RISK ASSESSMENT

1.0 RISK ASSESSMENT AND HAZARD MANAGEMENT

Hazard analysis involves the identification and quantification of the various hazards (unsafe condition) that exist in the plant. On the other hand, risk analysis deals with the identification and quantification of the risk, the plant equipment and Personnel are exposed to, due to accidents resulting from the hazards present in the plant.

Risk analysis involves the identification and assessment of risks to the population exposed to hazards present. This requires an assessment of failure probability, credible accident scenario, vulnerability of population etc. Much of this information is difficult to get or generate consequently, the risk analysis in present case is confined to maximum credible accident studies and safety and risk aspect related toexpansion of Molasses based Distillery and Co-Generation power plant.

Activities requiring assessment of risk due to occurrence of most probable instances of hazard and accident are both onsite and off-site.

On-site

- Exposure to fugitive dust, noise, and other emissions
- Housekeeping practices requiring contact with solid and liquid wastes
- Alcohol leakage/ spillage through pipeline during pumping & subsequent fire

Off-site

- Exposure to pollutants released from offsite/ storage/related activities
- Contamination due to accidental releases or normal release in combination with natural hazard
- Deposition of toxic pollutants in vegetation / other sinks and possible sudden releases due to accidental occurrences.

In view of the hazards involved in handling and storage of hazardous chemicals and processes "On Site Emergency Plan" has been prepared. It gives a clear organization structure, including outside agencies and elaborates the duties to be performed by each individual when situation demands. The plan enumerates the actions required to be taken by various personnel working at different work station in the plant. Particular emphasis is given to eight most vital areas of disaster planning like Organization responsibilities, procedure, training, mutual aid, communication, transportation and public relations.

1.1 Identification of Hazards

The following types of hazards are identified at the company.

Table: 1
Hazard Identification

S. No.	Name	Description	Severity	Hazard
1.	Transportation of raw material and storage	Biomass/coal	Major	Fire
		Enzymes, yeast, nutrients, etc	Minor	Exposure & inhalation
		Chemicals (Caustic, acids, etc)	Major	Exposure to skin
2.	Manufacturing Process	Distillation	Major	Heat & Fire
3.	Other Utilities	Boiler, D.G Sets	Major	Noise, Heat, Fire & electrocution
4.	Products	Alcohol	Major	Fire
5.	Other accidents	Leakages from the vessels, rupture of pressure vessels and storage tanks	Major	Exposure &Fire

1.2 Assessment of Risk along with mitigation measures

Qualitative risk assessment based on categorization of both probability and impactprovides greater insight into the absolute risk severity. The riskimpact assessment investigates the potential effect on a project objective such asschedule, cost, quality, or performance, including both negative effects for threats andpositive effects for opportunities.

Table: 2
Risk Assessment table along with mitigation measures

S. No.	Activity	Associated hazards	Associated risk/ health impact	Risk rating	Mitigation Measures
1.	Storage & handling of raw material & Chemicals	Bursting of storage tanks	Exposure, physical injuries	H	• Use of PPEs. • Inspection & regular monitoring • Training to workers for proper handling • Proper system for loading operation to prevent any spillage. • Spill kit for Acid and other chemicals
2.	Working near Distillation column	Heat & Fire	Physical injuries and burning	H	• Firefighting facility • Provision of pressure indicators in the vessels. • Use of PPEs. • Inspection & regular monitoring • Training to workers for proper handling
3.	Fuel yard	Heat & Fire	Physical injuries and burning	H	• Storage shall be away from ignition source • Firefighting facility are already provided • PPEs are provided • First aid box
4.	APCD failure	Release of PM in ambient air	Air pollution	M	• Regular monitoring & inspection is being/ shall be done. • The plant shall immediately shut down on APCD failure
5.	Working at height	Slip, trips & falls of operators	Physical injuries	H	• Individual alertness of the workers. • First aid boxes are provided.
6.	Storage of Alcohol	Exposure, inhalation, ingestion & Fire	Exposure to over 100 ppm may cause headache, drowsiness, etc. Ingestion may lead to depression of CNS, nausea, etc. Burn injuries	H	• Well ventilation • Keeping away from heat sparks & open flame. • PPEs. • Firefighting measures are readily available.
8.	Release of high pressure steam from boiler	Explosion	Risk of severe injury, damage to equipment	H	• Regular maintenance & inspection of parts. • Proper training to the individuals • PPEs • First aid kit
9.	Electrical maintenance work	Electric shock, short circuits in power room	Electrical shocks, Injury or burn	H	• Regular checking and maintenance of electrical units • PPEs • Provision of First aid box
10.	Working near Boiler, D.G. sets	High noise	Noise induced hearing losses	M	• Provision of PPEs to the workers.

