

SECTION – 10 SAFETY CODE AND REGULATIONS

10.0.0.0 GENERAL

- 10.0.1.0 The CONTRACTOR shall adhere to safe construction practices and guard against hazardous and unsafe working conditions and shall comply with the OWNER's safety rules as set forth herein.
- 10.0.2.0 In addition, the CONTRACTOR shall adhere to and be bound by the "Safety Practices During Construction" (OISD-GDN-192) formulated by the Oil Industry Safety Directorate from time to time. A copy of the existing "Safety Practices During Construction" as presently formulated by the Oil Industry Safety Directorate is annexed hereto as Appendix III.
- 10.0.3.0 In the event of any irreconcilable conflict between the "Safety Practices During Construction" prescribed by the Oil Industry Safety Directorate and the Safety provisions set out herein, the "Safety Practices During Construction" established by the Oil Industry Safety Directorate shall prevail to the extent of the irreconcilable conflict.
- 10.0.4.0 In this Section any reference to the Refinery shall wherever applicable include any existing Plant, Unit or Installation (other than a Refinery) in or adjacent to which the job site or any part thereof is located.

10.1.0.0 FIRST AID AND INDUSTRIAL INJURIES

- 10.1.1.0 The CONTRACTOR shall maintain first aid facilities for its employees and those of its sub-contractors.
- 10.1.2.0 The CONTRACTOR shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to the Engineer-in-Charge prior to start of construction, and their telephone numbers shall be prominently posted in CONTRACTOR's field office.
- 10.1.3.0 All critical industrial injuries shall be reported promptly to the Engineer-in-charge, and a copy of CONTRACTOR's report covering each personal injury requiring the attention of a physician shall be furnished to the OWNER.

10.2.0.0 GENERAL RULES

- 10.2.1.0 Carrying/Striking of matches, lighters inside the Refinery area, smoking within the refinery, tank, farm, or dock limits are strictly prohibited. Violators of the "No Smoking" rules shall be discharged immediately. Within the operation area, no hot work shall be permitted without valid gas safety/fire permits. The CONTRACTOR shall be held liable and responsible for all lapses of his sub-contractors/employees in this regard.

10.3.0.0 CONTRACTOR'S BARRICADES

- 10.3.1.0 The CONTRACTOR shall erect and maintain barricades required in connection with his operation to guard or protect :
- (i) Excavation
 - (ii) Hoisting areas
 - (iii) Areas adjudged hazardous by the CONTRACTOR's or the OWNER's inspectors.

- (iv) OWNER's existing property liable to damage by CONTRACTOR's operations, in the opinion of Engineer-in-Charge.
- (v) Railroad unloading spots.
- 10.3.2.0 The CONTRACTOR's employees and those of its sub-contractors shall become acquainted with the OWNER's barricading practices and shall respect the provisions thereof.
- 10.3.3.0 Barricades and hazardous areas adjacent to but not located in normal routes of travel shall be marked by red flasher lanterns at nights.
- 10.4.0.0 **SCAFFOLDING**
- 10.4.1.0 Suitable scaffolding shall be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra person shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal 4 vertical)
- 10.4.2.0 Scaffolding or staging more than 12' above the ground floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise rewinded at least 3' high above the floor or platform of scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- 10.4.3.0 Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally and if the height of the platform or the gangway or the stairway is more than 12' above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in Clause 10.4.2.0 above.
- 10.4.4.0 Every opening in the floor of a building or in a working platform shall be provided with suitable fencing or railing whose minimum height shall be 3 feet to prevent the fall of persons or materials by providing.
- 10.4.5.0 Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 30' in length while the width between the side rails in rung ladder shall in no case be less than 11.5" for ladder up to and including 10' in length. For longer ladders this width would be increased by at least ¼" for each additional foot of length. Uniform step spacing shall not exceed 12". Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any site of work shall be so stacked or placed as to cause danger or inconvenience to any person or public. The CONTRACTOR shall also provide all necessary fencing and lights to protect the workers and staff from accidents, and shall be bound to bear the expenses of defence of every suit, action or other proceedings, that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay damages and costs which may be awarded in any such suit or action or proceedings to such person, or which may with the consent of the CONTRACTOR be paid to compromise any claim by any person.

10.5.0.0 **EXCAVATION AND TRENCHING**

10.5.1.0 All trenches 4' or more in depth, shall at all times be supplied with at least one ladder for each 100' length or fraction thereof.

10.5.2.0 The Ladder shall be extended from bottom of the trench to at least 3' 3" above the surface of the ground. The site of the trenches which is 5' or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated material shall not be placed within 5' of the edge of the trench or half of trench depth whichever is more. Cutting shall be done from top to bottom. Under no circumstances shall undermining or undercutting be done.

10.6.0.0 **DEMOLITION**

10.6.1.0 Before any demolition work is commenced and also during the process of such work all roads and open areas adjacent to the work site shall either be closed or suitably protected.

10.6.2.0 No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.

10.6.3.0 All practical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion or flooding. No floor, or other part of the building shall be so overloaded with debris or material as to render it unsafe.

10.7.0.0 **SAFETY EQUIPMENT**

10.7.1.0 All necessary personal safety equipment as considered adequate by the Engineer-in-charge should be made available for the use to the persons employed on the site and maintained in a condition suitable for immediate use, and the CONTRACTOR should take adequate steps to ensure proper use of equipment by those concerned.

10.7.2.0 Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves.

10.7.3.0 Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eyes shall be provided with protective goggles.

10.7.4.0 Those engaged in welding and cutting works shall be provided with protective face and eyeshields, and gloves, etc.

10.7.5.0 Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

10.7.6.0 When workers are employed in sewers and manholes, which are in use, the CONTRACTOR shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident.

10.7.7.0 The CONTRACTOR shall not employ men below the age of 18 years and women on the work of painting or products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken:

- 10.7.7.1 No paint containing lead product shall be used except in the form of paste or readymade paint.
- 10.7.7.2 Suitable face masks shall be supplied for use by the workers when paint is applied in the form of spray or if a surface having lead paint dry rubbed and scrapped.
- 10.7.7.3 Overalls shall be supplied by the CONTRACTOR to workmen and adequate facilities shall be provided to enable the working painters to wash during and on cessation of work.
- 10.8.0.0 **RISKY PLACES**
- 10.8.1.0 When the work is done near any place where there is a risk of drowning, all necessary safety equipments shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
- 10.9.0.0 **HOISTING EQUIPMENT**
- 10.9.1.0 Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:
- 10.9.1.1 These shall be of good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good condition and in good working order.
- 10.9.1.2 Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.
- 10.9.1.3 Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or to give signals to the operator.
- 10.9.1.4 In case of every hoisting machine and of every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- 10.9.1.5 In case of departmental machines, the safe working load shall be notified by the Engineer-in-Charge. As regards CONTRACTOR's machines, the CONTRACTOR shall notify the safe working load of the machine to the Engineer-in-charge, whenever he brings any machinery to site of work and get it verified by the Engineer-in-charge concerned.
- 10.10.0.0 **ELECTRICAL EQUIPMENT**
- 10.10.1.0 Motor, Gearing, Transmission, wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum, the risk of accidental descent of the load. Adequate precautions shall be taken to reduce to the minimum the risk of any part of a suspended load becoming

accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, wearing apparel, such as gloves and boots as may be necessary shall be provided. The workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

10.11.0.0 MAINTENANCE OF SAFETY DEVICES

10.11.1.0 All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe conditions and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near the place of work.

10.12.0.0 DISPLAY OF SAFETY INSTRUCTIONS

10.12.1.0 These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at the job site. The person responsible for compliance of the safety code shall be named therein by the CONTRACTOR.

10.13.0.0 ENFORCEMENT OF SAFETY REGULATIONS

10.13.1.0 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 Welfare Officer, Engineer-in-charge or Safety Engineer of the OWNER or their representatives.

10.14.0.0 NO EXEMPTION

10.14.1.0 Notwithstanding anything provided in Clauses 10.0.0.0 to 10.13.0.0, the CONTRACTOR shall be bound by the provisions of any other Act or rules in force in the Republic of India, with a view that the provisions hereof shall be in addition thereto and not in lieu thereof.

10.14.2.0 The works throughout including any temporary works shall be carried on 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 thereof or with any existing works whether the property of the OWNER or of a third party.

10.14.3.0 In addition to the above, the CONTRACTOR shall abide by the safety code provision as per CPWD Safety Code framed from time to time.

10.14.4.0 The CONTRACTOR shall also arrange to obtain valid gate passes for his men and equipment from the concerned authorities of the Refinery/Project

10.14.5.0 No man/material/equipment not covered by valid passes shall be permitted within the Refinery/ Project area and no material/equipment shall be permitted to be taken out of the Refinery/Project area, unless authorised by the concerned authorities of the Refinery/Project. The CONTRACTOR shall be held fully responsible for any or all delays/ losses/ damages that may result consequent on any lapse(s) that may occur on the part of his sub-contractors/employees in this regard.

10.15.0.0 ENTRY PASSES

10.15.1.0 The CONTRACTOR has to apply for photo Entry Passes for his workers and staff and the workers and staff of his sub-Contractors in a prescribed

proforma provided by the OWNER. The Application shall be accompanied by a Statement and Declaration in the form prescribed by the OWNER signed by the employees for whom the Entry Passes are sought and confirmed by the employer. The photo Entry Passes shall be issued by the OWNER for a maximum period of 3 (three) months, which will be extendable upon the CONTRACTOR's application. As a special case, Temporary Passes may be issued for a maximum period of 7 (seven) days.

10.15.2.0 Unutilized/expired Entry Passes/Identity Cards shall have to be immediately surrendered to the OWNER.

10.15.3.0 In case of the loss of an Entry Pass/Identity Card, the CONTRACTOR shall immediately lodge an FIR with the local police station and inform the Engineer-in-Charge of the loss and shall pay a charge of Rs.150/- against Entry Pass/Identity Card lost. The CONTRACTOR is required to keep an account and track of all Entry Passes issued and surrendered.

Gate Passes/Identity Cards issued by the Security Section should always be displayed by the CONTRACTOR's or Sub-contractor's employees while working inside the Plant.

10.16.0.0 **GATE PASSES**

10.16.1.0 To bring materials, equipment, tools and tackle and other things inside the Refinery for construction Work, the CONTRACTOR has to produce proper documents of title or authority relative thereto for inspection by the OWNER's personnel at the gate. These shall be checked thoroughly by the OWNER's personnel at the Gate and recorded in their Register before permitting the same to be brought inside the Refinery limits. It is the CONTRACTOR's responsibility to see that the entry is duly recorded in the Register with proper Entry Number, date and signature of OWNER's authorised representative and that the supporting challans/documents are stamped and signed by the OWNER's personnel at the gate at the time of entry.

10.16.2.0 Those materials which need repairing/ replacement as per site condition will be allowed to move beyond OWNER's battery limit only after exchange of good equivalent material.

10.17.0.0 **WORK PERMIT**

10.17.1.0 In order to keep the OWNER informed of the various jobs being undertaken within the Refinery and to enable the OWNER to regulate the same to ensure the observance of safety regulations relative thereto, when Work is to be carried out in hazardous areas, a Hot Work Permit is to be obtained by the CONTRACTOR from the OWNER before start of Work on jobs which are capable of generating a flame, spark or heat e.g., gas cutting, grinding, welding, use of any electrical, diesel, petrol or battery operated prime mover, machine, tool or equipment or generator set, mixer machine, drilling machine, pump, crane, fork lift or hand truck or trailer or chipping or breaking of rocks or concrete or hacksaw cutting and drilling. Similarly the CONTRACTOR shall obtain a Cold Work Permit from the OWNER for jobs which do not come under the category of hot work and in respect of which there is no risk of fire, e.g., transportation, backfilling of ordinary soil by manual process, pile testing, hydrotesting, shuttering, fixing of reinforcement, hand mixed concreting, plastering and brickwork.

- 10.17.2.0 Depending on the nature of the Work and the equipments and tools involved, the CONTRACTOR shall apply for Cold/Hot Permit in a prescribed format at least 7(seven) days before the Work is planned to start. No Work Permit shall be issued by the OWNER unless proper arrangement is made by the CONTRACTOR to ensure safe performance of the Work inside the Refinery limit. Job-wise and area-wise permits shall be issued to the CONTRACTOR and for Work against each permit the CONTRACTOR shall post at site at least one Construction Supervisor and one Safety Supervisor of required level to ensure the due observance of all safety requirements.
- 10.18.0.0 **VEHICLE PERMIT**
- 10.18.1.0 Permits are to be obtained separately for entry/use of vehicles/trailers and other mobile equipment inside the Refinery limits. All the CONTRACTOR's vehicles should have a valid 'PUC Certificate'. The following requirements are to be met to obtain vehicle permit :
- i. Vehicle/Equipment shall be in good condition and fitted with spark arrestor.
 - ii. Vehicles should carry, wherever applicable, valid Road Tax Certificate and Fitness Certificate from the Competent authority and insurance policy.
 - iii. Valid operating/driving license of driver/operator.
- 10.18.2.0 **VALIDITY OF THE PERMIT**
- (i) Any Hot or Cold Work Permit issued is valid only for 24 hours.
 - (ii) Thereafter the validity of the Permit must be renewed for each shift (morning & evening) by the shift in-charge/ shift representative of the OWNER.
 - (iii) The permit may be renewed for a maximum period of one month from the date of issue and if extension is required, the CONTRACTOR has to apply for a fresh permit.
 - (iv) A permit is not valid for Work on holidays unless special permission of the OWNER is obtained for the purpose.
- 10.19.0.0 **SPECIAL SAFETY REGULATIONS**
- 10.19.1.0 **REGARDING WORK PERMIT**
- 10.19.1.1 The Work shall be carried out inside the Refinery limits to conform to the OWNER's safety section and in accordance with any instructions of the Engineer-in-Charge issued from time to time. Sometimes working hours may be drastically reduced or increased to satisfy safety requirements and the CONTRACTOR shall meet these requirements without any time and cost implications. No claim for idling of machinery, plant, manpower or equipment shall be entertained for reason of delay in the issue of a Work Permit and it shall be the exclusive responsibility of the CONTRACTOR to apply for, pursue and obtain the requisite Work Permit(s) well in advance of the relative requirement(s).
- 10.19.1.2 The CONTRACTOR shall abide by all safety regulations of the Plant and ensure that safety equipment for specific jobs as stipulated in the Factories Act Safety Handbook is issued to all employees during the execution of Work, failing which all the works at site shall be suspended.

- 10.19.1.3 HSE specifications, OISD and other requirements shall be followed in totality.
- 10.19.2.0 **REGARDING HOT WORK**
- 10.19.2.1 When doing hot work inside the plant, the CONTRACTOR must ensure that the fire hose is hooked up with the fire water system and extended to the work site. In addition, at least one fire extinguisher must be kept near the working spot. The area around and below the place of hot work must be adequately protected from sparks and hot metals by a booth made of asbestos cloth/sheet and by wetting with water. In addition, depending on the location and hazard of the work, the CONTRACTOR shall at its own cost arrange sufficient number of additional fire hoses and such fire fighting equipment of approved quality as may be required to carry out hot job inside the plant.
- 10.19.2.2 Welding & electrical cables should be of approved quality and no jointing or loose connection shall be permitted.
- 10.19.2.3 At the end of the working day the CONTRACTOR must inform the electrical section to switch off power at sub-station end.
- 10.19.2.4 The CONTRACTOR must provide cotton clothes, safety shoes, safety helmet, safety belt, and hand gloves of approved quality to his workers to meet the safety requirement of various jobs to be carried out inside the Plant.
- 10.19.3.0 **REGARDING USE OF VEHICLE**
- 10.19.3.1 Vehicle must not ply on any road within the Refinery limit at a speed exceeding 20 KM/hr.
- 10.19.3.2 Mobile cranes, loaded trucks and trailers must not exceed the speed limit of 15 KM/hr inside the plant.
- 10.19.3.3 No crane is allowed to move inside the plant with load.
- 10.19.3.4 No vehicle is allowed to be parked inside the plant.
- 10.19.3.5 Limited number of vehicles will be permitted inside the battery area due to security reasons.
- 10.20.0.0 **DEDUCTIONS FROM LUMP SUM PRICE**
- 10.20.1.0 In addition to price reduction and deductions as provided for, the OWNER shall be entitled to deduct from any payment due to the CONTRACTOR, any amount claimed by the OWNER under the Contract and any costs, damages or expenses for which the CONTRACTOR is liable under the Contract.
- 10.20.2.0 In addition to price reduction and deductions as provided for in the Contract, the OWNER shall be entitled to deduct from any payment due to the CONTRACTOR, for violations of safety provisions, as per details given below:
- (i) Violation of applicable safety, health and environment related norm, a price reduction of Rs.5000/- per occasion
 - (ii) Violation as above resulting in :
 - (a) Any physical injury - a price reduction of 0.5% of the Lumpsum Price (maximum of Rs.2,00,000) per injury in addition to Rs. 5,000/-

- (b) Fatal accident - a price reduction of 1% of the Lumpsum Price (maximum of Rs.10,00,000) per fatality in addition to Rs. 5,000/-

10.21.0.0 **SPECIAL CONTRIBUTIONS**

10.21.1.0 With a view to ensure the formulation and enforcement of a safety code by the CONTRACTOR, it is stipulated that in the event of any act, omission or accident at the job site which results in the death of a person, the CONTRACTOR shall contribute a sum of Rs.5,00,000/- (Rupees five lakh only), or which results in the permanent disablement of a person, the CONTRACTOR shall contribute a sum of Rs.3,00,000/- (Rupees three lakh only) in addition to any other sum(s) required to be paid by the CONTRACTOR under any law or other contract, to a welfare fund to be established by the OWNER for, inter alia, such contributions, and until such fund is established, to a charity nominated by the OWNER.
