

NUMALIGARH REFINERY LIMITED

ASSAM, INDIA

SAFETY REGULATION

Annexure – 8 to General Conditions of Contract

INTRODUCTION

Safety in Hydrocarbon Industry such as Refineries, Marketing Installations and LPG Bottling Plants like ours deserves utmost attention, as these are inherently hazardous. A good number of contractor workmen are deployed in these sectors to carry out maintenance, construction and other jobs and these are widely recognized as accident prone activities. The analysis of the incidents / accidents in the Petroleum Sector reveals that a large number of such incidents involve contractor workforce which in turn have resulted in either causality, injury or property damage to owner or and contractor personnel & property besides leading to operational interruptions and environmental degradation.

The reasons for accidents are mainly due to unsafe act, unsafe working condition, lack of training and awareness, inadequate safety management, equipment failure and poor house keeping. It is seen that unsafe acts and unsafe conditions contribute approximately 88% and 10% of all accidents respectively. It is also said that a safe and alert worker is safer in unsafe condition than an unsafe and un-alert worker in a safe condition. Most of the accidents are caused due to inadequate safety management system; same needs to be prevented.

In order to improve the safety levels in our Refinery Premises, the contractor safety is of paramount and utmost importance and therefore a good contractor safety management system must be in place. The Contractor's management, supervisor, safety officers therefore must ensure that all these rules and regulations of this Safety management system are strictly enforced and monitored with the help and guidance of Owner's Engineer in charge / Safety officers so that precious lives and costly properties can be saved.

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1.0 GENERAL SAFETY GUIDELINE

i) General : Safety of Contractor's employees working for Owner on sites should be of the same high standards as that of Owner's own people. The following is a list of rules and regulations which must be observed by any contractor or his sub-contractor working in the Refinery, other property/facilities outside, belonging to the company.

ii) The contractors have to satisfy the provisions of Factories Act, 1948 and the Rules framed there under and other related Acts concerned to the running /construction of the factory/refinery.

iii) The contractor shall take every precaution and provide the facilities necessary for the safety of all workmen employed and shall comply with the safety rules and regulations of the company.

iv) Carrying of matches or any other means of ignition is strictly prohibited in the Refinery. Persons on entering the Refinery must deposit such articles at the security gates.

v) No dry battery or accumulator type of electric hand lamp or torch which is not of the flame proof safety type shall be taken into the Refinery.

vi) All persons engaged at the Refinery, if called upon , shall submit to be searched by the Company's recognized officials for the possession of articles prohibited under rule (iv) above . The search may take place at the time of entry to the Refinery or during the time when the employees is in the Refinery by the security staff.

vii) Warnings and tags shall be placed pointing out hazards.

viii) Hard safety hats shall be worn by all employees when assigned work in the Refinery operating area/unit before entering the unit to protect from head injuries.

Safety helmets: Contractors employees require the wearing of helmets under the following conditions:

- a) In plant under shutdown maintenance.
- b) In areas where maintenance is being carried in the opinion of the company's Engineer helmet should be worn.
- c) After entering the 2nd gate of the refinery, safety helmet shall be available with every contract worker.

ix) While walking, be on the side of the roads and the central portion of the road should be left for vehicular traffic.

x) Resolve to keep good housekeeping a habit. If the work place is tidy and the job is being done in neat manner, there are fewer interruptions, delays and above all it helps in controlling accidents. Job site of contractor shall be kept reasonably clean and free from rubbish and debris which, may create tripping of fire hazards. Remove grass/shrubs whenever required to carryout the work in safe manner.

xi) Safety goggles, gloves, gumboots, aprons, hard and other safety equipment shall be used by the contractor's employee where, in accordance with Company's regulation, use of such equipment is prescribed.

Owner's representative will stop the work of contractor whose employees are found not to be wearing safety shoes , not using hand gloves and are not wearing hard hat. The work will be allowed to commence only when these employees are found wearing the personal protective equipments.

No contract worker will be allowed to enter beyond 2nd gate of the refinery without Safety Helmet and Safety Shoe.

xii) Ladders/scaffolds/lifting tackle / tools and equipment used by Contractor shall meet applicable safety codes and rules, unsafe tools equipment shall not be used under any circumstances. In this regard, the decision of the company Representative /Safety section shall be final.

xiii) Oil, rags, cloths or any waste materials are dangerous fire and tripping hazards. Dispose off such materials immediately in the dust bins only.

- xiv) Fire extinguishers , water hydrants and steam hoses are there to extinguish fire and should not be used for cleaning tools, washing, etc. Free access must always be maintained to such equipment.
- xv) Do not wear oily clothes.
- xvi) Report oil leaks promptly to owner's operating personnel. Stop all the hot work in the surrounding areas.
- xvii) Do not leave tools, bolts , and other equipment in the walkways, on the beams or in any place where they will cause a tripping hazard.
- xviii) Do not turn on steam, water, electricity or set in motion machinery without permission and seeing that any one is in a position to be injured. Never remove a tag from any vessel without proper authorization.
- xix) Inspects walk planks, runways and ladders before use and keep them in good conditions.
- xx) Do not throw material from high elevation. Lower it by means of a rope.
- xxi) Cordon of all excavations and trenches to avoid falls, by fencing, barricading or otherwise and place a sign indicating the same.
- xxii) Never point compressed air or steam hoses towards employee/workmen.
- xxiii) No contractor will be allowed to work in the Electricity sub-station without a standby from Owner's electrical department.
- xxiv) Following completion of work , contractor shall clean up job-site to Company's satisfaction.
- xxv) Debris shall be disposed off, at designated location(s). Metal scrap and salvageable materials belonging to the Company shall be moved to the Refinery Salvage Yard/Scarp yard.
- xxvi) Contractor's employees shall no enter manufacturing units, office buildings or maintenance shops and store house premises without specific approval. They shall not leave their representative job site without prior approval.
- xxviii) Company Representative and Safety section are authorized to correct any conditions which they may consider hazardous.
- xxix) Contractor should:
- Make themselves and their employees aware of all the hazards; provide means and organization to comply with the safety & health measures required at the workplace before commencement of any job inside Refinery. Educate workmen about their duties at the workplaces.
 - Implement safe methods and practices; deploy appropriate machinery, tools & tackles, experienced supervisory personnel and skilled work force etc. required for execution. Ensure inspection and certification of all tools being used. Remove defective tools immediately.
 - Nominate / engaged qualified & trained Safety Engineers / Officers reporting to the Site Incharge for supervision, co-ordination and liaison for the implementation of the safety plans & procedures.
 - Ensure that only PPEs of the Owner approved type is used at work site. Arrange suitable facilities in liaison with the Owner for drinking water, toilets, lighting, etc applicable as per Laws / Legislation at site.

- Ensure strict compliance with work permit system after ensuring that all safety precautions / conditions in the permit are complied with and closing the same after job completion. Arrange for fire protection equipment as per the advice of owner.
- Ensure that its employees have completed appropriate health and safety training as required by the statute / regulation and also as per requirements of the Owner / Consultant. The documentation of such training imparted to all its employees should be maintained and produced for verification as required.
- Ensure that workers have proper training for their job assignments, including use of appropriate PPE and first aid fire fighting equipment.
- Report each incident and / or injury in accordance with established procedures and assist in investigation. To maintain accident & near miss record in a register.
- Conduct daily inspections to ensure compliance with safety standards, codes, regulations, rules and orders applicable to the work concerned. Arrange daily toolbox meeting and regular site safety meetings and maintain records.
- Attend training and ensure participation of his workers for training as per schedule arranged by the Owner / Consultant and keeps himself updated.
- Keep records of number of persons working at the site. Also keep a constant liaison with EIC / Owners' representative on safety issues.

2.0 SAFETY MANAGEMENT

2.1 JOB SAFETY ANALYSIS/PLAN

Job safety analysis provides the Contractor, Safety Officer or Supervisor a mechanism to take a detailed look at the individual task how it is performed and what are its inherent hazards and then take preventive actions accordingly. Contractor must do the exercise for all critical activities and submit it to Owner's EIC for approval before taking up a Job. A job safety analysis/plan includes the following five steps:

- Select a Job
- Break the Job down into sequence of steps
- Identify the hazards against each step
- Apply the Control to the hazards
- Evaluate the controls

2.2 WORK PERMIT SYSTEM

2.2.1 The Work Permit System is an important tool for ensuring safety in Hydrocarbon Processing & Handling Installations like Refinery, Marketing Terminals, LPG Bottling Plant, etc. For the safety of the personnel, machineries & plants, a safe and user friendly **Work Permit System** has been formulated in line with OISD & other statutory guidelines. If a work has to be performed by any person other than the operating personnel of that area, a duly authorized written permit shall be obtained by the executing agency before commencement of work. Such Permit is valid only for a specific job for a specific period. Every Contractor must comply with this **Work Permit System** without fail. If a work has to be performed by any person other than the operating personnel in that area, a duly authorized written Permit must be obtained by the person / agency executing the job before commencement of work. Since several maintenance & construction jobs are carried out with assistance from Contractors, it is essential to provide sufficient exposure to contractors, their supervisor and workmen about this Permit System. Work Permits are normally not issued directly to any Contractor.

In general, NRL has the following system of permits.

- a) Hot Work Permit: Combined for hot job and confined space entry
- b) Cold work permit
- c) Excavation permits
- d) Working at height
- e) Radiography permits
- f) Electrical lock out permit
- g) Road excavation permits
- h) Mobile material handling equipment permit

If required, the contractor has to prepare and submit a job safety plan for the special nature of the job along with the permit, which are to be approved by EIC and Fire and Safety Deptt. It is normally the contractor's responsibility to fulfill the conditions of the permit like keeping/wearing PPEs, Harness and life lines, gas detector, Portable fire extinguishers, spray nozzles, Fire hoses etc., however, the owner may also supply the same and if felt necessary may be charged also.

