



INDIAN OIL CORPORATION LIMITED (Marketing Division)



GENERAL CONDITIONS OF CONTRACT

(Amended in 2025)

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SECTION – 1

DEFINITIONS

- 1.0.0.0 The following expressions hereunder and elsewhere in the Contract Documents used, unless repugnant to the subject or context thereof shall have the following meanings hereunder respectively assigned to them, namely:
- 1.1.0.0 "Acceptance of Tender" shall mean the acceptance of bid by the OWNER through a letter, or fax of acceptance or any other written mode of notification of award of work;
- 1.2.0.0 "Approval" shall mean the written and signed approval of the OWNER or of Engineer-in-Charge or Consultant, if so authorized in this behalf by the OWNER, and with respect to a plan or drawing shall include an approval in Code 2, subject to the limitation(s) specified in such approval;
- 1.3.0.0 "Approval in Code 2" shall mean an approval to proceed with the work covered by plans or drawings subject to certain limitation(s) as specified in such approval;
- 1.4.0.0 "Completion" or "Final Completion" shall mean the successful provision of all materials and inputs and the successful completion and conclusion of all activities required in all respects to complete the contractual works in accordance with the Contract, but shall not include the obligation to rectify defects during the Defect Liability Period;
- 1.5.0.0 "Completion Certificate" shall mean the Completion Certificate issued by the Engineer-in-Charge in accordance with the provisions of Clause 5.5.0.0 hereof;
- 1.6.0.0 "Commissioning" of a Plant or Unit shall mean pressing into service the unit(s), equipment(s), vessel(s), pipeline(s), machinery and system(s) and sub-system(s) comprising the Plant, in accordance with the approved Operation Manual and as per procedures recommended by the Designer/Process Licensor or Supplier thereof, and approved by the OWNER, after successful trial runs of the Plant/Unit;
- 1.7.0.0 "Consultant" shall mean the Consultant appointed by the OWNER for the Project or the Works;
- 1.8.0.0 "Consumables" shall mean all items which are consumed in the execution of the Work, without being directly incorporated in the Work, such as fuel, electricity, water, POL, welding rods, electrodes and utilities;
- 1.9.0.0 "Contract" shall mean the agreement between the parties as derived from the Contract Documents;
- 1.10.0.0 "CONTRACTOR" shall mean individual, agency, firm or company (whether incorporated or not) selected by the OWNER for the performance of the Contract and shall include its legal representatives, successors and permitted assigns;
- 1.11.0.0 "Contract Documents" shall mean the contract documents as defined in Article 1 in the Form of Contract as annexed (Annexure 1) to the General Conditions of Contract;
- 1.12.0.0 "Defect Liability Period" shall mean the defect liability period as specified in Clause 5.6.0.0 hereof.;
- 1.13.0.0 The "Engineer-in-Charge" shall mean the Engineer or other officer of the OWNER, Consultant or other organization for the time being nominated by the OWNER in writing to act as Engineer-in-Charge for the purpose of the Contract or any specific works;
- 1.14.0.0 "Final Certificate" shall mean the final certificate, issued by the Engineer-in-Charge, in accordance with the provisions of Clause 6.8.0.0 hereof;
- 1.15.0.0 "General Manager" shall mean the Executive Director, Chief General Manager, General Manager or other Executive (howsoever designated) of the Project to which the Contract relates, and if there is no such separate Executive designated, shall mean the Executive Director (if any) or the Chief General Manager or General Manager, as the case may be, of the Refinery, Pipeline(s), Marketing, or other Unit or Department of the OWNER to which the Project relates and will include the concerned Head of the installation of the Engineering Department of the State in Marketing Division;
- 1.16.0.0 "Guarantee tests" shall mean all tests, undertaken after the Plant goes into operation and has stabilized, for ensuring that the functioning of the Plant meets all guarantees, as regards throughput, quality and magnitude/quantity of output, at the final stage as well as at the stipulated interim stages of operation/process, as well as in respect of consumption of utilities, chemicals and catalysts, etc.;

- 1.17.0.0 "Job Site" shall mean site at which the work is to be performed by the CONTRACTOR provided by the OWNER under clause 4.1.4.0 hereof, and shall include a part or portion of the job site but shall not include any land provided by the OWNER under clause 3.6.0.0 hereof;
- 1.18.0.0 "Manuals" shall mean the Erection and Installation Manual of the various equipment and machinery forming part of the Work(s) or Plant(s)/Unit(s) as well as the Operation and Maintenance Manuals thereof;
- 1.19.0.0 "Materials" shall mean all materials, plant, machinery, instruments, components, equipment, sub-assemblies and assemblies, parts, spares and other items or things required for permanent incorporation in the works;
- 1.20.0.0 "Mechanical Completion", as applied to a Plant or Unit, shall mean the completion of civil works, erection, aligning and grouting of all mechanical and electrical equipment and piping, hydrostatic and other testing of all storage tanks, vessels, piping etc., all electrical and all utility connections to the equipment, mounting and fixing of all instruments, control systems and connecting them as required, testing and trial runs of all equipment on "no-load" and bringing the Plant to a state of readiness for pre-commissioning;
- 1.21.0.0 "Notified Claim" shall mean a claim of the CONTRACTOR notified in accordance with the provisions of Clause 6.6.1.0 hereof;
- 1.22.0.0 "Order" and "Instruction" shall respectively mean any written order or onstruction given by the Engineer-in-Charge or OWNER or Site Engineer(s) within the scope of their respective powers in terms of the Contract;
- 1.23.0.0 "OWNER", unless otherwise specified, shall mean Indian Oil Corporation Limited, a company incorporated in India and having its registered office at G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai-400 051 and shall include its successors and assigns;
- 1.24.0.0 "Plans" and "Drawings" shall mean and include all technical documentation such as maps, sketches, designs, drawings, plans, details, charts, schedules, tracings, prints, computer outputs, printouts, and manuals, relating to the work forming the subject matter of the contract, including but not limited to those forming part of the Tender Documents, Offer Documents, and working drawings and details, together with amendments/alterations/revisions/modifications thereto, as may have been approved by and/or furnished by the OWNER, the Engineer-in-Charge and/or the Consultant, as well as "As-Built" drawings to be submitted by the CONTRACTOR, as required under the contract;
- 1.25.0.0 "Pre-commissioning" shall mean the activities to be taken up before the taking up of Start-up, Commissioning and trial runs of the Plant/Unit, and shall include, without being limited to, all operations such as checking of all systems, subsystems, piping and vessels, flushing with air, water and steam, air-blowing and steam-blowing, system pressure and leak tests, purging with inert gas as required, checking all electrical equipment for earthing/ resistances, operability tests and cold run on all operating equipment, vessels and systems individually and in combination, integration of all control systems with one another and with the main control system, and completion of all operations detailed under the head, "COMPLETION OF CONSTRUCTION" in API-700;
- 1.26.0.0 "Progress Schedule" shall mean the Progress Schedule established by the CONTRACTOR and approved by the Engineer-in-Charge for completion of the work(s) within the time schedule in accordance with the provisions hereof and failing such Progress Schedule, shall mean the Progress Schedule established by the Engineer-in-Charge in accordance with the provisions hereof;
- 1.27.0.0 "Performance Test(s)" shall mean all tests meant to ensure that the Plant(s)/Unit(s) is/are in all respects in accordance with the requirements of the Contract and that the Plant functions properly and smoothly, in all respects as per the approved design parameters, within the permissible tolerances, and satisfies all the stipulated operating parameters, and will include the Guarantee Tests;
- 1.28.0.0 "Project" shall mean the project embracing the work(s) forming the subject matter of the Contract;
- 1.29.0.0 "Site Engineer" shall mean the engineer(s)/officer(s) for the time being designated by the Engineer-in-Charge as his representative(s) in writing, and authorized by him to assist him in performing his duties and functions for the purpose of the Contract;
- 1.30.0.0 "Plant" or "Unit" shall mean the grouping of and assembly of systems, subsystems, machinery, equipment, piping and associated facilities, designed to function as a cognizable part of the Project Facility whether alone or in conjunction with other Plants/Units and Facilities. (Examples: Distillation Unit, Reformer Unit or Desulphurization Unit.);
- 1.31.0.0 "Schedule of Rates" or "Price Schedule" shall mean the Schedule of Rates or Price Schedule

annexed to the Acceptance of Tender, and shall also include a lump sum price;

- 1.32.0.0 The "Specification(s)" shall mean the various specifications as set out in the Specifications forming part of the Tender Documents and as referred to and derived from the Contract and any order(s) or instruction(s) there under, and in the absence of any specifications as aforesaid covering any particular work or part or portion thereof, shall mean the Specifications and Codes of the Bureau of Indian Standards and other Organizations, including but not limited to British Standards Institution, ASTM, ASME, ANSI, API, AWS, AWWA, NACE, HEI, IEC, IBR, IEEE, EIL, CPWD, etc, with such modifications as may be applicable for the particular part(s) of the Contract, as decided by the Engineer-in-Charge and as per Standard Engineering and Industry Practice and/or as directed by the Engineer-in-Charge;
- 1.33.0.0 "Security Deposit" shall mean the Security Deposit as specified in Clause 2.1.0.0 hereof and associated clauses there under;
- 1.34.0.0 "Subsystems" shall mean the further breakdown of a System into its subsections and sub-components, each designed to fulfill a precisely demarcated function or role in the working of the system. (Example: Demineralization of boiler feed water and fuel injection for boilers for the Steam Generation system);
- 1.35.0.0 "Start-up" shall mean all activities required to be performed after Pre-commissioning and prior to trial operation and shall include final Pre-commissioning inspection and check out of equipment, vessels and system(s) and supporting sub-system(s), initial operation of complete equipment and systems within the Plant/Unit to obtain necessary pre-trial operation data, confirmation and correction of calibration, shutdown inspection and adjustment and other steps required to be taken prior to and enable Commissioning/trial operation;
- 1.36.0.0 "System" shall mean the breakdown of the Plant or Unit into specific sections and components, each designed to fulfill a precisely demarcated function or role in the working of the Plant/Unit (Examples: Fresh water system, circulating water system, steam and power generation and distribution systems, fuel system, effluent system in a Power Plant);
- 1.37.0.0 "Time Schedule" shall mean the time schedule for final completion of the Works or Mechanical Completion of the Plant(s)/Unit(s), as the case may be, incorporated in the Contract or as may be extended by the OWNER or Engineer-in-Charge pursuant to the provisions hereof and shall include interim time schedules set up for achieving interim/phase-wise/stage-wise progress/completion/testing/Commissioning/handing over, as may be prescribed by the OWNER/Engineer-in-Charge, within the overall Time Schedule as originally envisaged or as extended.
- 1.38.0.0 "Total Contract Value" shall, up to calculation of the entire remuneration (excluding any Goods and Services Tax) due to the CONTRACTOR in terms of the Contract on successful completion of the Work, mean the Total Contract Value as specified in the Acceptance of Tender, and after calculation of the entire remuneration due to CONTRACTOR under the Contract on successful completion of the Contract, shall mean the totality of such remuneration (excluding any Goods and Services Tax);
- 1.39.0.0 "Utilities" shall mean power, electricity, gas and other sources of energy, water, earth and other things whatsoever (other than materials and consumable(s)) required for or in the performance of the work(s);
- 1.40.0.0 "Work", "Scope of Work", "Service", and "Scope of Services" shall mean the totality of the work, services and activities to be performed or undertaken and the totality of the responsibilities to be discharged, as envisaged by expression or implication in the Contract and shall include all inputs required for such performance and discharge including (but not limited to) know-how, design/engineering inputs, preparation and supply of drawings and details, project management (including pre-construction activities, tendering, procurement, inspection and expediting), construction supervision, Pre-commissioning, Start-up and Commissioning and supply of consumables, materials, labour, construction and other requisite machinery and equipment, utilities and inputs required for, relative or incidental to and/or in connection with the performance of the Contract up to completion (including testing, Commissioning, handing over, troubleshooting, rectification, maintenance and defect liabilities).

SECTION - 2

GENERAL

- 2.0.0.0 INTERPRETATION OF CONTRACT DOCUMENTS:**
- 2.0.1.0** Singular and Plural: Where the context so requires, words imparting the singular also include the plural and vice versa.
- 2.0.2.0** Masculine and Feminine: Where the context so requires, words imparting the masculine gender shall also include the feminine gender and the neuter gender and vice versa.
- 2.0.3.0** Meanings: Unless expressly stipulated to the contrary in this Contract: (i) the words "direction(s)/directed", "instruction(s)/instructed," "order(s)/ordered," "requirement(s)/required", "permission(s) /permitted", "approval(s) /approved", shall mean the written directions, instructions, orders, requirements, permissions or approvals, as the case may be, of the OWNER or of the Engineer-in-charge or Site Engineer; (ii) the words "as felt", "considered necessary", "acceptable", "desirable" or "satisfactory", shall mean that the OWNER or Engineer-in-charge or Site Engineer feels or considers that the particular thing is necessary, acceptable, desirable, or satisfactory, as the case may be.
- 2.0.4.0** Language: All documents pertaining to the Contract, including drawings, manuals and any other writings shall be in English language. The translations, if any, in Hindi or any other language, as may be furnished by the OWNER of any of the documents forming the Contract, shall not anyway operate as the Contract between the parties or regulate upon the terms and conditions of the Contract Documents with the intention that all rights and obligations of the parties in terms of Contract Documents and any reference to the Contract or Contract Documents or any of them shall be deemed the rights and obligations arising out of the Contract Documents as written in English and / or Contract or Contract Documents or any of them as written in English; and no claim, dispute, difference or other objection will lie or will be entertained by the OWNER on account of any difference in the import or interpretation between any provision in the Hindi or any other language translation of the Contract Documents or any of them and the Contract Documents in English.
- 2.0.5.0** Measurement Units: The metric system of measurement units shall be used in the Contract, unless otherwise expressly stipulated.
- 2.0.6.0** The several Contract Documents forming the Contract are to be read together as a whole and are to be taken as mutually explanatory.
- 2.0.7.0** Should there be any doubt or ambiguity in the interpretation of the Contract Documents or error, omission or contradiction therein or in any of them, the CONTRACTOR shall, prior to commencing the relative work, apply in writing to the Engineer-in-Charge for his decision in resolution of the doubt, ambiguity or contradiction or correction of the error or omission, as the case may be. Should the CONTRACTOR fail to apply to the Engineer-in-Charge for his decision, as aforesaid, prior to commencing the relative work, the CONTRACTOR shall perform the said work at his own risks, and the provisions of Clause 2.0.10.0 hereof shall apply to any such work performed by the CONTRACTOR.
- 2.0.8.0** Notwithstanding anything provided in Clause 2.0.7.0 hereof, either the CONTRACTOR or the Site Engineer under intimation to CONTRACTOR, may at any time prior to, during or after the execution of the work or any part thereof (if the CONTRACTOR has failed to make an application as provided for in Clause 2.0.7.0) apply to the Engineer-in-Charge in writing for his decision in resolution of any doubt, ambiguity or contradiction, in the Contract Documents or any of them of the correction of any error or omission therein, as the case may be.
- 2.0.9.0** The decision of the Engineer-in-charge on any application under Clause 2.0.7.0 or Clause 2.0.8.0 hereof shall be in writing and final and binding upon the CONTRACTOR and shall form part of the Contract Documents, with the intent that the Contract Documents shall be read as though the said decision is and was at all times incorporated therein.
- 2.0.10.0** If thereafter the CONTRACTOR performs or executes any work at variance with the decision of the Engineer-in-Charge, then, notwithstanding payment in respect of such work having been made to the CONTRACTOR, such work shall be deemed to be a defective work and the provisions of Clause 5.1.4.0 hereof and associated clauses there under shall apply

thereto.

- 2.0.11.0 Any work shown, indicated or included in the job description, Plan(s), Drawing(s), Specifications and / or Schedule of Rates shall be deemed to form part of the work, notwithstanding failure to show, indicate or include such work in any other or others among the Documents aforesaid with the intent that the indication or inclusion of the work within any one of the said documents shall be deemed to be a sufficient indication or inclusion of the work within the work covered by the Contract.
- 2.0.12.0 No verbal agreement, assurances, representations or understanding given by any employee or officer of the OWNER or so understood by the CONTRACTOR, whether given or understood before or after the execution of the Contract, shall anyway bind the OWNER or alter the Contract Documents unless specifically given in writing and signed by a person specifically authorized by the OWNER and given as an Agreed Variation to the relative term(s) in the Contract Documents.
- 2.0.13.0 Clause headings given in this or any other Contract Document are intended only as, a general guide for convenience in reading and segregating the general subject of the various clauses, with the intent that the clause headings shall not govern the meaning or importance of the clauses there under appearing or confine or otherwise affect the interpretation thereof.
- 2.0.14.0 In case of irreconcilable conflict in non technical matters between the provisions in the separate Contract Documents concerning or governing the same aspect precedence shall be given to the provisions contained in the documents mentioned below in the order in which they are set out below:
1. Formal Contract
 2. Acceptance of Tender
 3. Price Schedule annexed to Letter of Acceptance
 4. Agreed Variations annexed to the Letter of Acceptance
 5. Addenda to the Tender documents
 6. Additional Conditions of Contract
 7. Special Conditions of Contract
 8. General Conditions of Contract
 9. Instructions to Tenderers / Special Instructions to Tenderers
 10. GeM General Terms and Conditions

A variation or amendment issued after the execution of the formal contract shall take precedence over the formal contract and all other Contract Documents.

- 2.0.15.0 In case of irreconcilable conflict in technical matters between the provisions concerning or governing the same aspect, clauses 2.0.7.0 and 2.0.8.0 shall be applied.
- 2.0.16.0 Should any provision of the Contract be found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provisions hereto and they shall remain binding on the parties hereto.

2.1.0.0 **SECURITY DEPOSIT**

- 2.1.1.0 The CONTRACTOR shall furnish Security Deposit in the amount equivalent to 10% (ten percent) of the Total Contract Value. Such Security Deposit is to be held by the OWNER as security for the due performance of the CONTRACTOR's obligations under the Contract and/or for the due payment of any amounts claimed by the OWNER from the CONTRACTOR.
- 2.1.1.1 The Security Deposit shall be made up of the Initial Security Deposit, and the retention monies, of a sum equal to 10% (ten percent) of the total (gross) value of each bill, up to and until the recovery of full Security Deposit to the extent specified in Clause 2.1.1.0 hereof is achieved. The deductions for the retention money(ies) will be stopped after the Security Deposit limit of 10% (ten percent) of the Total Contract Value is reached, unless otherwise required in terms of Clause 2.1.1.6 hereof.
- 2.1.1.2 The CONTRACTOR shall, within 10 (ten) days of the receipt of Acceptance of Tender issued by the OWNER, deposit Initial Security Deposit in an amount equal to 2.5% (Two and a half percent) of the Total Contract Value as aforesaid, in one or more of the following modes, subject to the stipulation(s) contained in the said Acceptance of Tender by the OWNER:
- a) through electronic transfer to the bank account designated by the OWNER (demand draft or pay order or cash or cheque shall not be accepted).

- b) If the Earnest Money Deposit has already been deposited, the CONTRACTOR may be permitted to adjust the same towards part of the Initial Security Deposit and pay the balance in the manner stipulated at (a) above.
 - c) By Bank Guarantee(s) in the prescribed form as included in the Tender Documents, from a Scheduled Bank in India acceptable to the OWNER, provided the amount covered by such Bank Guarantee is not less than Rs.1,00,000/- (Rupees One Lakh only). This Bank Guarantee shall be valid up to a period of 3 (three) month beyond the end of the Defect Liability Period and the same shall have a claim period for at least 3 (three) month thereafter.
 - d) By Insurance Surety Bond (only if the CONTRACTOR is an Indian entity) from an insurer registered with Insurance Regulatory and Development Authority, acceptable to the OWNER, in the prescribed format, provided, the amount covered by such Insurance Surety Bond is not less than Rs.1,00,000/- (Rupees One Lakh only). This Insurance Surety Bond shall be valid up to a period of 3 (three) months beyond the end of the Defect Liability Period shall have a claim period for at least 3 (three) month thereafter.
- 2.1.1.3 The CONTRACTOR will be permitted to furnish a Bank Guarantee/Insurance Surety Bond for the full Security Deposit of 10% (ten percent) of the Total Contract Value, in advance, in which case, no Initial Security Deposit will be required to be furnished and no deductions shall be made from his running bills towards retention money, except as may be required in terms of clauses 2.1.1.1 and 2.1.1.6 hereof.
- 2.1.1.4 The CONTRACTOR may, at any time and from time to time, during the course of or after completion of the work, with the permission of the OWNER, substitute his cash security deposit by way of retention money(ies) deducted from his bills and lying with the OWNER,
 - a) by Bank Guarantee(s) in the prescribed proforma from a Scheduled Bank in India acceptable to the OWNER and withdraw the equivalent cash amount(s), provided the amount covered by any such Bank Guarantee is not less than Rs.1 lakh (Rupees One lakh only).
 - b) by Insurance Surety Bond (only if the CONTRACTOR is an Indian entity) from an insurer registered with Insurance Regulatory and Development Authority acceptable to the OWNER in the prescribed proforma acceptable to the OWNER and withdraw the equivalent cash amount(s), provided the amount covered by any such Insurance Surety Bond is not less than Rs.1 lakh (Rupees One lakh only).
- 2.1.1.5 The Earnest Money deposited by the CONTRACTOR along with his Tender shall, unless it has been adjusted in accordance with clause 2.1.1.2(b) above, be refunded by the OWNER, after the Initial Security Deposit or the full Security Deposit, as the case may be, has been deposited by the CONTRACTOR and form of contract has been executed by the CONTRACTOR, if applicable.
- 2.1.1.6 If at any time during the course of the work, the gross value of the work, as reflected by the Running Bills submitted by the CONTRACTOR has in the opinion of the OWNER (which shall be final and binding on the CONTRACTOR), exceeded or is likely to exceed the Total Contract Value indicated in the Acceptance of Tender, the CONTRACTOR shall be bound to pay further Security Deposit as will make up the total Security Deposit to 10%(ten percent) of the then anticipated Contract Value, failing which the OWNER shall be at liberty to make such deductions towards retention money(ies) from the CONTRACTOR's Running Bills, and will, at all times, ensure that the Security Deposit does not fall below 10% (ten percent) of the gross value of the work, as reflected by the gross payments made to the CONTRACTOR, without taking into account any deductions. If the shortfall in Security Deposit is discovered after completion of the work, the shortfall shall be made good by the CONTRACTOR on demand from the OWNER, failing which, it will be recovered from any money (ies) due to the CONTRACTOR from the OWNER under this Contract and/or any other contract with the OWNER.
- 2.1.1.7 If after completion of the work, the Total Contract Value falls below the total contract value as indicated in the Acceptance of Tender, such that the total Security Deposit (made up of initial Security Deposit and retention money(ies) or otherwise) in the hands of the OWNER is in excess of the total Security Deposit calculated at 10% (ten percent) of the reduced contract value, such excess amount, as is in the form of cash in the hands of the OWNER, shall be refunded to the CONTRACTOR along with the Final Bill. If the Security Deposit furnished by

the CONTRACTOR to the OWNER in the form of Bank Guarantees/Insurance Surety Bond(s) is in excess of the full Security Deposit calculated on the Total Contract Value, by over Rs.1 lakh, the CONTRACTOR shall be permitted to replace the Bank Guarantee(s)/ Insurance Surety Bond(s) already submitted, by Bank Guarantee(s)/Insurance Surety Bond(s) to cover the reduced value of Security Deposit.

- 2.1.1.8 The Security Deposit shall be held by the OWNER as security for the due performance of the CONTRACTOR's obligations under the Contract and for the payment of any amounts claimed by the OWNER from the CONTRACTOR, provided that nothing herein stated shall make it incumbent upon the OWNER to utilize the Security Deposit in preference to any other remedy which the OWNER may have, nor shall be construed as confining the claims of the OWNER against the CONTRACTOR to the quantum of the Security Deposit.
- 2.1.1.9 The Security deposit including the Earnest Money / retention money(ies), and other withheld amounts from the Running Account Bill(s), if any, at any time remaining in the hands of the OWNER, shall be free of any liability for payment of any interest to the CONTRACTOR.
- 2.1.1.10 Upon determination of the Contract prior to completion of work(s) for any cause, the OWNER shall in so far as the Security Deposit constitutes cash refund and in so far as the Security Deposit is in any other form, release/discharge/return, as the case may be, to CONTRACTOR, the unutilized balance of the Security Deposits, if any, for the time being remaining in the hands of the OWNER after settlement of accounts and discharge of all amounts due from the CONTRACTOR to the OWNER and fulfillment of all obligations of the CONTRACTOR.
- 2.1.2.0 In case Mobilization Advance is paid to the CONTRACTOR under the provisions of Clause 6.4.5.0 hereof, it shall be permissible for the CONTRACTOR to furnish a Composite Bank Guarantee to cover both Mobilization Advance as well as retention monies forming part of the Security Deposit, which shall be subject to the following conditions:
- The Composite Bank Guarantee will be for a value equivalent to 110% of the advance plus applicable GST or 10% (ten percent) of the Total Contract Value, whichever is greater, and shall be kept valid up to 3 (three) months beyond the expiry of the Defect Liability Period with a claim period of atleast 3 (three) month thereafter;
 - In addition, Initial Security Deposit shall be payable as laid down in Clause 2.1.1.2 hereof;
 - Recoveries will be effected from each Running Account Bill at the rate of 10% (ten percent) of the gross bill value, till the entire Mobilization Advance (together with interest accrued thereon) is fully recovered;
 - Initially, the composite Bank Guarantee will be entirely reckoned towards Mobilization Advance and progressively, the portions of Composite Bank Guarantee, vacated by the recoveries effected towards Mobilization Advance, shall be reckoned towards Security Deposit, such that after the Mobilization Advance stands fully recovered with interest accrued thereon, the entire composite Bank Guarantee shall be reckoned to cover the Security Deposit for the Work. The Initial Security Deposit furnished by the CONTRACTOR under (b) above shall be refunded / returned after recovery of Mobilization Advance is effected from the Running Account Bills up to an aggregate amount equivalent to the Initial Security Deposit.
 - All the other stipulations hereof in respect of Security Deposit shall apply.
- 2.1.3.0 The CONTRACTOR shall from time to time at the request of the OWNER suitably extend the validity of any Bank Guarantee (whether furnished by way of Initial Security Deposit, Security Deposit or Composite Bank Guarantee) or to secure any advance for such period(s) as may from time to time be required by the OWNER failing which, without prejudice to any other right or remedy available to the OWNER, the OWNER shall be entitled to encash the Bank Guarantee. The above provisions shall apply mutatis mutandis to Insurance Surety Bond(s) if furnished .
- 2.2.0.0 **PLANS, DRAWINGS, SPECIFICATIONS AND APPROVALS TO BE FURNISHED BY THE OWNER**
- 2.2.1.0 Plan(s) and drawing(s) and other information forming part of the Tender Documents shall constitute only a general guidance to enable the CONTRACTOR to visualize the work and/or supplies contemplated under the Contract. These have been prepared and released in good faith on the basis of information available to the OWNER. The OWNER assumes no

responsibility as to the correctness thereof, and the CONTRACTOR is expected prior to tendering to have undertaken a complete and independent survey and to have made his own study of all factors relevant to the performance of the work or making the supplies.

2.2.2.0 Detailed working plan(s), drawing(s), any specification(s) and approval(s) required to be furnished by the OWNER for the actual execution of the work shall be furnished from time to time as and when required during the execution of the work.

2.2.3.0 It shall be the exclusive responsibility of the CONTRACTOR to call upon the Engineer-in-charge (in respect of approvals to be furnished by the OWNER) for and to pursue and obtain from the Engineer-in-Charge any plan(s), drawings(s), specification(s) or approval(s) required to be furnished to the CONTRACTOR under the Contract for the proper execution of the work or any particular item or job therein or the making of any supply, as the case may be, as and when required, sufficiently in advance of the stage of delivery of the materials or of the commencement or progress of the work for the performance or continuance of which the same shall be required. Any failure by the CONTRACTOR to do so shall be entirely at the risks and costs of the CONTRACTOR and shall not constitute a ground for the extension of time, unless the Engineer-in-Charge shall fail to provide the CONTRACTOR plan(s), drawing(s), specification(s) or approval(s) or disapproval(s) as the case may be within 15 (fifteen) days of notice by the CONTRACTOR to the Engineer-in-charge specifically stating the drawing(s), specification(s) or approval(s) which is/are pending, the period for which it/they are pending, the reason(s) for which they are pending, and that the notice is being given pursuant to the provisions of this clause on the clear understanding that if the plan(s), drawing(s), specification(s), or approval(s) or disapproval(s), is/are not granted within 15 (fifteen) days, the CONTRACTOR will be making claim for deemed approval pursuant hereto. If thereafter, said notice notwithstanding, the approval or disapproval, as the case may be, is not granted within 15 (fifteen) days, the relative approval(s) in Code 1 shall be deemed to have been granted, and the relative approval shall at the request of the CONTRACTOR be certified thereon by the General Manager, and the CONTRACTOR shall proceed with the work accordingly, without entitlement to any extension of time on this account.

2.2.4.0 The CONTRACTOR shall carefully study the plans/drawings furnished to him, in conjunction with all other connected plans/drawings and other Contract documents and shall bring to the notice of the Engineer-in-Charge for clarification/correction any ambiguity, error, discrepancy, contradiction or omission therein prior to the execution of the related work (s) or undertaking the related supply (ies) as the case may be, and the provisions of Clause 2.0.9.0 hereof shall mutatis mutandis apply to such clarification or correction.

2.2.4.1 Any work performed by the CONTRACTOR in absence of or contrary to such clarification/correction, shall be at the CONTRACTOR's risks and responsibilities and the provisions of Clauses 2.0.10.0 and 5.1.4.0 hereof and associated clauses there under with respect to defective works shall apply thereto.

2.2.4.2 Any approval to be accorded by the Engineer-in-Charge/ OWNER shall be furnished either in Code 3, Code 2 or Code 1 and the Contractor shall take the necessary action as may be required. For the purposes of the Contract:

"Code-1 or Level-1 Approval or Approved for Construction (AFC)" means final approval of drawings/documents incorporating all comments of the OWNER (including OWNER's Consultant);

"Code-2 or Level-2 Approval" means tentative approval of the drawings/ documents by the OWNER (including OWNER's Consultant) with comments to be incorporated by Contractor, with the intent that subject to incorporation of and/or rectification in accordance with such comments, construction/ manufacture can proceed based on commented drawings/ documents pending their re-submission and grant of Code-1 or Level-1 Approval;

"Code-3 or Level-3 Approval" means that on review of the drawings/ documents by the OWNER (including OWNER's Consultant) the same have not been found in accordance with the applicable codes, standards, design basis and contractual stipulations and must therefore be re-submitted for review and approval after appropriate correction and/or re-preparation.

2.2.5.0 Notwithstanding anything to the contrary in the Contract Documents expressed or implied, and notwithstanding the absence of any ambiguity, error, discrepancy, contradiction or omission in the plans/drawings as aforesaid, the OWNER shall be entitled at any time before or during execution of the related work(s) to amend / modify or alter any plan(s), drawing(s)

or specifications furnished to the CONTRACTOR by the OWNER and the CONTRACTOR shall thereafter perform and / or continue to perform the related work(s) according to the amended / modified / altered plans/ drawings/ specifications without entitlement to any extra remuneration and should the CONTRACTOR execute any relative work(s) at variance therewith (notwithstanding that the CONTRACTOR shall have already been made any payment in respect thereof), the provisions of Clause 5.1.4.0 hereof and associated clauses there under relating to defective works shall apply thereto, provided that:

- (i) If any such amendment / modification / alteration shall in the opinion of the CONTRACTOR, necessitate an extension of time for completion, the provisions of Clause 4.3.6.0 hereof and clauses related thereto shall apply.
- (ii) If such amendment or modification shall in the opinion of the Engineer-in-Charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR) necessitate the performance of any work not covered by the Schedule of Rates or the lump sum price, as the case may be, the remuneration for such work or portion or item thereof, as the case may be, not covered by the Schedule of Rates or lump sum price, as the case may be, shall be determined in accordance with the provisions of Clause 2.4.1.2 hereof.

2.2.6.0 Copies of all plans and drawings relating to work(s) shall be kept and maintained at the CONTRACTOR's office at the site and shall be made available to the Engineer-in-Charge and Site Engineer for inspection and reference at any time during the execution of work.

2.2.7.0 All plans and drawings furnished by the OWNER to the CONTRACTOR shall be and remain the property of the OWNER and shall be returned by the CONTRACTOR to the OWNER on completion of the works or prior determination of the Contract.

2.3.0.0 PLANS, DESIGNS, DRAWINGS & SPECIFICATIONS TO BE FURNISHED BY THE CONTRACTOR

2.3.1.0 Where the CONTRACTOR shall, within the scope of work, be required to prepare or furnish any plan(s), drawing(s), design(s) or specifications in respect of the work or any particular work, the CONTRACTOR shall within 15 (fifteen) days (or such other period as the OWNER may prescribe in this behalf) of receipt of notification of Acceptance of Tender or within 15 (fifteen) days before the proposed date of commencement of the relative work, whichever shall be earlier, submit to the OWNER for approval the relative plan(s), drawing(s), design(s) or specification(s). The OWNER shall be entitled at any time to suggest any amendment(s) / modification(s) in the plans, designs, drawings or specifications and the CONTRACTOR shall thereupon either convince the OWNER of the unnecessary in whole or portion of such amendment / modification or shall implement the same and shall cause the plans, drawings, designs or specifications to be accordingly amended provided that no such approval of or amendments or modifications in the plans, drawings, designs or specifications by or suggested by the OWNER shall anyway absolve the CONTRACTOR of any of his obligations, responsibilities or liabilities under the Contract.

2.3.2.0 The CONTRACTOR shall not permit any work to be done or any installation, material or equipment to be supplied or fabricated or erected at variance with plans, drawings, designs or specifications approved by the OWNER and / or amended or modified as aforesaid.

2.3.3.0 Unless otherwise required, at least 3 (three) sets along with soft copies / scanned copies in pdf / acceptable format of all approved plans, drawings, designs and specifications prepared by the CONTRACTOR, together with similar set of all revisions, amendments, and modifications therein shall be lodged with the OWNER for the record of the OWNER. Such sets of plans, drawings, designs and specifications shall be signed by the CONTRACTOR and shall indicate thereon the number and date of each revision, amendment and/or modification of communication by the OWNER or any consultant appointed by the OWNER for or relative to the approval thereof.

2.4.0.0 ALTERATIONS IN DESIGNS, PLANS, DRAWINGS, SPECIFICATIONS, ORDERS AND INSTRUCTIONS

2.4.1.0 In addition to the provisions of Clause 2.2.0.0 and associated clauses there under, the Engineer-in-Charge and / or Site Engineer shall have the power by written notice to the CONTRACTOR at any time prior to or in the course of the execution of works or any part thereof to alter or amend the specifications, orders and / or instructions or any of them by addition, omission, substitution or otherwise howsoever with or without altering or amending

the plans, drawings and / or designs and the CONTRACTOR shall carry out the related work in accordance with such altered specifications, orders, instructions, plans, drawings and / or designs as the case may be, on the same terms and conditions in all respects, subject to the provisions of Clause 2.4.1.2 hereof.

2.4.1.1 If such alteration or amendment shall, in the opinion of the CONTRACTOR, necessitate an extension in the time for completion, the provision of Clause 4.3.6.0 hereof and related clauses with regard to the extension of time, shall apply.

2.4.1.2(a) If such alteration or amendment shall, in the opinion of the Engineer-in-Charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR), necessitate the performance of any work not covered by the Schedule of Rates, the remuneration for such work or portion or item thereof not covered by the Schedule of Rates shall be determined in the following manner:

(i) If it is possible to derive the rate(s) for such work or items of work from any of the items of material and / or work covered in the Schedule of Rate(s), the rate(s) for the relative works / items shall be the rate(s) arrived at on the basis of such derivation. The opinion of the Engineer-in-Charge as to whether or not the relative rates can be derived from the rates for the items of material and / or work included in the Schedule of Rates and the consequent derivation of rate(s) on basis thereof shall be final and binding upon the CONTRACTOR.

(ii) If, in the opinion of the Engineer-in-Charge, the relative rate(s) shall not be derivable within the provisions of paragraph (i) hereof above, the relative rate(s) shall be the rate(s) for the work or items of work settled as follows:

An analysis of the rate for the completed work or items shall be prepared by taking (if and so far as applicable):

A) Issue rate(s) for materials supplied by the OWNER, if applicable;

B) Materials supplied by the CONTRACTOR and incorporated in the permanent works at the rate(s) (if any) for material specified in the relevant Schedule forming part of the Contract; and

C) Labour cost at rate(s) for labour, if any, specified in the relevant Schedule forming part of the Contract.

(iii) The opinion of the Engineer-in-Charge as to the quantity of material and / or labour involved shall be final and binding on the CONTRACTOR.

(iv) In the event of any item of material or labour involved not being covered by the relevant schedule forming part of the Contract for the purpose of determining the rates in terms of items (B) and / or (C) of paragraph (ii) above, market rates shall be taken into account for such items of materials and labour as are not covered by the relevant schedules forming part of the contract and there shall be added thereto 15% (Fifteen percent) to cover CONTRACTOR's supervision, overheads and profits. For the purpose of clarification, it is stated that 15% (Fifteen percent) addition shall apply only for any item not covered by the relevant schedule of the Contract.

(v) The opinion of the Engineer-in-Charge as to whether or not any particular item(s) of material(s) or labour involved is covered by the relevant Schedule(s) and if not as to the market rate(s) thereof shall be final and binding upon the CONTRACTOR.

2.4.1.2 (b) If any alteration, amendment or modification shall, in the opinion of the Engineer-in-charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR) result in a reduction or increase or change in the work or supply covered by the lump sum Price so as to render unreasonable the lump sum Price, the OWNER and the CONTRACTOR shall negotiate a suitable increase or reduction, as the case may be, in the lump sum Price, and failing agreement on a negotiated rate for the item by appropriate reduction/increase, as the case may be, the Engineer-in-Charge shall fix the reduction or increase as he considers reasonable in the circumstances to the lump sum Price, and the lump sum Price shall be deemed to be accordingly amended to the extent applicable to the work covered by the alteration or amendment.

2.4.1.3 Pending finalization in respect of the revised rate of any item in the Price Schedule or increase/reduction in the lump sum Price pursuant to the provisions of clause 2.4.1.2 hereof,

the CONTRACTOR shall continue and be bound to continue and perform the works and/or make the supply to completion in all respects according to the contract (unless the contract or works be determined by the OWNER) and the CONTRACTOR shall be liable and bound in all respects under the contract.

2.4.2.0 The rate(s) for any work determined in accordance with the provisions of Clause 2.4.1.2 above shall for the purpose of the Contract with respect of the work or items of work or supply affected by such amendment, alteration or modification be deemed to be rate(s) for such work or item(s) of work within the Schedule of Rates, or the lump sum Price, as the case may be.

2.4.3.0 The CONTRACTOR shall not be entitled to any compensation in addition to the payment for the work actually performed by the CONTRACTOR calculated on the basis of the Schedule of Rate(s) or lump sum Price or as provided for in Clause 2.4.1.2 hereof, as the case may be, as a result of any amendment or variation in the specification, orders, instructions, plans, designs or drawings notwithstanding that such alteration(s) / variation(s) may have resulted in a reduction of the total quantum or value of the work involved under the Contract, except as provided for in clause 2.6.2.0 hereunder.

2.5.0.0 **ALTERATION IN THE SCOPE OF WORK**

2.5.1.0 The OWNER may, at any time(s) before or after the commencement of the work, by notice in writing issued to the CONTRACTOR, alter the scope of work by increasing or reducing the works or the jobs required to be done by the CONTRACTOR or by adding thereto or omitting there from any specific works or jobs or operations or by substituting any existing works or jobs or operations with other works or jobs and / or operations, or by requiring the CONTRACTOR to perform any additional works in or about the job site, and upon receipt of such notice, the CONTRACTOR shall execute the job(s) as required within the altered scope of work.

2.5.2.0 If any alteration in the scope of work shall, in the opinion of the CONTRACTOR, necessitate any extension in the time for completion, the provisions of Clause 4.3.6.0 hereof and associated clauses with regard to the extension of time shall apply.

2.5.3.0 (a) If such alteration shall, in the opinion of the Engineer-in-Charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR), necessitate the performance of any work not covered by the Schedule of Rates, the remuneration for such work or portion or item thereof not covered by Schedule of Rates shall be determined in accordance with the provisions of Clause 2.4.1.2 hereof.

(b) If in the opinion of the Engineer-in-Charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR) any alteration in the scope of the work shall result in any reduction or increase or change in the work or supply covered by the lump sum price so as to render unreasonable the lump price, the lump sum Price shall be increased or reduced, as the case may be, in accordance with Clause 2.4.1.2 hereof.

2.5.3.1 Providing determination of the rates aforesaid, the provisions of clause 2.4.2.0 shall mutatis mutandis apply.

2.5.4.0 The CONTRACTOR shall not be entitled to any compensation in addition to the payment for the work actually performed by the CONTRACTOR calculated on the basis of the Schedule of Rates or lump sum Price or as provided in Clause 2.4.1.2 hereof, as the case may be, as a result of any alteration in the scope of work notwithstanding that such alteration may have resulted in a reduction in the total quantities or value of work involved, except as provided for in clause 2.6.2.0 hereunder.

2.6.0.0 **QUANTITIES OF WORK**

2.6.1.0 Subject to the provisions of Clause 2.6.2.0 hereof, the quantities of work stated in the Form of Schedule of Rates do not form part of the Contract and the OWNER shall not be liable for any increase or decrease in the actual quantities of work performed (notwithstanding the percentage of such increase or decrease), nor shall such increase or decrease in the actual quantities form the basis of any alteration of rates quoted and accepted or in the lump sum price or for any claim for additional compensation, damages or loss or profits or otherwise, with the intent that the CONTRACTOR shall notwithstanding the quantities mentioned in the Form of Schedule of Rates only be entitled to payment in respect of actual quantities of work performed in terms of the contract and measured in the Final Measurements, notwithstanding the percentage of increase or shortfall in such quantities and notwithstanding that the Total

Contract Value for the completed works on finalization of all dues to the CONTRACTOR under the Contract shall be less than the total contract value as specified for the purpose of Security Deposit in the Acceptance of Tender.

2.6.1.1 Notwithstanding the provision of Clause 2.6.1.0, if at any time prior to completion of the work(s), the CONTRACTOR finds that the accumulated quantities of work and the amounts payable in respect thereof under the Schedule of Rates exceeds by more than 20% (twenty per cent) of the estimated Total Contract Value of the work as set out in the detailed Letter of Acceptance, the CONTRACTOR may give a written notice thereof to the Site Engineer and Engineer-in-Charge. The CONTRACTOR may within 7 (seven) days of the notice aforesaid, if given, make a written request to Engineer-in-Charge for extension of any relative time of performance in accordance with the provisions of Clause 4.3.6.0 and all provisions relevant thereto shall be applicable to such request.

2.6.2.0 If, as a consequence of such amendments/variations/alterations/modifications/reductions, as envisaged in clauses 2.4.0.0 and/or 2.5.0.0 hereof and associated sub clauses there under, or pursuant to Clause 2.6.1.0 hereof, the quantities of work and the gross value of work actually performed by the CONTRACTOR, as valued on finalization of all dues to the CONTRACTOR under the Contract, shall be less than 80% (eighty percent) of the Total contract value, then the CONTRACTOR shall be entitled to 10% (ten percent) of the amount by which the reduced contract value as aforesaid falls short of 80% (eighty percent) of the Total Contract Value by way of allowance for the advantage (including profit) which the CONTRACTOR may have anticipated on the execution of the work up to the Total Contract Value. And the CONTRACTOR shall not be entitled to any compensation in addition to the payments specifically provided for above, and the CONTRACTOR hereby specifically waives any and all contrary rights and claims whatsoever.

2.7.0.0 **CANCELLATION OF CONTRACT**

2.7.1.0 The OWNER shall be entitled at any time at his discretion to cancel the Contract, if, in the opinion of the OWNER, the cessation of the work becomes necessary owing to any cause whatsoever, and a notice in writing from the OWNER to the CONTRACTOR of such cancellation and the reason(s) therefor shall be conclusive proof of such cancellation and the reasons therefor.

2.7.2.0 Upon cancellation of the Contract, the Engineer-in-Charge may require the CONTRACTOR:

- i) To perform to completion or to any other intermediary stage of completion to the satisfaction of the Engineer-in-Charge any work(s) already commenced by the CONTRACTOR and
- ii) To take such steps as are considered necessary by the Engineer-in-Charge for properly protecting and securing the works performed by the CONTRACTOR, to the satisfaction of the Engineer-in-Charge:

And the CONTRACTOR shall act accordingly and the same shall be deemed to be included within the CONTRACTOR's scope of work.

2.7.3.0 Upon receipt of a notice as specified in Clause 2.7.1.0 hereof the CONTRACTOR shall, unless the notice otherwise requires:

- i) Immediately discontinue work and/or supply from the date and to the extent specified in the notice;
- ii) Not place any further orders or sub-contracts for materials, services or facilities other than as may be necessary or required for completing or performing such portion of the work(s) or supplies which the CONTRACTOR is required to complete or perform;
- iii) Promptly make every reasonable effort to obtain cancellation or fulfillment, as the case may be, at the option of the Engineer-in-Charge/OWNER of all orders and sub-contracts to the extent they relate to the performance of the work(s) or supplies cancelled.
- iv) Assist the Engineer-in-Charge/OWNER as specifically requested in writing by the Engineer-in-Charge/OWNER in the maintenance, protection and disposition of property/works acquired by the OWNER pursuant to the Contract.

2.7.4.0 Upon cancellation of the Contract, the OWNER shall take over from the CONTRACTOR the approved surplus materials supplied by the CONTRACTOR for permanent incorporation in the work and lying at the job site on the date of receipt of notice of cancellation by the

CONTRACTOR and the decision of the Site Engineer as to the approved materials lying at Site on the date of cancellation and the quantities thereof shall be final and binding upon the CONTRACTOR.

2.7.5.0 Upon cancellation of the Contract, the CONTRACTOR agrees to waive any claim for damages, including loss of anticipated profits on account thereof, and as the sole right and remedy of the CONTRACTOR against the OWNER resultant upon such cancellation, the CONTRACTOR agrees to accept from the OWNER the following, namely:

- i) The cost of settling and paying claims for cancellation or completion of pending orders and/or sub-contracts as provided for in sub-clause (iii) of Clause 2.7.3.0 hereof;
- ii) The cost of protecting, securing and/or maintaining the works pursuant to the provisions of sub-clause (ii) of Clause 2.7.2.0 hereof and/or sub-clause (iv) of Clause 2.7.3.0 hereof;
- iii) Payment for the supplies actually made determined in accordance with the provisions of Clause 2.4.1.2 hereof.
- iv) Payment for the work actually performed by the CONTRACTOR calculated on the basis of Unit Rates or lump sum rates wherever applicable and the provisions of Clause 6.1.0.0 shall apply mutatis mutandis. Where Unit Rates or lump sum rates are not applicable and/or the relative works are incomplete, the provisions of Clause 2.4.1.2 shall apply for calculating remuneration.
- v) The cost of materials taken over by the OWNER including materials dispatched and/or in transit for permanent incorporation in the Works prior to the receipt of the notice referred to in Clause 2.7.4.0 hereof, subject to such material having been delivered to the OWNER in good condition.
- vi) An allowance, if any due, as determined by the Engineer-in-Charge (whose decision shall be final) to cover the cost of CONTRACTOR's actual mobilization and demobilization at job site for the work to the extent uncovered by payments under items (i) to (iv) above.

The CONTRACTOR shall not be entitled to any compensation in addition to the payments specifically provided for above, and the CONTRACTOR hereby specifically waives any and all contrary rights and claims whatsoever.

Provided that upon cancellation of the Contract on account of Force Majeure, the CONTRACTOR shall be entitled only to the following from the OWNER, namely:

- (a) The cost of protecting, securing and/or maintaining the works pursuant to the provisions of sub-clause (ii) of Clause 2.7.2.0 hereof and/or sub-clause (iv) of Clause 2.7.3.0 hereof;
- (b) Payment for the supplies actually made determined in accordance with the provisions of Clause 2.4.1.2 hereof.
- (c) Payment for the work actually performed by the CONTRACTOR calculated on the basis of Unit Rates or lump sum rates wherever applicable and the provisions of Clause 6.1.0.0 shall apply mutatis mutandis. Where Unit Rates or lump sum rates are not applicable and/or the relative works are incomplete, the provisions of Clause 2.4.1.2 shall apply for calculating remuneration.
- (d) The cost of materials taken over by the OWNER including materials dispatched and/or in transit for permanent incorporation in the Works prior to the receipt of the notice referred to in Clause 2.7.4.0 hereof, subject to such material having been delivered to the OWNER in good condition.

It is further agreed that the CONTRACTOR shall not be entitled to any compensation in addition to the payments specifically provided for above, and the CONTRACTOR hereby specifically waives any and all contrary rights and claims whatsoever.

2.7.6.0 For purposes of measurement, the provisions of Clause 6.1.0.0 shall apply. For purposes of payments, provisions of Clause 6.4.9.3 shall apply, as applicable.

2.7.7.0 Upon cancellation of the Contract, the CONTRACTOR shall as soon as is reasonably feasible prepare an account of all amounts due to it from the OWNER pursuant to Clause 2.7.5.0 hereof and upon submission of such account to the OWNER, the CONTRACTOR shall forthwith provide Bank Guarantee(s)/Insurance Surety Bond(s) (only if the CONTRACTOR

is an Indian entity) furnished by way of Security Deposit with reduced value to cover defects in the works performed and supplies made by the CONTRACTOR for the Defect Liability Period specified in Clause 5.6.1.2 hereof, and such Bank Guarantee(s) shall be valid throughout Defect liability period shall have a claim period of 3 (three) month thereafter. Alternatively, the CONTRACTOR may also cause fresh Bank Guarantee(s)/ Insurance Surety Bond(s) (only if the CONTRACTOR is an Indian entity) to be furnished to the OWNER for the amount and period aforesaid in lieu of the existing Bank Guarantee(s)/ Insurance Surety Bond(s) furnished to the OWNER by way of Security Deposit and the provisions of Clause 2.1.1.0 to 2.1.3.0 hereof shall mutatis mutandis apply to such substituted Bank Guarantee(s)/Insurance Surety Bond(s).

2.8.0.0 **SUSPENSION OF WORK**

2.8.1.0 The Engineer-in-Charge may at any time(s) at his discretion, should he consider that the circumstances so warrant (the decision of the Engineer-in-Charge as to existence of circumstances warranting such suspension shall be final and binding upon the CONTRACTOR), by notice in writing to the CONTRACTOR temporarily suspend the work or supply or any part thereof for such period(s) as Engineer-in-Charge shall deem necessary and the CONTRACTOR shall upon receipt of the order of suspension forthwith suspend the work(s) or supply (ies) or such part thereof as shall have been suspended until he has received a written order from the Engineer-in-Charge to proceed with the work suspended or any part thereof.

2.8.1.1 During the period of any suspension under Clause 2.8.1.0 the CONTRACTOR shall at his own cost within the scope of the relative work properly protect and secure the work and materials so far as is necessary in the opinion of the Engineer-in-Charge.

2.8.2.0 If the suspension under Clause 2.8.1.0 is for reasons of force majeure as defined in Clause 4.3.9.0 or by reason(s) of default or failure on the part of the CONTRACTOR or is for the purpose of ensuring safety of the work(s) or any part thereof or is necessary for the proper execution of the work(s) or is for reason(s) of weather affecting the safety or quality of the work(s) or materials (the reasons for the suspension stated by the Engineer-in-Charge in any notice of suspension as aforesaid, inclusive as to existence of default or failure on the part of the CONTRACTOR, if so stated in the notice, shall be final and binding upon the CONTRACTOR), the CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by the CONTRACTOR by virtue of any suspension as aforesaid notwithstanding that consequent upon such suspension the machinery, equipment and/or labour of the CONTRACTOR or any part thereof shall be or become or be rendered idle and notwithstanding that the CONTRACTOR shall be liable to pay salary, wages or hire charges or bear other charges and expenses thereof.

2.8.3.0 Unless the suspension is by reason of default or failure on the part of the CONTRACTOR (and the reasons for the suspension stated by the Engineer-in-Charge in any notice of suspension as aforesaid inclusive as to the existence of default or failure on the part of the CONTRACTOR if so stated in the notice, shall be final and binding upon the CONTRACTOR), if in the opinion of the CONTRACTOR such suspension shall necessitate any extension in the time of completion, the provisions of Clause 4.3.6.0 hereof and related clauses in respect of extension of time shall apply.

2.8.4.0(a) In the event of a suspension affecting the entire works remaining in operation in respect of the entire works for a period in excess of 4 (four) months from the date of commencement of the suspension, the CONTRACTOR shall have the option at any time before the issue of an order by the OWNER or the Engineer-in-Charge removing the suspension, to terminate the Contract by giving written notice thereof to the OWNER. Unless the suspension be by reason of default or failure on the part of the CONTRACTOR, as specified in clause 2.8.3.0 hereof, and subject to provisions of 2.8.2.0 such termination shall be deemed to operate as a cancellation of Contract, within the provisions of clause 2.7.1.0 hereof, and the provisions of clause 2.7.2.0 to 2.7.7.0 shall apply mutatis mutandis thereto.

2.8.4.0(b) In the event of a suspension affecting part of the works for a period in excess of 4 (four) months from the date of commencement of the suspension, and unless the suspension be by reason of default or failure on the part of the CONTRACTOR, as specified in clause 2.8.3.0 hereof, and subject to provisions of 2.8.2.0 the CONTRACTOR shall have the option at

anytime before the issue of an order by the OWNER or the Engineer-in-Charge removing such suspension, to seek alteration in the Scope of Work in respect of suspended works by giving a written notice thereof to the OWNER. If the Engineer-In-Charge/Owner does not lift the suspension within 28 (Twenty Eight) days of receipt of the Contractor's notice as aforesaid, the scope of work shall be deemed to be altered to the extent that the suspended works shall not be within the scope of the Contract. Such alteration shall be considered as an alteration under Clause 2.5.0.0.

- 2.8.5.0 In the event of such termination being upon a suspension consequent to a default or failure by the CONTRACTOR, the CONTRACTOR shall not be entitled to any damage, compensation, loss of profit or other compensation whatsoever in addition to payment for the completed supplies made and completed works done in terms of the Contract in accordance with the provisions of sub-clauses (iii), (iv) & (v) of clause 2.7.5.0 hereof.
- 2.8.6.0 Except for a suspension by a written order of the Engineer-in-Charge under clause 2.8.1.0 hereof, the CONTRACTOR shall not suspend the work for any cause and any such suspension if occurs, shall be attended by consequences as for suspension under clause 7.0.1.0 (i)(i) and (k) hereof.
- 2.8.7.0 Notwithstanding anything provided in Clause 2.7.0.0 and/or Clause 2.8.0.0 and related Clauses there under, upon a cancellation of the contract under the provisions of Clause 2.7.1.0 hereof or termination of the contract under provisions of Clause 2.8.4.0 (a) hereof, the provisions of Clauses 7.0.3.0 to 7.0.7.0 hereof consequent upon termination of Contract, shall apply. Should the termination be one to which the provisions of Clause 2.8.5.0 hereof apply, then the provision of Clauses 7.0.2.0 to 7.3.0.0 consequent upon termination of Contract shall also mutatis mutandis apply.
- 2.9.0.0 DECISION OF OWNER OR ENGINEER-IN-CHARGE
- 2.9.1.0 Any decision, opinion, or determination by the OWNER or the Engineer-in-Charge, which is expressed in terms of these General Conditions of Contract to be final and/or binding upon the CONTRACTOR shall be arrived at after giving the CONTRACTOR an opportunity to be heard either by making a written representation or by way of a personal hearing, and the decision, opinion or determination, as the case may be, shall be arrived at after taking into account the views, if any, of the CONTRACTOR and shall record the reason(s) on which the decision, opinion or determination is based.

SECTION – 3

MATERIALS, LABOUR AND EQUIPMENT

3.0.0.0 CONTRACTOR'S RESPONSIBILITY

3.0.1.0 Notwithstanding anything to the contrary in the Contract Documents express or implied, the CONTRACTOR shall be and remain at all times exclusively responsible to provide all material, labour, equipment, machinery, facilities, utilities and consumables and temporary works and other items and things whatsoever required for or in connection with the work, including, but not limited to those indicated by expression or implication in the Job Description, Schedule of Rates, the Specification, Plans, Drawings, and/or other Contract Documents or howsoever otherwise as shall or may from time to time and at any time be necessary for or in connection with the work, either for incorporation in or within the permanent works or in or relative to the execution and performance of the work.

3.1.0.0 MATERIALS SUPPLIED BY THE CONTRACTOR

3.1.1.0 Materials supplied by the CONTRACTOR shall conform to the specifications and shall be suitable for the purpose for which they are required.

3.1.2.0 Unless otherwise specified by the OWNER, all materials supplied by the CONTRACTOR shall be supplied by reputed manufacturers or suppliers approved by the OWNER or listed for the relative materials with the DGS&D and/or borne on the approved list of suppliers maintained for relative items by such organizations as are approved by the Engineer-in-Charge. If in respect of any materials, including but not limited to sand, stone, aggregate, bricks, earth, lime, steel and cement in respect whereof neither IS marking/approval nor any approved list of suppliers is available, such materials shall be obtained from sources/suppliers/manufacturers approved by the Engineer-in-Charge provided that no approval by the Engineer-in-Charge or any other representative of the OWNER for the supply of IS stamped materials or of materials supplied by DGS&D listed suppliers or other approved suppliers shall relieve the CONTRACTOR of his full responsibility in respect of the suitability and quality of the material or any defects therein or in any works or construction in or relative to which the same has been utilized.

3.1.3.0 Notwithstanding that any area(s) or source(s) has/have been allotted or suggested by the OWNER to the CONTRACTOR from which any materials for incorporation in the works can be obtained, the CONTRACTOR shall independently satisfy himself of the suitability, accessibility and sufficiency of the source(s) of supply suggested or allocated by the OWNER and suitability of materials available from such source(s), with the intent that any allotment or suggestion as aforesaid shall not anywise relieve the CONTRACTOR of his full liability in respect of the suitability and quality of material(s) there from and incorporate the same within the permanent works entirely at his own risks and costs in all respects, with the intent that any such allocation or suggestion by the OWNER shall only be by way of assistance to the CONTRACTOR and shall not entail any legal or financial responsibility or liability upon the OWNER.

3.1.4.0 Notwithstanding any other provisions in the Contract Documents for analysis or tests of materials and in addition thereto, the CONTRACTOR, shall, if so required for reasonable cause by the Engineer-in-Charge or Site Engineer in writing, at his own risks and costs, analyze, test, prove and weigh all materials (including materials incorporated in the work(s)) required to be analyzed, tested, proved and/or weighed by the Engineer-in-Charge or Site Engineer and shall have such analysis test conducted by the agency(ies), if any, specified by the Engineer-in-Charge or Site Engineer. The CONTRACTOR shall provide all equipment, labour, materials and other things whatsoever required for testing, preparation of the samples, measurement of work and/or proof or weighment of the materials as directed by the Engineer-in-Charge or Site Engineer.

3.1.5.0 The OWNER does not warrant or undertake the provision of any material(s) and the CONTRACTOR shall not imply by conduct, expression or assurance or by any other means any promise or obligation on the part of the OWNER in this respect understood by the CONTRACTOR, unless made by specific written instrument forming part of the CONTRACT or appropriately entitled as an amendment to the Contract.

3.2.0.0 MATERIAL AND EQUIPMENT SUPPLIED BY THE OWNER

3.2.1.0 In the case of contracts (including for equipment erection and/or piping), for which the OWNER undertakes the procurement and supply of equipment and materials, the supply of equipment and materials to the CONTRACTOR shall be on the following terms and conditions:

- (a) Deliveries shall be either from the storage of the OWNER or from the factory/storage of supplier or from nearest suitable railhead or other point(s) of collection as may be determined by the OWNER taking into account the source(s) of supply of the material.
- (b) It shall be the responsibility of the CONTRACTOR at his own risks and costs to take delivery of the materials from the stores, factory, railhead or other collection point, as the case may be, and to arrange for its loading, transportation to job site and unloading at the job site or other place of storage. The CONTRACTOR shall in taking delivery ensure compliance of any conditions for delivery applicable to deliveries from OWNER's or supplier's factory/stores or railways or other transporters concerned, and shall be exclusively responsible to pay and bear any demurrage or penalty or other charges payable by virtue of any failure or delay by the CONTRACTOR in lifting the supplies and/or any failure by the CONTRACTOR to observe the conditions of supply as aforesaid, and shall keep the OWNER indemnified from and against all consequences thereof.
- (c) The CONTRACTOR shall inspect the equipment and materials supplied to him at the time of taking delivery thereof and satisfy himself of the quantity and condition thereof prior to taking delivery and the OWNER shall not be liable for any claims or complaints for any defect or deficiency in the equipment or materials once the CONTRACTOR has taken delivery thereof, if the defect or deficiency could have been reasonably detected at the time of delivery.
- (d) The CONTRACTOR shall on receiving and opening the packing cases or other packaging of equipment and material on behalf of the OWNER, verify and tally the actual contents with the packing list and bring any discrepancies to the notice of the Engineer-in-charge and the Site Engineer. The CONTRACTOR shall also sort out and segregate and hand over to the OWNER's stores, the Instruction Manuals, Operation and Maintenance Manuals, Special Maintenance Tools, Erection Spares, Commissioning Spares, and Maintenance Spares and other extras, if received with the main equipment. The Erection Spares may be got issued from the OWNER's stores if required, after getting authorization from the Engineer-in-charge. The Commissioning Spares may be got issued from the OWNER's Stores, if Commissioning is included in the CONTRACTOR's scope.
- (e) The equipment and/or material(s) supplied or procured by the OWNER shall be utilized by the CONTRACTOR only for incorporation in the permanent works and even so shall not (unless specifically authorized by the OWNER in this behalf) be utilized for manufacturing any item(s) which can be obtained in finished form from standard manufactures.
- (f) The CONTRACTOR shall furnish to the Engineer-in-Charge sufficiently in advance a detailed statement showing his requirement of the types and quantities of equipment and materials agreed to be supplied by the OWNER, indication of the time when relative types and quantities thereof shall be required by him for the works so as to enable the OWNER to verify the quantities of materials specified by the CONTRACTOR and to enable the OWNER to make arrangements for the supply thereof.
- (g) The OWNER shall not be responsible for any delay in the supply of any equipment and/or materials supplied or procured or agreed to be supplied or procured by the OWNER, and no such delay or failure shall anyway render the OWNER liable for any claim for damages or compensation by the CONTRACTOR notwithstanding that an increase in the time of performance of the contract be involved by virtue of such delay and notwithstanding any labour, machinery or equipment brought upon to the job site by the CONTRACTOR for the performance of the work being rendered idle by such delay or failure, PROVIDED that if such delay shall in the opinion of the CONTRACTOR, necessitate an extension of time for completion, the provisions of Clause 4.3.6.0 hereof relating to extension of time and associated provisions thereof shall apply.
- (h) The CONTRACTOR shall maintain a day to day account of all equipment and materials supplied to him by the OWNER indicating the daily receipt(s), consumption and balance(s) in hand of each material and category thereof. Such account shall be maintained in such form (if any) as shall be prescribed by the Engineer-in-Charge and shall be supported by all documents necessary to verify the correctness of the entries in the account. Such account

shall be maintained at the CONTRACTOR's office at the site, and shall be open for inspection and verification (by verification of documents in support of the entry as also by physical verification of the stocks) at all times by the Engineer-in-charge and Site Engineer without notice, and for the purpose the Engineer-in-Charge and Site Engineer shall be permitted and enabled without obstruction to enter into any godown or other place or premises where the equipment or materials or any part thereof shall be stored and to inspect the same and to take by himself and/or through his representative(s) an inventory thereof.

- i) All equipment and materials supplied by the OWNER shall be taken delivery of, held, stored and utilized by the CONTRACTOR as trustee of the OWNER, and delivery of material to the CONTRACTOR shall constitute an entrustment thereof by the OWNER to the CONTRACTOR, with the intent that any utilization, application or disposal thereof by the CONTRACTOR otherwise than for permanent incorporation in contractual works in terms hereof shall constitute a breach of trust by the CONTRACTOR.
- j) The CONTRACTOR shall hold and store any equipment or material(s) supplied by the OWNER only at such place and/or premises as may be approved by the Engineer-in-Charge, provided that no such approval shall absolve the CONTRACTOR in whole or part of his full liabilities in respect of such material, and the CONTRACTOR shall be and remain responsible at all times at his own risk and cost to ensure that the material(s) supplied by the OWNER is/are retained at all times in premises that are air and water tight and otherwise suitable for the storage of the concerned equipment or materials so as to prevent damage or deterioration for any cause whatsoever or theft or other loss, and shall arrange such watch and ward therefor as shall be necessary to ensure the safety thereof.
- k) The Engineer-in-Charge may at his discretion require that all premises in which any equipment or materials supplied by the OWNER are stored, shall be double-locked with the keys to one lock retained by the Site Engineer or his representative and the other with the CONTRACTOR with the intent that all issues of OWNER supplied equipment and materials shall be with concurrence of the Site Engineer or his representative, as the case may be, provided that any such double-locking and/or concurrence as aforesaid shall be an additional precaution and shall not anyway absolve the CONTRACTOR of his full liabilities or responsibilities in respect of such equipment or materials.
- l) The equipment supplied by the OWNER shall be insured by the OWNER against normal risks during transit, storage and erection. The CONTRACTOR shall, however, be responsible forthwith to make and pursue on behalf of the OWNER any and all claims under the policy (ies) and to fulfill all formalities required to obtain payment there under and/or to assist the OWNER in making or pursuing any such claim(s) and/or in obtaining payment there under.
- m) The CONTRACTOR shall be required to take out at his own cost and initiative and keep in force at all times during the pendency of the contractual work, policy (ies) of insurance against the risks of fire, lightning, flood, inundation and theft and against any other damage or loss, for the full value of the OWNER supplied materials lying in the CONTRACTOR's custody and/or storage pending utilization/ incorporation in the work and during erection/incorporation in the work. The insurance shall be kept valid till the completions of the work and till the materials are duly accounted for to the satisfaction of the OWNER.
- n) Such insurance policy (ies) shall be in the joint names of OWNER and the CONTRACTOR with exclusive right in the OWNER to receive all money (ies) due in respect of such policy (ies), and with right in the OWNER (but without obligation to do so) to take out and/or pay the premia for any such policy (ies) and deduct the premia and any other costs and expenses in this behalf from the money (ies) for the time being due to the CONTRACTOR.
- o) Notwithstanding anything stated above, it shall be the responsibility of the CONTRACTOR to lodge with insurers and follow up claim(s), if any, under any policy(ies) of insurance aforesaid, and nothing herein provided shall absolve the CONTRACTOR from his full liabilities under the provisions of this clause and associated provisions hereof.
- p) Where the OWNER issued materials are being stored within the battery area under the security and gate-pass control of the OWNER and are covered by the Overall Storage- cum erection insurance Policy taken by the OWNER for the works, the OWNER may, at his sole discretion, permit the CONTRACTOR to furnish in lieu of insurance provided in (m) above, an Indemnity Bond in the proforma prescribed by the OWNER, for the entire value of the OWNER supplied materials and for the entire duration during which the materials shall be lying in the storage and custody of the CONTRACTOR.

- q) No such Insurance(s), as aforesaid, shall anyway absolve the CONTRACTOR from his full liabilities hereunder, with the intent that the CONTRACTOR shall at all times be exclusively responsible for any and all loss(es), damage(s), deterioration, misuse, theft or other application or disposal of the equipment or material(s), supplied by the OWNER or any of them contrary to the provisions hereof and shall keep the OWNER indemnified from and against the same and shall forthwith at his own cost and expense replace any such equipment and material(s) lost, damaged, deteriorated, misused, stolen, applied and/or disposed as aforesaid, with other equipment or material of equivalent quality and quantity to the extent that the same is not covered by any insurance as above, and if covered, payment under the relative policy(ies) is for any reason not available to the OWNER.
- r) The CONTRACTOR shall use the equipment and materials supplied by the OWNER for incorporation in the permanent works, carefully and judiciously with no wastage or the minimum possible wastage, wherever some wastage is inevitable or unavoidable, in any case within the wastage limit, if any, specified by the OWNER in respect of any such materials. For any excess wastage or scrap, due to misuse or injudicious, careless or wrong use of OWNER supplied materials, or in case of loss, damage or deterioration of the materials during storage with the CONTRACTOR, as to all of which the decision of the Engineer-in-charge shall be final and binding on the CONTRACTOR, the CONTRACTOR shall be bound to replace the material of equivalent quantity and grade, acceptable to the OWNER within the time limit specified by the OWNER, and where this is not possible, practicable or advisable, in the opinion of the OWNER, which shall be final and binding on the CONTRACTOR, the OWNER shall be compensated by the CONTRACTOR for the loss caused, for the replacement costs, which shall be worked out by the OWNER based on the assessed landed cost plus the costs of procurement at 1% (one percent) of the assessed landed costs for the OWNER. This amount shall forthwith be remitted by the CONTRACTOR within a week of demand made by the OWNER, failing which the OWNER shall be entitled to recover / adjust the amount demanded from any money (ies) due from the OWNER to the CONTRACTOR and/or from any Security or any other deposits of the CONTRACTOR lying with the OWNER, under this and/or any other contract, without any further notice to the CONTRACTOR. The decisions of the OWNER in respect of the actions contemplated in this clause shall be final and binding on the CONTRACTOR.
- s) Notwithstanding anything herein provided and notwithstanding the transfer of all risks in respect of such equipment and materials to the CONTRACTOR, the Ownership in respect of all OWNER supplied equipment and materials shall at all times be and remain in the OWNER.
- t) The excess equipment and material and the scrap material generated from the work, in so far as the OWNER supplied materials are concerned, shall be returned to the OWNER's Stores. On completion of the work, the CONTRACTOR shall duly render accounts for the materials and equipment issued by the OWNER, to the satisfaction of the OWNER. Any shortages, losses and/or damages shall be to the CONTRACTOR's account and all the conditions stipulated under sub-clause (r) above shall apply in this case also.

3.3.0.0 POWER, WATER & OTHER FACILITIES

- 3.3.1.0 The CONTRACTOR shall be responsible to provide within the scope of work all facilities, consumables and utilities necessary for performance of the work including (but not limited to) water, power, transportation, labour, tools, construction and testing equipment, machinery and land at or about the job site(s) for the CONTRACTOR's field offices, godowns, workshop; residential accommodation for CONTRACTOR's staff; quarry rights and borrow areas, access roads and right(s) of way to or about the job site(s) and CONTRACTOR's offices, godowns, workshop accommodation, quarries and / or borrow areas.
- 3.3.2.0 The OWNER does not warranty or undertake the provision of any facility, consumable or utility whatsoever to the CONTRACTOR, or assistance in obtaining / procuring the same or other assistance whatever for or in the performance or testing of the work and the CONTRACTOR shall not imply by conduct, expression or assurance or by any other means, any promise or obligation on the part of the OWNER contrary to the provisions hereof and any such promise or obligation understood by the CONTRACTOR shall not be binding upon the OWNER.
- 3.3.3.0 Any assistance which the OWNER renders to the CONTRACTOR in terms hereof or otherwise relative to the work by provision of any facility, utility, consumables, water, power, transportation, labour, tools, construction and / or testing equipment, and machinery, provision of land for quarries or borrow areas or for CONTRACTOR's office, godowns, workshops or

accommodations or provisions of right of way, access road(s) and / or railway siding facilities, or other facility, utility, or consumables for or in the performance of the work shall not for any cause afford a basis or defence to the CONTRACTOR for the performance of any of his obligations under the Contract, nor a ground for extension of time for completion or other claim whatsoever.

3.4.0.0 POWER SUPPLY

3.4.1.0 Without prejudice to the provisions of Clause 3.3.0.0 hereof and following clauses there under, as and when adequate power supply becomes available for the site, the OWNER may at its discretion provide supply of power to the CONTRACTOR for the work from the nearest sub-station, from which source the CONTRACTOR shall at his own cost and initiative make arrangement for temporary distribution of power to CONTRACTOR's work(s) at the site.

3.4.1.1 All arrangements for the distribution of power from sources aforesaid and the work relative thereto shall be made/performed/ installed in conformity with Indian Electricity Regulations, and shall be subject to prior approval of the Site Engineer.

3.4.1.2 The CONTRACTOR shall, at his own costs and initiative on completion or prior determination of the work or otherwise during execution of the work, if required by the Site Engineer because of hindrance caused thereby or for any other cause, forthwith remove or re-route the distribution lines/installations or other work(s) in respect thereof as the case may be, required to be removed/ re-routed.

3.4.2.0 The OWNER shall recover from the CONTRACTOR for power consumed by the CONTRACTOR from OWNER's source(s) of supply at the rate prescribed by the OWNER in this behalf from time to time. The amount due to the OWNER in respect of such power supplied shall without prejudice to any other mode of recovery to the OWNER, be deductible from the Running Account/ Final Bill(s) of the CONTRACTOR and / or any monies due to the CONTRACTOR under this or any other Contract from time to time.

3.4.2.1 The CONTRACTOR shall provide at his own cost suitable electric meters approved by the Site Engineer for measurement of Power units consumed by the CONTRACTOR for determination of the payment due thereon to the OWNER. Such meters shall be under the control and custody of the OWNER.

3.4.2.2 In the event of failure or defect of meter(s), power charges shall be calculated on the consumption determined by the Engineer-in-Charge (whose decision shall be final both as regards the existence of a defect or failure, and as regard the power consumed).

3.4.3.0 The OWNER may at any time suspend or discontinue power supply to the CONTRACTOR, and such suspension or discontinuance shall not entitle the CONTRACTOR to any compensation or damages nor shall constitute a basis for extension of time for completion.

3.4.4.0 Power supplied by the OWNER to the CONTRACTOR shall be entirely at the risk of CONTRACTOR as to the continuity and regularity of supply, maintenance of voltage and adequacy of load without any warranty by or liability to the OWNER in respect thereof and without entitlement to the CONTRACTOR on grounds of discontinuance, fluctuation of voltage or inadequacy of load or any other cause whatsoever to claim from OWNER in respect thereof or consequences thereof.

3.5.0.0 WATER SUPPLY

3.5.1.0 Without prejudice to the provisions of Clause 3.3.0.0 hereof and the following clauses there under, in the event of the OWNER having adequate source of water supply at the site available for distribution, the OWNER may at its discretion provide water to the CONTRACTOR for the work from the OWNER's source of supply upon the CONTRACTOR at his own cost and initiative providing suitable pumping installations and pipe network for the conduct of water to and distribution to the CONTRACTOR's place of work.

3.5.1.1 Such installation, pipes and other equipment shall be laid out / installed by the CONTRACTOR only with the prior approval of the Site Engineer so as not to interfere with the layout and progress of the other construction work at the site and access to or about the job site.

3.5.1.2 The CONTRACTOR shall forthwith on completion of the work or earlier determination of the contract or during the execution of the work(s), if so required by the Site Engineer, on ground of hindrance or obstruction caused thereby or other causes whatsoever at his own cost and initiative remove or re-route, as the case may be, any installations, pipes and / or other equipment or any part or portion thereof installed or erected by the CONTRACTOR for the conduction

and/ or distribution of water, and fill any trenches, ditches or other excavations made by the CONTRACTOR for the purpose thereof and restore the site to the same condition in which it was prior to the installation.

- 3.5.2.0 The OWNER shall recover from the CONTRACTOR for water consumed by the CONTRACTOR from OWNER's source of supply at the rate prescribed by the OWNER in this behalf from time to time. The amount due to the OWNER in respect thereof shall (without prejudice to any other mode of recovery available to other OWNER) be deductible from the Running Account / Final Bill of the CONTRACTOR and / or payments due to the CONTRACTOR from time to time under this or any other contract.
- 3.5.2.1 The CONTRACTOR shall provide at his own cost and initiative suitable water meters approved by the Site Engineer for measurement of water units consumed by the CONTRACTOR for determination of the payment due in this behalf to the OWNER. Such meters shall be under the custody and control of the OWNER.
- 3.5.2.2 In the event of failure or defect of meters, water charges shall be calculated on the consumption determined by the Engineer-in-Charge (whose decision shall be final both as regards the existence of a defect or failure and as regards the water consumed).
- 3.5.3.0 The OWNER may suspend or discontinue water supply to the CONTRACTOR and such suspension or discontinuation shall not entitle the CONTRACTOR any compensation or damages or constitute a basis for extension of time for completion or other claim whatsoever.
- 3.5.4.0 Water supplied by the OWNER to the CONTRACTOR shall be entirely at the risk of the CONTRACTOR as to the continuity and regularity of supply and maintenance and adequacy of pressure without any warrant by or liability to the OWNER in respect thereof and without entitlement to the CONTRACTOR on grounds of discontinuance, irregularity, drop or rise in pressure or other cause whatsoever to claim from OWNER in respect thereof or the consequences thereof.

3.6.0.0 **LAND**

- 3.6.1.0 Without prejudice to the provision of Clause 3.3.0.0 hereof and following clauses there under, the OWNER may at his discretion and convenience, if it has sufficient available land at its disposal, provide land to the CONTRACTOR near or about the job site, for the construction of the CONTRACTOR's field office(s), godowns, workshops, assembly yard and residential accommodation required for or in connection with the execution of the work(s). Such land shall be utilized by the CONTRACTOR only for the purpose of the contract and for the duration of the contract.
- 3.6.2.0 The CONTRACTOR shall at his own cost and initiative construct temporary buildings or other accommodation necessary for the purpose and make suitable arrangements for water and power supply thereto and for provision of sanitary, drainage and dewatering arrangements thereof in accordance with plans / designs / layouts previously approved by the Site Engineer in this behalf.
- 3.6.3.0 Any land provided by the OWNER to the CONTRACTOR within the provisions hereof shall be strictly on a licence basis, and shall not create any right, title or interest whatsoever in the CONTRACTOR herein or in respect thereof.
- 3.6.4.0 The CONTRACTOR shall pay the licence fee @ Rs.1000/- (Rupees One Thousand only) per month for land of an area up to 500 (Five Hundred) square meters and Rs. 200/- (Rupees Two Hundred only) for each additional 100 (One hundred) square meters or part thereof, per month or part thereof, for any land made available to the CONTRACTOR within the provisions hereof, and the OWNER shall be entitled (without prejudice to any other mode of recovery), to recover licence fee from the Running / Final Bill(s) of the CONTRACTOR and / or any other payments due to the CONTRACTOR from time to time under this or any other contract.
- 3.6.5.0 Notwithstanding anything herein provided, the OWNER reserves the right at any time during the pendency of the work to ask the CONTRACTOR to vacate the land or any part thereof on giving 7 (seven) days written notice to the CONTRACTOR in this behalf.
- 3.6.5.1 Forthwith on or before the expiry of such notice or within two weeks of the completion of the works or the earlier determination of the Contract, the CONTRACTOR shall remove all constructions, works, piping and other installations, whatsoever, not forming part of the contractual works put up or erected by the CONTRACTOR upon the land, and shall have the land cleared, levelled and dressed to the satisfaction of the Engineer-in-Charge.
- 3.6.5.2 The CONTRACTOR shall not be entitled upon any vacation or notice within the provisions of

- Clause 3.6.5.0 hereof to claim any resultant compensation or damage from the OWNER, nor shall such notice or vacation constitute a ground or basis for any extension of time for completion.
- 3.6.6.0 Likewise, the OWNER may at its discretion and convenience upon such terms and conditions as the OWNER may prescribe in this behalf, arrange or allocate or provide to the CONTRACTOR, borrow area(s) or quarry or mining rights and / or any right(s) of way or other access to or about the job site and unless specifically excluded, the provisions of Clause 3.1.3.0 hereof above, shall apply in respect of any borrow area, quarry, mining right and / or right of way or other access allocated, arranged, provided or permitted by the OWNER to the CONTRACTOR.
- 3.6.6.1 The OWNER shall be entitled, at any time without notice to the CONTRACTOR, to suspend or withdraw use by the CONTRACTOR of any such area, right or access as aforesaid and no suspension or withdrawal of such facility, or disruption or inadequacy thereof by virtue of flood, disrepair or other cause whatsoever, shall form the basis of any claim by the CONTRACTOR, for compensation or damages or ground for extension of time for completion. Upon such notice or within two weeks of the completion of the works or the earlier determination of the Contract the provisions of Clause 3.6.5.1 hereof shall mutatis mutandis apply.
- 3.7.0.0 Notwithstanding anything herein provided, the provisions of Clause 7.0.5.0 to 7.0.7.0 hereof and related clauses applicable consequent upon termination of Contract shall apply to any breach by the CONTRACTOR of his obligations within the provisions of Clause 3.4.1.2, 3.5.1.2, 3.6.5.1 and 3.6.6.1 hereof as if it is a breach of Clause 7.0.5.0 hereof.
- 3.8.0.0 **ACCESS TO SITE**
- 3.8.1.0 The CONTRACTOR shall construct, if necessary at his own cost and initiative, temporary access road to the site from the main public feeder road(s) and from borrow areas and mines and quarries, and shall so align such roads or ways so as not to interfere with the construction of the site or hamper construction of pavement roads by or on behalf of the OWNER or other CONTRACTORS operating at or about the job site.
- 3.8.2.0 The CONTRACTOR shall, if so required or relative to the performance of any other work at the site or construction of permanent roads, suspend, discontinue use of and / or re-route any access road constructed by him. No suspension, discontinuance or re-routing as aforesaid shall form the basis of any claims by the CONTRACTOR against the OWNER for compensation of damages or ground for extension of time for completion or other claim whatsoever.
- 3.9.0.0 **LABOUR, MACHINERY & EQUIPMENT**
- 3.9.1.0 If, during the execution of the works, the OWNER shall for any cause find it necessary to do so, the OWNER may, at its discretion and convenience provide labour, machinery and / or equipment to the CONTRACTOR for the performance of the work and / or testing of the works. The terms and conditions for provisions and / or hiring of such labour, equipment, machinery shall, in addition to any other condition relative thereto as may be specified by the OWNER, unless expressly excluded, be deemed to include the following:
- (i) Charges: The labour, equipment and / or machinery shall be supplied at the rate(s) in this behalf prescribed by the OWNER from time to time.
 - (ii) Recoveries: The amount(s) recoverable by the OWNER from the CONTRACTOR in respect of labour, equipment and / or machinery procured or supplied by the OWNER shall (without prejudice to any other mode of recovery) be debited to the CONTRACTOR's account and deducted from the Running Account / Final Bill(s) of the CONTRACTOR and / or any monies from time to time becoming due to the CONTRACTOR.
 - (iii) Any labour, equipment and / or machinery supplied or procured by the OWNER shall be utilized by the CONTRACTOR only for use in the contractual work.
 - (iv) The CONTRACTOR shall be responsible to ensure utilization of the equipment and / or machinery only within the capacity of such equipment and / or machinery, to ensure the proper utilization thereof in all respects without any manner of abuse or excess, and shall follow and obey all instructions or directions as shall or may be given by the Site Engineer in respect thereof, and if so required by the Site Engineer, shall provide at cost (to be determined by the Engineer-in-Charge in the event of dispute) labour for the operation, maintenance and repair of the equipment / machinery and / or shall operate, maintain and/or repair the same at his own costs and expenses, and provide all the inputs necessary for

the operation, repair and maintenance thereof, including spare parts, fuel and lubricants. The CONTRACTOR shall keep the OWNER indemnified from and against all losses, damages and / or costs, charges and expenses resultant from any breach or failure to observe the provisions hereof.

- (v) The CONTRACTOR shall ensure the safe-keeping and custody of the equipment and machinery at the site and shall be exclusively responsible and accountable for any loss, damage, theft or misuse thereof (and shall make proper arrangement for the storage and watch and ward thereof) and shall keep the OWNER indemnified from and against the same.
- (vi) The CONTRACTOR shall ensure return of the equipment / machinery to the OWNER upon the Completion of the works or earlier determination of the Contract or as and when called upon by the OWNER to return the same during the execution of the work in the same condition in which the equipment / machinery was at the time of bringing the same to job site or delivery to the CONTRACTOR, as the case may be.
- (vii) The provisions of Clause 3.2.1.0 hereof shall mutatis mutandis apply to equipment and machinery supplied by the OWNER to the CONTRACTOR.

3.10.0.0 GOVERNMENT CONTROLLED MATERIALS

- 3.10.1.0 In respect of all Government controlled or other scarce/imported materials in respect of which licenses, release orders, permits or authorizations have been granted in the name of the OWNER, the CONTRACTOR shall be deemed to be acting on behalf of the OWNER and as agent of OWNER in respect of deliveries taken by the CONTRACTOR against any licences, release orders, permits, or authorizations issued in the name of OWNER for Government controlled materials. The ownership in such materials shall (without prejudice to the responsibility/liability of the CONTRACTOR in respect thereof as set out in the various conditions hereof) vest in the OWNER from the point of time when it would have ordinarily vested in the OWNER on a direct delivery to the OWNER.

SECTION – 4

PERFORMANCE OF WORK

4.0.0.0 GENERAL

- 4.0.1.0 All works shall be performed and executed by the CONTRACTOR in strict conformity with the Job Description, Specifications, Plans, Drawings, Designs and other Contract Documents applicable to the specific work(s) and any relative orders or instructions as may be issued to the CONTRACTOR by the Engineer-in-Charge or Site Engineer from time to time.
- 4.0.2.0 The Engineer-in-Charge and Site Engineer shall be entitled from time to time or at any time at their discretion in order to procure the proper performance of the work and/or the proper compliance with the specifications or other contractual requirements to issue written orders or instructions to the CONTRACTOR relative to the performance and / or execution of the work(s) by the CONTRACTOR or otherwise relative to any matter touching or affecting the Contract or arising there from, and to revise or revoke any orders or instructions previously issued, and the CONTRACTOR shall, subject to the provisions of the following clause, obey and/or abide thereby.
- 4.0.2.1 Without prejudice to the provisions of Clause 4.0.2.0 hereof and associated clauses thereto, should the CONTRACTOR require any clarification in respect of any orders or instructions issued by the Engineer-in-Charge or Site Engineer, or should there appear to the CONTRACTOR to be any contradiction between any orders or instructions issued by the Engineer-in-Charge or Site Engineer and / or between any order(s), instruction(s) and the Contract Document or any of them, the CONTRACTOR shall refer the matter immediately in writing to the Engineer-in-Charge for his decision before proceeding further with the work, and the decision of the Engineer-in-Charge on any such matter shall be final and binding upon the CONTRACTOR, who shall perform the work accordingly without entitlement to any claim against or compensation from the OWNER resultant upon such order, instruction or decision.
- 4.0.3.0 The CONTRACTOR shall, within 10 (ten) days of receipt of notification of Acceptance of Tender, name at each job site at which the CONTRACTOR shall be awarded any work under the Contract, an engineer responsible for the work at the job site on behalf of the CONTRACTOR. The said Engineer of CONTRACTOR shall be the representative of the CONTRACTOR at the job site for and relative to all actions and transactions and dealings on behalf of the CONTRACTOR and to whom labour, materials, equipment and / or machinery procured or supplied by the OWNER may be given and to whom all Plans, Designs, Drawings, Orders and Instructions or other documents or communications for or relative to the job site may be given, with the intent that all transactions and dealings had with the said engineer shall be deemed to have been had with the CONTRACTOR, and any and all Plans, Drawings, Designs, Orders, Instructions, Documents or Communications and / or labour, material, equipment or machinery delivered to said engineer shall be deemed to have been delivered to the CONTRACTOR.
- 4.0.3.1 The Engineer(s) / supervisors appointed by the CONTRACTOR or his Sub-Contractors / other agencies, for the work shall be duly and adequately qualified with relevant experience to handle the work of the Contract to the satisfaction of the Engineer-in-charge. For this purpose, the CONTRACTOR shall furnish the bio-data of the Engineer(s) / supervisors proposed to be appointed by him for the work to the Engineer-in-charge for his approval. The CONTRACTOR shall be bound to appoint only such technical personnel as are approved by the Engineer-in-Charge for handling the work from time to time.
- 4.0.4.0 The CONTRACTOR shall provide and maintain, at or about each job site, an office for the working accommodation of the CONTRACTOR's engineer(s) and staff. Such office shall remain open and attended at all hours during which work is being performed at the job site, for the receipt of orders, instructions, notices, and other communications.

- 4.0.5.0 The CONTRACTOR shall co-operate with and afford the OWNER / Engineer-in-Charge and other CONTRACTORS engaged at the site, access to the work and supply at cost determined by the Engineer-in-Charge (whose decision shall be final) of power and water for the performance of the work entrusted to them and / or for the carriage and storage of materials by them and whenever any work is contingent or dependent upon the performance of any work by the CONTRACTOR or is being done in association, collaboration or in proximity with any other CONTRACTORS, the CONTRACTOR shall co-operate with the OWNER or other CONTRACTOR(s)/ agency(ies) involved in such work to ensure the harmonious working between the CONTRACTOR and the OWNER / CONTRACTOR(s), agency(ies) involved, and shall comply with any instructions issued by the Engineer-in-Charge for the purpose.
- 4.0.6.0 The OWNER/Engineer-in-Charge shall be entitled at its/his discretion, to appoint one or more Site Engineers and / or other personnel at or about each job site on behalf of the OWNER to do such acts, deeds, matters and things as may be necessary to safeguard the OWNER's interest including (but not limited to, at the discretion of the OWNER), supervision and testing of the work(s) being conducted by the CONTRACTOR at the job site and rendering such assistance to the CONTRACTOR relative thereto as the OWNER or such engineer(s) or personnel shall or may deem fit, it being understood, however, that the presence of any engineer(s) or personnel of the OWNER at or about each job site or any supervision, inspection or test performed or conducted by any such engineer(s) and / or personnel of the OWNER in respect of any work(s) or any other assistance rendered by such engineer(s) and / or personnel to the CONTRACTOR relative thereto, shall be without any attendant obligation or liability of the OWNER vis-à-vis the CONTRACTOR, nor shall relieve the CONTRACTOR of his full responsibility in respect of the work(s) under the Contract or bind the OWNER or accept as satisfactory or complete and/ or in accordance with the Contract any work(s) performed by the CONTRACTOR which has / have been supervised, inspected, tested or assisted by the said engineer(s) and / or personnel of OWNER.
- 4.0.7.0 If the CONTRACTOR's work or any part thereof shall be consequent or resultant upon any works performed by any other person or shall be in continuance thereof or otherwise based or founded thereon, the CONTRACTOR shall before commencing with its/his work, bring to the notice of the Engineer-in-charge and the Site Engineer, in writing, any defects existing in said prior works, failing which the CONTRACTOR shall be deemed to have accepted as complete and proper the said prior works and to have waived any and all rights to complaint or in respect of any defect(s) as may exist therein.
- 4.1.0.0 WORK FRONT/ JOB SITE**
- 4.1.1.0 Keeping in view the Progress Schedule as specified in Clause 4.3.5.0 or Activity Schedule prepared in accordance with 6.4.9.2, if applicable, the work front/job site required by the CONTRACTOR for the performance of the works shall be handed over by the OWNER to the CONTRACTOR sequentially in the stages meeting the CONTRACTOR'S requirements for the works with a view that the CONTRACTOR shall so plan his works as to perform and achieve completion in a sequential manner without starting all the works at the same time.
- 4.1.2.0 To this end, if so required by the Engineer-in-Charge, within 28 (twenty eight) days of finalization of the Progress Schedule or Activity Schedule, the CONTRACTOR shall finalize in consultation with the Engineer-in-Charge, sequential requirements of the work front/Job Site taking into account other works concurrently being undertaken by the OWNER at and about the same job site and/or on the performance or completion of which the CONTRACTOR's performance depends (the "Front Release Programme").
- 4.1.3.0 In the event that the OWNER, for any reason(s) not attributable to the CONTRACTOR is unable to hand over to the CONTRACTOR, the relative work front/job site on the planned date of release thereof as specified in the Front Release Programme/Progress Schedule/Activity Schedule, as the case may be, as a result of which the CONTRACTOR is prevented from continuing with the work, the CONTRACTOR shall give written notice thereof to the Engineer-in-Charge and the OWNER, specifying the particular work front/job site with reference to which the default has occurred and specifying that the notice is being given under this Clause 4.1.3.0 of the General Conditions of Contract, and if the work front/job site is not thereafter sufficiently made available to the CONTRACTOR within 10 (ten) days from the receipt of such notice and the CONTRACTOR cannot commence or progress with the work, the provisions of clause 4.3.6.0 hereof with regard to extension of time shall mutatis mutandis apply as the sole right and remedy of the CONTRACTOR and the CONTRACTOR waives all rights to claim compensation

or damages for any equipment, personnel and labour consequently rendered idle.

- 4.1.4.0 The Engineer-in-Charge shall furnish the CONTRACTOR with only four corners of the job site and a level bench mark, and the CONTRACTOR shall at his own cost and initiative set out the work to the satisfaction of the Site Engineer, but shall be solely responsible for the accuracy of such setting up notwithstanding the satisfaction as aforesaid of the Site Engineer or any other assistance rendered by the Site Engineer for the purpose.
- 4.1.5.0 The CONTRACTOR shall provide, fix and be responsible for the maintenance of all stakes, templates, contour and level marks, profiles and the like and shall take all precautions necessary to prevent their removal or disturbance, and shall be responsible for the consequence of such removal or disturbance and for their efficient and timely reinstatement. The CONTRACTOR shall also be responsible for the maintenance of all survey marks, boundary marks, distance marks, and centre line marks, whether existing or supplied / fixed by the CONTRACTOR.
- 4.1.6.0 Before commencing the work, the CONTRACTOR shall at his own cost and initiative, provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with scheme for benchmarks acceptable to the Site Engineer. The centre, longitudinal or face line and cross line shall be marked by means of small masonry pillars. Each pillar shall have a distinct mark at the centre to enable suitable survey equipment to be set over it. No work shall be started until all these points are approved by the Site Engineer but, such approval shall not relieve the CONTRACTOR of any of his responsibilities in respect of adequacy or accuracy thereof. The CONTRACTOR shall also provide all labour, material and other facilities necessary for the proper checking of layout and inspection of the points during construction.
- 4.1.7.0 Pillars bearing geodetic marks located at the sites of works under construction should be protected and fenced by the CONTRACTOR.
- 4.1.7.1 On completion of works, the CONTRACTOR must submit to the Engineer-in-Charge the geodetic documents according to which the work was carried out.
- 4.1.8.0 The CONTRACTOR shall be exclusively responsible for provision and maintenance of horizontal and vertical alignments and levels and for the correctness of every part of the work in accordance therewith and shall at his own cost rectify any errors or imperfectness therein.
- 4.2.0.0 **CONDITIONS OF WORK**
- 4.2.1.0 Work shall be carried on for a minimum of 48 (forty-eight) hours a week and 8 (eight) hours on any working day. If necessary, the CONTRACTOR shall work overtime or in two or more shifts in a day. Except as herein specifically provided to the contrary, the CONTRACTOR shall not be entitled to any extra compensation or remuneration for overtime or double or triple shift working, nor shall the OWNER anyway be responsible for any idle time payments to CONTRACTOR's staff or for labour, equipment or machinery, howsoever occasioned, and the CONTRACTOR waives any and all contrary rights and claims.
- 4.2.1.1 Should it be necessary to work on Sunday and / or holiday, the CONTRACTOR shall so work without extra compensation, after obtaining prior approval from the Site Engineer or the Engineer-in-charge.
- 4.2.2.0 The execution of the work(s) shall entail working in all seasons including the monsoons. In so far as necessary, the CONTRACTOR shall maintain at each job site at all times such material, labour, pumps, equipment and machinery as may be required for the performance of the work during the monsoon or other rains and shall plan well in advance for the collection of material and equipment and the erection of such tarpaulins, sheds, wind breakers and / or other protection as shall or may be necessary for the work during the monsoon or other rains so that the rains or monsoon shall not hamper working.
- 4.2.2.1 The CONTRACTOR shall also arrange and bring to each job site such special equipment and machinery as may be necessary to enable work during the monsoon, and shall, at his own cost and initiative, arrange at all times for dewatering the job sites so as to keep the construction site and areas to be worked upon, free of water.
- 4.2.2.2 The CONTRACTOR shall not be entitled to any extra compensation or remuneration for or

relative to any work to be done in any season including during the monsoon, or for or relative to any special arrangements to be made and / or equipment or machinery to be brought to the job site(s) to enable such working.

4.3.0.0 TIME FOR COMPLETION

4.3.1.0 The CONTRACTOR shall complete in all respects in accordance with the Contract, the entire work at each job site within the time specified in this behalf in the Time Schedule.

4.3.2.0 Within 30 (thirty) days from the date of issuance of Acceptance of Tender/issuance of specific notice, if applicable, the CONTRACTOR shall submit to the Engineer-in-Charge for approval in respect of each job site, a detailed Progress Schedule in graphical or other suitable form giving dates of various operations and works within the Time Schedule providing sufficient margin to cover for contingencies and for final testing and consequential reparation. The Engineer-in-Charge and the CONTRACTOR shall thereafter within 10 (ten) days settle the Progress Schedule and the Progress Schedule so settled shall be the approved Progress Schedule and shall form part of the Contract with attendant obligation upon the CONTRACTOR to commence the various works/operations involved on or before the date(s) mentioned in the Progress Schedule and to conclude the said work(s)/operation(s) on or before date mentioned in this behalf in the approved Progress Schedule. Failure by Contractor to commence or complete within prescribed date(s) any work or operation shall be deemed to be a breach to which the provisions of Clause 7.0.1.0 hereof relating to termination of contract shall apply, but without prejudice to any other consequences or rights or remedies which the OWNER may have in this behalf.

4.3.3.0 The Progress Schedule shall also indicate the latest dates of finishing of various operations and activities comprising the work in the critical path and the interlinking of the various activities and bring to light the specific/critical items on which the inputs from the Engineer-in-Charge /Consultant or other agencies, if any, would be required, to ensure adherence to the schedule.

4.3.4.0 If the CONTRACTOR shall fail to submit to the Engineer-in-Charge a Progress Schedule as envisaged above or if the Engineer-in-charge and CONTRACTOR fail to agree upon the Progress Schedule as envisaged above, then the Engineer-in-Charge shall prepare the Progress Schedule (the dates of progress as fixed by the Engineer-in-Charge being final and binding upon the CONTRACTOR except as herein otherwise expressly provided), and shall issue the Progress Schedule so prepared to the CONTRACTOR, which shall then be the Approved Progress Schedule and all the provisions of Clause 4.3.2.0 shall apply relative thereto.

4.3.5.0 Any reference in the Contract Documents to the "Approved Progress Schedule" or to the "Progress Schedule" shall mean the "Approved Progress Schedule" specified in Clause 4.3.2.0 above or the "Progress Schedule" prepared and issued by the Engineer-in-Charge as specified in Clause 4.3.4.0 above, whichever shall be in existence. In the absence of such approved Progress Schedule or such Progress Schedule prepared by the Engineer-in-charge, the Progress Schedule first prepared by the CONTRACTOR (with the incorporation of the OWNER's/Engineer-in-charge's comments thereon, if any), shall until such approved Progress Schedule or such Progress Schedule prepared by the Engineer-in-charge comes into existence, be deemed to be the Progress Schedule for the purpose of the Contract.

4.3.6.0 Within 7 (seven) days of the occurrence of any act (including any instruction by the OWNER or Engineer-in-Charge or Site Engineer) event or omission which, in the opinion of the CONTRACTOR, is likely to lead to delay in the commencement or completion of any particular work(s) or operation(s) or the entire work at any Job Site(s) and is such as would entitle the CONTRACTOR to an extension of the time specified in this behalf in the Progress Schedule(s), the CONTRACTOR shall inform the Site Engineer and the Engineer-in-Charge in writing of the occurrence of the act, event or omission and the date of commencement of such occurrence. Thereafter, if even upon the cessation of such act or event or the fulfillment of the omission, the CONTRACTOR is of opinion that an extension of the time specified in the Progress Schedule relative to particular operation(s) or item(s) or work or the entire work at the Job Site(s) is necessary, the CONTRACTOR shall within 7 (seven) days after the cessation or fulfillment as aforesaid, make a written request to the Engineer-in-Charge for extension of the relative time specified in the Progress Schedule and the Engineer-in-Charge may at any time prior to completion of the work extend the relative time of completion in the Progress Schedule for such period(s) as he considers necessary, if he is of opinion that such act, event or omission constitutes a ground for extension of time in terms of the Contract and that such act, event or omission has in fact resulted in insurmountable delay to the CONTRACTOR.

- 4.3.6.1 The application for extension of time made by the CONTRACTOR to the Engineer-in-Charge should contain full details of -
- (a) The notice under Clause 4.3.6.0 with a copy each of the notice sent to the Engineer-in-Charge and Site Engineer,
 - (b) The activity of the Progress schedule affected,
 - (c) The bottleneck(s) or obstruction(s) perceived/experienced, and the reason(s) therefor,
 - (d) Extension required/ necessitated on account of (c) above,
 - (e) Extension required /necessitated on account of reasons attributable to the OWNER,
 - (f) Extension required/ necessitated on account of force majeure reasons, and
 - (g) The total extension of time (if any) required/ necessitated for completion, taking the above into account and after eliminating all overlaps.
- 4.3.6.2 The opinion/ decision of the Engineer-in-Charge on the CONTRACTOR's application and as to the extension of time necessary shall, subject to the provisions of clause 4.3.7.0 hereof, be final and binding upon the CONTRACTOR.
- 4.3.7.0 Notwithstanding the provisions of clause 4.3.6.0 hereof, the OWNER may at any time at the request of the CONTRACTOR made by way of appeal either against the decision of the Engineer-in-Charge taken under clause 4.3.6.0 or against the Engineer-in-Charge's refusal to take a decision under the said clause, if satisfied of the work or any item or operation thereof if it is satisfied that the act, event or omission complained of constitutes a ground for extension of time in terms of the Contract and such act, event or omission has in fact resulted in insurmountable delay to the CONTRACTOR, extend the relative time for completion in the Progress Schedule for such period(s) as the OWNER may consider necessary, and the decision of the OWNER as to the existence or otherwise of any grounds justifying the extension and as to the period(s) of extension necessary shall be final and binding upon the CONTRACTOR.
- 4.3.8.0 Subject as elsewhere herein or in the contract documents expressly provided, only the existence of force majeure circumstances as defined in clause 4.3.9.0 hereof or OWNER's hold up as defined in clause 4.3.9.1. hereof shall afford the CONTRACTOR a ground for extension of time for completion of the work or any part of the work or any operation(s) involved therein, and specifically without prejudice to the generality of the foregoing, inclement weather, strike, shutdown, third party breach, delay in supply of material(s) or commercial hardship shall not afford the CONTRACTOR a ground for extension of time or relieve the CONTRACTOR of his/its full obligations under the Contract, nor will any forced shutdown or idleness or other impediment in progress or completion of the work due to any reason whatsoever afford the CONTRACTOR a ground for extension of time or relieve the CONTRACTOR of his/its full obligations under the Contract except and to the extent otherwise elsewhere herein specifically provided, nor shall any shut down or idle time charges be payable by the OWNER to the CONTRACTOR for delay in the commencement, progress or completion of the work due to any reason whatsoever, including due to the existence of force majeure circumstances.
- 4.3.9.0 The term "FORCE MAJEURE" as employed in this contract shall mean any event or circumstance or combination of events or circumstances that: (1) prevent or delay the affected Party (the "Affected Party") from performing in whole or in part its obligations pursuant to the terms of this Contract ; (2) are unforeseen and not within the Affected Party's reasonable control; and (3) are unavoidable by the exercise of due diligence by the Affected Party acting as a reasonable and prudent Party under the relevant circumstances. Subject to satisfaction of the conditions specified in items (1), (2), and (3) above, Force Majeure shall include wars (declared or undeclared) or revolutions, civil wars, acts of terrorism, typhoons, cyclones, hurricanes, tidal waves, fires, major floods, earthquakes, epidemics, quarantine restrictions and freight embargoes and nation- wide transporters' strikes, national strikes and state-wide strikes.
- 4.3.9.1 The term "OWNER's hold up" as employed in this Contract applies to a delay by the OWNER in providing a drawing, specification, approval, change, alteration, instruction, front, input, material or facility which the OWNER is required to provide under the CONTRACT and on which the progress or further progress of the work or any part of the work or any activity involved therein is dependent and will include any act of the OWNER or any other contractor appointed by the OWNER which prevents or interrupts the further progress of the whole work or a substantial portion thereof.

- 4.3.9.2 An extension of time shall only be granted on and with reference to an application made by the CONTRACTOR to the Engineer-in-Charge in compliance with the provisions of Clauses 4.3.6.0 and 4.3.6.1 hereof.
- 4.3.10.0 Upon an extension of the time for Mechanical Completion or Final Completion of the works in all respects or any part of the work or any operation(s) involved therein pursuant to Clause 4.3.6.0 or Clause 4.3.7.0 hereof, the extended date/time of completion shall be deemed to be the relative date of completion in the Progress Schedule, and such extension shall constitute the sole remedy of the CONTRACTOR for and/or arising out of such delays, and the CONTRACTOR shall not be entitled in addition to or in lieu of such extension, to claim any damages or compensation for extended stay or otherwise whether under the law governing contracts or quasi-contracts or any other relationship, and the CONTRACTOR hereby waives any and all contrary rights.
- 4.3.11.0 The mere fact that the OWNER shall not have terminated the contract or that the OWNER or Engineer-in-charge has permitted the CONTRACTOR, for the time being, to continue with the work for its completion shall not prejudice the full rights and remedies available to the OWNER under the contract arising out of the delayed completion, including the right of Price discount, damages and/or termination. Such permission(s) shall unless specifically stated to be an extension of time under Clause 4.3.6.0 or Clause 4.3.7.0, as the case may be, not be construed as extension(s) of time under Clause 4.3.6.0 or 4.3.7.0 hereof, and shall merely constitute an indication or intimation, as the case may be, of the OWNER's willingness, for the time being, to accept the delayed completion, subject to its rights under the Contract.
- 4.3.12.0 No assurance, representation, promise or other statement by any personnel, engineer or representative of the OWNER in relation to extension of time for commencement or completion of any work(s) or operation thereof or of the entire Works under the Contract shall be binding upon the OWNER or shall constitute an extension of time for commencement or completion of the entire Work(s) or any part or operation thereof within the provisions of Clause 4.3.6.0 or Clause 4.3.7.0 hereof, unless the same has been communicated to the CONTRACTOR in writing by the Engineer-in-charge under Clause 4.3.6.0 or by the OWNER under Clause 4.3.7.0 and the writing specifically states that it embodies an extension of time within the provisions of Clause 4.3.6.0 or Clause 4.3.7.0 as the case may be, and without prejudice to the foregoing, the mere agreement or prescription or signing of a Progress Schedule by the Site Engineer or any site representative of the OWNER at variance with the Progress Schedule, as the case may be, referred to in Clauses 4.3.2.0, 4.3.3.0, 4.3.4.0 and/or 4.3.5.0 hereof or containing an extended time of commencement or completion in respect of the entire work(s) or any part or operation thereof shall not anyway constitute an extension of time in the terms of the Contract so as to bind the OWNER or relieve the CONTRACTOR of all or any of his liabilities under the Contract, nor shall constitute a promise on behalf of the OWNER or a waiver by the OWNER of any of its rights in terms of the Contract relative to the performance of the Contract within the time specified or otherwise, but shall be deemed only (at the most) as a guidance to the CONTRACTOR for better organizing his work on a recognition that the CONTRACTOR has failed to organize his work and/or perform the same within the time specified in the Progress Schedule established within the provisions of Clause 4.3.2.0 or Clause 4.3.3.0 or Clause 4.3.4.0 or Clause 4.3.5.0 hereof, as the case may be.
- 4.4.0.0 PRICE ADJUSTMENT
- 4.4.1.0 The contractual price payable shall be subject to adjustment by way of discount or payment of bonus as hereinafter specified, depending upon if the Unit(s) is/are mechanically completed or the contractual works are finally completed, under the Contract, subsequent or prior to the date of Mechanical Completion/Final Completion specified in the Progress Schedule.
- 4.4.2.0 If Mechanical Completion of the Unit(s)/final completion of the works is not achieved by the last date of Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule (hereinafter referred to as the "starting date for discount calculation"), the OWNER shall be entitled to adjustment by way of discount in the price of the works and services in a sum equivalent to the percent of the Total Contract Value as specified below namely:

- (i) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 1 (one) week of the starting date for discount calculation - $\frac{1}{2}$ % (half percent) of the Total Contract Value.
- (ii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 2 (two) weeks of the starting date for discount calculation - 1% (one percent) of the Total Contract Value.
- (iii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 3 (three) weeks of the starting date for discount calculation - $1\frac{1}{2}$ % (one and a half percent) of the Total Contract Value.
- (iv) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 4 (four) weeks of the starting date for discount calculation – 2 % (two percent) of the Total Contract Value.
- (v) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 5 (five) weeks of the starting date for discount calculation - $2\frac{1}{2}$ % (two and a half percent) of the Total Contract Value.
- (vi) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 6 (six) weeks of the starting date for discount calculation – 3 % (three percent) of the Total Contract Value.
- (vii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 7 (seven) weeks of the starting date for discount calculation – $3\frac{1}{2}$ % (three and a half percent) of the Total Contract Value.
- (viii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 8 (eight) weeks of the starting date for discount calculation – 4% (four percent) of the Total Contract Value.
- (ix) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 9 (nine) weeks of the starting date for discount calculation – $4\frac{1}{2}$ % (four and a half percent) of the Total Contract Value.
- (x) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 10 (ten) weeks of the starting date for discount calculation – 5 % (five percent) of the Total Contract Value.
- (xi) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 11 (eleven) weeks of the starting date for discount calculation – $5\frac{1}{2}$ % (five and a half percent) of the Total Contract Value.
- (xii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 12 (twelve) weeks of the starting date for discount calculation – 6 % (six percent) of the Total Contract Value.
- (xiii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 13 (thirteen) weeks of the starting date for discount calculation – $6\frac{1}{2}$ % (six and a half percent) of the Total Contract Value.
- (xiv) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 14 (fourteen) weeks of the starting date for discount calculation - 7 % (seven percent) of the Total Contract Value.
- (xv) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 15 (fifteen) weeks of the starting date for discount calculation - $7\frac{1}{2}$ % (seven and a half percent) of the Total Contract Value.
- (xvi) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 16 (sixteen) weeks of the starting date for discount calculation – 8 % (eight percent) of the Total Contract Value.

- (xvii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 17 (seventeen) weeks of the starting date for discount calculation – 8 ½% (eight and a half percent) of the Total Contract Value.
- (xviii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 18 (eighteen) weeks of the starting date for discount calculation - 9 % (nine percent) of the Total Contract Value.
- (xix) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 19 (nineteen) weeks of the starting date for discount calculation – 9 ½% (nine and a half percent) of the Total Contract Value.
- (xx) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 20 (twenty) weeks of the starting date for discount calculation – 10 % (ten percent) of the Total Contract Value.

The reduction in the contract price hereunder by way of price discount shall in no event exceed 10% (ten percent) of the Total Contract Value.

4.4.2.1 The starting date for discount calculation shall be subject to variation upon extension of the date for Mechanical Completion of the Unit(s)/final completion of the works with a view that upon any such extension there shall be an equivalent extension in the starting date for discount calculation under Clause 4.4.2.0 hereof.

4.4.2.2 It is specifically acknowledged that the provisions of Clause 4.4.2.0 constitute purely a provision for price adjustment and/or fixation and are not to be understood or construed as a provision for liquidated damages or penalty under Section 74 of the Indian Contract Act or otherwise.

4.4.2.3 Price Adjustment shall be without prejudice to right of the OWNER to recover from the CONTRACTOR, actual direct damage if suffered by the OWNER on account of such delayed performance.

4.4.2.4 If Mechanical Completion of the Unit(s)/final completion of the works is achieved prior to the last date of Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule, the CONTRACTOR shall be entitled to adjustment by way of bonus in the price of the works and services in a sum equivalent to the percent of the Total Contract Value as specified below namely:

- i) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 1 (one) week prior to the Scheduled Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule – 0.25% (one quarter percent) of the Total Contract Value.
- ii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 2 (week) week prior to the Scheduled Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule – 0.50% (one half percent) of the Total Contract Value.
- iii) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 3 (three) week prior to the Scheduled Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule – 0.75 % (three fourth percent) of the Total Contract Value.
- iv) For Mechanical Completion of the Unit(s)/final completion of the works achieved within 4 (four) week prior to the Scheduled Mechanical Completion of the Unit(s)/final completion of the works specified in the Progress Schedule – 1 % (one percent) of the Total Contract Value.

The adjustment in the contract price hereunder by way of payment of bonus shall in no event exceed 1% (one percent) of the Total Contract Value and the same shall be considered an incentive for early completion in terms of the Contract.

4.4.2.5 Alternatively, OWNER shall be entitled to terminate the Contract under Clause 7.0.1.0 and associated clauses there under, if delayed performance is not acceptable to the OWNER. In the event of OWNER exercising its said right of termination after the last date for Scheduled Mechanical Completion of the Unit(s) and/or Final Completion of the works as stipulated in the relative Progress Schedule without prejudice to any other right or remedy available to the OWNER, the OWNER shall be entitled to discount as aforesaid upto the date of termination in

the contractual price of works performed and accepted by the OWNER upto the date of termination. This discount shall be in addition to any amount as may be due consequent to a termination under Clause 7.0.1.0 hereof and associated clauses there under.

4.5.0.0 DEVIATIONS AND VARIATIONS IN SPECIFICATIONS

4.5.1.0 The Engineer-in-Charge may at his discretion, and without prejudice to any other right or remedy available to the OWNER in this behalf permit a deviation or variation from the Specifications or accept any work or items of work performed by the CONTRACTOR at variance with the Specifications and any such permission, deviation or variation shall ipso facto be subject to the condition that the monetary benefit of the deviation or variation, as determined by the Engineer-in-Charge (whose decision shall be final and binding upon the CONTRACTOR) shall be passed on to the OWNER. In such event the CONTRACTOR shall be entitled only to such remuneration in respect of such works or item(s) of work as may be determined by the Engineer-in-charge after reduction of the monetary benefit arising from the deviation or variation as determined by the Engineer-in-charge after reduction of the monetary benefit arising from the deviation or variation as determined by the Engineer-in-charge.

4.5.2.0 Any permission or acceptance for any deviation or variation in specification as envisaged in Clause 4.5.1.0 hereof shall not be understood by the CONTRACTOR unless specifically given in writing by the Engineer-in-charge to the CONTRACTOR in the absence of which any deviation taken or variation done in any work performed by the CONTRACTOR at variance with contractual specifications, shall be deemed to be defective works attracting consequences elsewhere herein specified with respect to defective work(s).

4.6.0.0 REPORTS AND RECORDS

4.6.1.0 The CONTRACTOR shall, from time to time, maintain at each job site (in addition to any records or registers required to be maintained by the CONTRACTOR under any law, rule or regulation having the force of law) such records and registers as the Engineer-in-Charge or Site Engineer shall or may require the CONTRACTOR to keep and / or maintain from time to time.

4.6.2.0 In addition to any other records or registers required to be maintained by the CONTRACTOR from time to time and / or to the reports required to be furnished by the CONTRACTOR, the CONTRACTOR shall daily or otherwise as may be prescribed by Engineer-in-Charge or Site Engineer, submit to the Site Engineer a Progress Report of all work done and / or progress achieved by the CONTRACTOR at each job site within the preceding day or the period of last report, as the case may be.

4.6.2.1 The receipt and / or acceptance of any such report by the Site Engineer shall be without prejudice to the full rights and remedies of OWNER and obligations / liabilities of the CONTRACTOR under the Contract, and shall not anyway operate as an estoppel against the OWNER by reason of the fact that no notice or objection was taken of or to any information contained in any such report; nor shall any statement in any such report be deemed to be correct merely by virtue of the existence of such statement, and its being uncontroverted by any officer of the OWNER.

4.6.3.0 The CONTRACTOR shall also maintain at each job site a Site Order / Site Instructions Book, in which the day to day instructions of the Site engineer / Engineer-in-charge / other Inspecting Officers of the OWNER shall be recorded. Each such Order / Instruction shall be duly acknowledged and compliance with the same shall also be recorded in the appropriate columns of the Site Order / Site Instructions Book. This book shall be kept available for inspection by the officers of the OWNER. The Site Order / Site Instruction Book shall be lodged with the Engineer-in-charge on completion of the Work or sooner determination of the contract for any cause.

4.7.0.0 EXECUTION OF THE WORK

4.7.1.0 The CONTRACTOR shall provide sufficient labour, staff (qualified and unqualified), machinery, tools and equipment, material, consumables, utilities and things whatsoever necessary for the proper performance of the work and to ensure the rate of progress as envisaged in the Progress Schedule.

4.7.1.1 All the skilled persons employed by the CONTRACTOR (directly or through his sub- contractors and/or other agencies) on the work shall be duly and adequately skilled in their respective trades,

to the satisfaction of the Engineer-in-charge. Any person employed on the work found to be inadequately skilled or otherwise incompetent, may be directed by the Engineer-in-charge to be removed from the site and replaced by adequately skilled and competent persons and the CONTRACTOR shall forthwith comply with such directions of the Engineer-in-charge.

- 4.7.2.0 If, in the opinion of the Engineer-in-charge or Site Engineer (the opinion of either of whom in this behalf shall be final), the work(s), operation(s) at any job site as a whole is/are not meeting the progress necessary to achieve the relative date of commencement or completion in the Progress Schedule, the Engineer-in-charge or Site Engineer may instruct the CONTRACTOR to employ/provide additional labour, staff, machinery, tools, equipment or material or things necessary to achieve the required progress and CONTRACTOR shall forthwith comply with instruction(s).
- 4.7.3.0 Should the CONTRACTOR fail to comply with such instruction(s) or fail to comply therewith to the satisfaction of the Engineer-in-charge (whose opinion in this behalf shall be final and binding upon the CONTRACTOR) the Engineer-in-charge may, at his discretion, at the risk and cost of the CONTRACTOR, appoint, procure or provide the additional labour, staff, machinery, equipment, tools and materials as the Engineer-in-charge (whose decision in this behalf shall be final and binding upon the CONTRACTOR), considers necessary to achieve the necessary progress in relation to any particular work or operation or the work as a whole. In so doing, Engineer-in-charge/Site Engineer shall be deemed to be acting for and on behalf of and as agent of the CONTRACTOR and all such appointments, procurement and/or provision shall be deemed to have been made by the CONTRACTOR and paid for by the CONTRACTOR. In addition to the other amounts payable to OWNER in respect of any labour, staff, machinery, equipment and/or material, as aforesaid procured or provided by the OWNER, the OWNER shall be entitled in this event to recover from the CONTRACTOR 1% (one per cent) as administrative charges on the total expenditure incurred by the OWNER under this clause, on behalf of the CONTRACTOR.
- 4.7.4.0 Without prejudice to the OWNER's rights under Clause 4.7.3.0 and in addition or as an alternative thereto, should the Engineer-in-charge at any stage (notwithstanding that the time for completion of the relative work or item of work as specified in the Progress Schedule has not expired) be of opinion (the opinion of the Engineer-in-charge in this behalf being final) that the performance of any work or item or work by the CONTRACTOR is unsatisfactory (whether in the rate of progress, the manner, quality or workmanship of the performance, or in the adherence to specifications, or in the omission, neglect or failure to do, perform, complete or finish any work or item, or for any other cause whatsoever), the Engineer-in-charge shall be entitled (without prejudice to any other rights of the OWNER and/or obligations of the CONTRACTOR under the Contract) at his discretion and the risk and cost of the CONTRACTOR under due intimation to contractor in writing, appoint one or more sub-contractors for the satisfactory performance thereof or any part thereof, or may undertake the performance thereof or any part thereof departmentally, and the provisions of Clause 4.7.3.0 hereof shall mutatis mutandis apply to any action taken by the Engineer-in-charge pursuant to this clause in the same manner as applicable to an action taken under the said clause.
- 4.7.5.0 If the amount incurred by the OWNER /Engineer-in-charge, on account of carrying out works under Clause 4.7.3.0 and/or 4.7.4.0 above, is in excess of the amount due to the CONTRACTOR the OWNER shall be entitled to recover the same, at the OWNER's discretion from any amount due to the CONTRACTOR from the OWNER under this or under any other contract, and any Security Deposit(s) or Bank Guarantee(s) or Insurance Surety Bond(s) of the CONTRACTOR under this Contract.
- 4.7.6.0 Any action taken by the Engineer-in-Charge or Site Engineer under Clauses 4.7.3.0 and / or 4.7.4.0 shall be without prejudice to the full rights of the OWNER and full liability of the CONTRACTOR under the Contract, including but not limited to the OWNER's full rights under Clause 4.4.0.0 and associated clauses there under, and under Clauses 7.0.7.0 and 7.0.8.0 hereof.

4.8.0.0 SUB CONTRACTS

- 4.8.1.0. The CONTRACTOR shall not assign, sub-contract or sublet the whole or any part of the work in any manner provided that the CONTRACTOR may, with the prior written approval of the Engineer-In-Charge, subcontract any particular work or part of the work to a sub-contractor approved by the Engineer-In-Charge.

For such approval, the CONTRACTOR will submit for approval to the OWNER and the Engineer-in-Charge the details of the proposed sub-contractors in the Format prescribed by the OWNER for the purpose. The CONTRACTOR shall ensure that only competent and resourceful agencies with proven track record and performance should be proposed for the work to be sub-contracted and submit such documents to the Engineer-in Charge as may be required by the Engineer-in-Charge in this regard.

For avoidance of doubt, it is clarified that

- a) Procurement of material, hire of equipment or engagement of labour will not mean sub-contracting.
- b) Execution of the Works (or any part thereof) by petty contractors or on piece work basis under the supervision of the Contractor (or its representative) shall not be deemed to be sub-contracting under the Contract.
- c) The contractor shall be required to obtain consent from Engineer-In-Charge for purchases of Materials and Services which are in accordance with the Approved vendor list/Approved makes specified in the Contract or for provisions of labour or for the subcontracts for which the sub-contractors are named in the Contract.

4.8.2.0 Notwithstanding, approval of the sub-contract as aforesaid, and notwithstanding that the OWNER/Engineer-in-Charge shall have received a copy of the Contract between the CONTRACTOR and sub-Contractor, the CONTRACTOR shall be and shall remain exclusively responsible to the OWNER for the due and proper performance of the Contract, and the sub-Contractor shall for all purposes vis-à-vis the OWNER be deemed to be the servant/agent of the CONTRACTOR employed for the performance of the particular work with full responsibility on CONTRACTOR for all acts, omissions and defaults of the sub-Contractor.

4.8.3.0 Subject as herein above in this behalf specifically permitted and provided, the CONTRACTOR shall not sub-contract any work under the Contract, and any sub- contract in breach hereof shall be deemed to be an unauthorized sub-contracting of the Contract or part or portion thereof sub-contracted, as the case may be.

4.8.4.0 If any Sub-Contractor engaged upon the work at the site executes any work which in the opinion of the Engineer-in-Charge is not of the requisite standard (the opinion of the Engineer-in-Charge being final in this behalf), then without prejudice any other right or remedy available to the OWNER, the Engineer-in-Charge may by written notice to the CONTRACTOR require the CONTRACTOR to terminate such sub-contract, and the CONTRACTOR shall upon the receipt of such notice, forthwith terminate such sub-contract at the risks and costs of the CONTRACTOR, and shall keep the OWNER indemnified from and against the consequences.

4.8.5.0 Notwithstanding any Sub-Contract being approved by the Engineer-in-Charge as hereinabove envisaged, the CONTRACTOR shall, at the commencement of every month, furnish to the Engineer-in- Charge a list of all sub-contractors engaged and working at the site during the previous month, with particulars of the general nature of the works performed by them.

4.9.0.0 MISCONDUCT

4.9.1.0 If and whenever any of CONTRACTOR's or sub-contractor's agent(s) / sub-agent(s), consultant(s) or employee(s) shall in the opinion of the Engineer-in-Charge or Site Engineer (whose opinion in this behalf shall be final) be guilty of misconduct or be incompetent or insufficiently qualified or negligent in the performance of his / their duties, or if in the opinion of the Engineer-in-Charge (which shall be final) it is undesirable for any reason (which need not be disclosed to the CONTRACTOR) for such person(s) to be employed in the work, the CONTRACTOR, if so directed by the Site Engineer, shall forthwith remove or cause to be removed such person(s) from employment thereon, and any person(s) so removed shall not be re-employed in the work except with the prior permission in writing of the Engineer-in- charge. Any person(s) so removed from the works shall be immediately replaced at the expense of the CONTRACTOR by a qualified and competent substitute.

4.9.2.0 If, at any time, in the course of execution of the Contract, the OWNER / Engineer-in-charge finds that any person employed by the CONTRACTOR or his sub-contractor(s) or other agency(ies) employed by the CONTRACTOR is not observing and/or is willfully flouting the operating security and safety precautions of the area in which he is working and / or are found to be

indulging in activities prejudicial to the interest of the OWNER, the CONTRACTOR shall forthwith, on being directed by the OWNER/ Engineer-in-charge in this behalf remove or cause to be removed such person(s), as may be named by the OWNER / Engineer-in-charge in this behalf, from the site, within 24 hours of such intimation and such person(s) shall not be re-employed in this work or any other work under the OWNER, without the prior written permission of the OWNER. All repatriations of any person(s) removed from the site shall be done by the CONTRACTOR at his own cost and the vacancy (ies) so caused shall be filled by the CONTRACTOR at his own expenses by competent substitutes.

- 4.9.3.0 If any activities of any such person are considered by the OWNER or Engineer-in-charge to be criminal in character and/or prejudicial to the public or national interest, the CONTRACTOR shall, in addition to removing such person(s) as stipulated in 4.9.2.0 above, also co-operate with the OWNER/ Engineer-in-charge in lodging such complaints with the police or other authorities as the OWNER or Engineer-in-Charge considers necessary, and shall co-operate with the OWNER, in handing over such person(s) to the concerned authorities as decided by the OWNER.
- 4.9.4.0 The CONTRACTOR shall keep the OWNER indemnified from and against all personnel and third party claims whatsoever (inclusive of all costs incurred between attorney and client) arising out of any act or omission or intermission on part of any sub-contractor or agent, sub- agent, consultant, or employee of the CONTRACTOR or any sub-contractor, whether committed, omitted or arising with or without the scope of the contract, sub-contract, agency or employment, or otherwise.
- 4.10.0.0 CHANGE IN CONSTITUTION OF THE CONTRACTOR
- 4.10.1.0 The CONTRACTOR, whether an individual, Proprietary concern, Partnership firm, Private limited Company or Public Limited Company, shall not make any change(s) in its constitution, by transfer of substantial shareholding or of management (in the case of a company) or by addition or deletion of Partners, change in the terms of Partnership, or make any other material change(s) without prior intimation to and approval of the OWNER.

SECTION – 5

INSPECTION, TESTING AND QUALITY ASSURANCE

5.0.0.0 QUALITY ASSURANCE

5.0.1.0 Within 14 (fourteen) days of the receipt of the Letter of Acceptance from the OWNER, the CONTRACTOR shall submit to the Engineer-in-charge, a detailed Quality Assurance Plan (QAP) envisaged by him for ensuring due and proper adherence to Quality as required by the Specifications for the work. This Quality Assurance Plan shall give in detail the organization and methodology, checks and controls, as well as the correction mechanisms built into the QAP system as envisaged by the CONTRACTOR at the Site and elsewhere, for ensuring quality inputs into the work and for ensuring quality output on the Job.

5.0.2.0 The Engineer-in-charge shall be entitled, from time to time and at any time to make or cause to be made such addition(s), modification(s) or alterations(s) in the QAP as he considers necessary to improve the QAP (the decision of the Engineer-in-Charge in this behalf shall be final and binding on the CONTRACTOR), and the CONTRACTOR shall thereafter follow the QAP as added, modified or altered by the Engineer-in-charge.

5.0.3.0 Where under the QAP or otherwise in terms of the Contract, inspection and/or approval of the OWNER/Engineer-in-Charge for any works or materials is necessary for the CONTRACTOR to proceed further, the CONTRACTOR shall give the OWNER at least 7 (seven) days' written notice in respect of materials and at least 3 (three) days' written notice in respect of works of the readiness of the material(s) or works for inspection and if the OWNER/Engineer-in-Charge, notwithstanding receipt of notice fails to conduct relative inspection within the said period, the OWNER/Engineer-in-Charge will be deemed to have waived the right of inspection and the CONTRACTOR will be at liberty to proceed on the basis that materials or the works as the case may be, have been approved.

5.1.0.0 INSPECTION AND TESTING OF MATERIALS

5.1.1.0 The Engineer-in-Charge shall be entitled at all times, at the risk of the CONTRACTOR, to inspect and/or test by itself or through an independent person(s) or agency(ies) appointed by the OWNER or Engineer-in-Charge and / or to direct the CONTRACTOR to inspect and/or test or to get inspected and/or tested, all materials, items and components, whatsoever supplied or proposed for supply for incorporation in the works, inclusive during the course of manufacture or fabrication by the CONTRACTOR and / or at the CONTRACTOR 's or his sub-vendors' works or otherwise, of such material, item or component. The inspection and / or tests shall be conducted at the expense of the CONTRACTOR, and may be directed by the OWNER or Engineer-in-charge to be conducted by authorized representatives of the OWNER/Engineer-in-charge or third party inspection agency(ies) appointed by the OWNER. The OWNER may also require that all the inspections and tests conducted by the CONTRACTOR at his works or his sub-vendors' works be carried out in the presence of authorized representatives of the OWNER/Engineer-in-Charge/ third party inspection agency (ies) appointed by the OWNER. The CONTRACTOR shall provide the OWNER/ Engineer-in- charge and/or their representatives/Agents every facility or assistance necessary for carrying out or witnessing, as the case may be, the test(s)/inspection(s).

5.1.2.0 The CONTRACTOR shall also on receipt of intimation of any communication of any inspection or tests by the OWNER/Engineer-in-Charge or any of their representative(s)/agency (ies) nominated by the OWNER or Engineer-in-Charge in this behalf, present himself or his authorized representative at the place of inspection and/or testing to receive any orders or instructions consequent thereto, as shall be necessary.

5.1.3.0 The CONTRACTOR shall furnish to the Site Engineer for approval when requested, or as required by the specifications or other Contract Documents, adequate samples of all materials and finishes intended for incorporation in the works, such samples are to be submitted before the work is commenced permitting sufficient time for test(s)/examination(s) thereof of the OWNER. All materials furnished and finishes incorporated in the work shall conform to the approved sample(s) in all respects.

5.1.4.0 The Engineer-in-Charge and/or Site Engineer shall be entitled to reject at any time any

defective material, item or component (including specially manufactured or fabricated items and components) supplied by the CONTRACTOR for incorporation in the works, notwithstanding previous inspection and/or testing thereof by or on behalf of the OWNER without rejection and notwithstanding previous approval thereto by or on behalf of the OWNER (the decision of the Engineer-in-Charge as to any defect as aforesaid being final and binding upon the CONTRACTOR), and upon such rejection, the CONTRACTOR shall either perform such work or improvement thereon or in respect thereof, as shall be necessary to bring the material item/component to the requisite standard, or shall, if so required by the Engineer-in-Charge (whose decision in this behalf shall be final), remove the rejected material/item/component from the job site within the time specified by the Engineer-in-Charge or the Site Engineer and replace it at his own cost and expense (without additional remuneration or compensation in respect thereof) with material(s)/item(s)/component(s) approved by the Site Engineer. The provisions of clause 5.2.7.0 hereof shall mutatis mutandis apply to any failure of default by the CONTRACTOR to do so.

5.2.0.0 INSPECTION AND TESTING OF WORKS

5.2.1.0 The CONTRACTOR shall at all times ensure the highest standards of workmanship relative to the work, to the satisfaction of the Site Engineer or any inspector(s) or inspecting agency(ies) nominated by the OWNER/Engineer-in-Charge in this behalf. The Site Engineer/inspector(s)/inspecting agency (ies) shall have the power to inspect the work in all respects, at any and all times up to completion of the work as also to test or instruct the CONTRACTOR to test the works or any structure, material or component thereof at the risk and cost of the CONTRACTOR, either by the CONTRACTOR or by any agency (ies) nominated by the OWNER/Engineer-in-Charge or Site Engineer in this behalf.

5.2.1.1 The CONTRACTOR shall provide all facilities, instruments, material, labour and accommodation required for inspecting and testing the works (including checking the setting out of the works) and shall afford the Site Engineer/inspector(s)/inspecting agency(ies) all assistance necessary to conduct the tests.

5.2.1.2 The CONTRACTOR shall also provide and keep at all times during the progress of the work and maintenance period, proper means of access to the works and every part thereof by means of ladders, gangways, etc., and necessary attendance to move and set up the same as directed by the Site Engineer/inspector(s)/inspecting agency (ies) for inspection or measurement of the works.

5.2.1.3 The OWNER and the CONTRACTOR shall each bear the cost of their respective personnel involved in any inspection. The CONTRACTOR shall exclusively bear the costs of any marine vessel, third party personnel and/or experts and/or equipment (including specialized equipments) required or employed in or for any inspection to be conducted.

5.2.2.0 On no account shall the CONTRACTOR proceed with concreting or other work such as (but not limited to) foundations, superstructure or edge preparation of pipes for welding) by covering up or otherwise placing beyond the reach of inspection or measurement any works before necessary inspection entries are filled in the Site Inspection Register by the Site Engineer or the inspector(s) or inspecting agency(ies).

5.2.3.0 Should the CONTRACTOR fail to comply with any of the provisions foregoing relative to inspection and / or testing of the works, the Engineer-in-Charge or Site Engineer shall in his absolute discretion be entitled to remove / dismantle and / or uncover, as the case may be, at the risk and cost of the CONTRACTOR for test and examination any works, structure or component thereof installed, erected or put up by the CONTRACTOR and to conduct or have conducted the test(s) and / or examination at the risk and cost of the CONTRACTOR. In such event, the CONTRACTOR shall also bear the risk and costs of replacement, reinstallation or re-erection of the concerned works, structure, or component, as the case may be.

5.2.4.0 Notwithstanding anything provided in the foregoing clauses hereof, the CONTRACTOR shall be and remain liable at his own cost and initiative to conduct all tests at all relevant times during supply, erection and installation of any works, structure, material or component as shall be required in terms of the Contract Documents or by any codes or specifications referred to therein or approved by the OWNER or the Engineer-in-Charge. Where the Contract Documents or codes or specifications do not state or nominate the agency or laboratory where such test shall be conducted, the same shall be conducted at the cost of the CONTRACTOR through an agency(ies) or laboratory(ies) nominated by the OWNER or the Engineer-in-Charge for the

purpose.

- 5.2.5.0 Should the Engineer-in-Charge or Site Engineer on inspection or testing be not satisfied with the quality or workmanship of any works, structure, item or component (the decision of the Engineer-in-Charge being final in this behalf), the CONTRACTOR shall forthwith re-perform, replace, reinstall or re-erect, as the case may be, such works, structure, item or component, and no such rejected works structure, item or component shall be reused with reference to the work except with the prior permission of the Engineer-in-Charge or Site Engineer, and the provisions of Clause 5.2.7.0 hereof shall apply to default by the CONTRACTOR of the provisions of this Clause.
- 5.2.6.0 Notwithstanding anything provided in foregoing clauses hereof and notwithstanding that the Site Engineer and/or Inspector(s) or Inspecting Agency(ies) has/have inspected, tested and/or approved any particular work, structure, item or component, such inspection, test or approval shall not absolve the CONTRACTOR of his full responsibility under the Contract (inclusive of and relative to specification fulfillment and performance guarantees) the said inspection and test procedure being intended basically for the satisfaction of the OWNER that prima facie the erection done and/or materials and components supplied for incorporation in the works is in order.
- 5.2.7.0 Should the CONTRACTOR fail to remove and/or re-perform replace, reinstall, re erect, as the case may be, any work, structure, material, item or component rejected or found defective in terms of Clause 5.1.4.0 or Clause 5.2.5.0 hereof within such period as the Engineer-in-Charge may specify by written notice to the CONTRACTOR in this behalf, the CONTRACTOR shall be deemed to be in breach of contract within the provisions of Clause 7.0.1.0 hereof with regard to termination of Contract and associated provisions there under and the OWNER and Engineer-in-Charge shall be entitled (without prejudice to any other right or remedy of the OWNER) to remove the rejected / defective works, structure, material, item or component and to re-perform, replace reinstall and / or re-erect, as the case may be, the same by itself or through other agency(ies) or contractor(s) at the risks and costs of the CONTRACTOR in all respects, and recover the costs incurred by the OWNER in this behalf together with administrative charges of 1% (one percent) thereon admissible to the OWNER, and the OWNER shall be entitled (without prejudice to any other mode of recovery) to deduct the same from the Running Account / Final Bill(s) of the CONTRACTOR or any monies becoming due to the CONTRACTOR from time to time under this or any other Contract.
- 5.2.7.1 For the purposes of Clause 5.2.7.0 hereof, the decision of the Engineer-in-Charge on whether the works, structure, material, item or component is/are defective and/or is/are required to be removed and/or re-performed replaced, re-installed and/or re-erected, as the case may be, and as the costs incurred by the OWNER in this behalf, shall be final and binding upon the CONTRACTOR.
- 5.2.8.0 Without prejudice to and in addition to any other right of inspection, test or examination by the OWNER, before or after the passing and payment of the Final Bill, but before the expiry of the defect liability period, external agencies such as the Chief Technical Examiner of the Central Vigilance Commission shall have the right to technically audit the works. Any defects in the works pointed out by this technical audit group/agency shall be final and binding on the CONTRACTOR, notwithstanding that the Final Bill had been passed and/or paid to the CONTRACTOR and notwithstanding that the findings and report of this agency is released after the expiry of the defect liability period. The CONTRACTOR shall be bound to remove the defects pointed out by the technical audit group/agency and to repair / replace the defective works to the satisfaction of the OWNER, and the OWNER shall be entitled to retain in whole or part the CONTRACTOR's dues (if the Final Bill has not been paid), or the Security Deposit (if any) remaining in the hands of the OWNER, or to encash in whole or part the Bank Guarantee(s) (if any), Insurance Surety Bond(s) remaining in the hands of the OWNER to ensure the fulfillment of the CONTRACTOR's obligations in this regard.
- 5.2.8.1 Should the CONTRACTOR fail to comply with the provisions of Clause 5.2.8.0 hereof, the provisions of Clauses 5.2.7.0 and 5.2.7.1 hereof shall mutatis mutandis apply.
- 5.2.8.2 In case the defects or any of them are such as not to require replacement, the OWNER shall have the right to accept the defective work with suitable reduction in rates/price, as may be determined by the General Manager, for the determination of which the provisions of Clause 2.4.1.2 hereof shall mutatis mutandis apply, for which purpose any reference in Clause 2.4.1.2 to the Engineer-in-Charge shall be deemed to be a reference to the General Manager, and the defective works shall be deemed to be works not covered by the Schedule of Rates/lump sum

price as the case may be. The reduction as determined by the General Manager shall be final and binding on the CONTRACTOR.

- 5.2.8.3 Should the money retained by the OWNER pursuant to the provisions of Clause 5.2.8.0 hereof be insufficient to meet the CONTRACTOR's liabilities, the CONTRACTOR shall forthwith on demand by the OWNER pay the shortfall, failing which the CONTRACTOR shall be liable to pay the OWNER interest on the outstanding at the rate of interest applied by the State Bank of India on overdrafts, and the OWNER shall, without prejudice to any other right or remedy available to the OWNER, be entitled to recover the shortfall from any amount(s) payable or becoming due and payable under any other contract(s).

5.3.0.0 FINAL TESTS & POSSESSION OF WORKS

- 5.3.1.0 As soon as the works have been completed in all respects to the satisfaction of the Engineer-in-charge or Site Engineer, Final Tests of the works shall be undertaken by the CONTRACTOR at the risks and costs of the CONTRACTOR in the presence of the Site Engineer or his authorized representative(s). The OWNER may at its discretion permit final test(s) piecemeal in respect of particular part(s) or group(s) of the works or in respect of particular job site(s) involved.
- 5.3.1.1. The CONTRACTOR and the Site Engineer shall maintain a joint record of all Final Tests conducted, together with the results thereof, indicating the dates on which each of the said Final Tests was completed part-wise, component-wise, section-wise, group-wise, plant-wise, system-wise and sub-system wise, as well as on the entire works or Unit as a whole.
- 5.3.2.0 The OWNER shall be entitled to take over for operation, any of the various parts, components, sections, groups, plants, systems or sub-systems of the work, on which the respective Final Tests are completed. The date, on which the Final Tests on the entire work have been completed, shall be reckoned as the date of completion of the entire work covered by the Contract.
- 5.3.2.1 Unless commissioning is included within the scope of work of the CONTRACTOR, in a Contract in which the scope of work of the CONTRACTOR includes erection and/or installation of a Plant or Unit or of any equipment, the date of Mechanical Completion thereof recorded by the Engineer-in-charge pursuant to successful Final Tests under Clause 5.3.1.1 hereof shall be reckoned as date of completion of the work.
- 5.3.3.0 If during Final Tests or prior thereto any defects(s) in the design (insofar far as the work may involve any designing on the part of the CONTRACTOR) or in any work performed or structure or component installed or erected or re-installed or re-erected or in any installation or erection or material or other items incorporated in the works, is/are noticed, the CONTRACTOR shall forthwith repair (if it can be repaired) and/or remove and/or demolish the same (if it cannot be repaired) and replace, re-install and re-erect the same and otherwise do and provide whatever is necessary to be done or provided to correct, repair, and/ or rectify the defect(s) to the satisfaction of the Engineer-in-charge, and if the defect (s) be discovered during the Final Tests, the CONTRACTOR shall thereafter repeat the Final Tests or such of them as may be required to be repeated and so on, until the successful conclusion of Final Tests as aforesaid, without any defects in respect of the entire works or Plant or Unit, as the case may be.
- 5.3.3.1 Should the CONTRACTOR fail to correct, repair or rectify any defects as aforesaid, the provisions of Clauses 5.2.7.0 and 5.2.7.1 hereof shall mutatis mutandis apply.
- 5.3.4.0 If, by reason of any default on the part of the CONTRACTOR, Final Tests cannot be conducted in respect of the entire works or for the Plant or Unit (in the case of a Contract which includes within its scope the erection or installation thereof) or for any of the separate part(s), component(s), section(s), group(s), system(s) or sub-system(s) comprised therein, within 30 (thirty) days after the dates fixed for the completion of the entire works covered by the Contract under the Progress Schedule or Mechanical Completion of the Plant/Unit, as the case may be, the OWNER shall be entitled, notwithstanding anything provided in Clause 5.3.2.0 hereof and without prejudice to any other rights or remedies of the OWNER and/or the liabilities of the CONTRACTOR under the Contract including (but not limited to) the rights of the OWNER under clauses 4.4.0.0, 7.0.1.0 and associated clauses there under, to take over and use the incomplete works or Plant or Unit, as the case may be, with or without affording the CONTRACTOR any further opportunity for completing the works and/or satisfying the requirements of final tests. The taking over and possession or use of the works or Plant or Unit or any part or portion or component, section or group or system or sub- system thereof by the OWNER, under the above provisions shall not be deemed to be an acceptance of the works or Plant or Unit or the relative part, portion, component, section, group, plant, system or sub-system, as the case may be, nor

shall relieve the CONTRACTOR of his full obligations in respect thereof under the Contract.

- 5.3.5.0 If the CONTRACTOR is permitted to complete and/or conduct Final Tests for the works or Plant or Unit, or any part of the works or Plant or Unit, as the case may be, after it is taken over under the provisions hereof, this shall be without prejudice to the rights of the OWNER under the Contract, including (but not limited to) clauses 4.4.0.0 and 7.0.1.0 and associated clauses there under.
- 5.3.5.1 If the CONTRACTOR is permitted to complete and/or conduct Final Tests for the works or Plant or Unit or any part of the works or Plant or Unit, as the case may be, and the CONTRACTOR is of opinion that such taking over and/or use shall require an extension of time for completion and/or for conducting Final Tests, the provisions of Clause 4.3.6.0 and associated Clauses there under relating to extension of time shall apply.
- 5.3.5.2 If pursuant to action under Clause 5.3.4.0 the CONTRACTOR is not permitted by the OWNER to complete and/or to conduct Final Tests for the works or Plant or Unit or any part thereof, the incomplete works/Plant/Unit shall be deemed to be a defective work. If the OWNER decides not to exercise its rights under Clause 4.7.4.0 or Clause 7.0.1.0 in respect thereof, then the OWNER shall (without prejudice to any other right which it may have) be deemed to have agreed to accept the defective works subject to a reduction in the applicable rate(s)/lump sum price(s) as determined by the General Manager, and the provisions of Clause 5.2.8.2 hereof shall mutatis mutandis apply.
- 5.3.6.0 If the works in their entirety are complete or as the case may be, the Unit is mechanically complete but the Final Tests cannot be completed in respect of the entire work or the Plant/ Unit or any part/ component/ section/ group/system/ subsystem thereof, for reasons solely attributable to the OWNER, then;
- (i) After the date fixed for completion of the entire Works or Mechanical Completion of the Plant/ Unit, as the case may be, under the Progress Schedule, the OWNER shall be entitled to take over and use the Works/Plant/Unit pending the completion of the Final Tests by the CONTRACTOR at a later date.
 - (ii) If the Final Tests cannot be completed within 3 (three) months of the date fixed for the completion of the entire works or the Mechanical Completion of the Plant/Unit, as the case may be, for reasons solely attributable to the OWNER, the CONTRACTOR 's progressive/ stage wise payment, if any, held back specifically for non-completion of the said Final Tests, shall be released to the CONTRACTOR by the OWNER, against a Bank Guarantee for an equivalent amount issued in a form and by a Scheduled Bank in India acceptable to the OWNER. This Bank Guarantee shall be kept valid for a period of 3 (three) months from the date of release of payment as aforesaid; and
 - (iii) If, however, it is still not possible to conduct the Final Tests, within 6 (six) months of the date fixed for the completion of the entire works or Mechanical Completion of the Plant/Unit for reasons solely attributable to the OWNER, the Final Tests for the concerned works or Plant/Unit or part/ component/section/ group/ plant system/ subsystem thereof, shall be deemed to have been completed and the said Bank Guarantee will be released to the CONTRACTOR, duly discharged, by the OWNER.
- 5.3.7.0 The OWNER may, in addition to any other right(s) or power(s) to take over and/or use incomplete or defective works, at any time during the progress of the works, notwithstanding that time for the completion of the entire works or concerned part, system(s), portion or section thereof according to the Progress Schedule(s) shall not have expired, take over and/or use for any purpose the incomplete or partially completed works or any part, system(s), portion or section thereof, as the case may be, and give the CONTRACTOR an opportunity for completing the work or relative part, system(s) or portion or section thereof, as the case may be, within the time for completion permitted therefor under the Progress Schedule. If in the opinion of the CONTRACTOR, such taking over and/or use require an extension of time for completion, the provision of Clause 4.3.6.0 hereof and associated clauses there under relating to extension of time shall apply. Provided Always that such taking over, possession or use of the works or any part, system(s), portion or section thereof by the OWNER within the provisions hereof shall not be deemed to be an acceptance of work or relative part, system(s), portion or section thereof by the OWNER or relieve the CONTRACTOR of his full obligations in respect thereof under the CONTRACT.

5.4.0.0 COMMISSIONING AND PERFORMANCE TESTS

- 5.4.1.0 Notwithstanding the deeming provisions under clause 5.3.6.0, the CONTRACTOR shall remain liable to commission the Plant/Unit.
- 5.4.2.0 Prior to Commissioning the Plant or Unit, the CONTRACTOR shall undertake all operations necessary for start-up of the Plant/Unit to the satisfaction of the Engineer-in-Charge.
- 5.4.3.0 The OWNER shall provide in accordance with the provisions of Clause 3.3.0.0 hereof, the utilities required for Start-up and Commissioning the Plant/Unit and the raw material or feed stock to be processed in the Plant or Unit, the CONTRACTOR shall provide all other inputs and consumables required for Start-up and Commissioning the Plant/Unit including grease and lubricants and first fill of fuels and oils for the equipment and machinery.
- 5.4.4.0 The CONTRACTOR shall provide all personnel required for Start-up and supervisory and technical personnel required for Commissioning, while the OWNER shall provide operating personnel for Commissioning, and shall make and undertake modifications in the Plant/Unit required for successfully Commissioning the Plant/Unit. The CONTRACTOR shall not, however, within the scope of the work of erecting and/or installing or Commissioning the Plant/Unit be required to supply any material (other than utilities and consumables) required to be incorporated in such modification.
- 5.4.5.0 The Plant/Unit shall be understood to have been successfully commissioned by continuous and stabilized operation up to full capacity for a continuous period of not less than 7 (seven) days. On successful Commissioning of Plant/Unit, the Engineer-in-Charge shall issue a Commissioning Certificate which shall state the date of completion of Commissioning.
- 5.4.6.0 If conduct of Performance Tests falls within the scope of work of a CONTRACTOR engaged inter alia for erection and/or installation of a Plant or Unit, the work shall be deemed not to be complete until successful completion of the Performance Tests.
- 5.4.6.1 Performance tests shall be started when the Unit is stabilized under design conditions. The Plant shall be operated and controlled in accordance with procedures set up before hand. The performance shall be measured on the basis of the average of data obtained during 72 (Seventy two) hours of performance tested under continuous operation of the Unit/Plant in Performance Test conditions after the Unit/Plant has been stabilized.
- 5.4.7.0 The CONTRACTOR shall provide technical and supervisory personnel required to conduct the Performance Tests, while the OWNER shall provide all other inputs required for the purpose. The CONTRACTOR shall make and undertake all modifications required to be made in the Plant/Unit to meet the Performance parameters and/or to successfully complete the Performance Tests for the Plant/Unit. The CONTRACTOR shall not, however, within the scope of work of erecting and/or installing or conducting Performance Tests for the Plant/Unit be required to supply any materials (other than utilities and consumables) required to undertake the modifications. The Performance Tests shall be repeated, if necessary, until successful completion of the Performance Tests. On successful completion of the Performance Tests, the Engineer-in-Charge shall issue the CONTRACTOR a Performance Test Certificate which shall indicate the dates on which the Performance Tests were conducted and the date(s) of successful completion of the Performance Tests. The provisions of Clause 5.2.6.0 hereof shall mutatis mutandis apply to Performance Tests in the same manner as they apply to Final Tests.
- 5.4.8.0 If during Commissioning and/or Performance Tests, any defects are discovered in any work performed by the CONTRACTOR or in any erection or installation undertaken by the CONTRACTOR, the CONTRACTOR shall forthwith within the scope of work do and provide all that is necessary to be done or provided to correct, repair and/or rectify the defect(s) to the satisfaction of the Engineer-in-Charge and shall remove or demolish and re-erect or re-install the defective works, if necessary, and shall thereafter continue with the Commissioning or repeat the Performance Tests, as the case may be, or such of them as are required to be performed, and so on until successful completion of the Commissioning and/or Performance Tests. Should the CONTRACTOR fail to correct, repair or rectify any defects as aforesaid, the provisions of Clauses 5.2.7.0 and 5.2.7.1 hereof shall mutatis mutandis apply.
- 5.4.8.1 (a) If on any testing any material or equipment or the Unit does not meet the design, rated or guaranteed performance relative thereto, the CONTRACTOR shall forthwith within the CONTRACTOR's scope of work and at no additional cost to the OWNER undertake such additional tests and/or operations as are necessary to identify the cause of such failure.

Such tests and/or operations shall be conducted in conjunction with the Process Licensor, if the Unit as a whole fails to meet the Process Licensor's Guarantees.

- (b) If as a result of such tests and/or operations it is determined that the design, rated and/or guaranteed outputs or capacities have not been met because of a defect or deficiency or unsuitability or inadequacy in or of any material(s) (including machines and equipment) supplied by the CONTRACTOR, the CONTRACTOR shall forthwith in consultation with the Engineer-in-Charge take steps necessary to cause the defect/ deficiency/ unsuitability/ inadequacy to be identified and rectified, either by re-placement of the defective material or part thereof or by repair thereof.
- (c) If under any of the provisions hereof, the CONTRACTOR is required to undertake any modification, rectification or replacement, the CONTRACTOR shall for this purpose forthwith establish a Time Schedule acceptable to the Engineer-in-Charge for such modification/replacement/rectification bearing in mind the time exigencies and the Project requirements. Should the CONTRACTOR fail to establish the Time Schedule, the Engineer-in-Charge shall establish the Time Schedule, and the Time Schedule so established shall be binding on the CONTRACTOR.
- (d) Should the CONTRACTOR thereafter fail to adhere to a Time Schedule so established for the replacement/rectification, the OWNER may (but without obligation to do so) take over in whole or part such replacement/rectification at the risk and cost of and as agent of the CONTRACTOR. In so doing, the OWNER shall be entitled to identify and employ through private negotiations the quickest available resources of supply and/or work without resorting to the tender process or any other form of competitive bidding and shall be entitled to recover from the CONTRACTOR, the costs incurred by the OWNER in respect thereof, plus 1% (one percent) administrative charges thereon.

5.4.9.0 The procedure for Commissioning the Plant/Unit and/or for conducting Performance Tests shall be as prescribed by the Engineer-in-Charge taking into account the requirements of the manufacturers/Vendors of plant and equipment and the Licensors of the process (es) involved. The CONTRACTOR shall strictly comply with the procedure to ensure strict adherence with the said requirements.

5.4.9.1 Contractor shall carry out all activities for collecting the required data during Performance Test runs to identify problems of non-performance for further analysis and modifications required to meet process performance parameters.

5.4.10.0 If for reasons solely attributable to the OWNER and/or not attributable to the CONTRACTOR, the Commissioning of the Unit cannot be undertaken or completed by the CONTRACTOR within 6 (six) months of the Mechanical Completion of the Unit and/or the Performance Test(s) for the Unit cannot be undertaken or completed by the CONTRACTOR within 6 (six) months of successful Commissioning of the Unit, the OWNER and the CONTRACTOR shall negotiate in good faith an equitable resolution which either removes from the CONTRACTOR's scope, the Commissioning and/or Performance Test(s) of the Unit or discharges the CONTRACTOR from further obligation for Commissioning and/or Performance Test(s) of the Unit, or extends the period required for Commissioning of the Unit and/or undertaking Performance Test(s), with suitable compensation to the CONTRACTOR for the costs and charges incurred or to be incurred for the option selected by the OWNER.

5.4.11.0 If Commissioning of the UNIT commences later than 3 (three) months of Mechanical Completion of the UNIT for any reason not attributable to the CONTRACTOR, the OWNER and the CONTRACTOR shall agree upon the reasonable cost incurred for maintaining watch and ward and preservation and insurance of the UNIT beyond the said 3 (three) months period and up to commencement of Commissioning, which shall be payable to the CONTRACTOR in addition to the price of services and this additional amount shall be included within and form part of the Final Bill of the CONTRACTOR. If the Commissioning of the UNIT is delayed beyond 6 (six) months of Mechanical Completion of the UNIT, the OWNER and the CONTRACTOR shall work out the modalities for the takeover of the UNIT by the OWNER without prejudice to the CONTRACTOR's obligation for and related to and consequent to Commissioning.

5.4.12.0 If Commissioning of the UNIT and/or the conduct of the Performance Test is delayed beyond 6 (six) months from the date of Mechanical Completion of the UNIT for reasons not attributable to the CONTRACTOR, the OWNER shall (subject to such adjustments as permissible) release to the CONTRACTOR, the undisputable balance payable for any other work on commissioning

and/or Performance Tests other than any amount payable for Commissioning and/or Performance Tests against the CONTRACTOR furnishing a Bank Guarantee from a scheduled bank in India (including the Indian branch of a foreign bank) acceptable to the OWNER in a format prescribed by the OWNER for an amount equivalent to the amount of the payment(s) to be released. The validity of such Bank Guarantee(s) shall be initially for a period of 6 (six) months and shall be extended for one further period of 6 (six) months. If the Commissioning and/or Performance Test cannot be conducted within such extended period for reasons solely attributable to the OWNER, the Bank Guarantee will be substituted by Corporate Guarantee of the CONTRACTOR in a format acceptable to the OWNER. If however, the UNIT cannot be commissioned within the said period for reason(s) attributable to the CONTRACTOR or if commissioning and/or the Performance Test conducted indicates that the UNIT does not perform to the contractual specifications and requirements, then the Bank Guarantee(s) shall even after the extension aforesaid continue to be extended up to and until successful Commissioning and Performance Tests of the UNIT. In either event, the OWNER will be entitled to encash the Bank Guarantee(s) if the Bank Guarantee is not extended or substituted by an acceptable Corporate Guarantee, as the case may be, at least 14 (Fourteen) days prior to the date of expiry of Bank Guarantee(s).

5.5.0.0 COMPLETION CERTIFICATE

5.5.1.0 After the Final Tests have been successfully completed in respect of all the works envisaged in the contract, or after the Plant/Unit has been Mechanically completed, as the case may be, the CONTRACTOR shall clear the job site of all scaffolding, wiring, pipes, surplus materials, CONTRACTOR 's labour, equipment and machinery and shall demolish, dismantle and remove all CONTRACTOR 's site offices and quarters and other temporary works, structures and constructions and other items and things whatsoever brought upon or erected at the job site or any land allotted to the CONTRACTOR by the OWNER and not incorporated in the permanent works and shall remove all rubbish from the job site and the land allotted to the CONTRACTOR and shall clear, level and dress the job site and said land to the satisfaction of the Site Engineer and shall put the OWNER in undisputed custody and possession of the job site and all land allotted by the OWNER to the CONTRACTOR , and unless the CONTRACTOR shall have fulfilled the provisions of the clause, the works shall not be deemed to have been completed, and failing compliance by the CONTRACTOR of the provisions of this clause, the provisions of Clauses 7.0.6.0 and 7.0.7.0 hereof and associated provision there under shall mutatis mutandis apply.

5.5.2.0 Upon the satisfactory fulfillment by the CONTRACTOR of the provisions of Clause 5.5.1.0 hereof, the CONTRACTOR shall be entitled to apply to the Engineer-in-Charge, for a Completion Certificate in respect of the entire work or work at any job site, as the case may be, upon submission of the following documents:

- (i) The Technical Documents according to which the work was carried out;
- (ii) Complete set of working drawings showing therein corrections and modifications (if any) made during the course of execution of the works, signed by the Engineer-in- Charge;
- (iii) Certificates of final levels as set for various works, signed by the Site Engineer;
- (iv) Records of the final test as maintained jointly and signed by the representative of the CONTRACTOR and the Site Engineer or Mechanical Completion Certificate (if Commissioning is not within the CONTRACTOR's scope of work) and Commissioning Certificate (if Performance Tests are not within the CONTRACTOR's scope of work) and Performance Test Certificate (if Performance Tests are within the CONTRACTOR'S scope of work).
- (v) Certificate of Site Engineer of satisfactory fulfillment of the provisions of Clause 5.5.1.0 hereof;
- (vi) List of surplus/scrap materials, (out of the materials issued by the OWNER) returned to the OWNER's Store or otherwise disposed of, duly signed by the Site Engineer;
- (vii) Materials-at-site accounting for OWNER-supplied materials, signed by the Site Engineer;
- (viii) Discharge Certificate in respect of OWNER-supplied equipment and machinery, signed by the Site Engineer and

- (ix) Declaration by the CONTRACTOR that he has duly cleared any and all of the dues payable by him to his Labour/ Piece rate workers (PRWs), Sub-Contractors, Suppliers, Vendors, , Octroi / entry tax, Goods and Service Tax, Excise and Customs, Provident fund, ESI and royalties, if any.
- (x) Proof in payment in full of the cess payable under the Building & other Construction Workers' Welfare Cess Act, 1996, wherever applicable.

5.5.3.0 If Engineer-in-Charge is satisfied of the completion of the work relative to which the Completion Certificate has been sought and of the completeness in all respects of the documents specified in Clause 5.5.2.0 hereof, the Engineer-in-Charge shall, within 14 (fourteen) days of receipt of the application for Completion Certificate, issue a Completion Certificate in respect of the said work in the format prescribed by the OWNER.

5.5.3.1 The issue of a Completion Certificate shall be without prejudice to the OWNER's rights and to the CONTRACTOR's liabilities under the Contract, including the CONTRACTOR's liability for the Defect Liability Period under Clause 5.6.1.0 hereof, nor shall the issue of a Completion Certificate in respect of the works or work at any job site be construed as a waiver of any right or claim of the OWNER against the CONTRACTOR in respect of work or the works at the job site in respect of which the Completion Certificate has been issued.

5.5.4.0 Up to and until issue of the Completion Certificate as provided for hereinabove in respect of the work or works at any job site, the relative work(s) shall be and remain at the risks of the CONTRACTOR in all respects, including (but not limited to) accident, fire, lightning, earthquakes, flood, storm, tempest, riot, civil commotion and/ or war, except for such works/Plant/Unit or parts, portions, components, sections, groups, systems or sub-systems, which have been taken over by and put to beneficial use by the OWNER, in respect whereof such risks shall pass to the OWNER when the OWNER takes over the same in terms of the Contract.

5.6.0.0 **DEFECT LIABILITY PERIOD**

5.6.1.0 The Defect Liability Period for the works (including the materials incorporated therein within the CONTRACTOR's scope of supply) shall unless otherwise specified be 12 (twelve) months from the date of Completion/Mechanical Completion stated in the Completion Certificate.

5.6.1.1 The CONTRACTOR shall, at his own cost and initiative, correct, repair and/or rectify any and all defect(s) and/or imperfections in the design of the work (insofar as the CONTRACTOR shall be concerned with the design of the work or any part thereof) and/or in the work performed and/or materials, components or other items incorporated therein within the CONTRACTOR's scope of supply as shall be discovered during the Defect Liability Period and in the event of the CONTRACTOR failing to do so, the provisions of Clauses 5.2.7.0 and 5.2.7.1 hereof shall apply.

5.6.1.2 Defect liability Period for the works completed till the date of cancellation of contract shall be 12 (twelve) months from the date of Cancellation of Contract.

SECTION 6

MEASUREMENTS AND PAYMENTS

6.0.0.0 FINAL MEASUREMENTS

6.0.1.0 Within 15 (fifteen) days from the date of completion of Final Test(s) in respect of the works or any portion, section, group or job site, as the case may be, the CONTRACTOR shall cause to be jointly taken with the Site Engineer, final measurements as herein provided for the works covered by the said Final Test(s).

6.0.2.0 If the CONTRACTOR fails to apply to the Engineer-in-Charge for final measurements within 15 (fifteen) days from the date of relative final tests as specified in Clause 6.0.1.0 hereof, the Site Engineer may, of his own initiative, notify the CONTRACTOR in writing of the date(s) for final measurements. The CONTRACTOR shall be bound to present himself for the measurements on date(s) so notified, failing which the provision of Clause 6.1.4.0 hereof shall apply.

6.1.0.0 MODE OF MEASUREMENT

6.1.1.0 All measurements shall be in the metric system, and except where expressly indicated to the contrary in the Schedule of Rates or other Contract Documents, all measurements shall be taken in accordance with the procedures set forth in the Schedule of Rates, Specifications and other Contract Documents, notwithstanding any provision(s) in the relative standard method of measurement or any other general or local custom to the contrary.

6.1.2.0 In the event of the mode of measurement being not provided for by the Contract Documents in respect of any item of the work, such item of work shall be measured in accordance with the Indian Standard Specification No.1200 (latest edition) and such other Indian Standard Specifications as may be applicable, and in the event of such item not being covered by the said Indian Standard Specifications, shall be measured in accordance with the method of measurement in this behalf determined by the Engineer-in-Charge, whose decision shall be final and binding upon the CONTRACTOR.

6.1.3.0 All measurements shall be taken jointly by the Site Engineer or his representative on the one hand and the CONTRACTOR or his representative on the other hand and the CONTRACTOR shall be bound to present himself or his authorized representative whenever so required by the Site Engineer, and shall remain present throughout the time required for joint measurements.

6.1.4.0 If the CONTRACTOR absents himself for any reason whatsoever on any date appointed for joint measurements, the joint measurements shall be taken by the Site Engineer in the absence of the CONTRACTOR and the measurements signed by the Site Engineer shall be final and binding upon the CONTRACTOR.

6.1.5.0 Measurements shall be signed and dated on each page by the CONTRACTOR/CONTRACTOR's representative and Site Engineer/Site Engineer representative. If the CONTRACTOR objects to any of the measurements recorded, including the mode of measurement, such objection shall be noted in the Measurement Book against the item objected to and such note shall be signed by the CONTRACTOR/CONTRACTOR's representative and Site Engineer/Site Engineer's representative. In the absence of any noted objection as aforesaid, the CONTRACTOR shall be deemed to have accepted the relative measurements as entered in the Measurement Book/Sheets and shall be barred from raising any objection in respect of any measurements recorded in the Measurement Book.

6.1.6.0 All measurements relative to which any objections have been noted in the Measurement Book shall be submitted by the Site Engineer/ his representative to the Engineer-in-Charge for his decision, and the decision of the Engineer-in-charge relative thereto (whether on the correct measurement to be adopted or on the mode of measurement to be adopted) shall be final and binding upon the CONTRACTOR.

6.1.7.0 The OWNER and the CONTRACTOR shall each bear the costs of their respective personnel involved in any measurement. The CONTRACTOR shall exclusively bear costs of any marine vessel, third party personnel and / or experts and/or equipment (including specialized equipments) required or employed in or for any measurements to be conducted.

6.2.0.0 FINAL BILL

- 6.2.1.0 On the basis of the Final Measurements entered in the Measurement Books/Sheets (the measurements decided by the Engineer-in-Charge upon any objection and/or mode of measurement decided by the Engineer-in-Charge upon any objection being the measurement to be adopted in such event), the CONTRACTOR shall prepare and submit to the Engineer-in-charge a Final Bill in the prescribed form with reference to the total work covered by the Contract. Such Bill is to be drawn up by applying the applicable rate(s) specified in the Schedule of Rates to the relative measured quantity (ies). Final Bill shall also include the reconciliation or accounting of all materials supplied by or on behalf of the OWNER as free issue material or otherwise.
- 6.2.1.1 If there is any difference or disputes between the CONTRACTOR and the OWNER as to the item(s) of the Schedule of Rates applicable to any particular supply, work or operation, the decision of the Engineer-in-charge on the applicable item(s) of the Schedule of Rates shall be final and binding upon the CONTRACTOR. If the Engineer-in-Charge shall be of the opinion (which opinion shall be final and binding upon the CONTRACTOR) that the disputed supply, work or operation is not covered by any item in the Schedule of Rates or by any other rate fixed pursuant to the provisions hereof, the Engineer-in-charge shall determine the applicable rate(s) in respect thereof according to the provisions of Clause 2.4.1.2 hereof, and the rate(s) so determined by the Engineer-in-charge shall be final and binding on the CONTRACTOR.
- 6.2.1.2 If the CONTRACTOR has already prepared the Final Bill, the CONTRACTOR shall amend the Final Bill to apply the applicable item(s) of the Schedule of Rates and/or rate(s) as determined by the Engineer-in-charge and if the CONTRACTOR has not prepared the Final Bill, shall prepare the Final Bill accordingly.
- 6.2.2.0 The Final Bill shall, in addition to the payment entitlements arrived at according to the provisions of Clause 6.2.1.0 hereof and associated clauses above, include in a separate statement annexed thereto the notified claims of the CONTRACTOR as provided for in Clause 6.6.3.0 hereof.
- 6.2.3.0 The Final Bill drawn in accordance with the provisions hereof shall be submitted to the Engineer-in-charge for certification in quintuplicate (or in such other number of copies as may be prescribed), accompanied by the Completion Certificate relating to the works.
- 6.2.3.1 The Engineer-in-Charge shall within 30 days of the receipt of the Final Bill drawn in accordance with the provisions hereof proceed to check, correct and certify the Final Bill and shall forward the corrected and certified Final Bill to the OWNER for scrutiny and payment together with the Completion Certificate, and shall send to the CONTRACTOR for his information a copy of the Final Bill as corrected and certified.
- 6.2.4.0 All monies payable under the Contract shall become due to the CONTRACTOR only after submission to the OWNER of the certified Final Bill accompanied by the Completion Certificate in respect of the works.
- 6.2.5.0 Payment of the amount(s) due on the certified Final Bill to the extent admitted by the OWNER shall be made within 90 (ninety) days from the date of its certification by the Engineer-in-charge.
- 6.2.5.1 The payment to the CONTRACTOR on the Final Bill shall be subject to deduction of retention money(ies), balance security deposits and other claims, if any, as well as income tax as provided under section 194-C of the Income Tax Act and such other taxes and deductions as provided for under any law, rule or regulation having the force of law for the time being applicable (including any hold ups directed or necessitated by Court Orders or Orders of any Tribunal or other statutory authority and/or of the Vigilance Commission).
- 6.2.6.0 The OWNER may authorize the Engineer-in-charge and/or any other person(s) to commence a dialogue with the CONTRACTOR for arriving at a settlement of the notified claims of the CONTRACTOR annexed to the Final Bill as provided in Clause 6.6.3.0 hereof.
- 6.2.6.1 If a settlement is negotiated with the CONTRACTOR in respect of such claims and such settlement is approved by the OWNER, the CONTRACTOR shall submit a supplementary Final Bill ("Supplementary Final Bill") to the OWNER drawn in terms of the said settlement, and the provisions of Clause 6.2.3.1 and associated clauses there under shall mutatis mutandis apply to such Supplementary Final Bill.
- 6.2.6.2 Payment of the amount due on the Supplementary Final Bill drawn in terms of the settlement envisaged in clause 6.2.6.1 shall be made within 90 (ninety) days from the date of its certification

by the Engineer-in-Charge.

6.3.0.0 SCHEDULE OF RATES:

6.3.1.0 The remuneration determined due to the CONTRACTOR under the provision of Clause 6.2.0.0 hereof shall constitute the entirety of the remuneration and entitlement of the CONTRACTOR in respect of the work(s) under the Contract, and no further or other payment whatsoever shall be or become due or payable to the CONTRACTOR under the Contract.

6.3.2.0 Without prejudice to the generality of the provisions of Clause 6.3.1.0 hereof, the Schedule of Rates shall be deemed to include and cover:

- (i) All costs, expenses, outgoings and liabilities of every nature and description whatsoever and all risks and delays whatsoever (foreseen or unforeseen) to be taken or which may occur in or relative to the execution, completion, testing and/or handing over the work to the OWNER and/or in or relative to acquisition, loading, unloading, transportation, storing, working upon, using, converting, fabricating, erecting any item, equipment, material or component in or relative to the works whether or not such risks and delays are attributable to any act or omission of the OWNER or of the CONTRACTOR or of any third party and the CONTRACTOR shall be deemed to have known the nature, scope, magnitude and the extent of the works and items, materials, utilities, consumables, equipment, and components and work, labour and services required for the proper and complete execution of the works though the Contract Documents may not fully and precisely set out, describe or specify them; and the generality hereof shall not be deemed to be anyway limited, restricted or abridged because in certain cases, the Contract Documents or any of them shall or may and/or in other cases, they shall or may not expressly state that the CONTRACTOR shall do or perform any particular work, labour or service or because in certain cases, the Contract Documents state a particular work, operation, supply, labour or service shall be performed/made by the CONTRACTOR at his own cost or without additional payment, compensation or charge or without entitlement of claim against the OWNER or words to similar effect, and in other cases, they do not do so or because in cases it is stated that the same are included in or covered by the Schedule of Rates and in other cases, it is not so stated and the CONTRACTOR hereby waives any and all contrary rights;
- (ii) The cost of all constructional plant, equipment, supply of water and power, construction of temporary roads and access, temporary works and facilities, pumps, wiring, pipes, scaffolding, shuttering, and other materials, supervision, labour, insurances, fuel, stores, spares, supplies, appliances and other materials, items, articles and things whatsoever (foreseen or unforeseen) to be supplied, provided or arranged by the CONTRACTOR in or relative to or in connection with the performance and/or execution of each item specified in the Schedule of Rates and any related or incidental works or operations by expression or implication involved therein or incidental thereto, complete in every aspect in accordance with Contract Documents, and the plan(s), drawing(s), design(s), order(s) and/or instruction(s).
- (iii) The cost of royalties, licence fees, charges, duties, penalties, levies and damages whatsoever payable for or in respect of any protected or patented goods, materials, equipment or processes employed in or relative to the works and all rents, royalties, licence fees and any other fee, duty, penalty, levy, loss or damage payable on the excavation, removal or transportation of any material or acquisition or use of any right of way or other rights, licences, permits, privileges or usages required for or relative to the performance of the works;
- (iv) Customs duties, excise duties and other duties, sales tax on sale or purchase or turnover or on Works Contract or otherwise and other direct and indirect taxes, quay and port dues or charges and all other duties, taxes, fees, charges, levies octroi and/or cesses whatsoever imposed by the Central Government or State Government or Municipal or Local Bodies and other Authorities whatsoever payable on any materials and/or works imported, exported, transported, supplied or performed (including materials incorporated in the works or brought to site for the performance of the work) without any entitlement to the CONTRACTOR for any exemption, remission, refund or reduction thereof.
- (v) The cost of all indemnities to the OWNER and insurance premia on insurance required in terms of the Contract Documents under any law, rule or regulation, or otherwise taken out

by the CONTRACTOR and the cost of all risks whatsoever (foreseen or unforeseen) including but not limited to risks and costs of delay, OWNER's hold up, extended stay, idle personnel or equipment or extension of time or reduction or increase in the work or scope of work and/or cancellation of Contract and/or accidents, strike, civil commotion, war, labour trouble, third party breach, fire, lightning, inclement weather, storm, tempest, flood, earthquake and other acts of God, Government regulation or imposition or restriction, dislocation of road, rail and other transport, access or facilities, flooding of site and/or access roads or approaches thereto, suspension of work, sabotage and other cause whatsoever.

(vi) The cost of all material supplied to the OWNER for incorporation in the works delivered to the job site and stacked as instructed by the Engineer-in-Charge including (but not limited to) loading, transportation and unloading thereof, waste or materials and returns and disposal of waste and/ or empties; and

(vii) All supervision charges, establishment overheads, finance charges and other costs and expenses of and charges to the CONTRACTOR, and CONTRACTOR's profit of and relative to the work.

6.3.3.0 Subject to the provisions of Clause 8.1.0.0, the rates stated in the Schedule of Rates shall not be subject to escalation or increase on any account whatsoever.

6.4.0.0 **ON ACCOUNT PAYMENTS AND ADVANCES:**

6.4.1.0 Without prejudice to the provision of Clause 6.2.4.0 hereof, the OWNER may at its discretion by way of assistance to the CONTRACTOR, make 'on account' payments to the CONTRACTOR, during the progress of the work on the basis of Running Account Bills as hereinafter more specifically mentioned.

6.4.1.1 Monthly or otherwise as the Engineer-in-Charge may specify in this behalf, the CONTRACTOR shall make a quantitative assessment of the work performed by CONTRACTOR at each job site during the preceding month or other specified period and submit a Running Account Bill (in the form prescribed by the OWNER) in quintuplicate to the Site Engineer of the work during the said month/period with detailed measurements thereof, the said Running Account Bill(s), to be drawn by applying unit quantities measured to the applicable item(s) in the Schedule of Rates. The Engineer-in-Charge shall thereafter have summary verification undertaken of the work and quantities entered in the Running Account Bill(s), and may certify the Running Account Bill(s) for payment on basis of such verification.

6.4.1.2 Running Account Bills as specified in Clause 6.4.1.1 hereof may be drawn by the CONTRACTOR every alternate month, and an ad hoc payment made by the OWNER in respect of the intervening month for the amount certified by the Engineer-in-Charge on the basis of a summary assessment made by the Engineer-in-Charge of the value performed by the CONTRACTOR during the intervening month, such ad hoc payment(s) to be deducted from the amount(s) certified by the Engineer-in-Charge as payable on the Running Account Bill(s) thereafter following.

6.4.1.3 Where the Contract stipulates a lump sum as payable for the work or where a lump sum rate is stipulated in the Schedule of Rate(s) or otherwise in respect of any particular work or part thereof and the works are not, at any intervening stage, capable of measurement, the Running Account Bill to be prepared by the CONTRACTOR according to the provisions of Clause 6.4.1.1 hereof shall be prepared on the basis of a value assessment of such work as certified by the Engineer-in-charge, as percentage of the entire work or item of work for which the lump sum rate is stipulated.

6.4.1.4 No Running Account Bill(s) shall be made and/or certified for a total value of less than Rs.50,000/- (Rupees fifty thousand only) unless otherwise expressly agreed.

6.4.2.0 All on account payments shall be subject to deductions therefrom of all dues to the OWNER, retention monies and other deductions provided for in the Contract, and taxes and other monies deductible within the provisions of Section 194-C of the Income Tax Act or any other law, rule or regulation for the time being in force.

6.4.3.0 All on account payments shall be regarded merely as advance payments against the amount which will become due to the CONTRACTOR in terms of the Contract, and any such payments shall be without prejudice to the full rights of the OWNER under the Contract and to the liabilities of the CONTRACTOR thereunder, and specifically shall not be regarded as an acceptance or

completion of any work(s) paid for in terms of any Running Account Bill or otherwise, notwithstanding any verification or certification by the Engineer-in-Charge in respect thereof.

6.4.3.1 The Schedule of Rate item(s) applied by the CONTRACTOR in respect of any work in his Running Account Bill(s) and the acceptance thereof by the Engineer-in-Charge while verifying and certifying the Bill for payment in respect of such work or otherwise in certifying any payment within the provisions aforesaid shall not be deemed to be binding upon the OWNER as determining the applicable Schedule of Rate item(s) and shall be without prejudice to the rights of the OWNER within the provisions of Clause 6.2.1.1 hereof.

6.4.4.0 Unless or until an extension of time has been granted by the Engineer-in-charge under Clause 4.3.6.0 hereof or by the OWNER under Clause 4.3.7.0 hereof on account payments made under Running Account Bills raised by the CONTRACTOR for the works executed after the expiry of the date of final completion of the works under the approved Progress schedule, shall be subject to provisional withholding of an amount towards adjustment by way of discount in the price calculated as per provisions of Clause 4.4.2.0 hereof. The amount so withheld shall be adjusted towards the Price Adjustment (if any) finally determined after completion of the works, without prejudice to the OWNER's right to recover from the CONTRACTOR any shortfall between the Price Adjustment finally determined and the amount provisionally withheld. Any excess amount provisionally withheld in excess of Price Adjustment finally determined shall upon such determination be paid to the CONTRACTOR. As an alternative, the CONTRACTOR shall have an option to provide:

- a) Bank guarantee from a scheduled bank and in a format acceptable to the OWNER for a sum equal to 10% (ten percent) of the Total Contract Value which shall be available for recovery of the Price Adjustment for Slippages in completion (if any) finally determined after completion of the works. This Bank guarantee shall be in addition to any other guarantee to be provided by the CONTRACTOR and shall be valid for a period of not less than 6 (six) months from the date of final completion of the works with a claim period of atleast 3 (three) month thereafter or;
- b) Insurance Surety Bond (only if the CONTRACTOR is an Indian entity) from an insurer registered with Insurance Regulatory and Development Authority, acceptable to the OWNER, in the format included acceptable to the OWNER for a sum equal to 10% (ten percent) of the Total Contract Value which shall be available for recovery of the Price Adjustment for slippages in completion (if any) finally determined after completion of the works. This Insurance Surety Bond shall be in addition to any other guarantee to be provided by the CONTRACTOR and shall be valid for a period of not less than 6 (six) months from the date of final completion of the works with a claim period of atleast 3 (three) month thereafter.

6.4.5.0 In Contracts of a Total Contract Value of Rs. 10 crore (Rupees ten crore only) and above, the CONTRACTOR may be allowed a Mobilization advance for an amount equivalent to up to 10% (ten per cent) of the Total Contract Value (to be released in not less than two installments as the OWNER may determine), subject to the fulfillment of the following conditions:

- a) The CONTRACTOR shall have furnished the Initial Security Deposit as stipulated in Clause 2.1.1.0 and associated clauses hereof.
- b) The CONTRACTOR shall have executed the formal contract in terms of the Form of Contract.
- c) The CONTRACTOR shall have made a formal application for the release of the Mobilization Advance and shall have furnished a Bank Guarantee to cover the Mobilization Advance and a sum equivalent to 10% (ten per cent) thereof from a Scheduled Bank in India acceptable to the OWNER and in a format approved by the OWNER.
- d) The outstanding balance of the Mobilization Advance shall carry interest at 1% (one percent) above the MCLR bank rate prevailing on the date of opening of Price Bids;
- e) Without prejudice to any other mode of recovery available to the OWNER, the Mobilization Advance, together with interest thereon calculated on the reducing balance, may be recovered at the rate of 10% (ten per cent) of the gross amount certified against each Running Account Bill, till the advance, together with the interest accrued thereon, is recovered in full. The unrecovered balance if any and interest may be recovered from the

Final Bill of the CONTRACTOR and/or from any other amount due to the CONTRACTOR under any other contract or otherwise.

- f) All recoveries shall first be apportioned and appropriated to interest and then to principal.
- g) (i) If the OWNER is satisfied that 25% (twenty five per cent) of the Mobilization Advance and interest accrued till then on the Mobilization Advance has been repaid to or recovered by the OWNER, the OWNER may on the application of the CONTRACTOR, if the Bank Guarantee submitted by the CONTRACTOR covers and secures only the Mobilization Advance, permit the CONTRACTOR to substitute the Bank Guarantee by a Bank Guarantee in a format approved by the OWNER from a Scheduled Bank in India acceptable to the OWNER for an amount reduced by 25% (twenty five per cent).
(ii) The provisions of paragraph (i) hereof above, shall mutatis mutandis apply to the OWNER's satisfaction that the CONTRACTOR has repaid 50% (fifty per cent) and/or 75% (seventy five per cent), as the case may be, of the Mobilization Advance, and interest up to then accrued till then on the Mobilization Advance.
- i) Any Bank Guarantee furnished to secure the Mobilization Advance shall be valid, in the first instance, for a period of 3 (three) months beyond the Scheduled period of Mechanical Completion of all the works under the Contract. The CONTRACTOR shall prior to the expiry of any period for which a Bank Guarantee is valid, at the request of the OWNER, suitably extend the validity of the Bank Guarantee(s) for such further period or periods as may be required by the OWNER failing which, without prejudice to any other right or remedy available to the OWNER, the OWNER shall be entitled to encash the Bank Guarantee(s) and recover in part or whole the outstanding mobilization advance and interest from the proceeds of the encashment, without prejudice to any other right or remedy.
- j) All other conditions stipulated in Clause 2.1.2.0 hereof shall be applicable to the advance(s).

6.4.5.1

(a) Interest shall be applied on the portion of the Mobilization Advance outstanding from any amount certified for payment under a Running Account Bill up to the date of recovery or up to a period of thirty (30) days from the date of submission of the Running Account Bill complete in all respect to the Engineer-in-Charge, whichever is earlier.

(b) Interest shall be applied on the portion of the Mobilization Advance outstanding from any amount certified for payment under the Final Bill up to the date of recovery or up to a period of ninety (90) days from the date of submission of the Final Bill, whichever is earlier. The Final Bill shall be deemed to be submitted on the date when the Engineer-in-Charge has acknowledged receipt of the Final Bill without conveying any reservation.

6.4.6.0

In addition, the OWNER may, at its discretion, allow Secured Advance(s) to the CONTRACTOR, against imperishable materials brought to site for incorporation in the permanent works. Such Secured Advance(s) shall be governed by the following conditions:

- (a) The decision of the OWNER as to whether or not to grant a Secured Advance and as to what materials, if any, are imperishable for the grant of Secured Advance and/or as to what has to be done to qualify any particular material for the grant of Secured Advance, shall be final and binding on the CONTRACTOR.
- (b) The Secured Advance shall be limited to lower of the following:
 - (i) 75% (Seventy Five percent) of the value of the imperishable material brought to site for permanent incorporation in the works as assessed by the Engineer-in-Charge, who may call for (but shall not be bound by) the voucher(s)/invoices for any such material from the CONTRACTOR, who shall forthwith comply with the same;
 - (ii) 90% (Ninety percent) of the concerned item rate for the work in which the material is to be incorporated as set out in the Schedule of Rates.
- (c) The Secured Advance shall be recovered from the subsequent Running Account bill(s) of the CONTRACTOR, to the extent as determined by the Engineer-in-charge (whose decision shall be final and binding upon the CONTRACTOR) that the materials covered by the Secured Advance are used up in or for the work(s) covered by the bill(s).
- (d) Upon payment/disbursement by the OWNER to the CONTRACTOR or any supplier of the

CONTRACTOR of any Secured advance with respect to any materials, the ownership of the said materials shall forthwith vest in the OWNER as security for the repayment of the said advance(s) without necessity of any further act, deed, matter or thing, and the said materials shall be deemed to be OWNER supplied materials entrusted to the CONTRACTOR for permanent incorporation in the works and the provisions of Clause 3.2.1.0 hereof {including sub clauses (a) to (t) thereof} shall mutatis mutandis apply thereto in the same manner as apply to other OWNER supplied materials, and before payment/disbursement of any secured advance by the OWNER pursuant hereto the CONTRACTOR and the Engineer-in-charge shall jointly sign a Statement setting out and detailing the material(s) with reference to which the advance has been reckoned, title to which shall vest in the OWNER pursuant to the provisions hereof.

- (e) Notwithstanding anything provided in sub-clause (c) hereof above, the OWNER shall be entitled (without prejudice to any other right or remedy available to the OWNER) by written notice to the CONTRACTOR to recall the advance or the outstanding balance thereof in the circumstances set out in Clause 6.4.8.0 hereof or if the OWNER is of the opinion that by virtue of delay by the CONTRACTOR in the execution or completion of the work or for any other cause, the value of the remaining material against which the advance has been paid is insufficient to adequately secure the outstanding balance of the advance and interest payable thereon or if allowed to continue will become inadequate to secure the same. Should the CONTRACTOR upon such notice fail to repay the OWNER the outstanding balance of the said advance, it will be open to the OWNER without further reference or notice to the CONTRACTOR to sell in whole or part(s) the materials referred to in sub-clause (d) hereof above by private contract or public tender or a combination thereof or otherwise as the OWNER deems fit, and for the purpose to exercise all powers and to sign and do all acts, deeds, matter and things as are set out in Clause 7.0.6.0 hereof, and the provisions of the said clause shall mutatis mutandis apply to such materials in the same manner as they apply to scaffolding, wiring, pipes, surplus and other materials, equipment and machinery covered by the said Clause.

6.4.7.0 Nothing provided in the foregoing clauses hereof shall anyway be deemed to confer any rights or entitlement on the CONTRACTOR to receive on account payments or Advance payments of any kind whatsoever, nor shall any failure or delay by the OWNER to make any advance or on account payment(s) as herein envisaged or otherwise afford the CONTRACTOR a ground or basis for extension of time for completion or otherwise relieve the CONTRACTOR from any of its/his liabilities under the Contract, it being clearly understood that these on account payments or advance payments are only by way of assistance to the CONTRACTOR.

6.4.8.0 The Mobilization Advance and the materials covered by the Secured Advance shall be utilized by the CONTRACTOR solely for and in the execution of the Contract and for no other purpose, and the CONTRACTOR shall satisfy the OWNER/Engineer-in-charge in this regard whenever required. If it is found that any of the advance(s) or materials aforesaid have been utilized by the CONTRACTOR in whole or part for any other purpose or if the Contract is for any reason cancelled or terminated, the OWNER may at its discretion recall the said advances or the unrecovered portion(s) thereof, as the case may be, and without prejudice to any other right or remedy available to the OWNER, recover the same by recourse to any Bank guarantee to which the OWNER may have recourse for the purpose.

6.4.9.0 SCHEDULE OF ACTIVITIES FOR ON – ACCOUNT PAYMENT

6.4.9.1 The provisions of this Clause 6.4.9.0 and associated Clauses there under shall apply only to a contract in which the Schedule of Rates specifies a lump sum price payable for the whole or any part of the work(s) or activities covered by the Contract. If only part(s) of the work(s) or activities under the Contract are the subject of a lump sum price then the provisions of this clause shall apply only to such part.

6.4.9.2 The CONTRACTOR shall within 30 (thirty) days from the date of issue of the Letter of Acceptance, furnish to the OWNER a detailed schedule of Activities specifying in detail the various activities which the CONTRACTOR would be required to perform and the milestones with respect to each which the CONTRACTOR would have to achieve in order to set up and establish the Unit.

6.4.9.3 Each activity entered in the schedule of Activities and each milestone therein shall be priced so

as to break-up so far as possible, the lump sum price into various priced milestones of achievements and priced activities required to achieve those milestones. The Schedule of Activities and the said priced break-up of activities therein are intended only to provide a basis for the purpose of calculating on account payments and for the calculating payments due to the CONTRACTOR under Clause 2.7.5.0 hereof upon cancellation of Contract, and for no other purpose.

- 6.4.9.4 The OWNER shall review or cause to be reviewed the prima facie adequacy, sufficiency, validity and/or suitability of the activities listed in the Schedule of Activities for the works they are intended, and of the percentages indicated in the Schedule of Activities in respect thereof. Such review shall be performed in conjunction with the design, engineering, specification and other technical reviews to be done by the OWNER and all provisions applicable thereto shall be applicable to the review of the Schedule of Activities.
- 6.4.9.5 No such review shall in any manner absolve the CONTRACTOR of his full responsibility under the contract to supply and perform within the lump-sum price specified in the Price- Schedule, all materials and services and to perform and undertake the work(s) required to set up and establish the Unit/works in accordance with the Contract and the specifications, complete in all respects, whether or not any particular work, supply or activity required is included within the schedule of activities and whether or not the percentage thereof is included in the price indicated in the Schedule of Activities and whether or not the price thereof is in conformity with the price thereof indicated in the Schedule of Activities. The review and approval of the Schedule of Activities and the prices therein are intended only for the satisfaction of the OWNER that the priced Schedule of Activities prima facie covers the activities required to be performed by the CONTRACTOR within the scope of supply and services.
- 6.4.9.6 The Schedule of Activities shall be subject to amendment in both items and percentages in so far as necessary consequent upon any amendment in any relevant related technical particulars, and upon any amendment, the amended Schedule of Activities as approved by the OWNER shall thereafter constitute the Schedule of Activities as envisaged in the Contract Documents.

6.5.0.0 MODE OF PAYMENT

- 6.5.1.0 All payment(s) by the OWNER under or in terms of the Contract shall be made through electronic mode. For this purpose, the CONTRACTOR shall submit bank details, cancelled cheque, PAN card and any other information required by the OWNER, such information to be provided by the CONTRACTOR in any format as may be required by the OWNER for the purpose.

6.6.0.0 CLAIMS BY THE CONTRACTOR

- 6.6.1.0 Should the CONTRACTOR consider that he is entitled to any extra payment or compensation in respect of the works over and above the amounts due in terms of the Contract as specified in Clause 6.3.1.0 hereof or should the CONTRACTOR dispute the validity of any deductions made or threatened by the OWNER from any Running Account Bills, the CONTRACTOR shall forthwith give notice in writing of his claim in this behalf to the Engineer-in-Charge and the Site Engineer within 10 (ten) days from the date of the issue of orders or instructions relative to any works for which the CONTRACTOR claims such additional payment or compensation or of the happening of other event upon which the CONTRACTOR bases such claim, and such notice shall give full particulars of the nature of such claim, grounds on which it is based, and the amount claimed.
- 6.6.2.0 No omission or failure on the part of the Engineer-in- Charge or Site Engineer to reject any claim made or notified by the CONTRACTOR or delay in dealing therewith shall be deemed to be an admission by the OWNER of the validity of such claim or waiver by the OWNER of any of its rights in respect thereof, with the intent that all such claims otherwise valid within the provisions of Clause 6.6.1.0 read with Clauses 6.6.3.0 and 6.6.3.1 shall be dealt with/considered by the OWNER at the time of submission of the Final Bill.
- 6.6.3.0 Any claims of the CONTRACTOR notified in accordance with the provision of Clause 6.6.1.0 hereof as shall remain at the time of preparation of Final Bill by the CONTRACTOR shall be separately included in the Final Bill prepared by the CONTRACTOR in the form of a Statement of Claims attached thereto, giving particulars of the nature of the claim, grounds on which it is based, and the amount claimed and shall be supported by a copy(ies) of the notice(s) sent in respect thereof by the CONTRACTOR to the Engineer-in-Charge and Site Engineer under Clause 6.6.1.0 hereof.

- 6.6.3.1 The OWNER shall not anyway be liable in respect of any notified claim not specifically reflected in the Final Bill in accordance with the provisions of Clause 6.6.3.0 hereof and any and all notified claims not specifically reflected and included in the Final Bill in accordance with the provisions of Clause 6.6.3.0 hereof shall be deemed to have been waived by the CONTRACTOR. Further the OWNER shall have no liability in respect thereof and the CONTRACTOR shall not be entitled to raise or include in the Final Bill any claim(s) other than a notified claim conforming in all respects and in accordance with the provisions of Clause 6.6.3.0 hereof.
- 6.6.4.0 No claim(s) shall on any account be made by the CONTRACTOR after the Final Bill, with the intent the Final Bill prepared by the CONTRACTOR shall reflect any and all notified claims whatsoever of the CONTRACTOR against the OWNER arising out of or in connection with the Contract or work performed by the CONTRACTOR there under or in relation thereto, and the CONTRACTOR shall notwithstanding any enabling provision under any law or Contract and notwithstanding any right of claim in quantum meruit that the CONTRACTOR could have in respect thereof, be deemed to have waived any and all such claims not included in the Final Bill and to have absolved and discharged the OWNER from and against the same, even if in not including the same as aforesaid, the CONTRACTOR shall have acted under a mistake of law or fact.
- 6.6.5.0 Notwithstanding the existence of any claim by the CONTRACTOR in terms hereof or otherwise, the CONTRACTOR shall continue and be bound to continue and perform the works to completion in all respects according to the Contract (unless the Contract or works be priorly determined by the OWNER in terms hereof) and shall remain liable and bound in all respects under the Contract.
- 6.6.6.0 The payment of any sum on account to the CONTRACTOR during the performance of any work or item of work in respect of which a claim has been notified by the CONTRACTOR in terms of Clause 6.6.1.0 hereof or the making or negotiation of any interim arrangements in respect of the performance of such work or item of work by the OWNER, shall not be deemed to be an acceptance of the related claim by the OWNER, or any part or portion thereof with the intent that any such payment shall constitute merely an interim facility or interim assistance to the CONTRACTOR, and not an obligation upon the OWNER.
- 6.7.0.0 DISCHARGE OF OWNER'S LIABILITY**
- 6.7.1.0 The acceptance by the CONTRACTOR of any amount paid by the OWNER to the CONTRACTOR in respect of the final dues of the CONTRACTOR under the Final Bill upon condition that the said payment is being made in full and final settlement of all said dues to the CONTRACTOR, shall without prejudice to the Notified Claims of the Contractor included in the Final Bill in accordance with the provisions under Clause 6.6.3.0 hereof and associated provisions thereunder, be deemed to be in full and final satisfaction of all such dues to the CONTRACTOR, notwithstanding any qualifying remarks, protest or condition imposed or purported to be imposed by the CONTRACTOR relative to the acceptance of such payment, with the intent that upon acceptance by the CONTRACTOR of any payment made as aforesaid, the Contract (including the arbitration clause, if applicable) shall, subject to the provisions of Clause 6.8.2.0 hereof, stand discharged and extinguished.
- 6.7.2.0 The acceptance by the CONTRACTOR of any amount paid by the OWNER to the CONTRACTOR in respect of the Notified Claims of the CONTRACTOR included in the Final Bill in accordance with the provisions of Clause 6.6.3.0 hereof and associated provisions there under shall, subject to the provisions of Clause 6.7.3.0 hereof, be deemed to be in full and final satisfaction of all claims of the CONTRACTOR notwithstanding any qualifying remarks, protest or condition imposed or purported to be imposed by the CONTRACTOR relative to the acceptance of such payment with the intent that upon acceptance by the CONTRACTOR of any payment made as aforesaid, the Contract (including the arbitration clause, if applicable) shall stand discharged and extinguished insofar as relates to and/or concerns the claims of the CONTRACTOR.
- 6.7.3.0 Notwithstanding anything provided in Clause 6.7.1.0 and/or Clause 6.7.2.0 hereof the CONTRACTOR shall be and remain liable for defects in terms of Clause 5.6.0.0 hereof and for the indemnity to the OWNER in terms of Clause 6.8.2.0, and shall be and remain entitled to receive the unadjusted balance of the Security Deposit remaining in the hands of the OWNER in terms of Clause 6.8.3.0 hereof.

6.8.0.0 FINAL CERTIFICATE

- 6.8.1.0 After the expiry of the defect liability period as provided for in clause 5.6.0.0 hereof and after all the liabilities of the CONTRACTOR in respect of the Contract have been satisfied, the OWNER or the Engineer-in-Charge, shall within 30 (thirty) days of the receipt by the Engineer-in-Charge of the Application of the CONTRACTOR, issue a Final Certificate to the CONTRACTOR, certifying that the CONTRACTOR has performed all his obligations in respect of the defect liability period in terms of clause 5.6.1.1 hereof.
- 6.8.2.0 Upon Application for the Final Certificate, the CONTRACTOR shall be deemed to have warranted that it/he has fully paid and satisfied all claims for work, labour, materials, supplies, equipment and all other liabilities whatsoever touching or affecting the Contract, and to have undertaken to indemnify and keep indemnified the OWNER from and against all claims, demands, debts, liens, obligations and liabilities whatsoever arising there from or relating thereto and upon issue of the Final Certificate, the CONTRACTOR shall be deemed to have released, acquitted and discharged the OWNER from and against all claims (known or unknown), liens, demands or causes of action of any kind whatsoever arising out of or relating to the Contract or otherwise howsoever touching or affecting the same and to have undertaken to indemnify and keep indemnified the OWNER from and against the same.
- 6.8.3.0 Within 15 (fifteen) days of Application made by the CONTRACTOR in this behalf accompanied by the Final Certificate, or within 15 (fifteen) days of the passing of the CONTRACTOR's Final Bill by the OWNER, whichever shall be later, the OWNER shall pay/refund to the CONTRACTOR the unadjusted balance (if any) of the Security Deposit for the time being remaining in the hands of the OWNER, and upon such payment/refund, the OWNER shall stand discharged of all obligations and liabilities to the CONTRACTOR under the Contract.

6.9.0.0 CLAIMS OF OWNER:

- 6.9.1.0 No release or payments of any unadjusted balance of the Security Deposit by the OWNER to the CONTRACTOR as aforesaid or otherwise shall be deemed or treated as a waiver of any right(s) or claim(s) of the OWNER or shall estop or prevent the OWNER from thereafter making or enforcing any claims or any rights against the CONTRACTOR. The claims of the OWNER, if any, against the CONTRACTOR shall continue to survive and shall not get extinguished notwithstanding the issue of Final Certificate and/or the release of Security Deposit to the CONTRACTOR.
- 6.9.2.0 If and where the Contract requires the CONTRACTOR to pass or pay to the OWNER any GST/ Comprehensive Economic Partnership Agreement (CEPA) or any other benefit(s), or if the OWNER is required in terms of the Contract to pay, bear or reimburse any excise, customs or like duties or sales or other taxes, the CONTRACTOR shall on receiving any such benefit(s) or on obtaining or being granted any exemption, refund, rebate, set-off or draw-back of any such duty or tax, as the case may be, forthwith pay and pass on to the OWNER the full amount or value thereof ; and if the CONTRACTOR fails to pass on or pay to the OWNER the full amounts of the said benefit(s) available to the OWNER, or the full amount or value of such exemption refund, rebate, set- off, or draw-back of any such duty or tax as the case may be, the CONTRACTOR shall be liable to pay interest thereon @ 16% (sixteen percent) per annum from the date the same is received or obtained by or granted to the CONTRACTOR, and OWNER shall, without prejudice to the generality of the foregoing, be entitled to claim and recover the same from the CONTRACTOR as and when the OWNER derives knowledge thereof, together with interest as aforesaid.

SECTION 7

TERMINATION

7.0.0.0 TERMINATION

7.0.1.0 Notwithstanding anything elsewhere herein provided and in addition to any other right or remedy of the OWNER under the Contract or otherwise (including the right of the OWNER to claim price discount due under the provisions of Clause 4.4.0.0 hereof or otherwise), the OWNER shall be entitled to terminate the Contract by written notice at any time during the currency on or after the occurrence of any one or more of the following events, omissions or contingencies, namely:

- (i) Default or failure by the CONTRACTOR of any of the material obligations of the CONTRACTOR under the Contract, including, but not limited to;
 - a) Failure to start the work within 10 (ten) days of handing over the job site to the CONTRACTOR, and in the event of more than one job site being involved, failure to start the work at each job site involved within 10 (ten) days of handing over of the concerned job site to the CONTRACTOR or within such extended period(s) as may be permitted by the OWNER in this behalf;
 - b) Failure to commence any work at any job site in accordance with the time prescribed in this behalf in the Progress Schedule;
 - c) Failure to carry out on the works or any of items to meet the Progress Schedule;
 - d) Failure to provide at each job site sufficient labour, material, equipment, machinery, temporary work and/or facilities required for the proper and/or due execution of the work or any part thereof;
 - e) Failure to execute the works or any of items in accordance with the Contract;
 - f) Disobedience of any order or instruction of the Engineer-in-Charge and/or Site Engineer in terms of the Contract;
 - g) Negligence in carrying out the works or carrying out of work found to be unsatisfactory by the Engineer-in-Charge;
 - h) Abandonment of the works or any part thereof;
 - i) Commission, permission or sufferance of any other breach of any terms, conditions or provisions of the Contract on the part of the CONTRACTOR to be paid, performed and/or observed.
 - j) Suspension of the entire works or any part thereof, for a period of 14 (fourteen) days or more without due authority from the OWNER or Engineer-in-Charge.
 - k) Failure to deposit the Initial Security Deposit within 30 (thirty) days of receipt by the CONTRACTOR of Acceptance of Tender or within such extended period(s) as may be permitted by the OWNER in this behalf;
 - l) Failure to execute the Contract in terms of the Form of Contract forming part of the Tender Documents within 30(thirty) days of notice in this behalf from the OWNER;
- (ii) If the CONTRACTOR is incapable of carrying out the work;
- (iii) If the CONTRACTOR misconducts himself in any manner;
- (iv) If there is any change in the constitution of the CONTRACTOR or in the circumstances or organization of the CONTRACTOR, which may be deemed by the OWNER to be detrimental to the interests of the work or of the OWNER;
- (v) Dissolution of the CONTRACTOR (if a firm) or commencement of liquidation or winding up (whether voluntary or compulsory) of the CONTRACTOR (if a company) or appointment of a receiver or manager of any of the CONTRACTOR's assets and/or insolvency of the CONTRACTOR (if a sole proprietorship) or any Partner of the CONTRACTOR (if a firm);

- (vi) Distress, execution, or other legal process being levied on or upon any of the CONTRACTOR's goods and/or assets;
- (vii) Death of a CONTRACTOR (if an individual);
- (viii) If upon any change in the partnership/constitution of a CONTRACTOR's organization (if a partnership or company), the OWNER refuses in its sole discretion to continue the Contract with the re-constituted firm or company;
- (ix) If the CONTRACTOR or any person employed by him shall make or offer for any purpose connected with the Contract any gift, gratuity, royalty, commission, gratification or other inducement (whether money or in any other form) to any employee or agent of the OWNER;
- (x) If the CONTRACTOR shall sub-contract the whole or any part of the work in contravention of the provisions of Clause 4.8.1.0 hereof or the CONTRACTOR shall assign or attempt to assign his interest or any part thereof in the Contract.
- (xi) The occurrence of any other act, event, misfeasance, malfeasance or omission in respect of which the Contract Documents or any declaration furnished in terms thereof or pursuant thereto provides for termination of Contract.
- (xii) In case: (a) a petition seeking commencement of insolvency resolution process or liquidation or bankruptcy proceeding against the Contractor is either: (i) filed by such Contractor voluntarily; or (ii) admitted, whether under Insolvency and Bankruptcy Code ("Code") or under any other law (where Code is not applicable) by the National Company Law Tribunal (NCLT), Debt Recovery Tribunal (DRT), or any other court/ tribunal of competent jurisdiction; (b) the Contractor adopts any resolution of its Board of Directors or stakeholders and/or obtains approval for the purpose of effecting any of the foregoing comprised in (a) above; (c) an Interim Resolution Professional/Resolution Professional/ bankruptcy trustee, Liquidator or other similar professional is appointed to take possession, custody, or control of all the assets and property of the Contractor.

- 7.0.1.1 The decision of the General Manager, as to whether any of the events/ contingencies mentioned in Clause 7.0.1.0 hereof, entitling the OWNER to terminate the Contract, has occurred or not, shall be final and binding upon the CONTRACTOR.
- 7.0.2.0 The notice of termination shall set forth, in addition to a statement of the reason(s) for terminating the contract, the time(s) and place(s) for conducting a survey and measurement of the work performed under the Contract up to the date of termination for the purpose of determining the final amount(s) due to the CONTRACTOR therefor. The reason(s) for the termination stated in the notice of termination, shall be final and binding upon the CONTRACTOR.
- 7.0.3.0 For the purpose of measurements, the provisions of Clause 6.1.1.0 to 6.1.7.0 hereof shall apply. Only completed items of the work shall be reckoned for the purpose of measurements and the decision of the Engineer-in-Charge as to whether or not any items of works have been completed for the purpose of measurement shall be final and binding upon the CONTRACTOR. "Completed works" for the purpose of such measurements shall mean works that are capable of use of Final Completion without destruction or alteration. Incomplete items of works shall be measured only on the basis of material supplied and the decision of the Engineer-in-Charge as to the quantity of material involved in or relative to any incomplete works, shall be final and binding upon the CONTRACTOR.
- 7.0.4.0 For the purpose of determining the amount due to the CONTRACTOR in respect of the work, the provisions of Clauses 6.2.1.0, 6.2.1.1, 6.2.1.2, 6.2.2.0 and 6.3.1.0 shall apply, and the measurements taken shall for the purpose of such accounting be deemed to be final measurements and the bill prepared by the CONTRACTOR on the basis thereof shall be deemed to be the Final Bill and no other amount(s) shall be due to the CONTRACTOR in respect thereof, subject to the provisions of Clause 6.6.0.0 and associated clauses there under with regard to claims of the CONTRACTOR.
- 7.0.5.0 Within 7 (seven) days of completion of the measurements, the CONTRACTOR shall clear the job site of all scaffolding, wiring, pipes, surplus materials, CONTRACTOR's labour, equipment and machinery and shall demolish, dismantle and remove all CONTRACTOR's site offices and quarters, and other temporary works, structures and construction and other items and things

whatsoever brought upon or erected at the job site or on any land allotted to the CONTRACTOR by the OWNER and not incorporated in the permanent works and shall remove all rubbish from the job site and the land allotted to the CONTRACTOR and shall clear, level and dress the job site and said land to the satisfaction of the Engineer-in-Charge and shall put the OWNER in undisputed custody and possession of the job site and all land allotted by the OWNER to the CONTRACTOR.

- 7.0.6.0 Should the CONTRACTOR fail to comply with provision of Clause 7.0.5.0 hereof in the manner and within the time specified therein, the OWNER shall have the right at the risks and costs of the CONTRACTOR in all respects to clear the job site of all scaffolding, wiring, pipes, surplus materials, CONTRACTOR's labour, equipment and machinery and other materials and things and/or demolish/dismantle and remove all CONTRACTOR's site offices and quarters and other temporary works, constructions and erections whatsoever on or at the job site or on any land allotted to the CONTRACTOR by the OWNER and/or remove all rubbish from the job site, the land allotted to the CONTRACTOR and store, sell, dispose of and/or otherwise deal with any and all material, equipment and machinery etc., and other items and things aforesaid and recoveries of any demolition/dismantling as the OWNER shall in its absolute discretion deem fit, and the CONTRACTOR shall forthwith on demand pay the OWNER, the entirety of the costs and expenses of the OWNER relative to the above, together with 1% (One percent) thereon to cover OWNER's administrative charges, with right in the OWNER (without prejudice to any other mode of recovery), to recover the same from the proceeds of any sale or disposal as aforesaid or any monies of the CONTRACTOR held by the OWNER or dues of the CONTRACTOR and the CONTRACTOR doth thereby irrevocably nominate, constitute and appoint the OWNER (with right to the OWNER to delegate any and all of its rights in terms hereof to such of its officer(s) and/or other person(s) as it shall deem fit) for and on behalf of and as attorney of the CONTRACTOR to do, commit and sign all acts, deeds, matters and things as shall or may be necessary to be done, committed and/or signed by the OWNER to put into effect the provision of this clause with full right to enter into arrangements with third parties for or relative to the storage, sales and/or other disposal of any material, equipment and machinery, etc., and other items and things and to enter into or upon any of the CONTRACTOR's premises and to break locks and other fasteners for entry thereto and generally to do all other acts, deeds, matters and things as shall be necessary to give full effect to the provision of this clause.

PROVIDED ALWAYS THAT

- (i) The OWNER shall be entitled, without prejudice to the foregoing and in addition thereto, upon the CONTRACTOR failing to comply with the provisions of Clause 7.0.5.0 hereof after removing/demolishing/dismantling from the job site or land allotted to the CONTRACTOR, any of the CONTRACTOR's scaffolding, wiring, pipes, materials, temporary works and other items and things, by written notice to the CONTRACTOR, to require the CONTRACTOR to take delivery of, lift and/or clear the same within 7 (seven) days (or such other period as may be specified in the said notice) of date of said notice, failing which the OWNER may abandon the same at the risk and costs of the CONTRACTOR, and should the CONTRACTOR fail to take delivery of, lift and/or clear the same within the period in this behalf specified in said notice, the OWNER shall be entitled at any time thereafter to abandon the same at the risks and cost of the CONTRACTOR, whereupon (without prejudice to any other rights of the OWNER), the OWNER shall stand absolutely discharged and absolved in respect of all and any material, equipment, machinery and other items and things whatsoever abandoned as aforesaid;
- (ii) Notwithstanding anything to the contrary herein provided, nothing herein stated shall constitute the OWNER as a trustee or bailee for or in respect of any of the CONTRACTOR's material, equipment, machinery or other items or things removed, cleared, demolished, dismantled or abandoned as aforesaid, nor shall the OWNER be bound in law or fact by any duty of care in respect thereof, with the intent that all actions, dealings and disposals within the provisions of this clause shall be exclusively at the risks and liability of the CONTRACTOR (including relative to any loss or damage), and the OWNER shall not be howsoever responsible, accountable or liable in respect thereof.

- 7.0.7.0 If, due to any cause (including, but not limited to resistance put up by the CONTRACTOR and/or his servants or agent or sub-CONTRACTOR(s) or any court order consequent upon a suit or proceedings filed by the CONTRACTOR and/or the CONTRACTOR's servants, agents or sub-CONTRACTOR(s)), the OWNER is unable to fully take over possession of the entire works at

any or all job sites within 7 (seven) days from the date of completion of the measurements as contemplated above, the OWNER shall, in addition to all amounts, compensation and/or damages recoverable from the CONTRACTOR in terms hereof (including but not limited to OWNER's entitlements under Clause 4.4.0.0 and Clause 7.0.9.0 hereof) or otherwise, be entitled to recover from the CONTRACTOR liquidated damages in the amount equivalent to 1% (one per cent) of the total Contract value for each week or part thereof that the said taking over of possession at any job site is delayed beyond the period of seven days specified above, subject to a maximum of 5% (Five percent) of the Total Contract Value.

7.0.8.0 Notwithstanding anything provided in Clause 7.0.6.0, the OWNER shall have the right at any time prior to the removal of the same from the job site, to take possession of such of the CONTRACTOR's materials at any and all job sites, as the OWNER shall deem fit, and the CONTRACTOR shall forthwith upon being required to do so place the OWNER in undisputed possession and custody of all such materials opted for by the OWNER. The price payable to the CONTRACTOR for such material shall be determined by the Engineer-in-Charge having due regard to the condition of the materials and the cost thereof as determined by the Engineer-in-Charge for which purpose the Engineer-in-Charge shall be entitled to call upon the CONTRACTOR to produce the CONTRACTOR's accounting and other records relevant to such materials. The cost of such materials as determined by the Engineer-in-Charge shall be final and binding on the CONTRACTOR.

7.0.9.0 Upon termination of the Contract, the OWNER shall be entitled at the risk and expense of the CONTRACTOR by itself or through any independent CONTRACTOR(s) or partly by itself and/or partly through independent CONTRACTOR(s) to complete and/or get completed to its entirety the work as contemplated in the scope of work and to recover from the CONTRACTOR in addition to any discounts, compensations or damages that the OWNER may in terms hereof or otherwise be entitled (including price discount within the provisions of Clause 4.4.0.0 and liquidated damages under Clause 7.0.7.0 hereof) to the difference between the amounts as would have been payable to the CONTRACTOR in respect of the work(s) (calculated as provided for in Clause 6.2.1.0 hereof read with the associated provisions there under and Clause 6.3.1.0 hereof) and the amount actually expended by the OWNER for completion of the entire work(s) as aforesaid together with 1% (One per cent) administrative charges of the said amount expended by the OWNER for completion of the entire work(s), and in the event of the latter being in the excess of the former, the OWNER shall be entitled (without prejudice to any other mode of recovery available to the OWNER) to recover the excess from the Security Deposit or any monies due or becoming due to the CONTRACTOR.

7.2.0.0 No amount shall be due and payable to the CONTRACTOR upon or in the event of termination of the Contract unless and until the entirety of the works contemplated in the scope of work shall have been completed in all respects to the satisfaction of the OWNER and following such completion, the Defect Liability Period in respect thereof as herein otherwise provided for has elapsed and all payments finally due on any account to the OWNER and/or other CONTRACTOR(s) in respect of all liabilities in respect thereof has been determined.

7.3.0.0 If, upon the satisfaction of the provisions of Clauses 7.0.9.0 and 7.2.0.0 hereof, there shall remain in the hands of the OWNER any excess/balance after all accounting and adjustment of all dues from the CONTRACTOR to the OWNER, the OWNER shall forthwith pay such excess/balance to the CONTRACTOR and in the event of the Security Deposit and other dues of the CONTRACTOR in the hands of the OWNER being insufficient to meet the dues of the OWNER as aforesaid the CONTRACTOR shall forthwith on demand by the OWNER pay the OWNER the shortfall.

SECTION 8

MISCELLANEOUS

8.0.0.0 PERSONAL ACTS AND LIABILITIES

8.0.1.0 No Director, employee, consultant or agent of the OWNER or other person representing the OWNER or acting on behalf of the OWNER in or pursuant to the Contract or in the discharge of any obligation to the OWNER under the Contract or otherwise in relation to the Contract shall have any personal liability to the CONTRACTOR or any Sub-Contractor, agent, representative, director or employee of the CONTRACTOR or to any other person acting for or on behalf of the CONTRACTOR and the CONTRACTOR on its own behalf and on behalf of its Sub-Contractors, directors, employees, agents and representatives hereby waives and disclaims any and all right of action which it or they may have whether under tort or Contract or otherwise against the OWNER or any director, employee, agent, consultant or representative of the OWNER for act of omission or commission done or omitted to be done.

8.0.2.0 The CONTRACTOR shall not be entitled to any increase in the rate(s) mentioned in the Schedule of Rates or any of them or to any other payment, right, benefit or claim whatsoever, by reason of any representation, explanation, statement, assurance or understanding given or alleged to have been given to him by any Director, officer, or other employees of the OWNER, nor shall any Director, officer, or other employee of the OWNER be personally liable for or in respect of any representation, explanation, statement, assurance or understanding given or alleged to have been given by him to the CONTRACTOR or any other person relative to the Contract.

8.0.3.0 The CONTRACTOR shall not under any circumstances pay or advance to any officer(s), servant(s) or agent(s) of the OWNER any sum or money on any account without prior authority of the OWNER in writing and any such payment made or money advanced by the CONTRACTOR without such authority shall be entirely at the risks of the CONTRACTOR without any liability to the OWNER in respect thereof.

8.0.4.0 Any money paid to any partner of the CONTRACTOR (if a firm) and any receipt, settlement, acknowledgement of liability or other document whatsoever signed by any one of the partners of the firm or erstwhile partner of the firm (without notice of the cessation of his interest) or any person held out to be a partner of the firm shall be binding upon the CONTRACTOR vis-à-vis the OWNER and shall constitute a full release and discharge to the OWNER and/or valid settlement, acknowledgement or obligation upon the CONTRACTOR, as the case may be, and the OWNER shall not be concerned, with the application of any monies so paid or the authority of the concerned partner (or erstwhile or purported partner) vis-à-vis the other partners to make the settlement, receipt, acknowledgement or other document(s) concerned provided always that the OWNER shall be entitled at its discretion at any time to call upon all the partners of the CONTRACTOR firm to sign any receipt, settlement, acknowledgement or other document(s) including any receipt, settlement, acknowledgement or other documents signed by a partner (or erstwhile or purported partner) as aforesaid, and all the partners of the firm shall, when called upon to do so by the OWNER, forthwith sign the receipt, order, acknowledgement or other document required to be so signed.

8.1.0.0 TAXES

8.1.1.0 The CONTRACTOR shall be exclusively liable for the payment of any and all taxes, levies, duties, cesses and charges now in force or hereafter imposed, increased or modified in respect of any work done and/or materials supplied and for the payment of all contributions and taxes for unemployment compensation, insurance and old age pension and annuity now or hereinafter imposed by the Central or any State Government or any authority with respect to or covered by the wages, salaries or other compensations paid to persons employed or engaged by the CONTRACTOR and doth hereby undertake to indemnify and keep indemnified the OWNER from and against the same and all claims, actions, demands and payments whatsoever against the OWNER howsoever arising there from or in connection therewith.

- 8.1.2.0 Notwithstanding anything to the contrary elsewhere provided in these General Conditions of Contract;
- (i) If and prior to the date of Scheduled Mechanical Completion/completion of the entire work(s) under the contract or any extension thereof by the Engineer-in-Charge under Clause 4.3.6.0 or by the OWNER under Clause 4.3.7.0, there is an increase in the rate of any of the following output taxes (indirect tax which is required to be passed on to OWNER) applicable to invoices raised on the OWNER, namely, Sales Tax, VAT or Service Tax or Goods and Service Tax (GST) relevant to the execution of Contract (in this Clause referred to the "said taxes") between rate(s) of the said taxes as exist on the last date of submission of the Price Bid relevant to the Contract and the date of relative invoice (in the Clause referred to as the "additional tax"), the OWNER shall pay and bear the additional tax. Similarly, if there is any reduction in any of the said taxes between the said dates, the CONTRACTOR shall pass on the benefit of such reduction to the OWNER with a view that the OWNER shall be invoiced for and pay the reduced tax.
 - (ii) If after the date of the last Price Bid of the CONTRACTOR relevant to the Contract and prior to the date of Scheduled Mechanical Completion/completion of the entire work(s) under the contract or any extension thereof by the Engineer-in-Charge under Clause 4.3.6.0 or by the OWNER under Clause 4.3.7.0, any new output tax (indirect tax which is required to be passed on to OWNER) is introduced in addition to the "said taxes" relevant to the execution of the works, on proof of payment by the CONTRACTOR, the OWNER will reimburse the CONTRACTOR the amount of such new output tax paid by the CONTRACTOR.
 - (iii) If after the date of the last Price Bid of the CONTRACTOR relevant to the Contract and prior to the date of Scheduled Mechanical Completion/completion of the entire work(s) under the contract or any extension thereof by the Engineer-in-Charge under Clause 4.3.6.0 or by the OWNER under Clause 4.3.7.0, a new output tax (indirect tax which is required to be passed on to OWNER) is introduced in lieu of an existing output tax(es) and the rate and impact of the new tax is in excess in aggregate of the rate and impact of existing tax(es) which it replaces, the OWNER shall on satisfactory proof reimburse the CONTRACTOR the additional tax paid by the CONTRACTOR as a result of the imposition of the new tax. If, on the other hand, the rate and impact of the new tax is less than the aggregate rate and impact of the tax(es) which it replaces, the CONTRACTOR shall pass on to the OWNER the benefit thereof.
- 8.1.2.1 Provided always that if there is an increase in the rate of output tax (CST, VAT, Service Tax and Goods and Service Tax (GST)) or any new output tax (indirect tax which is required to be passed on to OWNER) is introduced in addition to the said taxes in lieu of said taxes where the total financial implication on account of new output tax(es) is more and arises beyond the scheduled Mechanical Completion date, OWNER shall reimburse the same, if the OWNER is entitled for tax credit on such increase in output tax(es) or new output tax(es) is. In other cases, CONTRACTOR shall bear the increase in the rates of existing taxes or any new output tax.
- 8.1.2.2 The CONTRACTOR shall provide all necessary information as may be requisite for the purpose of calculating the impact of taxes as mentioned above. For purpose of calculating the impact of any benefit to be passed to the OWNER under sub- clauses above, if the CONTRACTOR fails to submit satisfactory documents in relation to such benefit to the OWNER then the benefit shall be determined by the OWNER and such determination by the OWNER shall be final and binding on the CONTRACTOR.
- 8.1.2.3 The CONTRACTOR shall ensure that it is registered with the respective tax authorities in the Centre and the applicable State(s) in which the work is to be executed, and shall submit to the OWNER self attested copy(ies) of such registration certificate(s). Any taxes/duties/levies claimed by the CONTRACTOR shall be claimed by issuing a proper Invoice raised on the OWNER indicating details/elements of all taxes charged and necessary requirements as prescribed under the respective tax laws. The CONTRACTOR shall mention correct and valid registration numbers applicable to the tax charged on all invoices raised on the OWNER.
- 8.1.2.4 The CONTRACTOR shall reimburse to or make good to the OWNER any loss to the OWNER resulting from a claim by the OWNER of any tax credit being rejected/disallowed by any tax authority due to non deposit of taxes or non- compliance of tax laws by the CONTRACTOR or of any requirement or formality to be fulfilled by the CONTRACTOR to qualify the OWNER for such tax credit.
- 8.1.2.5 The CONTRACTOR shall charge the correct rate of tax as prescribed under the respective tax

laws, and shall avail of and shall pass on to the OWNER the benefit(s) of all exemptions, rebates and concessions available to the CONTRACTOR under tax laws as may be applicable after the last date of submission of price bid relevant to the Contract.

- 8.1.2.6 The OWNER will issue/provide Road Permits to the CONTRACTOR only in respect of material directly purchased by the OWNER and transported by the CONTRACTOR. In such event, the CONTRACTOR will be obliged to ensure the proper utilization of the Road Permit issued /provided by the OWNER for the specific supply, and in case of the seizure of goods or vehicle transporting the goods, the CONTRACTOR will be solely responsible for release of the goods/vehicle and shall reimburse the OWNER any resultant litigation costs incurred by the OWNER.

8.2.0.0 **GOVERNMENT REGULATIONS**

- 8.2.1.0 The CONTRACTOR shall comply with and ensure strict compliance by his/its sub-contractors and agents of all applicable Central, State, Municipal and local laws and regulations and undertakes to indemnify the OWNER from and against all levies, damages, penalties, any payments whatsoever as may be imposed and against all actions, proceedings claims and demands arising there from and/or relative thereto.

8.3.0.0 **LABOUR LAWS AND REGULATIONS**

- 8.3.1.0 The CONTRACTOR shall be responsible for strict compliance of and shall ensure strict compliance by its sub-contractors, servants and agents of all laws, rules or regulations having the force of law affecting the relationship of employer and employee between the CONTRACTOR/sub-contractors and their respective employees and/or otherwise concerning labour, social welfare and wages, provident fund, pension, bonus, gratuity and other benefits to employees. Without prejudice to the generality of this provision, the CONTRACTOR shall comply with and ensure that his sub-contractors and other agencies employed by him comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees' Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefit Act, 1961, Mines Act, 1952, The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986, the Inter State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996, The Building and Other Construction Workers' Welfare Cess Act, 1996, The Contract Labour (Abolition & Regulation) Act, 1970, Payment of Bonus Act, 1965, Gratuity Act, 1972, Factories Act, 1948 and the Employees Provident Fund and Miscellaneous Provisions Act, 1952 as amended from time to time and all rules, regulations and schemes framed there under from time to time.
- 8.3.2.0 The CONTRACTOR and sub-contractor(s) of the CONTRACTOR shall obtain from the authority(ies) designated in this behalf under any applicable law, rule or regulation (including but not limited to) the Factories Act, 1948 and Contract Labour (Abolition and Regulation) Act, 1970 (in so far as applicable) any and all such licence(s), consent(s), registration(s) and/or other authorization(s) as shall from time to time be or become necessary for or relative to the execution of the work or any part or portion thereof or the storage or supply of any material(s) or otherwise in connection with the performance of the Contract and shall at all times observe and ensure due observance by the sub-contractors, servants and agents of all terms and conditions of the said licence(s), consent(s), regulation(s) and other authorization(s) and laws, rules and regulations applicable thereto. Without prejudice to the generality of this provision, the CONTRACTOR shall obtain and ensure that his sub-contractors and other agencies employed by him on the work, obtain a valid licence under The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986,, Contract Labour (Regulation & Abolition) Act, 1970 and shall duly and faithfully observe and comply with the provisions of the Contract Labour (Regulation & Abolition) Central Rules 1971 and other Central and State Rules as amended from time to time and applicable to the work, and shall duly, promptly and faithfully maintain and/or cause to be maintained all records and facilities required to be maintained and/or provided in terms thereof or any licence granted there under.
- 8.3.3.0 The CONTRACTOR shall ensure that wages are paid by himself or by his sub-contractors to their workmen directly without the intervention of any Thekedars or any other intermediary and that no amount by way of commission or otherwise is deducted or recovered by the Thekedars or any other intermediary from the wages of the workmen.
- 8.3.4.0 The OWNER shall be entitled at all times to carry out any check(s) or inspection(s) of the

CONTRACTOR's facilities, records and accounts to ensure that the provisions aforesaid are being observed by the CONTRACTOR and the sub-contractors and that the workmen are not denied the rights and benefits to which they are entitled under such provisions. Any violation shall, without prejudice to any other rights or remedies available to the OWNER, constitute a ground for termination of the Contract as though specifically set forth under Clause 7.0.1.0 thereof.

- 8.3.5.0 Nothing in the Contract Documents stated shall anyway constitute any workman/employee of the CONTRACTOR or any sub-contractor as or to be a workman/employee of the OWNER, or place obligation or liability in respect of any such workman/employee upon the OWNER.
- 8.3.6.0 The CONTRACTOR shall not employ in connection with the work, any person below the age of 18 years. Neither the CONTRACTOR nor any of the sub-contractor directly or indirectly engaged by such CONTRACTOR or such sub-contractor will indulge in any activities in violation of the The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986.
- 8.3.7.0 The establishment of the CONTRACTOR shall be duly registered under the Employees Provident Fund and Miscellaneous Provisions Act, 1952 and the Employees State Insurance Act, 1948 (if applicable) and the CONTRACTOR shall duly pay his contributions and his employees' contributions to the Authorities prescribed under the said Acts and any Schemes framed there under in respect of all labour employed by him for the execution of the contract. Copies of challans/receipt of such payments alongwith the list showing persons employed together with emoluments paid for the purpose of P.F. deductions shall be submitted to the OWNER before the end of every calendar month. In case the Provident Fund Authority's receipted challan referred to above are not furnished, the OWNER shall deduct 5% (five percent) of the payable amount from the CONTRACTOR's running bill for services and retain the same as a security for the payment of the Provident Fund. Such retained amounts shall be released to the CONTRACTOR only on production of challan/receipts of the Provident Fund Authority for the period covered by the related deduction.
- 8.3.8.0 Notwithstanding provision of Clause 8.3.7.0, on receiving information of any breach, non-fulfillment and/or non-observance by the CONTRACTOR and/or his sub-contractors and other agencies engaged by him in connection with the Works or any of the provisions or requirements of any of the Labour Laws, rules and regulations and/or as to the inaccuracy of any of the returns or statements furnished by the CONTRACTOR and/or his sub-contractors and/or any records or accounts maintained by any of them with respect to which the OWNER as the principal employer or otherwise can have a liability, the OWNER shall be entitled to deduct from the Bills and any amounts due or becoming due to the CONTRACTOR, under this or other contract(s) with the CONTRACTOR, any sum(s) required or estimated to be required, in its judgment which shall be final and binding on the CONTRACTOR, for making good or compensating for the liability or possible liability of the OWNER by reason of the said breach, non-fulfillment or non-observance and/or inaccuracy aforesaid.
- 8.3.9.0 The CONTRACTOR shall indemnify and keep indemnified the OWNER from and against all actions, claims, demands and liabilities whatsoever under and in respect of the breach of any of the provisions hereof and/or against any claim, action or demand by any workman/employee of the CONTRACTOR or any sub-contractor and/or from any liability anyway to any sub-contractor under any law, rules or regulation having the force of law including (but not limited to) claims against the OWNER under the Employees' Compensation Act 1923, the Employees Provident Fund and Miscellaneous Provisions Act 1952, the Employee's State Insurance Act 1948 and/or the Contract Labour (Abolition & Regulation) Act 1970 and/or The Child and Adolescent Labour (Prohibition & Regulation) Act, 1986.
- 8.3.10.0 The CONTRACTOR and his sub-contractors and agents employed by him for and/or in the performance of the Works shall strictly abide by and observe the provision of the "Contractors' Labour Regulations" and the "Model Rules for Labour Welfare" as set out in Appendix I and Appendix II to these General Conditions of Contract, which shall be binding on the CONTRACTOR, his sub-contractors and agents.
- 8.3.10.1 In the event of an irreconcilable conflict between the provisions herein and the provisions contained in the "Contractors' Labour Regulations" and/or the "Model Rules of Labour Welfare" (as set out in Appendix I and Appendix II hereto), the "Contractors' Labour Regulations" and "Model Rules for Labour Welfare" shall prevail to the extent of the irreconcilable conflict.
- 8.3.10.2 In the event of irreconcilable conflict between the "Contractors' Labour Regulations" and/or the "Model Rules for Labour Welfare" (set out in Appendix I and Appendix II hereto) and any applicable law, rule or regulation, the law, rule or regulation shall prevail over the "Contractors'

Labour Regulation" and/or the "Model Rules for Labour Welfare", as the case may be, and shall be complied with.

8.4.0.0 SAFETY REGULATIONS, ACCIDENT AND DAMAGE

8.4.1.0 The CONTRACTOR shall be responsible at his own cost in and relative to performance of the work and contract to observe and to ensure observance by his sub-contractors, agents and servants of the provisions of the Safety Code as hereinafter appearing and all fire, safety and security regulations as may be prescribed by the OWNER from time to time and such other precautions and measures as shall be necessary and shall employ/deploy all equipments necessary to protect all works, material properties, structures, equipment, installations, communications and facilities whatsoever from damage, loss or other hazard whatsoever (including but not limited to fire and explosion) and shall during construction and other operations minimize the disturbance and inconvenience to the OWNER, other contractors, the public and the adjoining land and property owners and occupiers of crops, trees and vegetation and shall indemnify and keep indemnified the OWNER from and against all losses and damages and costs, charges and expenses and penalties, actions, claims, demands and proceeding whatsoever suffered or incurred by or against the OWNER as the case may be, by virtue of any loss, alteration, displacement, disturbance or destruction or accident to any works, materials, properties, structures, equipment, installations, communications and facilities and land and property, owner and occupiers of crops, trees and vegetation as aforesaid, with the intent that the CONTRACTOR shall be exclusively responsible for any accident, loss, damage, alteration, displacement, disturbance or destruction as aforesaid resultant directly or indirectly from any breach by the CONTRACTOR of his obligations aforesaid or upon any operation, act or omission of the CONTRACTOR or his sub- contractor(s) or agent(s) or servant(s).

8.4.2.0 The CONTRACTOR's liabilities under Clause 8.4.1.0 and otherwise under the Contract shall remain unimpaired notwithstanding the existence of any storage-cum-erection or other insurance covering any risk, damage, loss or liability for which the CONTRACTOR is liable to the OWNER in terms of the foregoing sub-clause or otherwise and/or in respect of which the CONTRACTOR has indemnified the OWNER, with the intent that notwithstanding the existence of such insurance, the CONTRACTOR shall be and remain fully liable for all liabilities and obligations under the Contract and indemnities to the OWNER, and the OWNER shall not be obliged to seek recourse under such policy(ies) in preference to recourse against the CONTRACTOR or otherwise to exhaust any other remedy in preference to the remedies available to it under the Contract.

8.5.0.0 INDEMNITY AND INSURANCE

8.5.1.0 The CONTRACTOR shall be at all times indemnify and keep indemnified the OWNER and its officers, servants and agents from and against all third party claims whatsoever (including but not limited to property loss and damage, personal accident, injury or death of or to property or person of any sub-contractor and/or the servants or agents of the CONTRACTOR or any other contractor(s) and any sub-contractor and/or of the Owner), and the CONTRACTOR shall at his own cost and initiative at all times up to the successful conclusion of the defect liability period specified in Clause 5.6.0.0 hereof take out and maintain insurance policies in respect of all insurable liabilities under this clause, including but not limited to third party insurance and liabilities under the Motor Vehicles Act, 1988; Employees' Compensation Act, 1923; Fatal Accidents Act, 1855; Personal Injuries (Compensation) Insurance Act, 1963, Emergency Risk Insurance Act, and/or other Industrial Legislation from time to time in force in India with insurance company(ies) approved by the OWNER, and such policy(ies) shall be of not lesser limit than the limits hereunder specified with reference to the matters hereunder specified, namely :

- (a) Employees' Compensation Insurance - to the limit to which compensation may be payable under the laws of the Republic of India; but not less than the limits specified below.
- (b) Third Party Insurance - body injury and property damage to the limit specified below:
 - (i) If the Total Contract Value exceeds Rs. 1(one) crore, the policy shall be for not less than Rs.10,00,000/- (Rupees ten lakhs only) for each accident. The sum assured shall not be less than Rs.20,00,000/- (Rupees twenty lacs only) for all accidents; and
 - (ii) If the Total Contract Value does not exceed Rs.1 (one) crore, the policy shall be for not less than Rs.3,00,000/- (Rupees three lac only) for each accident. The sum assured shall not be less than Rs.10,00,000/- (Rupees ten lakhs only) for all accidents.

Provided that the limits specified above shall operate only as a specification of minimum limits for insurance purpose, but shall not anyway limit the Contractor's liability in terms of this clause to the limit(s) specified.

- 8.5.2.0 Should the CONTRACTOR fail to take out and/or keep afoot insurance as provided for in the foregoing sub-clauses, the OWNER shall be entitled (but without obligation to do so) to take out and/or keep afoot such insurance at the cost and expense of the CONTRACTOR and without prejudice to any other right or remedy of the OWNER in this behalf to deduct the sum(s) incurred therefor from the dues of the CONTRACTOR.

8.6.0.0 **LIMITATION OF LIABILITY**

- 8.6.1.0 Except as otherwise specifically provided in the Contract Documents, neither the OWNER nor the CONTRACTOR shall be liable to the other for any indirect or consequential loss including on account of idleness, loss of business, loss of goodwill, loss of opportunity, loss of profit, extended stay, or any like damage which may be suffered by such other party arising out of or in connection with the Contract. The total liability of both the OWNER and the CONTRACTOR arising in connection with or under the Contract, in tort or otherwise will not exceed an amount equivalent to the 100% (hundred percent) of Total Contract Value.

- 8.6.2.0 Provided, the aggregate cap on liability of the CONTRACTOR as specified above shall not be applicable in case of:
- (i) Liabilities under Clause 3.2.0.0 (Materials and Equipment supplied by the OWNER);
 - (ii) Liabilities under Clause 3.4.0.0. (For power provided by the OWNER);
 - (iii) Liabilities under Clause 3.5.0.0 (For water provided by the OWNER);
 - (iv) Liabilities under Clause 3.6.0.0. (For land provided by the OWNER);
 - (v) Liabilities under Clause 3.9.0.0. (For labour, machinery and equipment provided by the OWNER);
 - (vi) Liabilities under Clause 3.10.1.0 (For government controlled materials for which the OWNER is liable);
 - (vii) Liabilities for recoverable advances and interest thereon; and
 - (viii) Liabilities arising out of fraud, misconduct, negligence, illegal or unlawful acts, or such acts or commissions which are contrary to the most elementary rules of diligence as would have been followed in similar circumstances
 - (ix) any liability arising out of infringement of intellectual property right(s) by the CONTRACTOR or affiliates or any sub-contractor or any supplier or any of its or their respective officers, directors, employees, servants or agents
 - (x) any liability arising under Clauses 8.17.0.0 & 8.18.0.0.
 - (xi) any liability pursuant to Contractor's indemnity obligations under the Contract
 - (xii) any liability towards third parties including death and/or injury by the Contractor or affiliates or any sub-contractor or any supplier or any of its or their respective officers, directors, employees, servants or agents

Provided always that any limitation of liability aforesaid shall exclude any amounts recovered under any policy(ies) of insurance taken out and/or maintained by the CONTRACTOR pursuant to the provisions of the Contract

8.7.0.0 **TRAINING OF APPRENTICES**

- 8.7.1.0 The CONTRACTOR shall, if so required by law and/or when called upon the Engineer-in-Charge during the currency of Contract, himself engage and/or procure engagement by his sub-contractor(s) of such number of apprentices and for such period as may be required by the Engineer-in-Charge in this behalf. Such apprentices shall be trained in accordance with the provisions of the Apprentices Act, 1961 and any other Act, rule or regulation having the force of law, regulating upon the employment of apprentices or as may be required by the Engineer-in-Charge in this regard, and the CONTRACTOR shall be responsible at his own cost and initiative and without entitlement to any extra compensation or remuneration from the OWNER in this behalf, to fulfill all obligations of the employer under the said Act, including liability for payment to apprentices as required there under.

8.8.0.0 **RECORDS AND INSPECTION**

- 8.8.1.0 The CONTRACTOR shall, if and when required by the Engineer-in-Charge produce or cause to

be produced before the Engineer-in-Charge or any other officer of the OWNER designated by the Engineer-in-Charge in this behalf, for examination, any cost or other book(s) of account and/or other records and documents in the possession of the CONTRACTOR or any sub-contractor or subsidiary or associated firm or Company of the Contractor or any sub-contractor, and/or copies of extracts thereof and/or other information or returns relative thereto (such returns to be verified in the manner prescribed by the Engineer-in-Charge or other officer aforesaid designated in this behalf) as may be required relative to the execution of the Contract or for verifying or ascertaining the cost of any material, labour, service or item or thing whatsoever in connection with the Contract, and the decision of the Engineer-in-charge or other officer designated in this behalf, as the case may be, as to whether any book, record, document, information or return is relevant for any of the purpose aforesaid, shall be final and conclusive.

- 8.8.2.0 Should the Engineer-in-Charge (whose decision in this behalf shall be final) consider it necessary for the purpose of verifying or ascertaining the cost of production for any item or thing to examining the works and/or records of the CONTRACTOR or any sub-contractor(s) or any subsidiary or associated firm or company of the CONTRACTOR engaged in the fabrication, manufacture or assembly of any item or thing, the CONTRACTOR shall permit and/or facilitate such inspection by the Engineer-in-Charge or other officer of the OWNER designated in this behalf by the Engineer-in-Charge and shall afford the Engineer-in-Charge or concerned officer all assistance as shall be necessary for the purpose.

8.9.0.0 **PATENT AND ROYALTIES**

- 8.9.1.0 If any equipment, machinery or materials to be used or supplied or methods or processes to be practices or employed in the performance of this Contract is/are covered by a patent under which the CONTRACTOR is not licensed, the CONTRACTOR shall before supplying or using the equipment, machinery, materials, methods or processes as the case may be, obtain such licence(s) and pay such royalty(ies) and licence fee(s) as may be necessary in connection with the performance of this Contract. In the event that the CONTRACTOR fails to pay such royalty or obtain such licence, the CONTRACTOR will defend at his own expense any suit for infringement of patent which is brought against the CONTRACTOR or the OWNER as a result of the failure, and shall pay any damages and costs awarded in such suit and will keep the OWNER indemnified from and against all other consequences thereof.

8.10.0.0 **ARTICLES OF VALUE FOUND**

- 8.10.1.0 All gold, silver and other metals, minerals or ore of any kind or description and precious and semi-precious stones and bearing earth, rock or strata, coins, treasures, treasure trove, antiques and other items and things whatsoever which shall be found under or upon the job site shall as between the CONTRACTOR and the OWNER be the exclusive property of the OWNER and the CONTRACTOR shall forthwith upon discovery thereof notify the OWNER of such discovery with the details of the item(s) or things discovered and pending directions by the OWNER for the disposal thereof shall hold and preserve the same as trustee of the OWNER to the satisfaction of the Engineer-in-Charge.

8.11.0.0 **MATERIALS OBTAINED FROM DISMANTLING**

- 8.11.1.0 Any material obtained by the CONTRACTOR consequent upon dismantling of any building, structure or construction whatsoever at the job site other than any building, structure or construction dismantled by the CONTRACTOR pursuant to the CONTRACTOR's liabilities for defects as elsewhere herein provided, shall be the exclusive property of the OWNER.

8.12.0.0 **LIENS AND LIABILITIES**

- 8.12.1.0 If at any time there is evidence of any lien or claim for which the OWNER might be or become liable and which in terms of the Contract or otherwise is chargeable to or payable by the CONTRACTOR under this Contract or any other contract with IOCL, the OWNER shall have the right to retain out of any payment then due or thereafter becoming due to the CONTRACTOR under this Contract an amount sufficient to completely indemnify the OWNER against such lien or claim, and should the CONTRACTOR not dispute such lien or claim and/or if in the opinion of the OWNER, such lien or claim is otherwise valid (the Owner's opinion in this behalf being final

and binding on the CONTRACTOR), the OWNER may pay and discharge the same and deduct the amount so paid together with any legal and other costs, charges and expenses incurred by the OWNER in defending any action and/or in obtaining legal advice or opinion relative to the lien, claim or action, from any monies then due or thereafter becoming due to the CONTRACTOR and/or retained as aforesaid, and if there is no money due or retained as aforesaid or if the same be insufficient to satisfy the payment(s) aforesaid, the CONTRACTOR shall on demand pay to the OWNER the same and failing such payment within 10 (ten) days of demand by the OWNER in this behalf, shall be liable to pay interest on the amount due from the date of demand up to and until the date of payment in full at the bank rate as applicable to the OWNER plus 1% (one percent) per annum and the provisions hereof (in so far as such notice shall be deemed to be necessary in addition to the contractual provisions herein) shall be deemed to constitute a notice for the payment of interest under the provisions of the Indian Interest Act and in determining such interest, the Certificate issued by an officer of the OWNER in a financial department of the OWNER shall be conclusive evidence of the Bank rate of interest applicable to the OWNER.

8.13.0.0 LIABILITIES FOR SUB-CONTRACTOR(S)

8.13.1.0 Without prejudice to any other liabilities or obligations of the CONTRACTOR relative to sub-contractors in terms hereof or otherwise, the CONTRACTOR shall require every sub-contractor to whom any portion of the work to be performed under the Contract has been sub-contracted, to comply with the provisions of the Contract in so far as applicable to each sub-contractor, and the CONTRACTOR shall hold the OWNER harmless and indemnified from any and against all penalties, actions, claims and demands and costs, charges and expenses whatsoever arising out of or in connection with any failure of the CONTRACTOR or any sub-contractor(s) to make full and proper compliance with any of the terms and conditions of the Contract.

8.14.0.0 WAIVER

8.14.1.0 It shall always be open to the OWNER to waive in whole or part any right or the enforcement of any right or remedy which the OWNER may have against the CONTRACTOR or of any obligations which the CONTRACTOR may have hereunder, provided always that :

- (i) No waiver shall be presumed or inferred unless made in a written communication addressed by the OWNER to the CONTRACTOR and specifically communicated as a Waiver ;
- (ii) No waiver of any right or part of any right on one occasion shall be deemed to be a waiver or abandonment of that right for all occasions with the intent that a waiver once given shall be limited to the specific waiver and shall be without prejudice to the right of the Owner to insist upon the strict adherence of the attendant obligations of the Contractor and/or the future enforcement of the right by the Owner in respect of the same and/or any other dependent obligation.

8.15.0.0 CONTRACTOR'S ESTABLISHMENT

8.15.1.0 It is understood that the establishment of the CONTRACTOR (and any sub-Contractor engaged by the CONTRACTOR) constitutes an independent establishment involving inter alia in undertaking works and/or services for others of the nature and kind forming the subject matter of the Contract. It is consequently understood that all the employees of the CONTRACTOR (and any Sub-Contractor engaged by the CONTRACTOR) are the employees of the independent establishment of the CONTRACTOR or Sub-Contractor (as the case may be) who have been and will be appointed solely for and/or with reference to the work of that establishment, and have not been and will not be appointed specifically or otherwise for the sole purpose of the work covered by the present Contract. To this end, each CONTRACTOR (and sub-Contractor engaged by the CONTRACTOR) shall issue to each of its employees deputed to the job-site to perform any work in relation to the Contract a regular letter of appointment for employment in the CONTRACTOR'S/ sub-Contractor's independent establishment, with authority in the CONTRACTOR/sub-Contractor to employ or depute him for or in relation to any work or engagement assumed by the CONTRACTOR/sub-Contractor from time to time in the course of its business and the production of a certified copy of each letter of appointment duly acknowledged by the concerned employee shall be a pre-condition for the issue of a Gate Pass

to any employee of the CONTRACTOR/sub-Contractor into any area the entry to which is restricted by the OWNER.

8.16.0.0 COLLECTION OF INDEBTEDNESS

- 8.16.1.0 Without prejudice to any other rights or remedies of the OWNER and in addition to any other provisions hereof, the OWNER shall be entitled, out of the Security Deposit (including by recourse to Bank Guarantee/ Insurance Surety Bond) any monies or securities under this or any other contract(s) for the time being of the CONTRACTOR in its hands and out of any payments then due or becoming due in future to the CONTRACTOR under this or any other Contract,
- (a) deduct any and all amounts due to the OWNER from the CONTRACTOR arising out of or in connection with the Contract or any other contract;
 - (b) retain such amounts which the OWNER has claimed against the Contractor and arising out of or in connection with this Contract or any other contract.

8.17.0.0 OBSERVANCE OF ENVIRONMENTAL REGULATIONS AND ENVIRONMENTAL PROTECTION

- 8.17.1.0 The CONTRACTOR shall ensure that its servants and agents and sub-contractors and their servants and agents shall duly comply with all environmental laws, rules and regulations and the conditions of any permit, permission, consent and/or no-objection granted in this behalf by any authority with respect to or concerning the work, and shall independently so organize and conduct its operations and cause its sub-contractors so organize and conduct their operations as not to cause any hazard or pollution to health, life, property or environment including (but not limited to) discharge of any noxious substance or effluent into the atmosphere or into the earth or into any drain, canal, stream, river, pond, lake or other water body.
- 8.17.2.0 The CONTRACTOR shall indemnify and keep indemnified the OWNER from and against the breach, non-observance, infraction or dereliction of any of the provisions of Clause 8.17.1.0 hereof, and against any and all claims, actions or proceedings, prosecutions and liabilities and losses and damages and costs (including legal costs), charges and expenses whatsoever suffered or incurred or instituted against the OWNER as the case may be.

8.18.0.0 CONFIDENTIAL HANDLING OF INFORMATION

- 8.18.1.0 The CONTRACTOR and its/his employees, agents and sub-contractors and the employees and agents of the sub-Contractor(s) shall treat as strictly confidential and shall take all steps necessary to ensure confidential handling of all maps, Plans, charts, designs, Drawings, photographs, data, reports, tests, Specifications, methods, and other information developed or acquired by the CONTRACTOR from or by means of the Tender Documents or any facility extended to the CONTRACTOR pursuant thereto or the award or performance of the works or any of them or otherwise disclosed or made available to the CONTRACTOR or any of the aforesaid persons, and shall not disclose or reproduce the same in any book, article, speech or other publication, provided always that the OWNER may upon application by the CONTRACTOR to the OWNER in this behalf permit report, disclosure or re-production of the same in any book, article, speech or other publication if it is satisfied that this would not involve the disclosure of any classified or other information which would not be in the interest of public or security to disclose.
- 8.18.2.0 Application for such consent shall be submitted to the OWNER in writing outlining the intended use of the relative material and shall be submitted to the OWNER at least one month prior to the expected use accompanied by the text of the relative publication in which it is sought to be used. Photographs should be accompanied by their caption. An application shall not be understood to have been permitted unless expressly permitted in writing by the OWNER.

8.19.0.0 GOVERNMENT OF INDIA NOT LIABLE

- 8.19.1.0 It is expressly understood and agreed by and between the CONTRACTOR and the OWNER that the OWNER is entering into this agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the OWNER is an independent legal entity with power and authority to enter into contracts, solely in its behalf under the applicable laws of India and general principles of Contract Law. The CONTRACTOR expressly agrees, acknowledges and understands that the OWNER is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts,

omissions, commissions, breaches or other wrongs arising out of the Contract. Accordingly, CONTRACTOR hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Government of India arising out of this Contract and covenants not to sue the Government of India on any matter, claim, cause of action or thing whatsoever arising out of or under this Contract.

8.20.0.0 INDEPENDENT CONTRACTOR STATUS

8.20.1.1 The CONTRACTOR shall act as an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint ventures or joint relationship between the parties. Subject to all compliance with the Contract, the CONTRACTOR shall be solely responsible for the manner in which works are performed. All employees, representatives or sub-CONTRACTORS engaged by the CONTRACTOR in performing the Contract shall be under the complete control of the CONTRACTOR and shall not be deemed to be employees of the CORPORATION and nothing contained in the Contract or in any sub-Contract awarded by the CONTRACTOR shall be construed to create any contractual relationship between any such employees or representative or Sub-Contractor and OWNER. CONTRACTOR shall be responsible for the acts, defaults or negligence of the CONTRACTOR, his agencies, servant or workmen.

8.21.0.0 EMPLOYMENT BY FIRMS TO OFFICIALS OF THE OWNER

8.21.1.1 The CONTRACTOR shall not to employ serving OWNER employees unless such recruitment is through open public recruitment process.

8.21.1.2 The CONTRACTOR shall not employ or engage any ex- senior management personnel of OWNER within the initial two years period after their retirement/resignation/severance from the service in connection with the Contract, without specific permission of Owner. Failure to comply with the above shall be deemed to be a breach of contract.

8.22.0.0 PRADHAN MANTRI SURAKSHA BIMA YOJANA (PMSBY) AND PRADHAN MANTRI JEEVAN JYOTI BIMA YOJANA (PMJJBY).

8.22.1.1 Contractor shall, ensure that all his/ its personnel deployed under the Contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of the OWNER for defraying the cost of the insurance premium amount under the contract. The contractor shall also certify that the claim has not been preferred in the earlier contract of OWNER or otherwise.

8.22.1.2 OWNER after satisfying by verifying the required documents shall release the premium amount to contractor. In case a member is covered through more than one account, insurance cover will be restricted to one only.

8.23.0.0 INSOLVENCY OF CONTRACTOR

8.23.1.0 It shall be the responsibility of the Contractor to inform OWNER in writing as per Annexure 6 immediately and in any event within one (1) working day from the earlier of either: (i) filing; or (ii) admission/ rejection by National Company Law Tribunal (NCLT), Debt Recovery Tribunal (DRT) or any other court or tribunal having jurisdiction, of the petition for insolvency resolution or liquidation proceedings under the Insolvency and Bankruptcy Code, 2016 ("Code") or any other applicable law (in case where Code is not applicable).

8.23.2.0 If the Contractor refuses or fails to share the information regarding their status of insolvency resolution process or liquidation or bankruptcy proceeding, it shall be treated as breach of Contract and OWNER shall be entitled to terminate the contract in terms of Clause 7.0.1.0.

8.24.0.0

ENVIRONMENTAL, SOCIAL AND GOVERNANCE COMPLIANCES

8.24.1.0

It shall be responsibility of the Contractor and any of the sub-contractors deployed by the Contractor to ensure compliance with all applicable laws and to ensure safe healthy, inclusive, ethical and equitable work environment, and to have zero tolerance policy towards sexual harassment for all its employees. The Contractor shall be in compliance with all applicable laws in this regard. The Owner shall have right to carry out any inspection of the Contractors premises in order to verify such compliances and ask for any document or other record as deemed necessary for such compliance. The Contractor shall render all necessary support and assistance for the same. The Contractor shall abide by the undertakings as annexed hereto as Annexures ESG-I to IV.

SECTION 9

DISPUTE RESOLUTION

9.0.0.0 NOTICE OF DISPUTE AND AMICABLE SETTLEMENT

9.0.1.0 Subject to the provisions of Clause 6.2.0.0, in the event of any difference/dispute between the parties to the Contract arising out of or in connection with the Contract, the concerned party shall send a Notice of Dispute specifying all points of disputes / issues, the amounts of any quantified claims, and an estimate of the monetary value of any other claims, along with the supporting document(s) to the other party under the Contract.

Provided such a request can only be made upon submission of Final bill in terms of clause 6.2.0.0, 7.0.4.0 and subject to provisions of clause 6.2.6.0.

9.0.2.0 After receipt of a Notice of Dispute under Clause 9.0.1.0 above, the parties shall in good faith, make all reasonable efforts to arrive at a mutually acceptable resolution to the disputes raised in the Notice of Dispute in a formal meeting(s) between authorized representatives of the parties.

9.0.3.0 Parties agree that any effort by either party for arriving at the mutually acceptable resolution of the disputes is to be kept confidential by both Parties. Parties also agree to not rely upon any views expressed, admissions or suggestions made, or willingness to enter into a settlement by either party as evidence in any forum / arbitration / court proceeding.

9.0.4.0 Parties agree that the Contractor shall not be entitled to any claim or compensation for any consequential, indirect or special losses/damages, including loss of profit, loss of production, loss of use, loss of goodwill, loss of reputation, remote damages, loss of business opportunities, loss of employment opportunities, loss of interest including any pre-reference or *pendente-lite* interest, idling costs of men and machinery, prolongation costs etc., on account of any dispute/ claim raised under the Contract. Parties agree that claim for any such amount by the Contractor shall not be considered and shall be void.

9.0.5.0 In case the parties fail to amicably resolve the disputes between them within 60 days of receipt of Notice of Dispute sent under Clause 9.0.1.0 above, the following provisions of Clause 9 mentioned below, if applicable, shall follow.

9.1.0.0 MEDIATION/CONCILIATION

9.1.1.0 If there is no resolution of dispute pursuant to clause 9.0.0.0, then the concerned party would seek resort to the Mediation/Conciliation under the Indian Oil Conciliation Rules 2014 as amended and/or re-enacted from time to time, if the dispute is covered under the said Rules.

9.1.2.0 The said Rules are available on the OWNER's website.

9.2.0.0 ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSEs DISPUTES (AMRCD)

9.2.1.0 In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14-12-2022 as may be modified from time to time .

9.2.2.0 Notwithstanding the existence of any dispute resolution process in terms hereof or otherwise, the CONTRACTOR shall continue and be bound to continue and perform all its/ his outstanding obligations in all respects under the Contract (unless the Contract is determined by the OWNER), and the CONTRACTOR shall remain liable and bound in all respects under the Contract.

9.3.0.0 DISPUTE RESOLUTION (IN CASE OF DISPUTES IS NOT BETWEEN GOVT. ENTITIES/PUBLIC SECTOR ENTERPRISES)

9.3.1.0 Subject to the provisions of Clauses 9.0.0.0, 9.1.0.0, 9.2.0.0, 6.7.1.0, and 6.7.2.0 hereof, any dispute arising out of a Notified Claim of the CONTRACTOR included in the Final Bill of the CONTRACTOR in accordance with the provisions of Clause 6.6.3.0 hereof, and any dispute arising out of any claim(s) of the OWNER against the CONTRACTOR shall be referred to the arbitration under the institute as enumerated under Contract documents (whose rules are deemed to be incorporated herein by reference) to an arbitral tribunal appointed under rules as provided for. It is specifically agreed that the OWNER may prefer its claim(s) against the CONTRACTOR as counter-claim(s) if a Notified Claim of the CONTRACTOR has been referred to arbitration. The CONTRACTOR shall not, however, be entitled to raise as a set-off defense or counter-claim any claim which is not a Notified Claim included in the CONTRACTOR's Final Bill in accordance with the provisions of Clause 6.6.3.0 hereof.

Provided that

- (a) to be arbitrable, the cumulative value of Notified Claims of Contractor (for domestic procurement contracts) and the claims of OWNER does not exceed Rupees Ten Crore. It is further agreed that in case the cumulative value of Notified Claims of the CONTRACTOR (inclusive of interest amount claimed by CONTRACTOR till the date of filing of statement of claim or the counter-claim as the case may be) filed before Arbitrator and the claims of OWNER (inclusive of interest amount claimed by OWNER till the date of filing of statement of claim or the counter-claim as the case may be) filed before the Arbitrator exceed Rupees Ten Crore, the Arbitrator so appointed shall refrain from proceeding in the arbitration and the arbitration proceedings shall stand terminated forthwith.
- (b) in case of the non-domestic procurement contracts to be arbitrable, the cumulative value of Notified Claims of Contractor and the claims of OWNER does not exceed Rupees Hundred Crore. It is further agreed that in case the cumulative value of Notified Claims of the CONTRACTOR (inclusive of interest amount claimed by CONTRACTOR till the date of filing of statement of claim or the counter-claim as the case may be) filed before Arbitrator and the claims of OWNER (inclusive of interest amount claimed by OWNER till the date of filing of statement of claim or the counter-claim as the case may be) filed before the Arbitrator exceed Rupees Hundred Crore, the Arbitrator so appointed shall refrain from proceeding in the arbitration and the arbitration proceedings shall stand terminated forthwith.

9.3.2.0 The Arbitration shall be conducted by an Arbitral Tribunal consisting of:

- (i) For claim amount upto Rs. 2 crore, by a Sole Arbitrator, to be appointed by the concerned institute from the panel of arbitrators maintained by such institute. It is agreed between the parties that only a Retired Judge shall be eligible to be appointed as a Sole Arbitrator under this clause, and
- (ii) For claim amount above Rs. 2 crore, by a Tribunal of three arbitrators from the panel of arbitrators maintained by such institute. It is agreed between the parties that only Retired Judge(s) shall be eligible to be appointed as arbitrator(s) under this clause. Parties to nominate one arbitrator each and the presiding arbitrator shall be appointed from the panel of arbitrators maintained by such institute, in accordance with the rules of the relevant institute.

In the event institutional arbitration has not been provided for in the Form of Contract, the sole arbitrator provided for in 9.3.2.0 (i) may be appointed by mutual consent of Parties and the arbitrator(s) to be nominated under clause 9.3.2.0 (ii) may be nominated by the Parties without recourse to an arbitration institution and the two arbitrators so nominated may appoint a presiding arbitrator by mutual consent.

9.3.2.1 Seat of the arbitration shall be the place of exclusive jurisdiction as provided in the "Form of Contract". In the event, "Form of Contract" under the Contract Documents has not been executed between the parties, for any reason whatsoever, the seat of arbitration shall be the place from where the tender has been issued by the OWNER.

9.3.2.2 Notwithstanding any other court or courts having jurisdiction to decide the question(s) forming the subject matter of the reference if the same had been the subject matter of

a suit, all actions and proceedings arising out of or relative to the Contract shall lie only in the court of competent civil jurisdiction in this behalf as specified in the Form of Contract to the exclusion of any other court. In the event, "Form of Contract" under the Contract Documents has not been executed between the Parties, for any reason whatsoever, Court of competent jurisdiction shall be the place from where the tender has been issued by the OWNER, to the exclusion of any other court.

- 9.3.3.0 If a dispute arises with reference to any of the matters referred to in Paragraphs (i) to (iii) of Clause 9.3.4.0 hereof before the appointment of the Arbitral Tribunal under this clause, such dispute shall be referred for adjudication under Clause 9.3.4.0 hereof and the appointment of the Arbitral Tribunal, if any, shall be subject to and without prejudice to Clause 9.3.4.0 and the Arbitral Tribunal so appointed shall refrain from proceeding in the arbitration so far as concerns any such disputed matter under the decision of the General Manager under Clause 9.3.4.0 in respect thereof. If the dispute arises during the course of the arbitration proceedings commenced under Clause 9.3.0.0 with respect to any of the said matters, the Arbitral Tribunal shall forthwith refrain from proceeding further in the arbitration so far as concerns any such disputed matters until the decision of the General Manager under Clause 9.3.4.0, and if necessary, the Arbitral Tribunal so appointed under this Clause shall direct the parties before him for the purpose to make reference of such dispute(s) to the General Manager under Clause 9.3.4.0
- 9.3.4.0 Any dispute(s) or difference(s) with respect to or concerning or relating to any of the following matters are hereby specifically excluded from the scope, purview and ambit of the Arbitration Agreement embodied in Clause 9.3.0.0 with the intention that any dispute or difference with respect to any of the said following matters and/or relating to Arbitral Tribunal's jurisdiction with respect thereto shall not and cannot form the subject-matter of any reference or submission to arbitration under Clause 9.3.0.0, and Arbitral Tribunal shall have no jurisdiction to entertain the same or to render any decision with respect thereto, and such matter shall be referred to the General Manager for decision and the same shall be decided by the General Manager (whose decision shall be final and binding on the OWNER and the CONTRACTOR) prior to the appointment of the Arbitral Tribunal, if appointed then Arbitral Tribunal appointed under Clause 9.3.0.0 proceeding with or proceeding further with the reference, as the case may be. The said excluded matters are:
- (i) With respect to or concerning the scope or existence or otherwise of the Arbitration Agreement;
 - (ii) Whether or not a Claim sought to be referred to arbitration by the CONTRACTOR under Clause 9.3.0.0 is a Notified Claim;
 - (iii) Whether or not a Notified Claim is included in the CONTRACTOR's Final Bill in accordance with the provisions of Clause 6.6.3.0 hereof.
- 9.3.4.1 The General Manager shall act as a '*persona designate*' or expert and not as an arbitrator and the provisions of the Indian Arbitration and Conciliation Act, 1996 or any law governing arbitration shall not apply to proceedings before the General Manager.
- 9.3.4.2 The General Manager shall render his decision on the basis of the material placed before him either by the OWNER or by the CONTRACTOR, and if the CONTRACTOR fails to place material before him, the General Manager shall assume that the CONTRACTOR has no material to place and may render his decision accordingly.
- 9.3.4.3 Venue for the resolution under this Clause shall be at the place where the General Manager is located, provided that the General Manager may with the consent of the Contractor agree upon any other venue.

9.4.0.0 **ADJUDICATION BY COURTS**

Subject to provisions of applicable law, any dispute not resolved or not covered under the provisions of Clauses 9.0.0.0 to 9.3.0.0 above may be referred for final adjudication by a court of competent jurisdiction.

Notwithstanding any other court or courts having jurisdiction to decide any dispute all actions and proceedings arising out of or relative to the Contract shall lie only in the court of competent civil jurisdiction in this behalf as specified in the Form of Contract

to the exclusion of any other court. In the event, "Form of Contract" under the Contract Documents has not been executed between the Parties, for any reason whatsoever, Court of competent jurisdiction shall be the place from where the tender has been issued by the OWNER, to the exclusion of any other court.

9.5.0.0

CONTINUED PERFORMANCE

Notwithstanding the fact that settlement of dispute(s) (if any) under any of the mechanisms as enumerated hereinabove, as may be pending, the parties hereto shall continue to be governed by and perform the work in accordance with the provisions under the Contract.

9.6.0.0

NO INTEREST

9.6.1.0

Parties agree that the CONTRACTOR shall not be entitled for any pre-reference or *pendente-lite* interest, i.e., date of cause of action till date of Award by Arbitral Tribunal. Parties agree that CONTRACTOR's claim for any such interest shall not be considered and shall be void. The Arbitrator or Tribunal shall have no authority or power to award pre-reference or pendent-lite interest in the matter to the CONTRACTOR.

9.6.2.0

Where the arbitral award is for the payment of money, no interest shall be payable by Owner on whole or any part of the money for any period till the date on which the award is made.

9.6.3.0

Parties agree that the CONTRACTOR shall not be entitled for any pre-filing interest, i.e., date of cause of action till date of filling of civil suit. Parties agree that CONTRACTOR's claim for any such interest shall not be considered and shall be void.

9.6.4.0

Where the civil decree is for the payment of money, no interest shall be payable by OWNER on whole or any part of the money for any period till the date on which the suit is filed.

9.6.5.0

The Parties agree that the CONTRACTOR hereby waives any right to claim any pre-reference or pending proceeding interest claim before any conciliator or AMRCD as the case may be.

SECTION 10

SAFETY CODE

10.0.0.0 ADHERENCE TO SAFETY PRACTICES

- 10.0.1.0 CONTRACTOR shall adhere to safe construction practice and guard against hazardous and unsafe working conditions and shall comply with 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.

10.1.0.0 FIRST AID AND INDUSTRIAL INJURIES

- 10.1.1.0 CONTRACTOR shall maintain first aid facilities for its employees and those of its sub-contractors.
- 10.1.2.0 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 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 Engineer-in-charge, and a copy of CONTRACTOR's report covering each personal injury requiring the attention of a physician shall be furnished to 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 and responsible for all lapses of his sub-contractors/employees in this regard.

10.3.0.0 CONTRACTOR'S BARRICADES

- 10.3.1.0 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 CONTRACTOR's or OWNER's inspectors.
 - (iv) OWNER's existing property liable to damage by CONTRACTOR's operations, in the opinion of Engineer-in-Charge/Site Engineer.
 - (v) Railroad unloading spots.

- 10.3.2.0 CONTRACTOR's employees and those of its sub-contractors shall become acquainted with OWNER's barricading practice and shall respect the provisions hereof.
- 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 metal 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 mazdoor 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, swing 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 platform, 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 be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 3 feet.
- 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 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 of the 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, as law 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 any such person, or which may with the consent of the CONTRACTOR be paid to compromise any claim by any such 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 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 the work all roads and open area 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 eye shields, 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 to the public.
- 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 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 anyplace where there is a risk of drowning, all necessary safety equipment 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 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 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 machine, 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 appliance 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 energized, 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 goods 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 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 work spot. 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 the above Clauses 10.0.0.0 to 10.13.0.0 there is nothing in these to exempt the CONTRACTOR from the operations of any other Act or rules in force in the Republic of India.

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 thereto or 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 authorized 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 lapses that may occur on the part of his sub-contractors/employees in this regard.

10.15.0.0 DEDUCTIONS ON ACCOUNT OF SAFETY VIOLATIONS

10.15.1.0 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.

10.15.2.1 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, an amount of Rs.5000/- per occasion
- (ii) Violation as above resulting in :
 - a) Any physical injury – an amount equal to 0.5% of the Total Contract Value (maximum of Rs.2,00,000) per injury in addition to Rs. 5,000/-
 - b) Fatal accident – an amount equal 1% of the Total Contract Value (maximum of Rs.10,00,000) per fatality in addition to Rs. 5,000/-

10.16.0.0 **SPECIAL CONTRIBUTIONS**

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.



ANNEXURES TO GCC

APPENDIX I

CONTRACTORS' LABOUR REGULATIONS

(Reference : Clause 8.3.0.0 of GCC)

1. These regulations may be called Model Contractors Labour Regulations.
2. Definition : In these regulations, unless otherwise expressed or indicated, the following words and expressions shall have the meaning hereby assigned to them :
 - (a) "Labour" means workers employed by a contractor, directly or indirectly through a sub-contractor, or by an agent on his behalf to do any skilled, semi-skilled or unskilled manual, supervisory, technical or clerical work.
 - (b) "Fair Wage" means wages, which shall include wages for weekly day of rest and other allowances, whether for time or piece work, after taking into consideration prevailing market rates for similar employments in the neighbourhood but shall not be less than the minimum rates of wages fixed under the payment of Minimum Wages Act.
 - (c) "Wages" shall have the same meaning as defined in the Payment of Wages Act.
 - (d) "Contractor" for the purpose of these regulations shall include an agent or sub-contractor employing labour on the work taken on the contract.
 - (e) "Inspecting Officer" means any Labour Enforcement Officer or Assistant Labour Commissioner of the Chief Labour Commissioner's Organization.
 - (f) "Prescribed" means prescribed under the Contract Labour (Regulation and Abolition) Act, 1970 and Rules framed there under.
3. Notice of commencement : The Contractor, shall within SEVEN days of commencement of the work, furnish in writing, to Inspecting Officer of the area concerned the following information:
 - (a) Name and Situation of the work.
 - (b) Contractor's name and address.
 - (c) Particulars of the Department for which the work is undertaken.
 - (d) Name and address of sub-contractors as and when they are appointed.
 - (e) Commencement and probable duration of the work.
 - (f) Number of workers employed and likely to be employed.
 - (g) "Fair wages" for different categories of workers.
 - (i) Number of hours of work to constitute a normal working day : The number of hours which shall constitute a normal working day for an adult shall be NINE hours. The working day of an adult worker shall be so arranged that it is inclusive of intervals, if any, for rest, it shall not spread over more than twelve hours on any day. When a worker is made to work for more than NINE hours on any day or for more than FORTY EIGHT hours in a week, he shall, in respect of overtime work, be paid wages at double the ordinary rate of wages.
 - (ii) Weekly day of rest : Every worker shall be given a weekly day of rest which shall normally be a Sunday unless otherwise fixed and notified at least TEN days in advance. A worker shall not be required or allowed to work on the weekly rest day unless he has or will have a substituted rest day, on one of the five days immediately before or after the rest day, provided that no substitution shall be made which will result in the worker working for more than ten days consecutively without a rest day for a whole day.

4. Where, in accordance with the foregoing provisions, a worker works on the rest day and has been given a substituted rest day, he shall be paid wages for the work done on the weekly rest day at the overtime rate of wages.

(NOTE : The expression "ordinary rate of wages" means the fair wage the worker is entitled to.)

5. Display of notice regarding Wages, Weekly Day of Rest etc. : The contractor shall, before the commencement of his work on the Contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the works, notice in English and in the local Indian language, spoken by majority of workers, giving the rate of fair wages, the hours of work for which such wages are payable, the weekly rest days workers are entitled to and name and address of the Inspecting Officer. The Contractor shall send a copy each of such notices to the Inspecting Officers.

- 6.1 Fixation of Wage Periods : The Contractor shall fix wage periods in respect of which wages shall be payable. No wage period shall normally exceed one month.

- 6.2 Payment of wages :

- (i) Wages due to every worker shall be paid to him direct. All wages shall be paid in current coins or currency or in both. The wages shall be paid without deductions of any kind except those specified by Central Government by General Order or Special Order in this behalf or permissible under the Payment of Wages Act.
- (ii) Wages of every worker employed as contract labour in an establishment or by Contractor are less than one thousand, such workers shall be paid within SEVEN days from the end of the Wage period; and before the expiry of the 10th day from the end of the wage period accordingly as the number of workers exceed 1,000.
- (iii) When employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before expiry of the second working day from the date on which his employment is terminated.
- (iv) All payment of wages shall be made at the work site on a working day except when the work is completed before expiry of the wage period, in which case final payment shall be made at the work site within 48 hours of the last working day and during normal time.

(NOTE : The term "working day" means a day on which labour is employed, and the work is in progress)

7. Register for Workmen : A register of workmen shall be maintained in the prescribed form and kept at the work site or as near to it as possible, and the relevant particulars of every workman shall be entered therein within THREE days of his employment.

8. Employment Card : The Contractor shall issue an employment card in the Form appended to these regulations to each worker on the day of work or entry into his employment. If a worker already has any such card with him issued by the previous employer, the Contractor shall merely endorse that Employment Card with relevant entries. The Contractor may, alternatively, issue an attendance-cum-wage slip to each worker in the form appended. This card shall be valid for a wage period. The Contractor shall mark attendance on the cards twice each day and again after the rest interval, before he actually starts the work. On termination of employment, the Employment Card shall again be endorsed by the Contractor, service certificate issued and returned to the Worker.

9. Register of Wages etc.:

- (i) A register of Wages-cum-Muster Roll in the prescribed Form shall be maintained and kept at the work site or as near to it as possible.
- (ii) A wage slip in the prescribed Form shall be issued to every worker employed by the Contractor at least a day prior to disbursement of wages.

10. Fines and deductions which may be made from Wages :
- (i) Wages of a worker shall be paid to him without any deduction of any kind except the following:
 - (a) Fines ;
 - (b) Deduction for absence from duty, i.e. from the place of his employment he is required to work. The amount of deductions shall be in proportion to the period for which he was absent ;
 - (c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money which he is required to account for, where such damage or loss is directly attributable to his neglect or default ;
 - (d) Deductions for recovery of advances or for adjustment of overpayment of wages. Advance granted shall be entered in a register ; and
 - (e) Any other deduction which the Corporation may from time to time allow.
 - (ii) No fines shall be imposed on any worker say in respect of such acts and omissions on his part as have been approved by the Chief Labour Commissioner or Competent Authority.
 - (iii) No fine shall be imposed on a worker and no deductions for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
 - (iv) The total amount of fines which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in a rupee of the wages payable to him in respect of that wage period.
 - (v) No fine imposed on a worker shall be recovered from him in installments, or after expiry of sixty days from the date on which it was imposed. Every fine shall be deemed to have been imposed on the day of the act or commission in respect of which it was imposed.
 - (vi) The Contractor shall maintain both in English and the local Indian language, a list approved by the Chief Labour Commissioner or Competent Authority clearly stating the acts and commissions for which penalty or fine may be imposed on a workman and display it in good condition in a conspicuous place on the work site.
 - (vii) The Contractor shall maintain a register of fines and the register of deductions for damage or loss in the prescribed Forms which should be kept at the place of work.
 - (viii) The Contractor shall display in a conspicuous place of work the list of acts and omissions for which the fines can be imposed. They are as under :
 - 1. Willful insubordination or disobedience, whether alone or in combination with other.
 - 2. Theft, fraud or dishonest in connection with the Contractors beside a business or property of Corporation.
 - 3. Taking or giving bribes or any illegal gratification.
 - 4. Habitual late attendance.
 - 5. Drunkenness, fighting, riotous or disorderly or indifferent behaviour.
 - 6. Habitual negligence.
 - 7. Smoking near or around the area where combustible or other materials are locked.
 - 8. Habitual indiscipline

9. Causing damage to work in the progress or to property of the Corporation or of the Contractor.
 10. Sleeping on duty.
 11. Malingering or slowing down work.
 12. Giving of false information regarding name, age, father's name etc.
 13. Habitual loss of wage cards supplied by the employers.
 14. Unauthorized use of employer's property of manufacture or making of unauthorized articles at the work place.
 15. Bad workmanship in construction and maintenance by skilled workers which is not approved by the Corporation and for which the Contractor is compelled to undertake rectification.
 16. Making false complaints and/or misleading statements.
 17. Engaging trade within the premises of the establishments.
 18. Any unauthorized divulgence of business affairs of the employers.
 19. Collection or canvassing for the collection of money within the premises of an establishment unless authorized by the employer.
 20. Holding meeting inside the premises without previous sanction of the employers.
 21. Threatening or intimidating any workmen or employer during the working hours within the premises.
 22. Non-observance of Safety norms/practices applicable to the Worksite.
11. Register of Accidents: The Contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars :
- a. Full particulars of the labourers who met with accident.
 - b. Rate of wages.
 - c. Sex
 - d. Age
 - e. Nature of accident and cause of accident
 - f. Time and date of accident
 - g. Date and time when admitted in hospital
 - h. Date of discharge from the hospital
 - i. Period of treatment and result of treatment
 - j. Percentage of loss of earning capacity and disability as assessed by Medical Officer.
 - k. Claim required to be paid under Employees' Compensation Act.
 - l. Date of payment of compensation
 - m. Amount paid with details of the person to whom the same was paid.
 - n. Authority by whom the compensation was assessed
 - o. Remarks
12. Preservation of Registers : The Register of Workmen and the Register of Wages -cum- Muster Roll required to be maintained under these Regulation shall be preserved for 3 years after the date on which the last entry is made therein.
13. Enforcement : The Inspecting Officer shall either, on his own motion or on a complaint received by him, carry out investigations and send a report to the Engineer-in-charge specifying the amounts representing Workers' dues and amount of penalty to be imposed on the Contractor for breach of these Regulations, that have to be recovered from the Contractor, indicating full details of the recoveries proposed and the reasons therefor. It shall be obligatory on the part of the Engineer-in-charge on receipt of such a report to deduct such amounts from payments due to the Contractor.
14. Disposal of amounts recovered from the Contractor : The Engineer-in-charge shall arrange payment to workers concerned within FORTY FIVE days from receipt of a report from the Inspecting Officer. In cases where there is an appeal, payment of workers dues would be arranged by the Engineer-in-charge wherever such payments arise, within THIRTY days from the date of receipt of the decision of the Regional Labour Commissioner (RLC).
15. Appeal against decision of Inspecting Officer : Any person aggrieved by a decision of the Inspecting Officer may appeal against such decision to the RLC concerned within THIRTY days from the date of decision, forwarding simultaneously a copy of his appeal to the Engineer-in-charge. The decision of the RLC shall be final and binding upon the Contractor and the workmen.

16. Representation of parties :
- (i) A workman shall be entitled to be represented in any investigation or enquiry under these Regulations by an officer of a registered trade union of which he is a member or by an officer of a Federation of Trade Unions to which the said trade union is affiliated or where the workman is not a member of any registered trade union, by an officer of a registered trade union, connected with, or by any other workman employed in the industry in which the worker is employed.
 - (ii) A contractor shall be entitled to be represented in any investigation of enquiry under these Regulations by an officer of an Association of Contractors of which he is a member or by an officer of a Federation of Association of Contractors to which the said association is affiliated or where the Contractor is not a member of any Association of Contractors, by an officer of association of employers, connected with, or by any other employer engaged in the industry in which the Contractor is engaged.
 - (iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these Regulations.
17. Maternity benefits for female employees : The Contractor shall extend the leave, pay and other benefits as admissible to the female employees. No maternity benefits shall be admissible to a female worker unless she has been employed for a total period of not less than 6 months immediately proceeding the date on which she proceeds on leave. The Contractor shall maintain a register of maternity benefits in prescribed form, and shall be kept in all places of work.
18. Inspection of Books and other documents : The Contractor shall allow inspection of the Registers and other documents prescribed under these Regulations by Inspecting Officers and the Engineer-in-Charge or his authorized representative at any time and by the worker or his agent on receipt of due notice at the convenient time.
19. Submission of Returns : The Contractor shall submit periodical returns as may be specified from time to time.
20. Amendments : The Corporation may, from time to time, add to or amend these Regulations, and issue such directions as it may consider necessary for the proper implementation of these Regulations or for the purpose of removing any difficulty which may arise in the administration thereof.

APPENDIX II

MODEL RULES FOR LABOUR WELFARE

(Refer : Clause 8.3.0.0 of GCC)

1. Definitions

- (a) "Workplace" means a place at which, on an average, twenty or more workers are employed on any day during which the Contract work is in progress.
- (b) "Large Workplace" means a place at which, on an average 500 or more workers are employed.

2. First Aid

- (i) At every workplace, there shall be provided and maintained in a readily accessible place First Aid appliances including an adequate supply of sterilized dressings and sterilized cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and in large work places, they shall be placed under the charge of a responsible person who shall be trained in First Aid treatment and who shall also be readily available during working hours. The First Aid boxes at the rate of not less than one box for 150 contract labour or part thereof shall be ordinarily employed. Adequate arrangement shall be made for immediate recoupment of items/equipment when necessary.
- (ii) At large work places, where hospital facilities are not available within easy distance of the Works, First Aid posts shall be established and be run by a trained compounder.

Where large work places are remotely situated far away from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees.

Where large work places are situated in cities, towns or in their suburbs and no beds are considered necessary owing to proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other workplaces, some conveyance shall be kept readily available to take injured person or persons suddenly taken seriously ill to the nearest hospital.

At large work places, there shall be provided and maintained an ambulance room of the prescribed sizes, containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed. For this purpose, the relevant provisions of the Factory Rules of the State Government area where the work is carried on may be taken as the prescribed standard.

3. Accommodation for labour : The Contractor shall during the progress of the Works, provide, erect and maintain necessary temporary living accommodation and ancillary facilities for labour at his own expense and to standard and scales as approved by the Engineer-in-charge. However, following specifications shall be followed :

- (a) (i) The minimum height of each hut at the eaves level shall be 2.10m (7ft) and the floor area to be provided will be at the rate of 2.7 sq.m (30sq.ft.) for each member of the worker's family staying with the labourer.
- (ii) The Contractor shall in addition construct suitable cooking places having a minimum area of 1.80m X 1.50m (6' x 5') adjacent to the hut for each family.
- (iii) The Contractor shall also construct temporary latrines and urinals for the use of the labourers, each on the scale of not less than four per each one hundred of the total strength. Separate latrines and urinals shall be provided for women.
- (iv) The Contractor shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These washing and bathing places shall be suitably screened.
- (b) (i) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local material as may be approved by the Engineer-in-Charge. In case of sun-dried bricks, the walls should be plastered with mud gobi on both sides. The floor may

be katcha, but plastered with mud gobri and shall be at least 15cm. (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the Contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

(ii) The Contractor shall provide each hut with proper ventilation.

(iii) All doors, windows and ventilators shall be provided with suitable leaves for security purposes.

(iv) There shall be kept an open space at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20ft) according to the availability of site with the approval of the Engineer-in-charge. Back to back construction will be allowed.

4. Drinking Water : In every workplace, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

Where drinking water is obtained from an intermittent public water supply, each workplace shall be provided with storage where drinking water should be stored.

Every water supply storage shall be at a distance of not less than 15 meters from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and water proof.

A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. Washing and Bathing Places : Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained conditions.

6. Scale of accommodation in latrines and urinals : There shall be provided within the precincts of every workplace, latrines and urinals in an accessible place and the accommodation separately for each of these, shall not be less than at the following scales :

No. of seats

(a) Where number of persons does not exceed 50	-	2
(b) Where number of persons exceeds 50 but does not exceed 100	-	3
(c) For additional persons (per 100 or part thereof)	-	3

In particular cases, the Engineer-in-Charge shall have the power to increase the requirement, where necessary.

7. Latrines and Urinals : Except in workplaces provided with water-flushed latrines connected with a water-borne sewage systems, all latrines shall be provided with receptacles on dry earth system which shall be cleaned at least four times daily and at least twice during working hours and kept in strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

If women are employed, separate latrine and urinals screened from those for men and marked in the vernacular in conspicuous letters "For Women Only" shall be provided on the scale laid down in Rule 6. Those for men shall be similarly marked "For Men Only". A poster showing the figure of a man and a woman shall also be exhibited at the entrance to latrines for each sex. There shall be adequate supply of water close to latrines and urinals.

8. Construction of latrines : Inside walls shall be constructed of masonry or other non-absorbent materials and shall be cement-washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines shall have at least thatched roof.

9. Disposal of excreta : Unless otherwise arranged for by the local municipal authority, arrangement for proper disposal of excreta by incineration at the workplace shall be made by means of a suitable incinerator approved by the local medical, health and medical or cantonment authorities. Alternatively, excreta may be disposed of by putting a layer of night soils at the bottom of pucca tank prepared for the purpose and covering it with a 15 c.m. Layer of waste or refuse and then

covering it with a layer of earth for a fortnight (when it will turn into manure).

The Contractor shall, at his own expense, carry out all instructions issued to him by the Engineer-in-charge to effect proper disposal of soil and other conservancy work in respect of Contractor's work people or employees at the site. The Contractor shall be responsible for payment of any charges which may be levied by municipal or cantonment authority for execution of such work on his behalf.

10. Provision of shelters during rest : At every workplace shall be provided, free of cost, four suitable sheds, two for meals and two others for rest, separately for use of men and women labour. Height of each shelter shall not be less than 3 meters from the floor level to lowest part of roof. Sheds shall be kept clean and the space provided shall be on the basis of at least 0.5 sq.m per head.

11. Creches : At a place at which 20 or more women workers are ordinarily employed, there shall be provided at least one hut for use of children under the age of 6 years belonging to such women. Huts shall not be constructed to a standard lower than that of thatched roof, mud floor and wall with wooden planks spread over mud floor and covered with matting.

Huts shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two dais in attendance. Sanitary utensils shall be provided to the satisfaction of local medical, health and municipal or cantonment authorities. Use of huts shall be restricted to children, their attendants and mothers of children.

Where the number of women workers is more than 25 but less than 50, the Contractor shall provide at least one hut and one Dai to look after the children of women workers.

Size of creche(s) shall vary according to the number of women workers employed. Creche(s) shall be properly maintained and necessary equipment like toys etc. provided.

12. Canteen : A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered necessary.
13. Planning, setting and erection of the above mentioned structures shall be approved by the Engineer-in-charge and the whole of such temporary accommodation shall at all times during the progress of the works be kept tidy and in a clean and sanitary condition as per requirements of the local bodies and to the satisfaction of the Engineer-in-charge and at the Contractor's expense. The Contractor shall conform generally to sanitary requirements of local medical, health and municipal or cantonment authorities and at all time adopt such precautions as may be necessary to prevent soil pollution of the site.

On completion of the Work, the whole of such temporary structures shall be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the whole of site left clean and tidy to the entire satisfaction of the Engineer-in-Charge and at the Contractor's expense.

14. Anti-malarial precautions : The Contractor shall, at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge, including filling up any burrow pits which may have been dug by him.
15. Enforcement : The Inspecting Officer mentioned in the Contractors' Labour Regulations or any other officer nominated in his behalf by the Engineer-in-charge shall report to the Engineer-in-charge all cases of failure on the part of the Contractor and or his sub-contractors to comply with the provisions of these Rules either wholly or in part and the Engineer-in-charge shall impose such fines and other penalties as are prescribed in the conditions.
16. Interpretations etc : On any question as to the application, interpretation of effect of these Rules, the decision of the Chief Labour Commissioner or Deputy Chief Labour Commissioner (Central) shall be final and binding.
17. Amendments : Government/Corporation may, from time to time, add to or amend these rules and issue such directions as it may consider necessary for the proper implementation of these Rules or for the purpose of removing any difficulty which may arise in the administration thereof.

APPENDIX III

SAFETY PRACTICE DURING CONSTRUCTION

(Refer Clause 10.0.2.0 of GCC)

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SAFETY PRACTICES DURING CONSTRUCTION

1.0 INTRODUCTION

Safety in Construction Management deserves utmost attention especially in the hydrocarbon industry, such as Exploration, Refineries, Pipelines and Marketing installations, Gas Processing units etc. Construction is widely recognized as one of the accident prone activities. Most of the accidents are caused by inadequate planning, failure during the construction process and/or because of design deficiencies. Besides property loss, accidents also result in injuries and fatalities to the personnel; same needs to be prevented.

The reasons for accidents during construction activities are related to unique nature of the industry, human behaviour, difficult work-site conditions, extended odd duty hours, lack of training & awareness and inadequate safety management. Unsafe working methods, equipment failure and improper housekeeping also tend to increase the accident rate in construction.

Ensuring good quality of materials, equipment and competent supervision along with compliance of standard engineering practices shall go a long way to in built safety in the system.

The objective of this standard is to provide practical guidance on technical and educational framework for safety and health in construction with a view to:

- (a) prevent accidents and harmful effects on the health of workers arising from employment in construction;
- (b) ensure appropriate safety during implementation of construction;
- (c) provide safety practice guidelines for appropriate measures of planning, control and enforcement.

2.0 SCOPE

This document specifies broad guidelines on safe practices to be adhered to during construction activities in oil industry. However, before commencing any job, specific hazards and its effects should be assessed and necessary corrective/preventive actions should be taken by all concerned. The document is intended only to supplement and not to replace or supersede the prevailing statutory requirements, which shall also be followed as applicable. For Personal Protective Equipment (PPE's), OISD-STD-155 (Part I&II) shall be referred to. The scope of this document does not include the design aspects and quality checks during construction.

3.0 DEFINITIONS

Definitions of various terminology are given below:

- Adequate, appropriate or suitable are used to describe qualitatively or quantitatively the means or method used to protect the worker.
- Brace: A structural member that holds one point in a fixed position with respect to another point; bracing is a system of structural members designed to prevent distortion of a structure.
- By hand: The work is done without the help of a mechanized tool.
- Competent Authority: A statutory agency having the power to issue regulations, orders or other instructions having the force of law.
- Competent person: A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill for the safe performance of the specific work. The competent authorities may define appropriate criteria for the designation of such persons and may determine the duties to be assigned to them.
- Execution agency:
Any physical or legal person, having contractual obligation with the owner, and who employs one or more workers on a construction site
- Owner:
Any physical or legal person for whom construction job is carried out.

It shall also include owner's designated representative/consultant/nominee/agent, authorized from time to time to act for and on its behalf, for supervising/ coordinating the activities of the execution agency.

- Hazard: Danger or potential danger.
- Guard-rail: An adequately secured rail erected along an exposed edge to prevent persons from falling.
- Hoist: A machine, which lifts materials or persons by means of a platform, which runs on guides.
- Lifting gear: Any gear or tackle by means of which a load can be attached to a lifting appliance but which does not form an integral part of the appliance or load.
- Lifting appliance: Any stationary or mobile appliance used for raising or lowering persons or loads.
- Means of access or egress: Passageways, corridors, stairs, platforms, ladders and any other means for entering or leaving the workplace or for escaping in case of danger.
- Scaffold: Any fixed, suspended or mobile temporary structure supporting workers and material or to gain access to any such structure and which is not a lifting appliance as defined above.
- Toe-board: A barrier placed along the edge of a scaffold platform, runway, etc., and secured there to guard against the slipping of persons or the falling of material.
- Worker: Any person engaged in construction activity.
- Workplace: All places where workers need to be or to go by reason of their work.

4.0 GENERAL DUTIES

4.1 GENERAL DUTIES OF EXECUTION AGENCIES

4.1.1 Execution agency should:

- i) provide means and organization to comply with the safety and health measures required at the workplace.
- ii) provide and maintain workplaces, plant, equipment, tools and machinery and organize construction work so that, there is no risk of accident or injury to health of workers. In particular, construction work should be planned, prepared and undertaken so that:
 - (a) dangers, liable to arise at the workplace, are prevented;
 - (b) excessively or unnecessarily strenuous work positions and movements are avoided;
 - (c) organization of work takes into account the safety and health of workers;
 - (d) materials and products used are suitable from a safety and health point of view;
 - (e) working methods are adopted to safeguard workers against the harmful effects of chemical, physical and biological agents.
- iii) establish committees with representatives of workers and management or make other arrangement for the participation of workers in ensuring safe working conditions.
- iv) arrange for periodic safety inspections by competent persons of all buildings, plant, equipment, tools, machinery, workplaces and review of systems of work, regulations, standards or codes of practice. The competent person should examine and ascertain the safety of construction machinery and equipment.
- v) provide such supervision to ensure that workers perform their work with due regard to safety and health of theirs as well as that of others.
- vi) Employ only those workers who are qualified, trained and suited by their age, physique, state of health and skill.
- vii) satisfy themselves that all workers are informed and instructed in the hazards connected with their work and environment and trained in the precautions necessary to avoid accidents and injury to health.

- viii) Ensure that buildings, plant, equipment, tools, machinery or workplaces in which a dangerous defect has been found should not be used until the defect has been rectified.
- ix) Organize for and remain always prepared to take immediate steps to stop the operation and evacuate workers as appropriate, where there is an imminent danger to the safety of workers.
- x) establish a checking system by which it can be ascertained that all the members of a shift, including operators of mobile equipment, have returned to the camp or base at the close of work on dispersed sites and where small groups of workers operate in isolation.
- xi) provide appropriate first aid, training and welfare facilities to workers as per various statutes like the Factories Act, 1948 etc. and, whenever collective measures are not feasible or are insufficient, provide and maintain personal protective equipment and clothing in line with the requirement as per OISD-STD-155 (Vol. I & II) on Personnel Protective Equipment. They should also provide access to workers to occupational health services.
- xii) Educate workers about their right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on working procedures adopted as may affect safety and health.
- xiii) Ensure that except in an emergency, workers, unless duly authorized, should not interfere with, remove, alter or displace any safety device or other appliance furnished for their protection or the protection of others, or interfere with any method or process adopted with a view to avoiding accidents and injury to health.
- xiv) Ensure that workers do not operate or interfere with plant and equipment that they have not been duly authorized to operate, maintain or use.
- xv) Ensure that workers do not sleep, rest or cook etc in dangerous places such as scaffolds, railway tracks, garages, confined spaces or in the vicinity of fires, dangerous or toxic substances, running machines or vehicles and heavy equipment etc.
- xvii) Obtain the necessary clearance/permits as required and specified by owner
- xviii) As per the Govt. circular as amended from time to time all contractors who employ more than 50 workers or where the contract value exceeds Rs. 50 crores, the following facilities are to be provided by contractor at site :
 - Arrangement for drinking water
 - Toilet facilities
 - A creche where 10 or more women workers are having children below the age of 6 years
 - Transport arrangement for attending to emergencies
- xix) should deploy a safety officer at site

4.2 GENERAL DUTIES OF OWNERS

4.2.1 Owners should:

- i) co-ordinate or nominate a competent person to co-ordinate all activities relating to safety and health on their construction projects;
- ii) inform all contractors on the project of special risks to health and safety;
- iii) Ensure that executing agency is aware of the owner's requirements and the executing agency's responsibilities with respect to safety practices before starting the job.

5.0 SAFETY PRACTICES AT WORK PLACES

5.1. GENERAL PROVISIONS

- 5.1.1 All openings and other areas likely to pose danger to workers should be clearly indicated.
- 5.1.2 Workers & Supervisors should use the safety helmet and other requisite Personal Protective Equipment according to job & site requirement. They should be trained to use personal protective equipment.

- 5.1.3 Never use solvents, alkalis and other oils to clean the skin.
- 5.1.4 Lift the load with back straight and knees bent as far as possible. Seek the help in case of heavy load.
- 5.1.5 Ensure the usage of correct and tested tools and tackles. Don't allow the make shift tools and tackles.
- 5.1.6 No loose clothing should be allowed while working near rotating equipment or working at heights.

5.2 MEANS OF ACCESS AND EGRESS

Adequate and safe means of access (at least two, differently located) to and egress from all workplaces should be provided. Same should be displayed and maintained.

5.3 HOUSEKEEPING

5.3.1 Ensure:

- i) proper storage of materials and equipment;
- ii) removal of scrap, inflammable material, waste and debris at appropriate intervals.

5.3.2 Removal of loose materials, which are not required for use, to be ensured. Accumulation of these at the site can obstruct means of access to and egress from workplaces and passageways.

5.3.3 Workplaces and passageways, that are slippery owing to oil, grease or other causes, should be cleaned up or strewn with sand, sawdust, ash etc.

5.4 PRECAUTIONS AGAINST THE FALL OF MATERIALS & PERSONS AND COLLAPSE OF STRUCTURES

5.4.1 Precautions should be taken such as the provision of fencing, look-out men or barriers to protect any person against injury by the fall of materials, or tools or equipment being raised or lowered.

5.4.2 Where necessary to prevent danger, guys, stays or supports should be used or other effective precautions should be taken to prevent the collapse of structures or parts of structures that are being erected, maintained, repaired, dismantled or demolished.

5.4.3 All openings through which workers are liable to fall should be kept effectively covered or fenced and displayed prominently.

5.4.4 As far as practicable, guardrails and toe-boards should be provided to protect workers from falling from elevated workplaces.

5.5 PREVENTION OF UNAUTHORISED ENTRY

5.5.1 Construction sites located in built-up areas and alongside vehicular and pedestrian traffic routes should be fenced to prevent the entry of unauthorized persons.

5.5.2 Visitors should not be allowed access to construction sites unless accompanied by or authorized by a competent person and provided with the appropriate protective equipment.

5.6 FIRE PREVENTION AND FIRE FIGHTING

5.6.1 All necessary measures should be taken by the executing agency and owner to:

- i) avoid the risk of fire;
- ii) control quickly and efficiently any outbreak of fire;
- iii) bring out a quick and safe evacuation of persons.
- iv) Inform unit/fire station control room, where construction work is carried out within existing operating area.

5.6.2 Combustible materials such as packing materials, sawdust, greasy/oily waste and scrap wood or plastics should not be allowed to accumulate in workplaces but should be kept in closed metal containers in a safe place.

- 5.6.3 Places where workers are employed should, if necessary to prevent the danger of fire, be provided with:
- i) suitable and sufficient fire-extinguishing equipment, which should be easily visible and accessible;
 - ii) an adequate water supply at sufficient pressure meeting the requirements of various OISD standards.
- 5.6.4 To guard against danger at places having combustible material, workers should be trained in the action to be taken in the event of fire, including the use of means of escape.
- 5.6.5 At sites having combustible material, suitable visual signs should be provided to indicate clearly the direction of escape in case of fire.
- 5.6.6 Means of escape should be kept clear at all times. Escape routes should be frequently inspected particularly in high structures and where access is restricted.
- 5.7 LIGHTING
- 5.7.1 Where natural lighting is not adequate, working light fittings or portable hand-lamps should be provided at workplace on the construction site where a worker will do a job.
- 5.7.2 Emergency lighting should be provided for personnel safety during night time to facilitate standby lighting source, if normal system fails.
- 5.7.2 Artificial lighting should not produce glare or disturbing shadows.
- 5.7.3 Lamps should be protected by guards against accidental breakage.
- 5.7.4 The cables of portable electrical lighting equipment should be of adequate size & characteristics for the power requirements and of adequate mechanical strength to withstand severe conditions in construction operations.
- 5.8 PLANT, MACHINERY, EQUIPMENT AND HAND TOOLS
- 5.8.1 General Provisions
- i) Plant, machinery and equipment including hand tools, both manual and power driven, should:
 - a) be of proper design and construction, taking into account health, Safety and ergonomic principles.
 - b) be maintained in good working order;
 - c) be used only for work for which they have been designed.
 - d) be operated only by workers who have been authorized and given appropriate training; be provided with protective guards, shields or other devices as required.
 - ii) Adequate instructions for safe use should be provided.
 - iii) Safe operating procedures should be established and used for all plant, machinery and equipment.
 - iv) Operators of plant, machinery and equipment should not be distracted while work is in progress.
 - v) Plant, machinery and equipment should be switched off when not in use and isolated before any adjustment, clearing or maintenance is done.
 - vi) Where trailing cables or hose pipes are used they should be kept as short as practicable and not allowed to create a hazard.
 - vii) All moving parts of machinery and equipment should be enclosed or adequately guarded.
 - viii) Every power-driven machine and equipment should be provided with adequate means, immediately accessible and readily identifiable to the operator, of stopping it quickly and preventing it from being started again inadvertently.
 - ix) Operators of plant, machinery, equipment and tools should be provided with PPEs, including where necessary, suitable ear protection.

5.8.2 Hand tools

- i) Hand tools should be repaired by competent persons.
- ii) Heads of hammers and other shock tools should be dressed or ground to a suitable radius on the edge as soon as they begin to mushroom or crack.
- iii) When not in use and while being carried or transported sharp tools should be kept in sheaths, shields, chests or other suitable containers.
- iv) Only insulated or non-conducting tools should be used on or near live electrical installations.
- v) Only non-sparking tools should be used near or in the presence of flammable or explosive dusts or vapours.

5.8.3 Pneumatic Tools

- i) Operating triggers on portable pneumatic tools should be:
 - a) so placed as to minimize the risk of accidental starting of the machine.
 - b) so arranged as to close the air inlet valve automatically when the pressure of the operator's hand is removed.
- ii) Hose and hose connections for compressed air supply to portable pneumatic tools should be:
 - a) designed and tested for the pressure and service for which they are intended;
 - b) fastened securely on the pipe outlet and equipped with the safety chain, as appropriate.
- iii) Pneumatic shock tools should be equipped with safety clips or retainers to prevent dies and tools from being accidentally expelled from the barrel.
- iv) Pneumatic tools should be disconnected from power and the pressure in hose lines released before any adjustment or repair is made.

5.8.4 Electrical Tools

- i) Low voltage portable electrical tools should generally be used.
- ii) All electrical tools should be earthed, unless they are "all insulated" or "double insulated" tools which do not require earthing.
- iii) All electrical tools should get inspected and maintained on a regular basis by a competent electrician and complete records kept.

5.8.5 Engines

- i) Engines should:
 - a) be installed so that they can be started safely and the maximum safe speed cannot be exceeded.
 - b) have controls for limiting speed.
 - c) have devices to stop them from a safe place in an emergency.
- ii) IC engines should not be run in confined spaces unless adequate exhaust ventilation is provided.
- iii) When IC engines are being fuelled:
 - a) the engine should be shut off.
 - b) care should be taken to avoid spilling fuel;
 - c) no person should smoke or have an naked light in the vicinity.
 - d) a fire extinguisher should be kept readily available.

- iv) Secondary fuel reservoir should be placed outside the engine room.

6.0 CONSTRUCTION ACTIVITIES

The various common activities in construction are as under:

- Excavation
- Scaffolding, Platforms & Ladders
- Structural Work, Laying of Reinforcement & Concreting
- Road Work (Laying of roads)
- Cutting /Welding
- Working in Confined Space
- Proof/Pressure Testing
- Working at Heights
- Handling & Lifting Equipments
- Vehicle Movement
- Electrical
- Offshore
- Demolition
- Radiography
- Sand/shot blasting/ spray painting
- Work above water

The safe practices to be followed during the implementation of above construction activities are given below:

6.1 EXCAVATION

6.1.1 All excavation work should be planned and the method of excavation and the type of support work required should be decided considering the following:

- i) the stability of the ground;
- ii) the excavation will not affect adjoining buildings, structures or roadways;
- iii) to prevent hazard, the gas, water, electrical and other public utilities should be shut off or disconnected, if necessary;
- iv) presence of underground pipes, cable conductors, etc.,
- v) the position of culvert/bridges, temporary roads and spoil heaps should be determined;

6.1.2 Before digging begins on site, all excavation work should be planned and the method of excavation and the type of support work required decided.

6.1.3 All excavation work should be supervised.

6.1.4 Sites of excavations should be thoroughly inspected:

- i) daily, prior to each shift and after interruption in work of more than one day;
- ii) after every blasting operation;

- iii) after an unexpected fall of ground;
- iv) after substantial damage to supports;
- v) after a heavy rain, frost or snow;
- vi) when boulder formations are encountered.

- 6.1.5 Safe angle of repose while excavating trenches exceeding 1.5m depth up to 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.
- 6.1.6 As far as possible, excavated earth should not be placed within one meter of the edge of the trench or depth of trench whichever is greater.
- 6.1.7 Don't allow vehicles to operate too close to excavated area. Maintain at least 2m distance from edge of excavation. No load, plant or equipment should be placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endanger any person unless precautions such as the provision of shoring or piling are taken to prevent the sides from collapsing.
- 6.1.8 Adequately anchored stop blocks and barriers should be provided to prevent vehicles being driven into the excavation. Heavy vehicles should not be allowed near the excavation unless the support work has been specially designed to permit it.
- 6.1.9 If an excavation is likely to affect the security of a structure on which persons are working, precautions should be taken to protect the structure from collapse.
- 6.1.10 Barricade at 1m height (with red & white band/self glowing caution board) should be provided for excavations beyond 1.5m depth. Provide two entries/exits for such excavation.
- 6.1.11 Necessary precautions should be taken for underground utility lines like cables, sewers etc. and necessary approvals/clearances from the concerned authorities shall be obtained before commencement of the excavation job.
- 6.1.12 Water shall be pumped/bailed out, if any accumulates in the trench. Necessary precautions should be taken to prevent entry of surface water in trenches.
- 6.1.13 During rains, the soil becomes loose. Take additional precaution against collapse of side wall.
- 6.1.14 In hazardous areas, air should be tested to ascertain its quality. No one should be allowed entry till it is suitable for breathing.
- 6.1.15 In case of mechanized excavation, precaution shall be taken to not to allow anybody to come within one meter of extreme reach of the mechanical shovel. The mechanized excavator shall be operated by a well-trained experienced operator. When not in operation, the machine shall be kept on firm leveled ground with mechanical shovel resting on ground. Wheel or belt shall be suitably jammed to prevent any accidental movement of the machine. Suitable precautions as per manufacturer guidelines should be taken for dozers, graders and other heavy machines.
- 6.1.16 In case of blasting, follow strictly IS:4081-1986 & Indian Explosive Act and rules for storage, handling and carrying of explosive materials and execution of blasting operation.

6.2 SCAFFOLDING, PLATFORMS & LADDERS

6.2.1 Metal as material of construction

- i) A scaffold should be provided and maintained or other equally safe and suitable provision should be made where work cannot safely be done on or from the ground or from part of a building or other permanent structure.
- ii) Scaffolds should be provided with safe means of access, such as stairs, ladders or ramps. Ladders should be secured against inadvertent movement.
- iii) Every scaffold should be constructed, erected and maintained so as to prevent collapse or accidental displacement when in use.
- iv) Every scaffold and part thereof should be constructed :
 - (a) in such a way so as not to cause hazards for workers during erection and dismantling;
 - (b) in such a way so as guard rails and other protective devices, platforms, ladders, stairs or

- ramps can be easily put together;
- (c) with sound material and of requisite size and strength for the purpose for which it is to be used and maintained in a proper condition.
 - v) Boards and planks used for scaffolds should be protected against splitting.
 - vi) Materials used in the construction of scaffolds should be stored under good conditions and apart from any material unsuitable for scaffolds.
 - vii) Couplers should not cause deformation in tubes. Couplers should be made of drop forged steel or equivalent material.
 - viii) Tubes should be free from cracks, splits and excessive corrosion and be straight to the eye, and tube ends cut cleanly square with the tube axis.
 - ix) Scaffolds should be designed for their maximum load as per relevant code.
 - x) Scaffolds should be adequately braced.
 - xi) Scaffolds which are not designed to be independent should be rigidly connected to the building at designated vertical and horizontal places.
 - xii) A scaffold should never extend above the highest anchorage to an extent which might endanger its stability and strength.
 - xiii) Loose bricks, drainpipes, chimney-pots or other unsuitable material should not be used for the construction or support of any part of a scaffold.
 - xiv) Scaffolds should be inspected and certified:
 - (a) before being taken into use;
 - (b) at periodic intervals thereafter as prescribed for different types of scaffolds;
 - (c) after any alteration, interruption in use, exposure to weather or seismic conditions or any other occurrence likely to have affected their strength or stability.
 - xv) Inspection should more particularly ascertain that:
 - (a) the scaffold is of suitable type and adequate for the job;
 - (b) materials used in its construction are sound and of sufficient strength;
 - (c) it is of sound construction and stable;
 - (d) that the required safeguards are in position.
 - xvi) A scaffold should not be erected, substantially altered or dismantled except by or under the supervision.
 - xvii) Every scaffold should be maintained in good and proper condition, and every part should be kept fixed or secured so that no part can be displaced in consequence of normal use.
 - xviii) If out-rigger scaffolding is to be used, it should be specifically designed and inspected before putting in use.

6.2.2 Lifting appliances on scaffolds

- i) When a lifting appliance is to be used on a scaffold:
 - (a) the parts of the scaffold should be carefully inspected to determine the additional strengthening and other safety measures required;
 - (b) any movement of the scaffold members should be prevented;
 - (c) if practicable, the uprights should be rigidly connected to a solid part of the building at the place where the lifting appliance is erected.

6.2.3 Prefabricated scaffolds

- i) In the case of prefabricated scaffold systems, the instructions provided by the manufacturers or suppliers should be strictly adhered to. Prefabricated scaffolds should have adequate arrangements for fixing bracing.
- ii) Frames of different types should not be intermingled in a single scaffold.
- iii) Scaffolding shall be erected on firm and level ground.
- iv) All members of metal scaffolding shall be checked periodically to screen out defective / rusted members. All joints should be properly lubricated for easy tightening.
- v) Entry to scaffolding should be restricted.
- vi) Erection, alteration and removal shall be done under supervision of experienced personnel.
- vii) Use of barrels, boxes, loose bricks etc., for supporting platform shall not be permitted.

- viii) Each supporting member of platform shall be securely fastened and braced
 - ix) Where planks are butt-joined, two parallel putlogs shall be used, not more than 100mm apart, to give support to each plank.
 - x) Platform plank shall not project beyond its end support to a distance exceeding 4 times the thickness of plank, unless it is effectively secured to prevent tipping. Cantilever planks should be avoided.
 - xi) The platform edges shall be provided with 150mm high toe board to eliminate hazards of tools or other objects falling from platform.
 - xii) Erect ladders in the "four up-one out position"
 - xiii) Lash ladder securely with the structure.
 - xiv) Using non-slip devices, such as, rubber shoes or pointed steel ferules at the ladder foot, rubber wheels at ladder top, fixing wooden battens, cleats etc.
 - xv) When ladder is used for climbing over a platform, the ladder must be of sufficient length, to extend at least one meter above the platform, when erected against the platform in "four up- one out position."
 - xvi) Portable ladders shall be used for heights not more than 4mt. Above 4mt flights, fixed ladders shall be provided with at least 600 mm landings at every 6mt or less.
 - xvii) The width of ladder shall not be less than 300mm and rungs shall be spaced not more than 300mm.
 - xviii) Every platform and means of access shall be kept free from obstruction.
 - xix) If grease, mud, gravel, mortar etc., fall on platform or scaffolds, these shall be removed immediately to avoid slippage.
 - xx) Workers shall not be allowed to work on scaffolds during storms or high wind. After heavy rain or storms, scaffolds shall be inspected before reuse.
 - xxi) Don't overload the scaffolding. Remove excess material and scrap immediately.
 - xxii) Dismantling of scaffolds shall be done in a pre-planned sequential manner.
- 6.2.4 Suspended scaffolds/boatwain's chair

- i) In addition to the requirements for scaffolds in general as regards soundness, stability and protection against the risk of falls, suspended scaffolds should meet the following specific requirements.
 - (a) platforms should be designed and built with dimensions that are compatible with the stability of the structure as a whole, especially the length;
 - (b) the number or anchorage should be compatible with the dimensions of the platform;
 - (c) the safety of workers should be safeguarded by an extra rope having a point of attachment independent of the anchorage arrangements of the scaffold;
 - (d) the anchorage and other elements of support of the scaffold should be designed and built in such a way as to ensure sufficient strength;
 - (e) the ropes, winches, pulleys or pulley blocks should be designed, assembled, used and maintained according to the requirements established for lifting gear adapted to the lifting of persons according to national laws and regulations;
 - (f) Before use, the whole structure should be checked by a competent person.

6.2.5 Bamboo Scaffolding

- i) In general, it should be avoided as far as possible. It should not be used in the unit/off-site areas and where hot work is to be done.
- ii) For construction and maintenance of residential and office buildings, situated outside explosive licensed area, bamboo scaffold, if used, should conform to provisions given in IS- 3696 (Part 1)-1987.

6.3 STRUCTURAL WORK, LAYING OF REINFORCEMENT & CONCRETING

6.3.1 General provisions

- i) The erection or dismantling of buildings, structures, civil engineering works, formwork, falsework and shoring should be carried out by trained workers only under the supervision of a competent person.
- ii) Precautions should be taken to guard against danger to workers arising from any temporary state of weakness or instability of a structure.
- iii) Formwork, falsework and shoring should be so designed, constructed and maintained that it will safely support all loads that may be imposed on it.
- iv) Formwork should be so designed and erected that working platforms, means of access, bracing and means of handling and stabilizing are easily fixed to the formwork structure.

6.3.2 Erection and dismantling of steel and prefabricated structures

- i) The safety of workers employed on the erection and dismantling of steel and prefabricated structures should be ensured by appropriate means, such as provision and use of:
 - ladders, gangways or fixed platforms;
 - platforms, buckets, boatswain's chairs or other appropriate means suspended from lifting appliances;
 - safety harnesses and lifelines, catch nets or catch platforms;
 - Power-operated mobile working platforms.
- ii) Steel and prefabricated structures should be so designed and made that they can be safely transported and erected.
- iii) In addition to the need for the stability of the part when erected, the design should explicitly take following into account:
 - the conditions and methods of attachment in the operations of transport, storing and temporary support during erection or dismantling as applicable;
 - Methods for the provision of safeguards such as railings and working platforms, and, when necessary, for mounting them easily on the structural steel or prefabricated parts.
- iv) The hooks and other devices built in or provided on the structural steel or prefabricated parts that are required for lifting and transporting them should be so shaped, dimensioned and positioned as:
 - to withstand with a sufficient margin the stresses to which they are subjected;
 - Not to set up stresses in the part that could cause failures, or stresses in the structure itself not provided for in the plans, and be designed to permit easy release from the lifting appliance. Lifting points for floor and staircase units should be located (recessed if necessary) so that they do not protrude above the surface;
 - To avoid imbalance or distortion of the lifted load.
- v) Store places should be so constructed that:
 - there is no risk of structural steel or prefabricated parts falling or overturning;
 - storage conditions generally ensure stability and avoid damage having regard to the method of storage and atmospheric conditions;
 - racks are set on firm ground and designed so that units cannot move accidentally.
- vi) While they are being stored, transported, raised or set down, structural steel or prefabricated parts should not be subjected to stresses prejudicial to their stability.
- vii) Every lifting appliance should:
 - be suitable for the operations and not be capable of accidental disconnection;
 - be approved or tested as per statutory requirement.
- viii) Lifting hooks should be of the self-closing type or of a safety type and should have the maximum permissible load marked on them.
- ix) Tongs, clamps and other appliances for lifting structural steel and prefabricated parts should:

- be of such shape and dimensions as to ensure a secure grip without damaging the part;
 - be marked with the maximum permissible load in the most unfavourable lifting conditions.
- x) Structural steel or prefabricated parts should be lifted by methods or appliances that prevent them from spinning accidentally.
 - xi) When necessary to prevent danger, before they are raised from the ground, structural steel or prefabricated parts should be provided with safety devices such as railings and working platforms to prevent falls of persons.
 - xii) While structural steel or prefabricated parts are being erected, the workers should be provided with appliances for guiding them as they are being lifted and set down, so as to avoid crushing of hands and to facilitate the operations. Use of such appliances should be ensured.
 - xiii) A raised structural steel or prefabricated part should be so secured and wall units so propped that their stability cannot be imperiled, even by external agencies such as wind and passing loads before its release from the lifting appliance.
 - xiv) At work places, instruction should be given to the workers on the methods, arrangements and means required for the storage, transport, lifting and erection of structural steel or prefabricated parts, and, before erection starts, a meeting of all those responsible should be held to discuss and confirm the requirements for safe erection.
 - xv) During transportation within the construction area, attachments such as slings and stirrups mounted on structural steel or prefabricated parts should be securely fastened to the parts.
 - xvi) Structural steel or prefabricated parts should be so transported that the conditions do not affect the stability of the parts or the means of transport result in jolting, vibration or stresses due to blows, or loads of material or persons.
 - xvii) When the method of erection does not permit the provision of other means of protection against fall of persons, the workplaces should be protected by guardrails, and if appropriate by toe-boards.
 - xviii) When adverse weather conditions such as snow, ice and wind or reduced visibility entail risks of accidents, the work should be carried on with particular care, or, if necessary, interrupted.
 - xix) Structures should not be worked on during violent storms or high winds, or when they are covered with ice or snow, or are slippery from other causes.
 - xx) If necessary, to prevent danger, structural steel parts should be equipped with attachments for suspended scaffolds, lifelines or safety harnesses and other means of protection.
 - xxi) The risks of falling, to which workers moving on high or sloping girders are exposed, should be limited by all means of adequate collective protection or, where this is impossible, by the use of a safety harness that is well secured to a strong support.
 - xxii) Structural steel parts that are to be erected at a great height should as far as practicable be assembled on the ground.
 - xxiii) When structural steel or prefabricated parts are being erected, a sufficiently extended area underneath the workplace should be barricaded or guarded
 - xxiv) Steel trusses that are being erected should be adequately shored, braced or guyed until they are permanently secured in position.
 - xxv) Load-bearing structural member should not be dangerously weakened by cutting, holing or other means.
 - xxvi) Structural members should not be forced into place by the hoisting machine while any worker is in such a position that he could be injured by the operation.
 - xxvii) Open-web steel joists that are hoisted singly should be directly placed in position and secured against dislodgment.

6.3.3 Reinforcement

- i) Ensure that workers use Personnel Protective equipment like safety helmet, safety shoes, gloves etc.
- ii) Don't place the hand below the rods for checking clear distance. Use measuring devices.
- iii) Don't wear loose clothes while checking the rods.

- iv) Don't stand unnecessarily on cantilever rods.
- v) To carry out welding/cutting of rods, safety procedures/precautions as mentioned in Item No. 6.5 to be followed.
- vi) For supplying of rods at heights, proper staging and/or bundling to be provided.
- vii) Ensure barricading and staging for supplying and fixing of rods at height.
- viii) For short distance carrying of materials on shoulders, suitable pads to be provided.
- ix) While transporting material by trucks/trailers, the rods shall not protrude in front of or by the sides of driver's cabin. In case such protrusion cannot be avoided behind the deck, then it should not extend 1/3rd of deck length or 1.5M whichever is less and tied with red flags/lights.

6.3.4 Concreting

- i) Ensure stability of shuttering work before allowing concreting.
- ii) Barricade the concreting area while pouring at height/depths.
- iii) Keep vibrator hoses, pumping concrete accessories in healthy conditions and mechanically locked.
- iv) Pipelines in concrete pumping system shall not be attached to temporary structures such as scaffolds and formwork support as the forces and movements may affect their integrity.
- v) Check safety cages & guards around moving motors/parts etc. provided in concreting mixers.
- vi) Use Personal Protective Equipment like gloves, safety shoes etc. while dealing with concrete and wear respirators for dealing with cement.
- vii) Earthing of electrical mixers, vibrators, etc. should be done and verified.
- viii) Cleaning of rotating drums of concrete mixers shall be done from outside. Lockout devices shall be provided where workers need to enter.
- ix) Where concrete mixers are driven by internal combustion engine, exhaust points shall be located away from the worker's workstation so as to eliminate their exposure to obnoxious fumes.
- x) Don't allow unauthorized person to stand under the concreting area.
- xi) Ensure adequate lighting arrangements for carrying out concrete work during night.
- xii) Don't allow the same workers to pour concrete round the clock. Insist on shift pattern.
- xiii) During pouring, shuttering and its supports should be continuously watched for defects.

6.4 ROAD WORK

- 6.4.1 Site shall be barricaded and provided with warning signs, including night warning lamps at appropriate locations for traffic diversion.
- 6.4.2 Filled and empty bitumen drums shall be stacked separately at designated places.
- 6.4.3 Mixing aggregate with bitumen shall preferably be done with the help of bitumen batch mixing plant, unless operationally non-feasible.
- 6.4.4 Road rollers, Bitumen sprayers, Pavement finishers shall be driven by experienced drivers with valid driving license.
- 6.4.5 Workers handling hot bitumen sprayers or spreading bitumen aggregate mix or mixing bitumen with aggregate, shall be provided with PVC hand gloves and rubber shoes with legging up to knee joints.
- 6.4.6 At the end of day's work, surplus hot bitumen in tar boiler shall be properly covered by a metal sheet, to prevent anything falling in it.
- 6.4.7 If bitumen accidentally falls on ground, it shall be immediately covered by sprinkling sand, to prevent anybody stepping on it. Then it shall be removed with the help of spade.
- 6.4.8 For cement concrete roads, besides site barricading and installation of warning signs for traffic diversion, safe practices mentioned in the chapter on "Concreting", shall also be applicable.

6.5 CUTTING/WELDING

- 6.5.1 Common hazards involved in welding/cutting are sparks, molten metal, flying particles, harmful light rays, electric shocks etc. Following precautions should be taken: -
 - i) A dry chemical type fire extinguisher shall be made available in the work area.
 - ii) Adequate ventilation shall be ensured by opening manholes and fixing a shield or forced circulation of air etc, while doing a job in confined space.
 - iii) Ensure that only approved and well-maintained apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.

- iv) All covers and panels shall be kept in place, when operating an electric Arc welding machine.
- v) The work piece should be connected directly to Power supply, and not indirectly through pipelines/structures/equipments etc.
- vi) The welding receptacles shall be rated for 63 A suitable for 415V, 3-Phase system with a scraping earth. Receptacles shall have necessary mechanical interlocks and earthing facilities.
- vii) All cables, including welding and ground cables, shall be checked for any worn out or cracked insulation before starting the job. Ground cable should be separate without any loose joints.
- viii) Cable coiling shall be maintained at minimum level, if not avoidable.
- ix) An energized electrode shall not be left unattended.
- x) The power source shall be turned off at the end of job.
- xi) All gas cylinders shall be properly secured in upright position.
- xii) Acetylene cylinder shall be turned and kept in such a way that the valve outlet points away from oxygen cylinder.
- xiii) Acetylene cylinder key for opening valve shall be kept on valve stem, while cylinder is in use, so that the acetylene cylinder could be quickly turned off in case of emergency. Use flash back arrestors to prevent back-fire in acetylene/oxygen cylinder.
- xiv) When not in use, valves of all cylinders shall be kept closed.
- xv) All types of cylinders, whether full or empty, shall be stored at cool, dry place under shed.
- xvi) Forced opening of any cylinder valve should not be attempted. xvii) Lighted gas torch shall never be left unattended.
- xvii) Store acetylene and oxygen cylinders separately.
- xviii) Store full and empty cylinders separately.
- xix) Avoid cylinders coming into contact with heat.
- xx) Cylinders that are heavy or difficult to carry by hand may be rolled on their bottom edge but never dragged.
- xxi) If cylinders have to be moved, be sure that the cylinder valves are shut off.
- xxii) Before changing torches, shut off the gas at the pressure reducing regulators and not by crimping the hose.
- xxiii) Do not use matches to light torches, use a friction lighter.
- xxiv) Move out any leaking cylinder immediately.
- xxv) Use trolleys for oxygen & acetylene cylinder and chain them.
- xxvi) Always use Red hose for acetylene and other fuel gases and Black for oxygen, and ensure that both are in equal length.
- xxvii) Ensure that hoses are free from burns, cuts and cracks and properly clamped.
- xxviii) Avoid dragging hoses over sharp edges and objects
- xxix) Do not wrap hoses around cylinders when in use or stored.
- xxx) Protect hoses from flying sparks, hot slag, and other hot objects.
- xxxi) Lubricants shall not be used on Ox-fuel gas equipment.
- xxxii) During cutting/welding, use proper type goggles/face shields.

6.6 WORKING IN CONFINED SPACES

6.6.1 Following safety practices for working in confined space like towers, columns, tanks and other vessels should be followed in addition to the safety guidelines for specific jobs like scaffolding, cutting/welding etc.

- i) Shut down, isolate, depressurize and purge the vessel as per laid down procedures.
- ii) Entry inside the vessel and to carry out any job should be done after issuance of valid permit

only in line with the requirement of OISD-STD-105.

- iii) Ensure proper and accessible means of exit before entry inside a confined space.
- iv) The number of persons allowed inside the vessel should be limited to avoid overcrowding.
- v) When the work is going on in the confined space, there should always be one man standby at the nearby man way.
- vi) Before entering inside the vessels underground or located at lower elevation, probability of dense vapours accumulating nearby should also be considered in addition to inside the vessel.
- vii) Ensure requisite O₂ level before entry in the confined space and monitor level periodically or other wise use respiratory devices.
- viii) Check for no Hydrocarbon or toxic substances before entry and monitor level periodically or use requisite Personal Protective Equipment.
- ix) Ensure adequate ventilation or use respiratory devices.
- x) Depending upon need, necessary respirator system, gas masks and suit shall be worn by everyone entering confined space. In case of sewer, OWS or in the confined area where there is a possibility of toxic or inert gas, gas masks shall be used by everyone while entering.
- xi) Barricade the confined spaces during hoisting, radiography, blasting, pressure testing etc.
- xii) Use 24V flameproof lamp fittings only for illumination.
- xiii) Use tools with air motors or electric tools with maximum voltage of 24V.
- xiv) House keeping shall be well maintained.
- xv) Safety helmet, safety shoes and safety belt shall be worn by everyone entering the confined space.
- xvi) Don't wear loose clothing while working in a confined space.
- xvii) In case of the vessels which are likely to contain pyrophoric substances (like Iron Sulphide), special care need to be taken before opening the vessel. Attempt should be made to remove the pyrophoric substances. Otherwise, these should be always kept wet by suitable means.
- xviii) The cutting torches should also be kept outside the vessel immediately after the cutting.
- xix) The gas cylinders used for cutting/welding shall be kept outside.
- xx) All cables, hoses, welding equipment etc., shall be removed from confined space at end of each work day, even if the work is to be resumed in the same space the next day.
- xxi) To the extent possible sludge shall be cleared and removed from outside before entering.
- xxii) No naked light or flame or hot work such as welding, cutting and soldering should be permitted inside a confined space or area unless it has been made completely free of the flammable atmosphere, tested and found safe by a competent person. Only non-sparking tools and flameproof hand lamps protected with guard and safety torches should be used inside such confined space or area for initial inspection, cleaning or other work required to be done for making the area safe.
- xxiii) Communication should be always maintained between the worker and the attendant.

6.7 PROOF/PRESSURE TESTING

- 6.7.1 Review test procedure before allowing testing with water or air or any other fluid.

- 6.7.2 Provide relief valves of adequate size while testing with air or other gases.
- 6.7.3 Ensure compliance of necessary precautions, step wise loading, tightening of fasteners, grouting etc. before and during testing.
- 6.7.4 Inform all concerned in advance of the testing.
- 6.7.5 Keep the vents open before opening any valve for filling/draining of liquid used for hydrotesting. The filling/draining should not exceed the designed rate for pressure testing.
- 6.7.6 Provide separate gauges of suitable range for pressurizing pump and the equipment to be tested.
- 6.7.7 Provide gauges at designated locations for monitoring of pressures.
- 6.7.8 Check the calibration of all pressurizing equipment and accessories and maintain records.
- 6.7.9 Take readings at pre-defined intervals.

6.8 WORKING AT HEIGHTS

6.8.1 General Provision

- i) While working at a height of more than 3 meters, ISI approved safety belt shall be used.
- ii) While working at a height of more than 3 meters, permit should be issued by competent person before commencement of the job.
- iii) Worker should be well trained on usage of safety belt including its proper usage at the time of ascending/descending.
- iv) All tools should be carried in tool kits to avoid their falling.
- v) If the job is on fragile/sloping roof, roof walk ladders shall be used.
- vi) Provide lifeline wherever required.
- vii) Additional safety measures like providing Fall Arrestor type Safety belt, safety net should be provided depending upon site conditions, job requirements.
- viii) Keep working area neat and clean. Remove scrap material immediately.
- ix) Don't throw or drop material/equipment from height.
- x) Avoid jumping from one member to another. Use proper passageway.
- xi) Keep both hands free while climbing. Don't try to bypass the steps of the ladder.
- xii) Try to maintain calm at height. Avoid over exertion.
- xiii) Avoid movements on beam.
- xiv) Elevated workplaces including roofs should be provided with safe means of access and egress such as stairs, ramps or ladders.

6.8.2 Roof Work

- i) All roof-work operations should be pre-planned and properly supervised.
- ii) Roof work should only be undertaken by workers who are physically and psychologically fit and have the necessary knowledge and experience for such work.
- iii) Work on roofs shouldn't be carried on in weather conditions that threaten the safety of workers.
- iv) Crawling boards, walkways and roof ladders should be securely fastened to a firm structure.
- v) Roofing brackets should fit the slope of the roof and be securely supported.

- vi) Where it is necessary for a person to kneel or crouch near the edge of the roof, necessary precautions should be taken.
- vii) On a large roof where work have to be carried out at or near the edge, a simple barrier consisting of crossed scaffold tubes supporting a tubing guardrail may be provided.
- viii) All covers for openings in roofs should be of substantial construction and be secured in position.
- ix) Roofs with a pitch of more than 10 should be treated as sloping.
- x) When work is being carried out on sloping roofs, sufficient and suitable crawling boards or roof ladders should be provided and firmly secured in position.
- xi) During extensive work on the roof, strong barriers or guardrails and toe-boards should be provided to stop a person from falling off the roof.
- xii) Where workers are required to work on or near roofs or other places covered with fragile material, through which they are liable to fall, they should be provided with suitable roof ladders or crawling boards strong enough and when spanning across the supports for the roof covering to support those workers.
- xiii) A minimum of two boards should be provided so that it is not necessary for a person to stand on a fragile roof to move a board or a ladder, or for any other reason.

6.8.3 Work on tall chimneys

- i) For the erection and repair of tall chimneys, scaffolding should be provided. A safety net should be maintained at a suitable distance below the scaffold.
- ii) The scaffold floor should always be at least 65 cm below the top of the chimney.
- iii) Under the working floor of the scaffolding the next lower floor should be left in position as a catch platform.
- iv) The distance between the inside edge of the scaffold and the wall of the chimney should not exceed 20 cm at any point.
- v) Catch platforms should be erected over:
 - (a) the entrance to the chimney;
 - (b) Passageways and working places where workers could be endangered by falling objects.
- vi) For climbing tall chimneys, access should be provided by:
 - (a) stairs or ladders;
 - (b) a column of iron rungs securely embedded in the chimney wall;
 - (c) Other appropriate means.
- vii) When workers use the outside rungs to climb the chimney, a securely fastened steel core rope looped at the free end and hanging down at least 3 m should be provided at the top to help the workers to climb on to the chimney.
- viii) While work is being done on independent chimneys the area surrounding the chimney should be enclosed by fencing at a safe distance.
- ix) Workers employed on the construction, alteration, maintenance or repair of tall chimneys should not:
 - a) work on the outside without a safety harness attached by a lifeline to a rung, ring or other secure anchorage;
 - b) put tools between the safety harness and the body or in pockets not intended for the purpose;
 - c) haul heavy materials or equipment up and down by hand to or from the workplace on the chimney;
 - d) fasten pulleys or scaffolding to reinforcing rings without first verifying their stability;
 - e) work alone;
 - f) climb a chimney that is not provided with securely anchored ladders or rungs;
 - g) Work on chimneys in use unless the necessary precautions to avoid danger from smoke and gases have been taken.
- x) Work on independent chimneys should not be carried on in high winds, icy conditions, fog or during electrical storms.

6.9 HANDLING AND LIFTING EQUIPMENT:

6.9.1 General Provisions

Following are the general guidelines to be followed with regard to all types of handling and lifting equipment in addition to the guidelines for specific type of equipments dealt later on.

- i) There should be a well-planned safety programme to ensure that all the lifting appliances and lifting gear are selected, installed, examined, tested, maintained, operated and dismantled with a view to preventing the occurrence of any accident;
- ii) All lifting appliances shall be examined by competent persons at frequencies as specified in "The Factories act".
- iii) Check thoroughly quality, size and condition of all lifting tools like chain pulley blocks, slings, U-clamps, D-shackles etc. before putting them in use.
- iv) Safe lifting capacity of all lifting & handling equipment, tools and shackles should be got verified and certificates obtained from competent authorities before its use. The safe working load shall be marked on them.
- v) Check periodically the oil, brakes, gears, horns and tyre pressure of all moving equipments like cranes, forklifts, trailers etc as per manufacturer's recommendations.
- vi) Check the weights to be lifted and accordingly decide about the crane capacity, boom length and angle of erection.
- vii) Allow lifting slings as short as possible and check packing at the friction points.
- viii) While lifting/placing of the load, no unauthorized person shall remain within the radius of the boom and underneath the load.
- ix) While loading, unloading and stacking of pipes, proper wedges shall be placed to prevent rolling down of the pipes.
- x) Control longer jobs being lifted up from both ends.
- xi) Only trained operators and riggers should carry out the job. While the crane is moving or lifting the load, the trained rigger should be there for keeping a vigil against hitting any other object.
- xii) During high wind conditions and nights, lifting of heavy equipments should be avoided. If unavoidable to do erection in night, operator and rigger should be fully trained for night signaling. Also proper illumination should be there.
- xiii) Allow crane to move on hard, firm and leveled ground.
- xiv) When crane is in idle condition for long periods or unattended, crane boom should either be lowered or locked as per manufacturer's guidelines.
- xv) Hook and load being lifted shall remain in full visibility of crane operators, while lifting, to the extent possible.
- xvi) Don't allow booms or other parts of crane to come within 3 meters reach of overhead electrical cables.
- xvii) No structural alterations or repairs should be made to any part of a lifting appliance, which may affect the safety of the appliance without the permission and supervision of the competent person.

6.9.2 Hoists

- i) Hoist shafts should be enclosed with rigid panels or other adequate fencing at:
 - (a) ground level on all sides;
 - (b) all other levels at all points at which access is provided;
 - (c) all points at which persons are liable to be struck by any moving part.
- ii) The enclosure of hoist shafts, except at approaches should extend where practicable at least 2m above the floor, platform or other place to which access is provided except where a lesser height is sufficient to prevent any person falling down the hoistway and there is no risk of any person coming into contact with any moving part of the hoist, but in no case should the enclosure

be less than 1mt in height.

- iii) The guides of hoist platforms should offer sufficient resistance to bending and, in the case of jamming by a safety catch, to buckling.
- iv) Where necessary to prevent danger, adequate covering should be provided above the top of hoist shafts to prevent material falling down them.
- v) Outdoor hoist towers should be erected on firm foundations, and securely braced, guyed and anchored.
- vi) A ladderway should extend from the bottom to the top of outdoor hoist towers, if no other ladderway exists within easy reach.
- vii) Hoisting engines should be of ample capacity to control the heaviest load that they will have to move.
- viii) Hoists should be provided with devices that stop the hoisting engine as soon as the platform reaches its highest stopping place.
- ix) Winches should be so constructed that the brake is applied when the control handle is not held in the operating position.
- x) It should not be possible to set in motion from the platform a hoist, which is not designed for the conveyance of persons.
- xi) Winches should not be fitted with pawl and ratchet gears on which the pawl must be disengaged before the platform is lowered.
- xii) Hoist platforms should be capable of supporting the maximum load that they will have to carry with a safety factor.
- xiii) Hoist platforms should be equipped with safety gear that will hold the platform with the maximum load if the hoisting rope breaks.
- xiv) If workers have to enter the cage or go on the platform at landings there should be a locking arrangement preventing the cage or platform from moving while any worker is in or on it.
- xv) On sides not used for loading and unloading, hoist platforms should be provided with toe-boards and enclosures of wire mesh or other suitable material to prevent the fall of parts of loads.
- xvi) Where necessary to prevent danger from falling objects, hoist platforms should be provided with adequate covering.
- xvii) Counterweights consisting of an assemblage of several parts should be made of specially constructed parts rigidly connected together.
- xviii) Counterweights should run in guides.
- xix) Platforms should be provided at all landings used by workers.
- xx) Following notices should be posted up conspicuously and in very legible characters:
 - (a) on all hoists:
 - on the platform: the carrying capacity in kilograms or other appropriate standard unit of weight;
 - on the hoisting engine: the lifting capacity in kilograms or other appropriate standard unit of weight;
 - (b) on hoists authorized or certified for the conveyance of persons:
 - on the platform or cage: the maximum number of persons to be carried at one time;
 - (c) on hoists for goods only:
 - on every approach to the hoist and on the platform: prohibition of use by persons.
- xxi) Hoists intended for the carriage of persons should be provided with a cage so constructed as to prevent any person from falling out or being trapped between the cage and any fixed part of the structure when the cage gate is shut, or from being struck by the counterbalance weight or by articles or materials falling down the hoistway.
- xxii) On each side in which access is provided, the cage should have a gate fitted with devices which ensure that the gate cannot be opened except when the cage is at a landing and that the gate must be closed before the cage can move away from the landing.
- xxiii) Every gate in the enclosure of the hoist shaft which gives access from a landing place to the cage should be fitted with devices to ensure that the gate cannot be opened except when the cage is at that landing place, and that the cage cannot be moved away from that landing place until the gate is closed.

6.9.3 Derricks

Stiff-leg derricks

- i) Derricks should be erected on a firm base capable of taking the combined weight of the crane structure and maximum rated load.
- ii) Devices should be used to prevent masts from lifting out of their seating.

- iii) Electrically operated derricks should be effectively earthed from the sole plate or framework.
- iv) Counterweights should be so arranged that they do not subject the backstays, sleepers or pivots to excessive strain.
- v) When derricks are mounted on wheels:
 - a) a rigid member should be used to maintain the correct distance between the wheels;
 - b) they should be equipped with struts to prevent them from dropping if a wheel breaks or the derrick is derailed.
- vi) The length of a derrick jib should not be altered without consulting the manufacturer.
- vii) The jib of a scotch derrick crane should not be erected within the backstays of the crane.

Guy derricks

- i) The restraint of the guy ropes should be ensured by fitting stirrups or anchor plates in concrete foundations.
- ii) The mast of guy derricks should be supported by six top guys spaced approximately equally.
- iii) The spread of the guys of a guy derrick crane from the mast should not be more than 450 from the horizontal.
- iv) Guy ropes of derricks should be equipped with a stretching screw or turnbuckle or other device to regulate the tension.
- v) Gudgeon pins, sheave pins and fool bearings should be lubricated frequently.
- vi) When a derrick is not in use, the boom should be anchored to prevent it from swinging.

6.9.4 Gin poles

- i) Gin poles should:
 - (a) be straight;
 - (b) consist of steel or other suitable metal;
 - (c) be adequately guyed and anchored;
 - (d) be vertical or raked slightly towards the load;
 - (e) be of adequate strength for the loads that they will be required to lift/move.
- ii) Gin poles should not be spliced and if a gin pole is composed of different elements, they should be assembled in conformity with their intrinsic material strength.
- iii) Gin poles should be fastened at their feet to prevent displacement in operation.
- iv) Gin poles, which are moved from place to place and re-erected, should not be taken into use again before the pole, lifting ropes, guys, blocks and other parts have been inspected, and the whole appliance has been tested under load.
- v) When platforms or skips are hoisted by gin poles, precautions should be taken to prevent them from spinning and to provide for proper landing.

6.9.5 Tower cranes

- i) Where tower cranes have cabs at high level, persons, capable and trained to work at heights, should only be employed as crane operators.
- ii) The characteristics of the various machines available should be considered against the operating requirements and the surroundings in which the crane will operate before a particular type of crane is selected.
- iii) Care should be taken in the assessment of wind loads both during operations and out of service. Account should also be taken of the effects of high structures on wind forces in the vicinity of the crane.
- iv) The ground on which the tower crane stands should have the requisite bearing capacity. Account should be taken of seasonal variations in ground conditions.

- v) Bases for tower cranes and tracks for rail-mounted tower cranes should be firm and level. Tower cranes should only operate on gradients within limits specified by the manufacturer. Tower cranes should only be erected at a safe distance from excavations and ditches.
- vi) Tower cranes should be sited where there is clear space available for erection, operation and dismantling. As far as possible, cranes should be sited so that loads do not have to be handled over occupied premises, over public thoroughfares, other construction works and railways or near power cables.
- vii) Where two or more tower cranes are sited in positions where their jibs could touch any part of the other crane, there should be direct means of communication between them and a distinct warning system operated from the cab so that one driver may alert the other of impending danger.
- viii) The manufacturers' instructions on the methods and sequence of erection and dismantling should be followed. The crane should be tested before being taken into use.
- ix) The climbing operation of climbing tower cranes should be carried out in accordance with manufacturers' instructions. The free-standing height of the tower crane should not extend beyond what is safe and permissible in the manufacturers' instructions.
- x) When the tower crane is left unattended, loads should be removed from the hook, the hook raised, the power switched off and the boom brought to the horizontal. For longer periods or at times when adverse weather conditions are expected, out of service procedures should be followed. The main jib should be slewed to the side of the tower away from the wind, put into free slew and the crane immobilized.
- xi) A wind speed measuring device should be provided at an elevated position on the tower crane with the indicator fitted in the drivers' cab.
- xii) Devices should be provided to prevent loads being moved to a point where the corresponding safe working load of the crane would be exceeded. Name boards or other items liable to catch the wind should not be mounted on a tower crane other than in accordance with the manufacturers' instructions.
- xiii) Tower cranes should not be used for magnet, or demolition ball service, piling operations or other duties, which could impose excessive loading on the crane structure.

6.9.6 Lifting ropes

- i) Only ropes with a known safe working capacity should be used as lifting ropes.
- ii) Lifting ropes should be installed, maintained and inspected in accordance with manufacturers' instructions.
- iii) Repaired steel ropes should not be used on hoists.
- iv) Where multiple independent ropes are used, for the purpose of stability, to lift a work platform, each rope should be capable of carrying the load independently.

6.10 VEHICLE MOVEMENT

6.10.1 Park vehicles only at designated places. Don't block roads to create hindrance for other vehicles.

6.10.2 Don't overload the vehicle.

6.10.3 Obey speed limits and traffic rules.

6.10.4 Always expect the unexpected and be a defensive driver.

6.10.5 Drive carefully during adverse weather and road conditions.

6.10.6 Read the road ahead and ride to the left.

6.10.7 Be extra cautious at nights. Keep wind screens clean and lights in working condition.

6.10.8 All vehicles used for carrying workers and construction materials must undergo predictive/preventive maintenance and daily checks

- 6.10.9 Driver with proper valid driving license shall only be allowed to drive the vehicle
- 6.10.10 Routes shall be leveled, marked and planned in such a way so as to avoid potential hazards such as overhead power lines and sloping ground etc.
- 6.10.11 While reversing the vehicles, help of another worker should be ensured at all times
- 6.10.12 An unattended vehicle should have the engine switched off
- 6.10.13 Wherever possible one-way system shall be followed
- 6.10.14 Barriers/fixed stops should be provided for excavation/openings to prevent fall of vehicle
- 6.10.15 Load should be properly secured
- 6.10.16 The body of the tipper lorry should always be lowered before driving the vehicle off.
- 6.10.17 Signs/signals/caution boards etc. should be provided on routes .

6.11 ELECTRICAL

6.11.1 General Provisions

- i) Only persons having valid licenses should be allowed to work on electrical facilities.
- ii) No person should be allowed to work on live circuit. The same, if unavoidable, special care and authorization need to be taken.
- iii) Treat all circuits as "LIVE" unless ensured otherwise.
- iv) Electrical "Tag Out" procedure "MUST" be followed for carrying out maintenance jobs.
- v) Display voltage ratings prominently with "Danger" signs.
- vi) Put caution/notice signs before starting the repair works.
- vii) All electrical equipment operating above 250V shall have separate and distinct connections to earth grid.
- viii) Proper grounding to be ensured for all switch boards and equipment including Portable ones prior to taking into service.
- ix) Make sure that electrical switch boards, portable tools, equipment (like grinding machine etc.) don't get wet during their usage. If it happens, stop the main supply, make the tools dry and then only use them. Check proper earthing. All temporary switch boards/ KIOSKS put up at work site should be suitably protected from rain and the level of same should be high enough to avoid contact with water due to water logging.
- x) Don't work wet on electrical system.
- xi) Don't overload the electrical system.
- xii) Use only proper rated HRC fuses.
- xiii) Industrial type extension boards and Plug sockets are only to be used.
- xiv) ELCB for all temporary connections must be provided. Use insulated 3-pin plug tops.
- xv) All power supply cables should be laid properly and neatly so that they don't cause hindrance to persons working and no physical damage also takes place to the cables during various construction activities.
- xvi) All Power cables to be properly terminated using glands and lugs of proper size and adequately crimped.
- xvii) Use spark-proof/flame proof type electrical fittings in Fire Hazard zones as per area classification under OISD-STD-113.

- xviii) Check installations of steel plates/pipes to protect underground cables at crossings.
- xix) Don't lay unarmored cable directly on ground, wall, roof or trees. 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. In case temporary cables are to be laid on wooden poles/steel poles, the minimum cable heights should be 4.5 M.
- xx) Maintain safe overhead distance of HT cables as per Indian Electricity Rules and relevant acts.
- xxi) Don't connect any earthing wire to the pipelines/structures.
- xxii) Don't make any unsafe temporary connections, naked joints/wiring etc.
- xxiii) Ensure that temporary cables are free from cuts, damaged insulation, kinks or improper insulated joints.
- xxiv) Check at periodic intervals that pins of sockets and joints are not loose.
- xxv) Protect electrical wires/equipments from water and naked flames.
- xxvi) Illuminate suitably all the work areas.
- xxvii) All switchboards should be of MS structure only and incoming source should be marked.
- xxviii) Hand lamps should not be of more than 24V rating.
- xxix) Fire extinguishers (DCP/CO2/Sand buckets) should be kept near temporary switch boards being used for construction purposes. Don't use water for fighting electrical fires.
- xxx) Insulating mats shall be provided in the front and back end of switch boards.
- xxxi) All parts of electrical installations should be so constructed, installed and maintained as to prevent danger of electric shock, fire and external explosion Periodic checking/certification of electrical safety appliances such as gloves, insulating mats, hoods etc. to be done/witnessed along with maintaining a register at site signed by competent authority.
- xxxii) A notice displaying following, should be kept exhibited at suitable places:
 - a) prohibiting unauthorized persons from entering electrical equipment rooms or from handling or interfering with electrical apparatus;
 - b) containing directions as to procedures in case of fire, rescue of persons in contact with live conductors and the restoration of persons suffering from electric shock;
 - c) specifying the person to be notified in case of electrical accident or dangerous occurrence, and indicating how to communicate with him.
- xxxiii) No other cables/pipes to be laid in trench used for electrical cables.
- xxxiv) Utmost care should be taken while excavating Earth from cable trench to avoid damage or any accident.
- xxxv) Sub-station floor cut-outs meant for switch board installations to be covered wherever installation is incomplete.

NOTE: A Residual Current Operated Circuit Breaker (RCCB) or Earth Leakage Circuit Breaker (ELCB), when installed, protects a human being to the widest extent. RCCB or ELCB should be provided as per Indian Electricity Rules.

6.11.2 Inspection and maintenance

- i) All electrical equipment should be inspected before taking into use to ensure suitability for its proposed use.
- ii) At the beginning of every shift, the person using the electrical equipment should make a careful external examination of the equipment and conductors, especially the flexible cables.
- iii) Apart from some exceptional cases, work on or near live parts of electrical equipment should be forbidden.
- iv) Before any work is begun on conductors or equipment that do not have to remain live:
 - a) the current should be switched off by a responsible authorized person;

- b) precautions should be taken to prevent the current from being switched on again;
 - c) the conductors or the equipment should be tested to ascertain that they are dead;
 - d) the conductors and equipment should be earthed and short-circuited;
 - e) neighbouring live parts should be adequately protected against accidental contact.
- v) After work has been done on conductors and equipment, the current should only be switched on again on the orders of a competent person after the earthing and short-circuiting have been removed and the workplace reported safe.
- vi) Electricians should be provided with approved and tested tools, and personal protective equipment such as rubber gloves, mats etc.
- vii) All conductors and equipment should be considered to be live unless there is a proof of the contrary.
- viii) When work has to be done in dangerous proximity to live parts the current should be cut off. If for operational reasons this is not possible, the live parts should be fenced off or enclosed by qualified staff from the sub-station concerned.

6.11.3. Testing

- i) Electrical installations should be inspected and tested and the results recorded.
- ii) Periodic testing of the efficiency of the earth leakage protective devices should be carried out.
- iii) