Information, Processes and Commercial Advantage. – Poor Company image with risk of loss of repeat business.	– Site security hording/Fence with lockable gate. – 24 hrs manning of the security gates provided at the site entrance(s). – Segregated vehicle / pedestrian entry/exit routes. – Visitors to the project to sign in/our at the site security point. Those persons who have not attended a site safety induction training Course will be escorted by a member of DLF Cyber City Developers Limited at all times. – Information, safety and directional signage will be displayed at the site entrance and other strategic location.

Working at Height – Persons falling from height – Materials falling from Height – Lack of working platform edge protection. – Incomplete working platform. – Unprotected lift shafts, stair wells ducts and service risers. – Holes in floor slabs.	– Provide working platforms with edge protection, toe-boards, brick guards, debris net, fans. – Provide guardrails/toe-boards and maintain disciplined monitoring / inspection regimes monitoring with discipline regimes. – Implement "Safety Alert" requirements and company procedures (See safety Alerts). – Provide edge protection, mesh secure covers.
Electricity (Equipment/Cables) – Electrocution – Electric shock – Burn – Explosion / Fire – Supply Failure / Loss of Production. – Damage to switchgear/ Distribution Boards. – Damage to plant/ Portable Appliances. – Damage to plugs, sockets and cables – .	– Procure quality switchgear, distribution boards, cables and portable appliances. – Check equipment and portable appliances at the time of delivery. – Installation, maintenance and repair to be carried out by qualified electricians. – Prevent unauthorized installation, maintenance and repairs. – Carry our regular inspection and tests. – Armoured cable and RCD's for 220/440V distribution systems. – Use industrial plugs and sockets. – Prohibit the use of domestic plugs and sockets in the construction areas. – Route cables and extension leads above head height. – Tool Box Talks for all site personnel.

7.7.9.2 TASK SPECIFIC RISK ASSESSMENT

Task Specific Risk Assessments are to be carried out using standard form.

- Movement of Vehicles and materials transportation.
- Handling of Reinforcement.
- Material Handling by Tower Hoist, Tower Crane, other lifting machine and lifting Machine and Lifting Tools and Tackles.
- Masonary Work.
- Shuttering of Slab/Column/lift core wall.
- Form Work.
- Concrete Work.

7.7.10 METHOD STATEMENTS TO BE PRODUCED:

Communication of information on working Methods

The approved methods will be communicated to the workforce by: a) DEEP BULK EXCAVATION WORKS b) TEMPORARY ACCOMODATION / INFRUCTURE

7.7.11 PROTECTION OF THE PUBLIC:

Are there any requirements to make the Boundary secure and are traffic management system required?	Yes
1. Secure Hoarding / Fence	Yes
2. Pedestrian Route / Gates	Yes
3. Lockable Vehicle / Pedestrian Gates	Yes
4. Signs (information, Safety, Directional)	Yes
5. 24 hours Security	Yes
Is the access designed to prevent injury to Public? If no, what pre-cautions are required?	Yes
Is any protection from falling objects required?	Yes
If yes what protection is to be installed?	SAFETY NETS
Any other issues and pre-cautions:	

7.7.12 FIRE SAFETY PLANNING

Standard fire pre-cautions are to be implemented by: Safety In-charge.

7.7.13 ACCIDENT REPORTING

The Accident Book is to be kept in the site office and ALL incidents are to be reported in accordance with DLF Cyber City Developers Limited systems.

7.7.14 WELFARE

Cleaning and maintenance is to be the responsibility of: HR/Administration.

7.7.15 INFORMATION FOR PEOPLE ON SITE

Inductions will be carried out by: SAFETY INCHARGE/SAFETY ADVISOR Tool Box talks will be held by: LINE MANAGEMENT (MANAGER/ENGINEER/SUPERVISOR) On the following subjects: 1. Site Security / interfaces with public / others. 2. Occupational Health / PPE. 3. Working at Height. 4. House Keeping & Waste Management. 5. Safe working with Electricity. 6. Material lifting.

7.8 APPLICABILITY OF RESETTLEMENT AND REHABILITATION PLAN

The proposed expansion project neither cause any voluntary and involuntary displacement of people nor lessening the connectivity with the nearby villages and areas, on the other hand there will be positive social impact such as employment generation, raising the living standard of the local people which reside in the study area. Therefore it may consider that required rehabilitation and resettlement plan as per the national Rehabilitation and Resettlement Policy, 2007 dated 31st October 2007 is not applicable for this proposed project.