Note: H- High; M- Moderate

1.3 Disaster Management Plan

Definition

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.

Scope

An important element of mitigation is an emergencyplanning, 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.

Objectives

The overall objectives of the emergency plan will be:

I. Define roles and responsibilities of site management
II. Provide training and guidelines and requirements.
III. Protect the human life and property.
IV. Ensure the welfare of the public during emergency.
V. Provide reference for those co-ordination emergency activities
VI. Take account of shortcomings and update as appropriate from time to time.

Rehearsal and Updating of Plan

Emergency plans need to be tested when first devised and thereafter to be rehearsed at suitable intervals. Individual personnel with duties under the plan are qualified by exercise which helps to refine the procedures by identifying deficiencies, difficulties and monitoring response time. To create awareness about safety and emergency response procedure among the personnel, mock drill is carried out monthly.

Rehearsals or exercise are important for all personnel likely to be involved in an accident on or off the site because:

I. They familiarize on-site personnel with their roles, their equipment and the details of the plans.
II. They allow the professional emergency services to test their parts at the plan and the co-ordination of all the different organizations.
III. They provide the current accuracy of the details of the plan (telephone numbers etc.) and the availability of special equipment (fire and rescue breathing sets etc.)
IV. They give experience and build confidence in the team members. In the initial shock and confusion of real incident, the ability to fall back on established initial actions are invaluable.

The on-site emergency procedures for each process plant, storage facility etc. are being/will be tested regularly and that all employees receive initial and refresher training, exercisesarebeing/will be arranged to test each part of the emergency plan on each plant, stage by stage. Emergency isolation and shut down is being/will be also rehearsed.

After each rehearsal or practice,the plan is being/will be reviewed to take account of any shortcomings highlighted by the exercise.

1.4 Safety Measures for Storage & Handling of Alcohol

The alcohol is being/will be directly fed to the storage tanks mechanically and no manual handling is being/will be involved which reduces/will reduce the risk of spillage. Following precautionary measures would be taken for safety:

- **HANDLING AND STORAGE:**Keeping away from heat, sparks and open flame, care is being/will be taken for avoidance of spillage, skin and eye contact, well ventilation, use of approved respirator if air contamination is above acceptable level is being/will be promoted. For Storage and handling following precautions are being/will be taken:
  - Keeping away from oxidizers, heat and flames.
  - Avoidance of plastics, rubber and coatings in the storage area.
  - Cool, dry, & ventilated storage and closed containers.
  - Grounding of the container and transferring of equipment to eliminate static electric sparks.
  - Storage of acid and alkalies should be done properly as they can cause severe burns on skin.

In case of any emergency following measures are being/will be taken:

- **FIRST AID MEASURES**: For skin contact, eye contact, & inhalation.
- **FIRE FIGHTING MEASURES:**
  - In plant precautions have been taken by declaring plant operating area as No Smoking Zone.
  - All the Electrical installations are flame proof type in the alcohol storage area.
  - Use of extinguishing media surrounding the fire as water, dry chemicals (BC or ABC powder), CO_2, Sand, etc

- Foam System for firefightingis being/will be provided to control fire from the alcohol storage tank. The foam thus produced suppresses/will suppress fire by separating the fuel from the air (oxygen), and hence avoiding the fire & explosion to occur in the tank. Foam would blanket the fuel surface smothering the fire. The fuel is being/will also be cooled by the water content of the foam.
- The foam blanket suppresses/will suppress the release of flammable vapours that can mix with the air.
- 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 well after the fire is out.
- Hazardous Decomposition Products: gases of Carbon Monoxide (CO) & Carbon Dioxide (CO_2).
- A team of security Guards is kept to maintain security round the clock in whole of the factory area. The Company has fully trained operating and security staff for firefighting and fire drill is conducted by the fire experts on regular intervals.

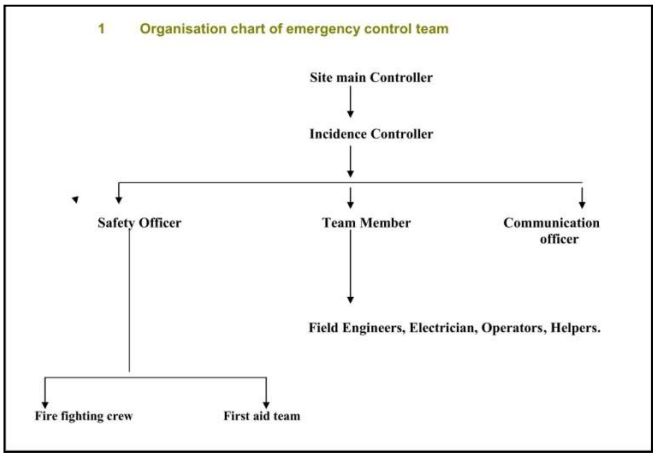
Fire fighting measures inside plant premises

- **ACCIDENTAL RELEASE MEASURES:** ForSpill Clean-up 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 is being/will be promoted.
- **Action to be taken by the First Person noticing the Fire/Leakage /Failure:**
  a) If it is a small fire, try to extinguish with fire extinguishers.
  b) After noticing the fire, immediately call for assistance by shouting "Fire Fire" or by using telephone facilities inform shift in-charge on intercom.
  b) Inform security on intercom

Whenever disaster occurs, the incident should be communicated to the concerned authority in minimum possible time, in case of failure of a means of communication due to electrical failure an officer should rush to the nearest public telephone booth/ police station to transmit message through line or police wireless.

During office hours on a working day

During office hours on working days senior most executive in the factory will take the charge of site main controller in case of any emergency. In case of incident controller is not present in the factory production chemist shall take over the function of incident controller as indicated in the organization chart.



1.5 Emergency Planning

General

Disaster Management Plan for an industrial 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.

The objectives of 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.
- A major disaster that can be expected due to fire in this distillery.

1.6 Duties and Responsibility of Key Personnel of Environmental Management Cell

Site Main Controller	Site main controller is the main controller who will lead the controlling of the fire incident. He will - • Call the fire tender. • Ensure that unwanted persons are safely removed from the affected area • Direct the fire tender to reach the affected area • Ensure that everyone has gathered in the demarcated area, called Assembly point. • Extend medical help for wounded. • Remove casualties.
Incident Controller	In absence of site main controller, he will act as main site controller. • Inform site main controller about the incident. • Call the fire tender. • Ensure that unwanted persons are safe and removed from the affected area. • Direct the fire tender to reach the affected area. • Ensure that everyone has gathered in the demarcated area, called Assembly point. • Provide Safety Appliance. • Guide external fire tender to approach the affected area. • Help in searching for casualties. • Collect and preserve evidence fire further inquiry.
Distillery Manager	In case site controller and incident controller are not in the factory, he will take over the function of incident controller otherwise he will: • Mobilize the fire-fighting operation and coordinate with external fire tenders/fire-fighting equipment.

	• Liaison between the incident controller and the maintenance, fire, safety and production and medical services. • The maintenance squad should isolate the hazardous area, and plug the leak.
Security Officer	• To coordinate fire-fighting operation and replenish the fire-fighting equipment. • To rescue the injured persons. • To provide first aid/medical assistance. • To liaison with ambulance services. • Remove tank lorry/other vehicles to safe location.
Maintenance Manager	• Maintenance squad should plug the leak, isolate the hazardous area and ensure the safety of the remaining part of the factory. • Remove the tank lorry and other vehicles form the factory premises. • Liaison between the incident controller and fire and safety departments. • The team will mobilize any repair work on an emergency basis.
Accounts Officer	• To coordinate the evacuation of the visitors and office staff who have no role in controlling emergency. • To rescue the injured persons. • To provide first-aid/medical assistance to injured workers. • To liaison with ambulance services.
Personnel Manager	• To communicate with the following authorities for the necessary help. ➢ Police Station ➢ Fire Brigade ➢ Local Hospitals ➢ Ambulance Services. ➢ Head Office • To request the police to control the traffic and maintain law and order. • To liaison with neighbouring organizations for assistance.
Shift In charge after office hours	• Establish the emergency control centre • Mobilize all coordinators assembled at the Emergency Control centre and put the disaster control plan into action. • Mobilize the fire- fighting operations. • Mobilize help from ambulance services and hospitals for medical assistance. • Mobilize help from the outside agencies for firefighting. • Inform the police and request to control traffic and maintain law and order. • Inform site controller, incident controller and appraise the situation. • Direct the shutting down of plants and their evacuation. • Give adequate attention to the causalities and send them to hospital.

1.7 Preparation of Plan

Alarm System

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

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

Communication

Walkies& Talkies are located at strategic locations; internal telephone system EPBX with external P&T telephones are provided.

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 comprises of the following.

(a) Fire brigade

Automatic / manual fire detection & alarm system

(b) Fire Hydrant

Fire hydrant is already provided at all around in the plant as per TAC Norms.

(c) Portable fire extinguishers

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

(d) Portable chemical fire extinguishers

These are intended as a first line of defence, and hence are 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.

(e) Fire detection and 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 comprisesof fire alarm panels, automatic fire detectors, manual call points and fire siren (hooter).

The main fire alarm panel provides both visual and audible alarm of fire in any protected areas of the plant.

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

Automatic fire detectors are provided in plant areas such as control rooms, switchgear rooms, cable galleries etc.

Emergency Control Center

For the purpose of handling emergency, emergency control center has been identified and shown on the site plan. All communications to and from originates at this control center. The emergency control centerhas/will have the following: -

- Updated copies of the On–site Disaster Management Plan.
- Emergency telephone numbers.
- The names, phone number, and address of external agencies, response organizations and neighboring facilities.
- The adequate number of telephone (more than two).
- Emergency lights, Clocks, Personal protective equipment.
- List of fire extinguishers with their type no. and location, capacity, etc.
- Safety helmets – List of quantity & location.
- Status boards/message board.
- Material safety data sheets for chemicals handled at the facility.
- Several maps of the facility including drainage system for surrounding area showing:
  - Areas where hazardous materials are stored.
  - Plot plans of storage tanks, routes of pipelines, all water permanent lines etc.
  - The locations where personal protective equipment are stored.
  - The position of pumping stations and other water sources.
  - Roads and plant entrances.
  - Assembly areas & layout of Hydrant lines.

1.8 Off-site emergency control plan:

The Off-Site emergency plan is based on those events which could affect the people and the environment outside the factory premises/installation. The nature of the accident is so serious that it becomes important not only in factory management but also for the general public outside the factory premises to deal with the situation. The basic objective is that damage to human life and property is minimized. Advance planning is the key.hhhhThe on-site and off-site plans should detail so that the emergency services are summoned at the appropriate time and are provided with accurate information and the correct assessment of the situation. The responsibility for this should be with the site main controller. The various emergency services should be co-ordinated by fire and Safety coordinator who will liaise with site Main Controller.

Action Plan:-

The site Main Controller will assess the situation and if the emergency is likely to spread outside the installation or affect the neighbour industry and people outside the factory premises, will declare off-site

emergency. He will coordinate with the incident controller and get intouch with all essential local authorities and mutual aid members for controlling the disaster. The local authorities will work under the direct supervision of the site Main Controller.

The help of the following agencies is summoned: -

- Local police
- Fire Brigade
- Hospitals
- Ambulance
- Blood Banks
- Home guards
- Voluntary Agencies

After the incident has been controlled, the site Main Controller should assess the situation and call off the emergency.

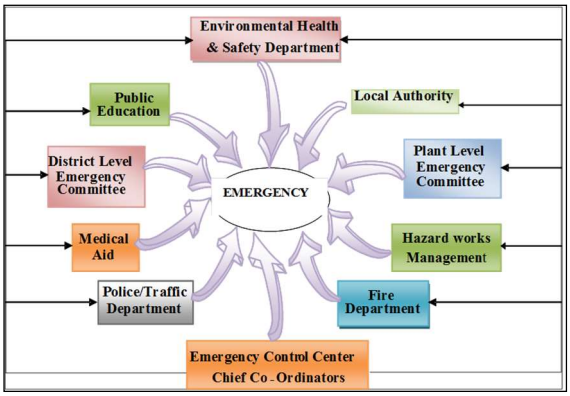


Figure 1: Various organizations involved during emergency

1.9 Sequence of operations required in case of emergency:

1) To take notice of the actual situation after hearing emergency siren.
2) To instruct the watchman for communication to all the agencies.
3) To see that person controlling the hazard wear appropriate personal protective appliances (Breathing Apparatus)
4) To move to the spot to assess what action is required.
5) To ascertain that the message has been communicated to the desired persons properly.
6) To ensure that unwanted people goes far away from the incident spot.
7) The fire shall be controlled with the help of fire extinguishers here, water jets, Carbon dioxide Cylinders. The helper shall assist him in this job.
8) To remove the Gas- affected / fire effected workers, give first aid and to be sent for medical care.

Procedure for Testing & Updating the Plan

Simulated emergency preparedness exercises and mock firefighting exercises including mutual aid scheme resources and in conservation with district emergency authority to be carried out every six months.

Disclosure of Information to Worker and Public Awareness System Anticipated

- Safety awareness among workers by conserving various training programs 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.

Table 3
Emergency contact numbers of government officials

S. No.	Name of Govt. Agency	Phone Nos.
1	District collector/ Magistrate	05882-257912/9454417526
2	Sub Divisional Officer / Magistrate	9454415862

S. No.	Name of Govt. Agency	Phone Nos.
3	Factory Inspector of the area	9411858555
5	DCP Traffic (HQ/Control room)/ SP	9454400301
7	Addnl. Commissioner of Police	9454400301
8	Fire Brigade	9454418518
10	Director Ind. Safety & Health/ DDF	9410660677
12	Dy. Chief Controller of Explosive/ ADM(E)	0562-2523266
14	Civil Surgeon	9837620156

2.0 Occupational health and safety will be categorised broadly into two categories:

1. Protection of Health
2. Promotion of Health

Protection of Health

In an industry, the most important factor for proper running of it is the health of employees which is being/has to be taken care of by following some measures like:

- Proper regular check-up of employees
- Regular training of employees
- 24 hrs First aid and medical availability
- Records maintenance

Promotion of Health

- Training regarding importance of health
- Programs related to health education
- Records maintenance
- Organizing health campaigns

Occupational health centre

The industrial premises has one occupational health centre for regular check-up of employees and to deal in case of emergency. The centre is being/will be equipped with all the emergency facilities and a qualified doctor as well as staff for auxiliary works.

2.1 Plan and Fund allocation for Occupational and Safety Hazards

Proposed budget details for expenditure on Occupational Health & Safety will be Rs 10.5 lakhs/annum.

Table: 4

Fund allocation for Occupational Health &Safety

S. No.	Description	Amount (Rs. In lakhs per annum)
1.	Doctor's Retainer Fee (including staff)	5.0
2.	Medicine Expenses	1.0
3.	Health Check-up Exp.	2.0
4.	Ambulance Expenditure	2.5
	Total Amount in (Rs.)	**10.5 Lakhs**

2.2 Permissible exposure levels

The distillery has following hazardous chemicals that are used in process and can prove harmful if not handled properly. The medical health check-up is being/will be carried out regularly to find out any previous symptoms related to any disorder or disease. The industry has all the MSDS of hazardous chemicals and employees are being/will be given proper training pertaining to medical emergencies and situations. The exposure levels of hazardous chemicals is/will never be surpassed and in case of leakage or sudden emergency, proper measures will be taken to avoid emergency situations.

S. No.	Hazardous chemical	Predicted exposure level (TLV)	Impacts	Mitigation measures
1.	Sodium hydroxide	2 mg/m^3	Caustic soda can cause burns. Acids and alkalis can cause severe burns.	• Proper PPEs to be provided to workers. • Handling in accordance with good industrial hygiene and safety practice • Avoid contact with water. Direct contact with water may cause an exothermic reaction.
2.	Carbon di-oxide	5000 ppm	headaches, dizziness, restlessness, a tingling or pins or needles feeling, difficulty breathing, sweating, tiredness, increased heart rate, elevated blood pressure, coma, asphyxia, and convulsions	• Carbon dioxide is being/will be collected in scrubbers and sold to vendors. • Proper monitoring and maintenance of fermentation equipment. • Proper PPEs to be provided to workers exposed to the zone. • Regular checking of pipes and bolts for avoiding any fugitive emissions.
3.	Ethyl alcohol	1000 ppm	Alcohol storage tank bursting or leakage	• Proper flow meter to check the flow of alcohol in storage tanks. • Proper training to employees to act in case of alcohol leakage. • Proper fire extinguishers adequate for the fire that can happen in distillery i.e. foam type. • Proper fire hydrant network is being/will be spread in all the areas prone to fire hazard. • Fire sensors and alarms.
4.	Dust exposure	-	Sudden dust cloud can affect the respiratory tract and interfere with breathing. Cause pneumoconiosis Some particles dissolve in the bloodstream. The blood then carries the substance around the body where it may affect the brain, kidneys and other organs.	• Proper dust mask for persons handling biomass and coal. • Regular water sprinkling to avoid dust dispersion. • Storage of coal and biomass in covered sheds and continuous water sprinkling. • Proper greenbelt is being/will be developed in all the areas having the probability of dust explosions.

2.3 Occupational health surveillance

In distillery plant, the occupational health surveillance of the employee is being/will be done on a regular basis and record of the same will be maintained as per the Factories Act.

Pre placement and periodical health check-up tests to be undertaken

The check-ups are/will be dependent on age, sex, duration of exposure and department wise. Following tests are being/will be done regularly:

- X Rays (Chest)
- Audiometry (Ears)
- Spirometry (Lungs)
- Vision testing (Eyes)
- ECG (Heart)

Frequency of Medical Examination

- Once in a year

Personal Protective Devices and Measures

- Industrial Safety helmets, Crash helmets
- Goggles

- Safety Shoes & Rubber Gumboots
- Aprons
- Ear muffs and Ear Plugs
- Full body Safety harness
- Leather hand gloves, Heat Resistive hand gloves, Chemical hand gloves and Cut resistance hand gloves
- Safety belt / line man's safety belt

Implementation of OHS standards as per OHSAS/USEPA

The overall objective of the company is to provide a system that is capable of delivering healthy and safe workplace. Following measures are being/ will be adopted for implementation of OHS standards.

- Well-equipped Occupational Health Centre with adequate paramedical staff
- Routine and special investigation related to occupational health
- Health surveillance and maintenance of health record
- Rules and procedure for effective implementation of Safety Health and Environment policy and made to know all employees
- Round the clock ambulance facility
- Sufficient number of first aid boxes
- Formulation of OHS implementation team/ cell
- Risk assessment of each and every activity
- Implementation of OHS management program
- Displaying the safety and health policy and instructions at various locations
- Display of safe operating procedure (SOP) at various locations
- Job safety analysis
- Carry out daily plant safety inspection by internal safety department
- Investigation of fatal, serious accidents
- Investigation of reports of occupational diseases
- Monthly safety meeting of all employees & workers to discuss last month accident if any, reason and corrective measures taken.
- Organize safety training, seminars for safe working and safe vehicle and traffic movement within the plant premises and regular training for safe driving outside the plant premises
- Prepare annual reports of accidents and occupational diseases. Preparation and updating of Onsite Emergency Plan and liaison with external agencies and authorities
- Ensure use of PPEs according to the job like helmet, safety shoes, goggle, dust mask, ear plug and hand gloves etc.
- Establishment of Occupational Health Centre for pre and periodic medical examination of workers and staff to detect any onset of occupational disease and corrective measures
- Display Material Safety Data Sheet (MSDS) for use of every hazardous substance
- Implement the recommendations of HAZOP (Hazard and operability study) for examination of problems in existing process / operation that may represent risks to personnel or equipment
- Periodic safety audits both internal and external, review and implementation of recommendations.

2.4 CONCLUSION

It is concluded that there is being/ will be no major risk involved due to expansion project. Proper precautionary measures are being/ will be taken to minimize risks. Personal Protective Equipment (PPEs) is being/will be helping to minimize the health hazards and accidental casualties. So it is safe to say that there is being/ will be no major risk involved due to the expansion project.

प्ररूप XV
(प्रथम अनुसूची का अनुच्छेद 6 देखिए)
FORM XV
(see Article 6 of the First Schedule)

अधिष्ठापनों में पेट्रोलियम के आयात और भंडारकरण के लिए अनुज्ञप्ति
LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अनुज्ञप्ति सं. (Licence No.) : **P/HQ/UP/15/5057(P411237)**

फीस रूपए (Fee Rs.) **15000/-** per year

M/s. M/S. L H SUGER FACTORIES LTD, CIVIL LINES PILIBHIT, Pilibhit, District: PILIBHIT, State: Uttar Pradesh, PIN: 262001 को केवल इसमें यथा विनिर्दिष्टु वर्ग और मात्राओं में पेट्रोलियम **2024.00 KL** आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा संख्या **P/HQ/UP/15/5057(P411237)** तारीख **26/02/2018** जो कि इससे उपाबद्ध हैं, में दिखाए गए स्थान पर भण्डारकरण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती हैं ।

Licence is hereby granted to **M/s. M/S. L H SUGER FACTORIES LTD, CIVIL LINES PILIBHIT, Pilibhit, District: PILIBHIT, State: Uttar Pradesh, PIN: 262001** valid only for the importation and storage of **2024.00 KL** Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No **P/HQ/UP/15/5057(P411237)** dated **26/02/2018** attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December **2022** तक प्रवृत रहेगी ।
The Licence shall remain in force till the 31st day of December **2022**

पेट्रोलियम का विवरण /Description of Petroleum	अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	**2024.00 KL**
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	**NIL**
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	**NIL**
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	**NIL**
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	**NIL**
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C,otherwise than in bulk	**NIL**
कुल क्षमता /Total Capacity	**2024.00 KL**

February 26, 2018

For Chief Controller of Explosives
HQ, Nagpur

अनुज्ञप्त परिसरों का विवरण और अवस्थान
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुज्ञप्त परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टयां संलग्न अनुमोदित नक्शो में दिखाई गई हैं **Khasra No: 411 M, V Jangrauli Pul , Pilibhit , Sungarhi , Pilibhit, Jangrauli Pul, Pilibhit, District: PILIBHIT, State: Uttar Pradesh, PIN: 262001** स्थान पर अवस्थित है तथा उसमें निम्नलिखित **6 Above Ground tank(s) for CLASS A** , सम्मिलित हैं ।

The licensed premises, the layout , boundaries and other particulars of which are shown in the attached approved plan are situated at **Khasra No: 411 M, V Jangrauli Pul , Pilibhit , Sungarhi , Pilibhit, Jangrauli Pul, Pilibhit, District: PILIBHIT, State: Uttar Pradesh, PIN: 262001** and consists of **6 Above Ground tank(s) for CLASS A** , together with connected facilities.

L.H. Sugar Factories Ltd. Pilibhit (U.P.) 05882 256053

intertek
☐ Reviewed
☐ Witnessed
Initial:
Date: 02/08/18
IN-0047