For the entire jobs, permits are to be taken as per owner's prescribed format and procedure and must be initiated & get it signed by Owner's designated representatives and other depts. as per procedure. Contractors working within Refinery without valid work permit or violating condition of permit may be penalized and shall be removed from the approved list of company contractors.

2.2.2 A) Hot work permits :

I. The performance of work which

- i) Constitutes a source of ignition
- ii) Constitutes a potential fire hazard or
- iii) Interferes in any way with normal fire fighting operations, shall require an approved Hot work permit.

a) i) Excavation permit:

Any excavation within the limits of the Refinery whether carried out by earth moving Equipment or hand tools, requires an excavation permit. It must be signed by owner's representative, in addition to the Hot work permit.

ii) Electrical permit:

For carrying out any electrical work, proper authorization and permission is required from Electrical Maintenance including energizing/ de-energizing certificate /Electrical permit. The contractor is not supposed to switch on/off any circuit connected to the electrical system or any work without energizing/de-energizing certificate/electrical permit.

b) i) Entry of motor vehicle and equipment fitted with internal combustion engines into the unit limits of operating areas. All engine driven equipment used on plant must be securely fitted with approved exhaust spark arrestors.

ii) Any work on oily water and intermediate sewer systems.

iii) Making any opening in the fire bound-walls enclosing storage tanks.

- d) Before starting any work, the contractor must fill in the prescribed form for doing hot work and hand it to the owner's representative. Person authorized to issue work and work permit will be intimated to the contractor by the owner.

II. a) Hot work permits are required for all locations in the Refinery other than those specifically exempted for this requirement.

b) Hot work permits are valid for the period mentioned therein and shall require renewal or extension by the issuing authority if work is to continue beyond the specified hours.

- c) Refinery operating personnel and shift-in-charge of Fire & Safety have the authority to withdraw any approved permit and stop work should they consider a hazardous condition exists or is likely to exist during the course of the work.
- d) Contractor's personnel assigned to the job requiring Hot work permits shall conduct the job safely and abide by all precautions specified on the permit.
- e) Hot work permits shall be endorsed by Fire & Safety Dept., copy of which shall be retained by them and the original shall be in possession of contractor's personnel actually working while work is in progress.

III. Issuance of Hot work permit for carrying out specified" Hot work" does not permit smoking on worksite.

B) Cold work permit:

a) The purpose of a "cold work permit" is to give written permission to a person/contractor to carry out work on a separate item of operating equipment or any facility belonging to an operating plant/area. The permit is to ensure that the equipment and area are safe to carry out the specific work.

b) Cold work permits are required for all work of maintenance, repair, modification or construction nature performed in the operating areas and/ on operating equipment.

c) Work permits are valid only for the duration specified and will require renewal or extension by the issuing authority if work is to continue beyond the specified hours.

d) Work permit must be signed by the Gas Safety Inspector/Office-in-charge responsible for the operation of the equipment/unit or area concerned.

e) Work permit shall be endorsed by authorized NRL employees of different classified areas and copy of which shall be retained by them, original must be in possession of Contractor's personnel actually working while work is in progress.

C) Clearance from field Supervisor:

The hot work and cold work permits shall not be valid until a clearance certificate is obtained from the field supervisor responsible for the operation of the equipment/unit or area concerned.

2.2.3 In the event of hazardous conditions developing in an area where work is being performed. Work permits will be withdrawn by Refinery Operations/Fire and Safety personnel. Work thus suspended shall not recommence until the work permits are re-issued.

2.2.4 Important Notes:

a) No work involving HOT WORK or the opening of equipment and lines may be carried out in the refinery without a Hot work permit and a cold work permit and where necessary a gas certificate. All vessels such as tanks, columns etc. which have contained any inflammable liquids or corrosive chemicals may only be entered by a person after a clearance certificate and cold work permit are issued.

b) All the conditions laid down in permit /clearance must be implemented in totality before start of job/activity and in case of any doubt the same shall be clarified with concerned NRL supervisor in charge of the work. Contractor must keep his workers fully informed of the details and possible dangers of the job in hand in daily meeting conducted at respective site.

c) Workmen must not be allowed to enter any vessel, tank, pump, trench or drain without a work permit issued for the job stipulating the necessary precautions to be taken for the safety of the workmen. It is the responsibility of the contractor to see that the certificate is valid up to date before any work is to proceed.

d) Any job involving dangerous chemicals must be covered by a cold permit, where such jobs required the use of protective clothing for the protection of the workmen; this will be supplied by the NRL in certain cases and it is the responsibility of the contractor to ensure that his workmen wear the protective clothing.

e) Electricity driven appliances such as drills, grinders, etc require a permit before they are to be used on plant plots, refinery roads, etc.

f) In case the diesel generating sets are required to be used for any particular work, the contractor shall arrange for necessary certificates for uses from Govt. Authorized Elect. Inspector. The wiring of DG set shall be with double earthing ELCB and approved by NRL Engineer.

g) All work in connection with roofs of a building must be covered by a work permit and cowl board or Cat Ladders must be used with a safety harness. On no account will any workmen be allowed to stand, walk or crawl over any roof.

2.3 USE OF PERSONNEL PROTECTIVE EQUIPMENTS:

The Personal Protective Equipments (PPE) are used at work site to reduce risk of dangerous occurrences and provide a physical barrier between the user and the hazard. It is of course of primary importance that Personal Protective Equipment (PPE) are carefully selected before procurement and then maintained. Improper selection, use and maintenance can only cause danger to the life of the user. All personnel using PPEs should be thoroughly trained about the right use of Personal Protective Equipment (PPE), its upkeep and maintenance by the Contractor. If required, guidance from Owner's representatives should be taken. PPEs are two types - Non-respiratory Personal Protective Equipment & Respiratory Personal Protective Equipment. The Contractor should follow the following guidelines.

- It is the prime responsibility of the Contractor to supply all PPEs to his workmen and strict adherence of the compliance of the same at the work place. He cannot allow his worker to perform job without using the requisite PPE for the job. Owner may issue any of these PPEs to Contractor, if available, on chargeable basis.
- All the PPE should be of BIS Standard or equivalent International standard. All PPEs like Safety Helmet, Safety Shoe, Boiler Suit, Full Body Harness, Gloves, Chemical suit, Mask, Welding goggles, Eye shield, Ear plug, Ear muff, BA apparatus, Life line, Mask for Toxic Gases should be procured as per this standard and supplied to his worker.
- Contractor should also ensure that these PPEs are replaced as per guidelines.
- A register for issue of PPEs to the workers is to be maintained by the contractor at site which may be checked by owners representatives.
- Certain PPE like helmet, Safety Shoe and Boiler suit will be checked at Main Entry and Owner will stop entry of such persons who are not having these PPEs.
- Contractor should take advice from owner the probable requirement of PPEs for a specific job before quoting or submitting his tender.
- The contractor has to train his persons about the usage of PPEs.
- Owner may check the quality of the PPEs supplied by the contractor to his workers through competent persons. Owner may also stop work and impose penalty to the Contractor for not using PPEs by their employees.

2.4 INSPECTION / AUDIT

Inspection / Audit is a tool to evaluate compliance of all safety requirements inside our Refinery Premises. Most of the relevant information can be gathered through site inspection using ready-made checklists to ensure that the Contractors are following the rules and regulations at work site. Contractors are therefore required to develop checklists in consultation with Owner's EIC & Safety Officers. Before starting a job and at regular interval thereafter, Contractor's supervisor and Owner's representative should inspect as per the checklist and take appropriate action in case of non-compliance.

2.6 PENALTY FOR NON-COMPLIANCE

In order to ensure 100% compliance of safety related regulations and procedures and nonuse of PPE, penalty will be imposed on the Contractors or their Workmen not adhering to permit conditions / safety rules & regulations. The Contractors must endeavour to avoid penalty by encouraging, motivating and making their employees aware about all the Safety regulations. Remember that the purpose of this scheme is to ensure safety of the personnel & property. A few of the non-compliances are as under:

- Non-usage of PPEs / Safety Belt(Full Body Harness)
- Violation of safety permit conditions
- Non-barricading of area
- Working without valid work permit
- Unauthorized road closure

1. The Penalties on the Contractor or their workmen may be in the form of:

- Warning
- Seizure of Gate Pass
- Denying Entry / Entry Pass renewal
- Compulsory Training at Contractor's cost
- Delisting

2. Owner's authorized representatives will report such violations to the concerned departmental head for imposing necessary penalty.

3. The above penalties shall be double in case of violations more than 3 times during the contractual period for a particular contract.

4. Imposing any penalties for violation of HSE norms does not absolve the Contractors from their contractual obligation / responsibility.

5. Contractors shall own full responsibility for any accident and injury to any of their employees or property due to violation of HSE norms.

6. All such financial Penalties imposed on Contractors shall be considered for evaluation of Contractor's performance for tendering.

2.6 ANNEXURE – I : FORM FOR INTIMATION

1. TO : EIC / HOD
2. NAME OF THE CONTRACTOR :
3. DATE & TIME OF VIOLATION :
4. AREA / LOCATION / UNIT :
5. DETAILS OF VOILATION :

Sl	Description of violation (Pl indicate the penalty clause no)	Penalty	Remarks
1			
2			

Name:

Signature:

Date:

2.7 REPORTING UNSAFE ACTS/CONDITIONS/FIRE/ INCIDENT /ACCIDENT / INJURIES / HAZARDS ETC

If the Contractor's employee notices any oil leak, fire or hazard or any other abnormal situation including unsafe acts and conditions he should immediately report to owner's representatives. Also Refer emergency procedure clauses 3.3

2.7.1 Hazard communication including fire reporting and control:

Contractor must familiarize themselves about all probable sources of hazards like Fire, Explosion or Toxic release inside the Refinery & Marketing Terminal. He in turn will also ensure that the same information has been passed to his supervisor and workmen. Proper record of such dissemination of information must be kept by the Contractor and submit to the Engineer In charge on demand.

2.7.2 Action by person noticing Fire / Emergency situation are as under:

1. Attempt to extinguish fire with equipment available.
2. Inform NRL personnel immediately available in the job / unit.
3. Operate Fire Alarm (MCP) and / or inform Fire Station on telephone No.333/444 giving specific information like identity of caller, location of fire/incident, other site information like road blocked, etc. for ensuring earliest arrival of fire crew & equipment.

2.7.3 Reporting Accident / Injuries and Records :

- According to the Factory & Other Acts, any workman sustaining an injury in the Refinery and then absenting himself from work from more than 48hours, his accident report is to be sent to the Government authorities. To comply with this regulation, it is the responsibility of the Contractor to inform immediately to Owner's representative regarding the accident, which may occur to his employee while working in the Refinery premises.
- If any Contractor employee is referred to an outside hospital as a result of an injury suffered by him and whether hospitalization is required or not, the Contractor will keep Owner posted on day to day basis about the condition of the injured person. Contractors to maintain proper records of Accidents of his personnel.
- Any injury must be reported to the Occupational Health Centre (OHC) and EIC immediately. Also Contractor must fill in the First Information Report (FIR) within 4 hours from the incident and the accident investigation Report (AIR) within 24 hours of the incident.
- Contractors are also required to submit the safety statistics like accident / incident / injuries for the last 3 consecutive years for the various jobs executed by them in various work sites along with tender.

2.7.4 FIRST AID / TREATMENT OF INJURIES:

- In the event of any injury sustained by any of Contractor's employees within Refinery & Marketing Terminal Premises, it should be informed to OHC at telephone 222/3700. The Contractor should ensure that FIRST- Aid should be immediately made available to the victim.
- Facilities for treatment of injuries (FIRST AID) are available at all times at the company Occupational Health Center. Injuries should be treated with a minimum of delay. Contractors are to follow the advice given by the Occupational Health Centre for the subsequent treatment.
- Contractor shall arrange expenses for Medical treatment including charges during hospitalization of Contractor's Personnel.

2.8 SAFETY COMMITTEE MEETING:

To maintain awareness, update training, convey important safety and health information, Safety Meetings should be held at a periodic interval. The Contractor, their Supervisors & Safety supervisors, should attend such meetings. The Owner's Supervisor / EIC and Safety Officers may also attend these meetings at random basis. The Contractors should maintain record of these meetings. Following three types of safety meetings should be held.

2.8.1 Tool Box Meeting

2.8.2 Site Safety Committee Meeting

2.8.3 Periodic Safety Review Meeting

2.8.1 Toolbox meeting

To maintain awareness, update training and convey important safety and health information, contractor supervisors should conduct toolbox meetings at site prior to start of work. All Contractor workmen should attend this meeting. The Owner's Supervisor / EIC & Safety Officers may also attend this meeting. The frequency of Toolbox meeting is to be decided based on the circumstances.

2.8.2 Site Safety Committee Meeting

The Safety Committee should include representatives from Owner, Consultant & Contractor and it should be headed by EIC. The purpose of this Committee is to enable Owner & Contractor to monitor Site safety to prevent accidents and improve working condition. Its size & membership will depend on the size and nature of job. Owner's EIC / Safety Officer will guide in this matter.

The Safety Committee should have monthly meeting and the outcome of these meetings should be documented. The functions carried out by safety committee should include:

- i. Review compliance status of pending items of last Safety meetings.
- ii. Discussion on incident / accident / near-miss reports to make appropriate recommendation for prevention. Examination / evaluation of suggestions made by workmen.
- iii. Forward recommendation to Apex Body for consideration / approval.

2.8.3 Safety Review Meeting

This meeting is generally be headed by the Location head and attended by Owner's Supervisor / EIC / Safety Officer and may be by all concerned department heads. Prime purpose of this review is to ensure that all the recommendations of various committees are being complied with. The frequency of the meeting is at least once in every quarter. All the investigation reports / audit findings with status of implementation shall be discussed.

2.9 SAFETY TRAINING

F&S Training is mandatory for all Contractor employees for getting an entry pass and also before start of any work inside the Refinery Premises.

a Training of Contractors' Proprietor, Partners, Directors, etc:

- The Proprietors, Partners, Directors of the Contractors who have ultimate responsibility to carry out the work must undergo a comprehensive safety familiarization programme.
- This programme would be conducted once in a quarter by Fire & Safety / Training & Development Section the schedule of which will normally be notified in advance.
- On completion of the programme a certificate of Attendance / Safety training card will be issued to each participants which will be required for issue of Entry Pass.

b Supervisors' Training:

- Contractors' supervisor will have to undergo training on Health, Safety and Environment (HSE) in Refinery which also includes "Work Permit Systems".
- HSE training card would be issued on completion of the training which would be valid for 1 year.

c Workmen's Training:

- Contractor's workmen will have to undergo one day's classroom and practical training on "Safety" before commencement of the job.
- On completion of Training, "Certificate of Attendance" would be issued by F&S Section.
- The "Certificate of Attendance" would remain valid for a period of one year. However, the same may be required for rectification with the same procedure if the workman is found violating any safety norms or indulging any unsafe act.
- Entry pass would be issued on production of valid certificate only.

d Refresher Training:

Supervisors / workmen will be required to undergo refresher training from time to time as decided by Fire & Safety Section. The coverage & methodology of Refresher Training would be same as the initial training.

2.10 MEDICAL CERTIFICATE

Contractor will ensure that workers including Supervisors are medically examined by a certified surgeon / Occupational Health Physician having qualification of MBBS+AFIH as per Assam Factories Rule, 1960 or any competent physician before deployment on the job. Only medically sound person as certified by above medical practitioner would be allowed to do the job. Workmen deployed on high risk jobs like working in confined space, working at height, working under water, etc. must also be additionally certified for such jobs. The medical certificates older than more than 6 months will not be accepted. Health Assurance certificates submitted by the Contractors would be checked at random by the Refinery medical officers.

3.0 SAFETY PRACTICES AT WORK PLACES:

3.1 SAFE PRACTICES FOR INDIVIDUALS

- 3.1.1** i) Where walkways are provided use them instead of short-cuts. If walkways not available you must use the roadway keep to the right so you will face approaching vehicle.
ii) As a protective measure employees must not walk through or cut across any operative units unless their duties require them to do so.
iii) Walking on or over any mechanical or roller conveyer is strictly prohibited.
iv) Employees should not walk on rail road tracks if it can be avoided.
v) Passing under railway wagon as a short-cut is dangerous and strictly prohibited.
vi) It is prohibited for any person to ride on the running board of any vehicle or any part of the vehicle without being properly seated.
vii) All stairways, platforms and walkways must be kept clear at all times.
viii) Make shift of any kind are prohibited.
ix) Umbrellas are not permitted to be used while cycling.

- 3.1.2** i) Before starting a job be sure you know how to do it. If any doubt, consult your supervisor.
ii) Do not touch or attempt to operate or set in motion any machine or equipment, which you are not assigned to operating or repairing.
iii) Only the authorized personnel may operate any switch-gear from routine stopping and starting of motors and lighting.
iv) Never look directly into the arc produced when welding without proper eye protection.
v) When starting any steam pump or machine, make sure the exhaust steam heads are drained, so that hot water will not be sprayed out creating a hazard.
vi) Protruding nails should be pulled out or bent over.
vii) Goggles or shields must be used when working on emery wheels, brushes, chipping etc... or any other circumstances where there are possible eye hazards.
viii) Gloves must never be worn while grinding materials on an emery wheel. Gloves are not provided to keep hands but to protect against abrasions, silver corrosives and extreme temperatures. Gloves should not be used when operating machinery without sanction from section Head.
ix) When working around moving machinery, the wearing of loose clothing such as Dhotis, lungies etc. is prohibited.
x) Learn the right way to lift so as to avoid strain. Bend your knees, keep your body erect, and push upward with your legs.
xi) All the tools to be used on job should be of good quality and good condition. Defective tools are dangerous. Do not use them. Never use a tool except for its purpose.
xii) Do not leave tools or materials where they may accidentally drop on persons below.
xiii) Do not tamper with or attempt to repair instruments. Only instrument technicians are permitted to work on instrument.

- xiv) Process technicians must always be stand on the windward side when taking samples, bleeding or draining lines or equipment .
- xv) No work should be started on oil, chemical, gas stream, air, sewer, or water lines or equipment carrying these before a clearance certificated is obtained from Ops. Dept.
- xvi) Shift employees must not leave their jobs until the men who relieve them are properly advised of all operating conditions.
- xvii) When work is completed, all left over junk and tools are to be removed to the proper places.
- xviii) NO WORK is to be started until all permits are obtained.
- xix) If an object is too heavy for you, get help.
- xx) Watch your hands and footing when you are handling heavy objects.
- xxi) The use of safety shoe is mandatory.
- xxii) Finger rings should not be worn.

- 3.1.3** i) If you become aware of an immediate hazard such as unexposed escape of petroleum products, gas etc. see that the work in surrounding area is immediately stopped. Your prompt action can prevent injury to others. If any gas leaks occurs signs must be placed on road to keep automotive equipment away from contaminated area. Fire section should be informed immediately.
- ii) Safety is your responsibility and not responsibility of that imaginary someone else. All conditions that may affect the safety of employees or equipment must be reported at once.
- iii) Lines or equipment must not be purged with compressed air.
- iv) Compressed air or gas must not be used for cleaning or blowing dust out of clothing or for pressure testing within refinery.
- v) Never points an open hose at another person.
- vi) Drums, full or empty may not be used as work benches or supports for any job, or in place of ladders .
- vii) All drums must be clearly marked as to their contents.
- viii) Do not hesitate to suggest any additional guarding for improvements to existing guards that may make for added safety.
- ix) Excavations in any area must be suitably protected and marked. This also applies to any trench or drains which has a cover removed. During unit shut-down if ladders, grating or hand rails removed, safely ropes must be placed around the opening to eliminate the danger of fall. Before starting excavations of any description in the refinery or residential area an approval must first be obtained from the Engineering Department, so as to avoid any possible damage to electrical cables or pipelines.
- x) When it is necessary to block off any road in any area including the residential area, only official road barriers should be used. These are obtainable from the Fire Station on request. The supervisor in-charge of excavation work is responsible for carrying out of this regulation.
- xi) The excavation or ditch more than 1.5 meter deep must be properly shored up, before any employee is permitted to work in it.
- xii) Whenever your clothes become saturated with oil, change your clothes immediately and wash your body part with water.
- xiii) Coupling or connections on stream, air or water lines for hose connection should point downwards, so that if the hose blows of their will be less danger of personally injury .
- xiv) No clothing or any inflammable material is allowed to be dried out on steam lines or any other hot equipment.
- xv) As gas or liquids have natural freezing qualities when the pressure is suddenly released, care must be exercise not to expose any part of the body to serious leaks or when taking samples. Frost bite is often the effect of such exposure.
- xvi) When a person is working in any vessel in the immediate vicinity of operating units one person must be Stationed at the opening of the vessel as a watchman.
- xvii) Sample bottles must not be used for any purpose other than samples.
- xviii) All belts and couplings must be properly guarded.
- xix) A guard may not be removed or adjusted while machinery is in operation. The machine must be rendered in operative by the removal of fuses or locking of moving parts before a guard is removed or repairs commenced. Guards must be replaced before machinery is put back into operation.
- xx) All guards on pumps, motors, gears, machinery, etc.etc. must be fitted after any maintenance work. These must be in place before handling over the equipment for operation.

- xxi) When work is completed all guards ,and rails etc. must be replaced.
- xxii) All moving parts of the machinery such as couplings, pulleys, wheels, belts chains, fly wheels etc. must be equipped with proper guards.
- xxiii) It is strictly prohibited to use any grade of petrol or any other inflammable liquids or corrosive chemical such as caustic soda or acid for cleaning purposes. Approved paint removers may however be used.
- xxiv) Transporting or storing of Petrol/Diesel or light products or corrosive chemicals etc. in any open container is strictly prohibited.
- xxv) Every precaution must be taken to avoid oil splashes when opening lines or other equipments. Oil must be drained into suitable containers wherever possible. In the event of an oil spill the Fire Section should be advised with a minimum of delay . Spills which involve light products must receive immediate attention.
- xxvi) Protective Clothing and equipment must be worn by personnel handling corrosive chemicals such as acid, caustic soda etc. When required gas masks can be obtained from Fire Station.
- xxvii) All storage containers such as tanks, drums etc. containing corrosive chemicals must be clearly marked indicating the nature of the contents.
- xxviii) All pumps in service on corrosive or dangerous chemicals must have gland guards to prevent spraying . All equipments which come in contact with corrosive chemicals must be washed with water immediately After finishing the job.
- xxix) Before using any types of swinging scaffold, stages of boatswains chairs, it should be tested while close to the guards.
- xxx) Don't insert a bolt or nail in a chain to shorten it. The bolt or nail may slip or break and an accident results.
- xxxi) Only members of the operating personnel are allowed to change over pumps, open or close valves on the operating lines or vessels etc. or in an emergency at least a member of the plant operating personnel must be in attendance when this is carried out.
- xxxii) When loading , unloading or handling pipe joints, a piece of wood or smaller short pipe should be inserted into the ends of the pipe. This will keep the hands free and prevent crushed fingers.
- xxxiii) Hand towing of Lister trailers only allowed in plant areas.
- xxxiv) Do not transport any material including in process or final products samples by bicycles which are equipped with special carriers.
- xxxv) If glass panes or windows ventilators or shutters etc. are broken or cracked, the entire pane must be renewed immediately.

- 3.1.4** i) Vehicles of all description must be equipped with good exhaust and muffler system to enter the refinery Area. Any unit with a defective exhaust system will be prohibited from entering the refinery area. All Traffic signs and regulations must be complied within the refinery area.
- ii) Vehicles must not be driven off roads on the operating plant area without a Hot Work permit and cold work permit.
- iii) Diesel must not be siphoned out of tanks of vehicles.

3.1.5 General Loss Control Rules:

Refinery being a highly hazardous industry it is mandatory that the Contractor's employees follow all applicable safe practices and confine to the work place only and neither move from their job site nor loiter around the Refinery operating and other Units. They will not be allowed to relax or sleep in the operating units even in the period of work breaks. It is Contractor's responsibility to explain all the safety regulations / instructions to his employees. All the Contractors and their employees must ensure the following General Loss Control Rules :

1. Numaligarh Refinery and its Terminal area (Factory) are under hazardous industry and every worker/visitor/contractor must observe safety rules and regulations and insist on its observance by other co-workers also. All are to enter factory premises with valid gate pass/authorization only.
2. Carrying of matches or any other means of ignition source is strictly prohibited inside Factory Premises. Before entering the Factory premises, matches and lighters must be deposited at the security main-gate.
3. Smoking is strictly prohibited inside the Factory Premises.

4. Mobile phones are strictly prohibited inside the second gate of Factory Premises.
5. Wearing of Helmet & Safety Shoe with proper colour code is must inside the refinery premises after second gate. To perform a job safely use appropriate personal protective Equipment (PPE). Ensure all the PPEs are in proper condition.
6. Do not wear loose clothing (e.g. Dhoti, tie etc) in plant area. It is dangerous near running machinery.
7. Wear cotton protective cloths. Synthetic clothes may generate static electricity, which can be source of ignition in hydrocarbon processing plant.
8. Only Diesel driven vehicles fitted with approved spark arrestor are allowed in designated roads inside the Factory Premises.
9. Only authorized drivers with special Fire & Safety Driving training is allowed to drive inside the second gate of Factory Premises.
10. Speed limit of 25 km/hr should be strictly followed while driving inside the Factory Premises. The vehicles should stop at sites with sign board “STOP”, “LOOK AROUND” & “GO” and follow the above instructions.
11. Don't carry out any job/operation without proper authorization/Work permit.
12. Before the start of any job be sure you know how to do it safely. If in doubt, ask your supervisor.
13. Non sparking tools must be used in hydrogen/LPG handling areas in refinery and Marketing terminal.
14. Fire fighting and safety equipment's must be kept in designated places and access to be kept unobstructed.
15. All stairways, platforms and walkways must be kept clear at all times
16. If you are working in an isolated place, keep in touch with the person designated by your supervisor.
17. In case of Disaster /Major Fire Siren all hot jobs being executed inside refinery shall be immediately stopped and electric power for the same shall be cut off.
18. In case of any accident / fire incident/dangerous occurrence / near misses immediately report to your supervisor and telephone Fire & Safety dept at Tel: 333/444. Get first aid promptly. For ambulance telephone Occupational Health Centre at Tel:222.
19. Two person should not be allowed while riding bicycle inside the refinery premises.
20. All the vehicles including material handling crane, hydra, excavator etc should have back horn.

3.1.6 Movement inside Refinery / Marketing Terminal Premises

1. Always use walkways instead of short cuts. No one should walk through or across any operative units unless their duties require them to do so.
2. Walking on or over any rolling item, mechanical roller or conveyor is prohibited. Avoid walking on railroad tracks. Passing under railway wagon as a short cut is dangerous and strictly prohibited.

3.2 HOUSEKEEPING

3.2.1 Housekeeping is an important aspect towards maintaining a healthy & safe work environment inside any Industry. If proper housekeeping can be maintained, lots of problems are automatically resolved. The Contractor therefore must ensure for removal of scrap, inflammable material, waste and debris at appropriate interval including proper storage of materials and equipment. The debris, scrap and other unwanted materials generated out of the activities carried out by the Contractors must be removed from site and shifted to the designated location or as instructed by EIC. The Contractor may ensure the following.

- Ensure proper storage of both Owners' / Contractor's materials & equipment at site used for carrying out the maintenance or construction job.
- Remove the loose materials, which are not required for use. Accumulation of these at the site can obstruct means of access to workplaces and passageways. Scrap generated out of the maintenance job should also be removed.
- Workplaces and passageways, that are slippery owing to oil, grease or other causes, should be cleaned up or strewn with sand, sawdust, ash etc.
- The workplace to be kept clean on continuous basis. Even for continued nature of work the work place must be cleaned not later than every four hour basis, non compliance of which shall be treated as major violation of safety norms.

- Before offering a completed job for final inspection/acceptance Contractor must ensure that all maintenance waste, scrap and other disposable items are removed from the workplace. Failing the same will call for rejection of inspection call and the contractor shall be penalized for the wastage of inspectors time through necessary recovery from their bill.
- All disposable material and scrap shall be dumped in the specified location only and panel recovery shall be made if found dumped in other location. It may be noted that in all the item rate contract housekeeping is a part of the activities and as such deduction will be made in case of non-compliance.

3.2.2. Worksite Inspection Clearance Report

The following report to be attached with the final bill. The report should be filled up and signed after joint inspection after completion of work. Inspection should be carried out jointly by the representatives of EIC, production Deptt or area in charge and contractor representative.

i Format for worksite Inspection Clearance report

Inspection Date

Time

LOA no	Name of the Work / Worksite	Cleaning Status
		Workable Material Stacked properly : Yes / No Left scattered : Yes / No Scrap Material Transported to scrap yard : Yes / No Left out at site : Yes / No Waste Material Transported to waste yard : Yes / No Left out at site : Yes / No
Name of Representative		Signature
Site I/C - Contractor		
EIC - Maintenance		
Area I/C – Operation		

3.3 EMERGENCY PROCEDURES

Emergencies like fires, explosion, leakages or accidents may occur at any time and in any case if contractors' personnel notice such abnormality he should immediately inform nearby NRL employees or Fire Station. He may use any of the following modes of communication to intimate Fire Station / Occupational Health Centre about the incident / accident.

- Intercom telephone to Fire Control room – 333/444**
- Breaking MCP (Manual call point)**
- VHF Channel-8**
- PA system**
- Occupational Health Centre (Ph 222) in case of injury**

However, as a responsible person he should use portable Fire Fighting media in case of Fire and inform immediately the nearby Owners representative / Fire Station.

3.3.1 Siren Code: To communicate during emergency, NRL has following siren code:

- i) **Minor Fire: No siren**
- ii) **Major Fire: Wailing sound for 2 minutes**
- iii) **Emergency: In case disaster wailing siren will be sounded for 2 minutes thrice at a gap of 1 minute in subsequent blowing.**
- iv) **All Clear: 2 minutes straight siren**

3.3.2 Important Procedures to be observed during Emergency

- If the Contractors employees notice any oil leak or fire, he should immediately report to Owner's representatives or Fire Station by using any one of the communication mode mentioned above and stop all the jobs.
- Action by contractors in the event of a Major Fire Alarm:
 1. Contractor personnel under direct supervisor of NRL :
On sounding of a general alarm siren, contractor's personnel within the premises will carry on their normal work unless they are directed otherwise by their NRL Supervisors.
 2. Contractors personnel under contractors direct supervision :
 - a) If not in the immediate vicinity of the incident he is to keep men working as normal
 - b) If in the vicinity of the incident, following shall be resorted to :
 - Stop all work, shut off engines/ welding machines etc. and take advise from owner's representatives.
 - Check the number of workforce immediately and if any of his personnel are missing then he is to report this to fire station control room.
 - Assemble the workers at a safe distance from the incident, preferably at the identified "Assembly Point" and wait direction from his normal NRL supervisor.
 - Only when the all-clear siren is blown work should be resumed. Fresh permits should be taken before commencing work in such cases.
 - c) Under no circumstance, must the contractor's supervisor allow his men to take part in any emergency action unless so required by a NRL's supervisor.
 - d) Any contractor who is driving a vehicle when the Fire Siren sounds should park his vehicle at a suitable location away from the site of fire.
 - e) Contractor personnel working at Refinery premises should be given demonstration and should acquire knowledge of the fire prevention and should be able to make use of the fire extinguishers.
- Those who are using firewater for any purpose must immediately stop using the same and must shut off the hydrant valve from which water being taken.
- When a fire extinguisher is operated for firefighting purpose or inadvertently, advice Fire station immediately so that extinguisher may be replaced.
- Any employee contravening the Fire Regulation is liable for instant removal.

4.0 PROCEDURES, REGULATIONS FOR SAFETY DURING EXECUTION OF WORK :

4.1 EXCAVATION OF WORK

Any excavation work inside the Refinery & Marketing Terminal Premises may affect underground sewers / telephone lines / cables / pipelines as a result of which there may be Fire & Explosion Accident or shutdown of the Plant. Any excavation within the limits of the refinery whether carried out by earth moving equipment or hands tools, requires an excavation clearance permit. It must be initiated & signed by Owner's representative and other depts. as per procedure.

The basic guidelines for excavation is as under:

4.1.1 General Provisions:

- Entire requirements as per IS-3764 & OISD 192 & 207 guidelines should be followed. All excavation work should be planned. The method of excavation and type of support work required should be decided considering the stability of the ground & affect on adjoining buildings, roads, underground pipes, cables or any other structures.
- All excavation work should be supervised and inspected for any defect regularly.
- Safe angle of repose while excavating trenches exceeding 1.5m-depth upto 3.0m should be maintained. Based on site conditions, provide proper slope, usually 45°, and suitable bench of 0.5m width at every 1.5m depth of excavation in all soils except hard rock or provide proper shoring and strutting to prevent cave-in or slides.
- Don't allow vehicles to operate too close to excavated area. Barricade should be provided.
- Contractor shall not make any underground road crossing without the specific prior approval of the Owner's representative. The Owner's representatives shall make alternate arrangement for emergency movement of fire tenders. Area drug-up will be kept with "Road closed" barrier. Side berm of Road should invariably be excavated manually.
- Dumping of excavated earth should be done at the designated area only. Penalty will be imposed in case of non-compliance. Checklist to be prepared and to be submitted to EICs before commencement of any excavation.

4.1.2 Checklist for Excavation Clearance

SI	ITEM	REMARKS
i.	Whether excavation hot work permit is taken?	
ii.	Compliance status of precautions suggested in the permit. 1 ---- 2 ----	
iii.	Whether barricading with glowing caution board is provided?	
iv.	Condition of the area where excavated earth is to be dumped.	
v.	Others	

Signature of Contractor's Site In charge

Signature of EIC

4.2 LADDERS AND SCAFFOLDS

Accidents are also caused by the ladders falling or the climber losing his balance or failure of scaffolds. As such, utmost care should be taken for these two items normally used extensively for maintenance and construction purpose inside the Refinery. Some of the safe practices as listed below are to be observed before commencement of work.

- Make sure that ladder is not defective or broken and is not a repaired one. All ladders used must be sound construction and the right length for the job in hand. The free length must extend by 1.5 meters above the point of landing but should not be more than 1/4th of the ladder length. No portable single ladder shall be over 9 meter in length.
- Short ladder must not be tied together to give greater lengths. All ladders of 6 m or above should be tied to the structure on which they are resting to prevent from slipping. If they cannot be fixed with reasonable security, a worker must be stationed at the base of the ladder to foot it to prevent slipping. Ensure that the ladder is placed at a safe angle to prevent slip or fall back.
- Metal ladders may not be used for electrical work.
- Every member of scaffolding must be of sound construction. Steel planks used in scaffolds should be carefully inspected and should be tied on both sides with suitable fixing arrangements to the pipes. Scaffolding must not be overloaded.
- The Steel pipe & clamp to be used must be of good quality. The spacing between the vertical & horizontal members of the scaffolding should not be more than 1.5m and 1 meter respectively. The scaffolding should be further strengthened with cross bracing and stays.

- vi. The scaffolds should be provided with short climbs ladders for safe ascending / descending of workmen in the job. Only those men who are well trained / experienced in erecting scaffolding should be engaged for scaffolding work. The men working in the actual erection / dismantling of the scaffolding and all persons using the scaffolding must use suitable PPEs.
- vii. Bamboo or other flammable material is not allowed inside refinery for any type of scaffolding work other than specific purposes.
- viii. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing.
- ix. The Contractor or his representative shall check the approach platform to scaffolding for correctness and shall put a tag with signature that it is checked by them and found as per standard scaffolding norms. If required, necessary certificates regarding stability of such arrangement should be taken from the competent person before it is put to use.

4.3 ELECTRICAL SAFETY

Numaligarh Refinery Limited deals with product like Naphtha, SKO, Diesel and Hydrogen, which are very hazardous in nature in regard to flammability. The ignition point is so low that huge fire may occur with slightest of spark. Hence while dealing with electrical equipment / installation extreme care needs to be taken in terms of installation as well as operation. Hence ELECTRICAL SAFETY is prime requirement while executing any works inside the refinery. The subsequent clauses and sub clauses will give a brief idea about the system and procedure needs to be followed for operation of electrical equipment or running a electrical system.

4.3.1 Safety Standard: Applicable standards for Electrical Safety are:

- I. OISD standard**
- ii. Indian Electricity Rule 1956**
- iii. IS standard**

4.3.2 Electrical License:

Only persons having valid licenses should be allowed to work on electrical facilities. The person who had undertaken contract for electrical installation work must possess Electrical contractor license. The person who supervises any electrical installation work must possess Electrical supervisor license based on the voltage level. The person who performs electrical power connection must possess Electrician work permit. The document must be furnished before commencement of any such job.

4.3.3 Procedure for Temporary Electrical Power Connection:

Owner may supply power to the Contractor from the nearest substation at one point. The Contractor have to make his own temporary installation including temporary cable as per guideline stated below following the Indian Electricity Rule 1956 and OISD GN 192 for Construction Safety. The Contractor shall dismantle at his own cost the installation including temporary cabling etc. after completion of job failing which penal recovery, as deemed fit by the owner will be imposed.

The following are the minimum requirement for the Contractor electrical installation without which power connection will not be provided.

- The installation to be protected with proper shed to prevent ingress of water. The SFU, bus bar chamber must be in metallic structure. The SFU must be provided with HRC fuse.
- The metallic stand / chamber must be earthed by using 2 nos of 3 meter long 65 mm dia GI earth electrode using minimum 25x3 mm G I strip. All non-current carrying metallic part needs to be connected to earth.
- Static energy meter along calibration certificate needs to be installed. Required numbers of Fire bucket & Fire extinguisher is to be installed wherever required.
- The danger board must be displayed prominently. Authorization chart mentioning the name of authorized person to be displayed. Artificial respiration chart to be displayed.
- All Isolation switches are well accessible. And the entire Installation area to be well illuminated. All spare holes of the switchboard to be plugged. Wiring in the installation to be neatly dressed and all cable must be armored with proper size glands and lug.

Once completed, the Installation checked & certified by licensed supervisor.

- After completion of installation, the Contractor must submit the application for temporary electrical connection along with test report as per the prescribed format.
- The Owner will designate engineer for inspection of the said installation and power supply will be provided only after compliance of all safety requirements. Any delay on this account is attributable to the Contractor.
- The addition of any load beyond the approved load must be intimated to in same format of application along with test report. The same needs to be inspected by owners Engineer. Violation of above procedure may liable for power disconnection.
- The Owner from time to time will designate Engineer for checking of the installation and any non compliance found must be complied within a week failing for which power will be disconnected.
- The Contractor will maintain checking of the Installation every fortnightly and record the same in a register. Owners Engineer will review the register.

4.3.4 General Safety Precautions:

- No person should be allowed to work on live circuit.
- For power connection from Existing Refinery Electrical system, permit to be obtained from Electrical SIC and job needs to be carried out as per his written instructions. Before obtaining permit, Insulation Resistance test to be carried out and report to be furnished to Electrical Shift In charge .The Contractor must furnish all the document as per QAQC procedure of the Electrical works.
- All temporary switchboards put up at work site should be suitably protected from rain and the level of it should be enough to avoid contact with water due to water logging.
- Use only proper rated HRC fuses. Don't overload any equipment or system. Overloading of equipment may create overheating which ultimately led to fire hazard. ELCB for all temporary connections must be provided. Use insulated 3-pin plug tops.
- Industrial type extension boards and Plug sockets are only to be used.
- Use spark-proof / flame proof type electrical fittings in Fire Hazard zones as per area classification under OISD-STD-113.
- All temporary cables should be laid at least 750 mm below ground and cable markers should be provided. Proper sleeves should be provided at road crossings. Termination should be done using glands and lugs of proper size and adequately crimped.
- Illuminate suitably all the work areas. Hand lamps should be of 24V rating.
- All switchboards should be of steel only. Incoming source should be marked.
- Fire extinguishers (DCP/CO2/Sand buckets) should be kept near switchboards used for construction purposes. Don't use water for fighting electrical fires.
- Electricians should be provided with approved and tested tools, and personal protective equipment such as rubber gloves, mats etc.
- RCCB or ELCB should be provided as per Indian Electricity Rules used wherever required. A Residual Current Operated Circuit Breaker (RCCB) or Earth Leakage Circuit Breaker (ELCB) protects a human being to the widest extent.
- Notices displaying important electrical safety information should be kept exhibited at suitable places.

4.4 DEMOLITION

Demolition of any building or structure might cause accident or damage property. As such, all necessary precautions, methods and procedures should be adopted for demolition and disposal of waste or residues. The work should be planned and undertaken only under the supervision of a competent person after obtaining necessary permit. All hazards and risks involved in the process must be identified. A duly approved job safety plan must be available with the Contractor before commencement of any demolition job.

- Before any demolition work is commenced and also during the progress of the work, all roads and open areas adjacent to the work site shall either be closed suitably protected.

- All electric, hydrocarbon and utility service lines near the site should be shut off or adequately protected against damage before work commences.
- As far as practicable, the danger zone round the site should be adequately fenced off.
- Demolition activities should not be continued under adverse climatic conditions such as high winds, which could cause the collapse of already weakened structures.
- Structures should not be left in a condition in which they could be brought down by wind pressure or vibration.

4.5 WORK OVERHEAD / HOSTING EQUIPMENT

Accidents do happen while working overhead or due to failure or unsafe use of hoisting equipment. As such, adequate care must be taken to prevent it. The following are some of the precautions to ensure safety of the workmen engaged by the Contractor:

- i. Contractors involved in handling of any material overhead must install necessary barricades, warning signs or take any other steps necessary to prevent others from walking / standing beneath the load.
- ii. All equipments like crane, chain blocks, sling, rope including all other material handling equipments must have valid load test certificates.
- iii. If handrails are temporarily removed from platforms, stairways, etc., the resulting opening should be protected by extending rope line or by any other suitable device.
- iv. Contractors must safeguard their workmen on all overhead work by ensuring suitable construction and erection of ladders & scaffolding. Contractors must also take measures to safeguard person on ground against objects falling from the work above.
- v. Hoisting machines, tackles including their attachments, anchorage & supports must conform to the good mechanical construction, sound materials and adequate strength and free from patent defect and shall be preserved in good condition.
- vi. Every crane driver or hoisting appliances operator shall be properly qualified and no person below the age 21 years should be in charge of any hoisting machine.
- vii. Every hoisting machine and all gears shall be plainly marked with the safe working load. No part of any machine or gear shall be loaded beyond the safe working load.
- viii. In case of owner's machine, the safe working load shall be notified by EIC. For Contractor's machines, the Contractor shall notify the safe working load to EIC.
- ix. Motors, gearing transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with safe guards.
- x. Permission must be obtained from EIC before any person is allowed to work on an asbestos roof with all fall arresting appliances. When working on asbestos covered roofs, proper boards must be used to support your weight-crawling boards or cat ladders.

4.6 CONFINED SPACE ENTRY:

- i) Working in confined space is highly dangerous and must be carried out as per the work permit condition and under very close supervision.
- ii) No work in any confined space shall be carried out without a valid permit and clearance certificate. No entry board shall be displayed when equipment like columns, vessels are opened for work till clearance for entry is given after testing. Safe to enter board shall be displayed the person giving the clearance for the entry after conducting necessary tests.
- iii) Before entry into any confined space proper tests for hydrocarbon, toxic gas, oxygen level must be carried out by NRL authorized person , Adequate means of entry and exit must be provided. Adequate light must be provided inside the confined space with max. 24V.
- iv) Ventilation as required to extract welding fumes, dust etc must be provided as prescribed in the permit. Minimum 19.5% oxygen must be available in the confined space for entry and work.
- v) Never enter a confined space without provision of standby personnel. Stand by person should be aware of NRL emergency handling procedure and adequately trained in rescue operation.
- vi) Use life harness, one end of which shall be held by the standby personnel outside. Use all personal protective equipment including fresh air hose mask if hydrocarbon gas concentration is more than 5% of Lower Explosive Limit(LEL).

- vii) No one shall enter any confined space even with a supplied air respirators if the gas concentration is more than 20% of LEL.
- viii) No one shall be allowed to enter a confined space if hydrocarbon sulphide or other toxic gas is present.
- ix) Emergency equipment as required must be kept ready and in good condition.
- x) Portable lights used in confined space not exceed 24 volts.

4.7 Material handling:

4.7.1 Accidents occur in handling materials because of unsafe working practices such as lifting improperly, carrying too heavy a load and failure to use personnel protective equipment.

Following directives should be adhere to:

1. Before lifting and carrying objects size the load and if necessary get help.
2. Survey that the route to be followed is free of obstructions.
3. Lift and carry in the proper position. Lift material with your leg and not your back.
4. When two or more men must carry a single object must have good coordination.
5. Make sure that object carried does not hit anybody or fall on someone working below.
6. While using mechanical hoists and cranes, test hoist , controls and brakes before starting the job.
7. Never carry loads over men working nearby. Signal them out of the way.
8. Move the load on signal from one person only.
9. While handling unusually heavy loads like exchangers and drum, use extreme caution.

4.7.2 The crane lifting tackles, slings, D'shacles etc. used for the work at site shall comply with the statutory requirement and shall accompany with valid test certificates duly approved by statutory authority.

4.7.3 Contractors bringing any equipment into the company premises are required to declare it at the security gates and obtain necessary endorsement on the challans from security department.

4.7.4 Any automobile or container , as well as, any company or personnel property of any kind , brought into or carried out of the plant , is subject to inspection by the security staff and government excise.

4.7.5 A gate pass issued by a designed representative of the company must be presented to the security for inspection of all materials, tools and equipment leaving the premises of the company along with the stamped challans.

4.7.6 Transporting materials from one place to another by a forklift, Escort, Hydra or mobile cram is prohibited. Material must be transported on trailer, truck or handcart of adequate capacity.

4.7.7 Handcart must of good mechanical construction, sound material and adequate strength and must be declared safe to use by competent and authorized person. Display the name of the contractor who owns it. Record of all the Hand carts should be properly maintained which shall include details of purchase, repairs carried out time to time by authorized person . Hand carts must be used with defective wheels or other body parts. Defective hand carts should be discarded from the system and record of such discarded hand carts should be properly maintained in prescribed manner.

4.7.8 Over-hanging loads whether on the sides or at the rear of the hand cart or any vehicle is dangerous and particular care must be exercised.

4.7.9 Trained and experienced riggers only must carry out materials handling.

4.8 USE OF OWNER'S EQUIPMENT & MACHINERY

4.8.1 Use of Owner's Equipment:

- i. Owner's equipment must not be handled or tampered with by the Contractor & Contractor's employees. Owner may grant permission to Contractor to operate his equipment, if so require, but Contractor shall not use Owner's equipment and tools without obtaining permission from Owner's representative.
- ii. Contractor shall assume full responsibility for proper care of Owner's equipment and tools, which are made available to them for the execution of their work and ensure to return such equipment and tools in good working order. Owner will recover from Contractor's full cost of repairs to or replacement of equipment or tools in the event some damage is occurred due to improper use while in Contractor's custody.

- iii. Contractor is not permitted to make use of the Company's transport, unless special permission is obtained from competent authority.
- iv. Work of private nature using Company's or Contractor's equipment and / or materials is not to be performed in the Refinery site.
- v. **Tie -in to Owner's Equipment / System** : Contractor shall not open or tie -in their work into Owner's existing pipeline, equipment, sewer systems, electrical power circuits, and other process equipment without specific approval from the Owner's representative.
- vi. **Safety Equipment** :
 - All Contractors' must return the safety equipment loaned to them as soon as the work is completed. Loss or damage to this equipment will be charged.
 - Safety equipment, barricade ribbon, no entry sign board, etc given during any job as per job safety plan must be removed immediately once job is over. Continuing with such equipment even after completion of work shall also be treated as violation of safety norms.

4.9 TEMPORARY OFFICE / SHED

Temporary construction inside Refinery / Marketing Terminal Premises is normally not permitted. However, for a specific period if such shed is required for any construction / maintenance job, it may be permitted provided it meets some specific requirements apart from meeting the requirement of IS 8758. Therefore temporary construction should be done once it is approved by the EIC. In general temporary construction should have access, exit & entry and fire protection facilities.

The following are to be followed for getting permission.

- i. The Contractor should submit formal application for making temporary shed inside Refinery / Marketing Terminal to EIC who in turn take approval from Maintenance Planning. MP will route it Civil Maint, Electrical Maint and F&S for comments. The details like work order reference, purpose, size & shape, materials of construction, duration, location, power requirement & single line diagrams, etc should be submitted to EIC in the format indicated below.
- ii. The shed so constructed should not be at the cost of safety, security or aesthetics. Torn /rusted / repaired items should not be used for construction. The Contractor must ensure housekeeping aspect.
- iii. Power connection should be done only after approval by Electrical Maintenance Section.

4.9.1 Format / Checklist for applying for Temporary shed Construction:

Sl	Description	Remarks
1	Name of the Contractor / Contact person / Contact details	
2	Description of the Job	
3	Name of the Department / Name of EIC	
4	Purpose for which the shed is required.	
5	Location should be made in a plot plan showing distances from all major structures, hazardous units etc.	
6	Size & materials of construction of the shed. (enclose sketch)	
7	Single line diagram. (enclose sketch)	
8	Duration / timing of work inside the shed.	
9	Approximate duration for which the shed is required.	
10	Fire Protection Measure, if any.	
11	An undertaking to the owner that the temporary office shall not be used for any other purposes other than execution or managing execution of specific work as per agreed contractual terms with the owner.	

5.0 STATUTORY / OISD GUIDELINES:

Contractors and their supervisors must acquaint themselves with all the relevant statutory guidelines like Factories Act and Assam Factories Rule, Indian Explosives Acts and Rules, Petroleum Acts and Rule, Indian Electricity Acts and rules, relevant IS codes, etc. relating to safety while working inside a hazardous industry like Refinery, Marketing Terminal & LPG Bottling plants. Copies of such statutory guidelines must be available with the Contractor as ready reference. Copies of OISD guidelines 105, 113, 155, 192, 207, etc may be made available as and when required for reference by the Contractors.

6.0 EFFECTIVENESS OF RULES

6.1 Should any Discrepancy occur between the various oral or written instructions furnished to contractor, the Contractor shall refer the same to the Head of Security /Fire & Safety Dept. whose decision will be final And conclusive and no claim for losses alleged to have been caused by such discrepancy between Instructions/doubts/misunderstanding shall in any event be admissible.

6.2 These safety provisions should be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work spot. The person responsible for compliance of the safety regulations shall be named therein by the contractor.

6.3 a) To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Engineer –in-Charge or officer-in-charge of safety or their representatives.

b) Notwithstanding the above clauses there is nothing in these to exempt the contractor from the operations of any other act of rules in force in the Republic of India.

c) The works without including any temporary works shall be carried out in such a manner as not to interfere in any way whatsoever with the traffic on any roads or footpaths at the site or in the vicinity thereto or any existing works whether the property of the Administration or of a third party.

d) In addition to the above the contractor shall abide by the safety code provision as per P.W.D safety Code and Indian Safety Code framed from time to time.

e) Violation of Safety Regulations may lead disciplinary action, even though the particular violation does not result in an accident.

6.4 The violation of following General Rules and Regulations shall be viewed seriously and disciplinary action shall be taken against employee found responsible for the same.

1. Willful or negligent violation of any Safety Rule which has been previously made known to him.
2. Failure to report immediately accident or personal injuries in which the owner may become involved.
3. Violation of criminal law or committing of offence involving moral turpitude.
4. Conduct which offends common decency and morality.
5. Carrying weapons on site.
6. Fighting or attempting to hurt another person on site.
7. Drunkenness on site or while entering Refinery Premises.
8. Malicious mischief resulting in injury to Owner's employees or property.
9. Use of profane language with intent to insult or other abusive language to an employee.
10. Introduction, Possession or use of intoxicating liquor or habit forming drugs on site.
11. Stealing making fraudulent records or knowingly obtain material on fraudulent orders.
12. Insubordination, including refusal to perform assigned work and intentional disregard or disobedience to instructors.
13. Demonstrated incompetent and inability to do the work.
14. Sleeping on premises.
15. Negligence or carelessness resulting in damage to owner.

7. COMPLIANCE OF NRL HEALTH, SAFETY AND ENVIRONMENT PLANS;

The CONTRACTOR shall comply with the following Health, Safety and Environment Plans and also confirm his/its commitment to the same in the prescribed formats.

- i) Safety Action Plan
- ii) Housekeeping Plan
- iii) Environment Control Plan
- iv) Dust Control Plan and

The details of the above are available in APPENDIX-A of the document

8. FINANCIAL DETERRENT FOR VIOLATION OF HSE NORMS BT CONTRACTOS:

All contractors working for NRL have to strictly HSE norms as per NRL rules and regulations. Contractors who violate HSE norms while executing the job will be penalized financially. Penalty amount and Reporting Authority for Violation/non-adherence of various HSE norms are given in APPENDIX –B of the document.

APPENDIX-A

SAFETY ACTION PLAN

- All supervisors and contract workers shall attend safety training. Only safety trained workers will be deployed by me.
- All personal protective equipment will be provided by me.
- We will strictly adhere to NRL safety rules and regulations.
- We will follow the work permit system of NRL
- While working at height, safety harness will be used.
- While handling with chemicals proper precaution shall be taken to avoid spillage or splash on body.
- Any incident/accident shall be reported to NRL authorities and documented properly.
- Any injury to the personnel employed by me for the job will be promptly reported to NRL Medical centre/Occupational Health centre.
- Proper enclosures will be prepared for welding.
- While entering column/vessel proper care will be taken by providing standby personnel outside.
- Only safe to use scaffolding will be used.
- Daily safety briefing will be given to the personnel employed by me. Safety supervisor shall be designated who will monitor safe working.
- I/We will employ only medically fit employees for the execution of the job.

HOUSEKEEPING PLAN

- All equipment will be properly arranged and placed before start of work.
- A separate bin shall be provided for collecting waste generated by the personnel employed by me. i.e. canteen waste /gloves/cotton waste.
- All debris generated from plant will be collected and stored in NRL allocated space.
- Metallic debris will be carted away to warehouse and accounted for.
- Unused material will be deposited back to warehouse.
- Waste insulation material will be taken out of the site immediately.
- Spillage of oil, if any, will be cleaned immediately.
- Work area will be kept clean at all times.
- Contractor shed and surroundings, if allocated any, will be kept clean and debris will be deposited on road.
- We will maintain approach way for movement of cranes etc.

ENVIRONMENT CONTROL PLAN

- Proper care will be taken at site to avoid any oil leakage/seepage into the ground.
- In case of leakage while opening flange, the matter will be reported to NRL authorities.
- Debris generated like insulation, refractory, concrete etc. will be collected and stored in designed places as directed by NRL authorities.
- Welding machines used shall not emit smoke beyond the permissible level.
- Cleaning of work site will be carried out on a continuous basis.
- Proper breathing apparatus will be used wherever required.

DUST CONTROL PLAN

- Work shall be carried out in a manner where generation of dust is minimum.
- Loose dust/dirt debris will be collected in bags and dumped in designated areas.
- Work area will be barricaded, if required, to prevent dust inhalation.
- Dust mask will be used in dust prone areas.

I/ We are committed to all the above plans.

Job No:_____ Job Name:_____

APPENDIX - B - FINANCIAL DETERRENCE FOR NON-COMPLIANCE

FINANCIAL DETERRENT FOR VIOLATION OF SAFETY NORMS BY CONTRACTORS (APPLICABLE TO ALL WORKS CARRIED OUT IN THE REFINERY BY CONTRACTORS)

All contractors working inside the Refinery have to strictly follow safety norms as per NRL rules and regulations. Contractors who are violating safety norms while executing the job will be penalized financially. Penalty amount and Reporting Authority for violation / non adherence of various safety norms is given below.

Sr. No.	VIOLATION OF HSE NORMS	PENALTY AMOUNT	REPORTING AUTHORITY
NON ADHERENCE OF WORK PERMIT CONDITIONS			
1.	Working without proper Authorisation / Permit (Cold work)	Rs 6000/- per occasion	Engineer-in-charge, HOD, F&S HOD of Technical Functions
2.	Hot work without proper Authorisation/ Permit	Rs. 12000/- per occasion and delisting / holiday listing of 3 years if repeated.	Engineer-in-charge, HOD, F&S HOD of Technical Functions
3.	Violation of any of the conditions specified in the permit	Rs 2000/- per permit.	Engineer-in-charge, HOD, F&S HOD of Technical Functions
4.	Use of mechanically propelled equipment/engine/generator set without/ with faulty spark arrestor	Rs. 1000/- per equipment	Engineer-in-charge, HOD, F&S HOD of Technical Functions HOD, Warehouse
5.	Non-display of name board, permit etc., at site	Rs 600/- per location where job is being executed. Penalty will be repeated if not rectified within 3 days.	Engineer-in-charge, HOD, F&S HOD of Technical Functions
VIOLATION OBSERVED WHILE WORKING AT HEIGHT			
6.	Working at height without safety belt arrangement as required i.e. without safety belt / Non use of double lanyard safety belt.	Rs 1000 / per person Engineer-in-charge,	Engineer-in-charge, HOD, F&S HOD of Technical Functions HOD, Warehouse
7.	Throwing up/down any material from height or not making proper provision to bring down material safely from height	Rs. 1000/- per occasion Engineer-in-charge,	Engineer-in-charge, HOD, F&S HOD of Technical Functions
8.	Non standard/unsafe platform/ ladder	Rs. 2000/- per case per day	Engineer-in-charge, HOD, F&S HOD of Technical Functions
9.	Non standard/unsafe Scaffolding	Rs. 2000/- per case per day	Engineer-in-charge, HOD, F&S HOD of Technical Functions

10.	Use of Uncertified Scaffolding	Rs. 2000/- per case per day	Engineer-in-charge, HOD, F&S HOD of Technical Functions
NON USE OF PERSONAL PROTECTIVE EQUIPMENT			
11.	For not using Non Respiratory Personal Protective Equipment (Helmet, goggles, gloves, safety belts, Boiler suit etc, Shoes .)	Rs. 1000/- Per day/item/person	Engineer-in-charge, HOD, F&S HOD of Technical Functions
12.	For not providing Respiratory – Personal Protective Equipment prescribed in Work permit/job safety plan /B.A. set/canister mask/B.A. compressor etc)	Rs. 5000/- per case per day	Engineer-in-charge, HOD, F&S HOD of Technical Functions
VIOLATION OBSERVED IN ELECTRICAL WORK			
13.	Non use of ELCB , using poor joints of cable, using naked wire without top plug into the socket , laying wire/cables on the roads, carrying out electrical jobs by incompetent person	Rs 5000/- per item per day	HOD, Elect. Maint. Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
14.	Non deployment of the Licensed electricians for electrical job.	Rs. 2000/- per person	HOD, Elect. Maint. Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
15.	Working/ on live electrical circuits without work permit/authorization	Rs. 5000/- per case per day	HOD, Elect. Maint. Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
VIOLATIONS IN EXCAVATION WORK			
16.	- Unsatisfactory fencing / barricading of excavated areas, - not providing proper shoring / strutting / proper slope and - not keeping the excavated earth at least 1.5 M away from excavated area - Not using Equipment having non conductive handle during manual excavation.	Rs. 2000/- per item per day	Engineer-in-charge, HOD, F&S HOD of Technical Functions
VIOLATIONS OBSERVED IN ROAD SAFETY			
17.	Driving NRL or Contractor's vehicle without authority from DTO (Driving License).	Rs. 1000/- per case	Any employee through Head of Dept (F&S)
18.	Over speeding of Cars / buses, rash driving, wrong side parking.	Rs. 2000/- per item	Any employee through Head of Dept (F&S)
19.	Driving hydra/Crane/fork lift above its speed limit fixed for NRL refinery roads or Driving hydra without being escorted by cleaner who is sitting left side of the driver to guide him.	Rs. 1000/- per case	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

20.	Entry of contractors vehicle in No Entry Area without proper authorization.	Rs. 1000/- per case	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions HOD Security/Admin.
21.	Entry of any person in barricaded area marked with tape.	Rs. 1000/- per person	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
22.	Riding on material handling vehicles or trolleys	Rs. 500/- per case	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
23.	Sitting or allowing sitting along with the drivers on fork lift.	Rs. 500/- per case	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
24.	Vehicle Accident- i.e. overturning, falling in pits, damaging equipment , hitting another vehicle etc.	Rs 5000/- per case plus replacement/ repair charges incurred by NRL for NRL owned material	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions HOD Security/Admin.
NON DEPLOYMENT OF REQUIRED MANPOWER			
25.	Non-deployment of safety supervisor / supervisor responsible for safety at work site required as per Special Safety Conditions	Rs2000 per person per day	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
26.	Failure to maintain safety register and record by Contractor Safety Supervisor or Supervisor responsible for safety	Rs.2000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
27.	Failure to have weekly safety site inspection / audit and monthly safety meeting and maintain record (by contractors themselves)	Rs. 2000/- per occasion	Engineer-in-charge, Head of Dept. F&S,
28.	Failure to conduct tool box meeting every day and maintain the records of the same.	Rs. 500/- per day	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
29.	Failure to submit the monthly HSE report by 5 th of next month to Engineer-in-charge	Rs. 200/- per day	Engineer-in-charge
VIOLATION OF STATUTORY REQUIREMENT			
30.	Acting in contravention to any of the provision mentioned in Factories Act 1948 and/or the rules framed there under including all amendments thereto.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

31.	Failure to maintain records as per statutory requirement like 1. Form No. 1A . for the shed/s constructed by contractor 2. Form No. 6 . Certificate of fitness 3. Form No. 10 . Register of workers attending machinery 4. Form No. 11 . Report of Examination of Hoist/Lift/Lifting tackles. 5. Form No. 13 . Report of Examination of any pressure vessel brought by the contractor at refinery site. 6. Form No. 16 . Notice of periods of works for adult workers 7. Form No. 17 . Register of adult workers 8. Form No. 23 . Special certificate of fitness 9. Form No. 29 . Muster Roll	Rs. 10000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
OCCURENCES OF INDUSTRIAL ACCIDENTS			
32.	Failure to furnish a first information report (FIR) as per prescribed Pro-Forma within 4 hours of the incident.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
33.	Failure to arrange immediate investigation / evidences /documents of the incident and furnish within 24 hours to NRL Engineer-In-Charge.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
34.	Keep and maintain proper records of all incidents occurred at work site	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
35.	Failure to report to NRL supervisor on - the - job, medical centre and area safety officer any injury to his employees or any near miss or any hazardous/ dangerous incident at work site within the Refinery premises or hiding of any accident or near miss.	Rs. 5000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
36.	Negligence on contractor's part which has resulted in an Injury/fire: Lost Time Injury Fatality	Rs.1,00,000/- per person Rs. 5,00,000/- per person	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

37.	Negligence on contractors part which has resulted in Minor Fire/Explosion/ etc Major Fire (Reportable)	Rs 1,00,000/- Rs 2,00,000/-	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
VIOLATION OF LABOUR LAWS			
38.	Working beyond statutory limits by contractors Workers	Rs. 1000/- per person per day	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
39.	Deployment of contractor's employees including supervisors without receiving necessary training on safety for working in the refinery.	Rs. 5000/- per person per day and holiday listing of contractor for 6 months if repeated	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
40.	Deployment of contractor's employees including supervisors without undergoing their medical examination, by the authorized medical professional. Deployment of workers on high risk jobs like working in confined space, working at height, working under water, etc. without being examined and certified as medically fit for such jobs by the doctors who are authorized to certify for such jobs.	Rs. 1000/- per person	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
41.	Non subjecting to periodic medical examination after every six months after deployment of workers including supervisors on the job by the certifying surgeon as per Assam Factories Rule 1963.	Rs. 1000/- per person	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
42.	Deployment of child or adolescent	Rs. 10,000/- per person	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
43.	Use of untested and uncertified pressure vessel.	Rs. 5000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
44.	Use of untested and uncertified lifting tools/tackle	Rs. 5000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

VIOLATION IN MATERIAL HANDLING			
45.	Improper material handling/ Manually handling of heavy material when it is require using mechanical equipment/ use of substandard/defective material handling trolleys/hand cart.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
46.	Failure to submit duly filled pre use check list for any new machine or equipment brought at site.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
47.	Inadequate supervision at work site(absence of supervisor/ designated employee as supervisor from site for more than 30 Minutes when work is in progress)	Rs. 2000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
SAFETY PERFORMANCE DISPLAY BOARD			
48.	Safety performance score board not displayed.	Rs. 100/- per day	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
VIOLATIONS IN USE OF GAS CYLINDERS			
49.	Unsafe handling of compressed gas cylinders No trolley or jubilee clips or double gauge regulator or flash back arrestor on both gas lines & both ends or improper storage /handling or cylinders without caps when not in use/ damaged hoses)	Rs. 500/- per item per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
VIOLATIONS DURING RADIOGRAPHY PROCESS			
50.	Radiography without authorization	Rs. 10000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
51.	Non barricading the area during radiography	Rs. 10000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
52.	Non announcement on PA system/alerting people working in vicinity, before start of Radiography jobs	Rs. 1000/- per occasion Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

MISCELLANEOUS			
53.	Damage to fire hydrant & monitors, fire extinguishers including non return of extinguishers	Cost incurred by NRL for repair/replacement	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
54.	Poor House-keeping	Rs. 5000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
55.	Removal of grating/cover/lid on any opening in floor or vessel.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
56.	Use of dangerous portable tools/hand tools like grinding machine, drilling machine, pneumatic excavators/drill by unskilled worker.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
57.	Operating/allow to operate any machine without having guard on its dangerous/rotating part of the machine or an equipment.	Rs. 1000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
58.	Horseplay at work site	Rs1000 /- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
59.	Shifting of debris from one location to another/dumping debris at unauthorized place.	Rs. 10000/- per occasion	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions
60.	Use of mobile in plant areas	Rs 1000/- per person per occasion.	Engineer-in-charge, Head of Dept. F&S, HOD of Technical Functions

Please note that :

1. The above penalties will be applicable for all the contracts jobs carried out inside Refinery and covered by NRL Safety Regulations/ norms / work permit system.
2. Site Engineers, Operations Officers, Safety Officers will report such violation through their Department Head /Engineer-in-charge (Reporting Authority) to the respective contracting department (Commercial) for necessary action. Reporting Authority has been indicated against each violation.
3. On advice from Reporting Authority, Commercial department shall make the deductions from the next payment due to the contractor.
4. The above penalties shall be double in case of violations more than 3 times during the contract period for a particular contract. For annual and other rate contracts POs awarded as part of rate contract shall be considered for this.

5. In case of frequent penalties for a particular contractor, necessary action such as holiday listing / delisting will be taken.
6. In addition to the safety conditions mentioned in Special safety Conditions attached, contractors are required to adhere to the following additional safety requirement for which penalties are applicable as above for violation of these conditions :
 - a) All contractors shall themselves arrange weekly safety site inspection / audit and monthly safety meeting and record should be maintained.
 - b) All contractors shall submit monthly HSE report to respective Engineer-In-Charge by 5th of next month. Report should carry details of precautions against accident and injury to any of the workers or to any person or persons or of weekly safety site inspection / audit, monthly safety meeting, details about records maintained by Safety Supervisor and any other information felt necessary by Engineer-in-Charge for safe execution of job.
7. Implementation of above financial penalties for violation of Safety norms does not absolve contractors from their responsibilities to take at all times due and proper precautions to avoid injuries and accidents.
8. Contractors shall own the full responsibility for any accident and injury to any of the workers or to any person or persons or property arising due to violation of Safety norms by contractors even though financial penalty is not applied for such violation. Implementation of these financial penalties does not absolve Contractors from any of the responsibility as per General Contract Conditions (Latest Revision), General Terms and Conditions and Special Safety Conditions.
9. All such financial penalties imposed on contractors shall be displayed / publicized appropriately by the respective Contracting department.

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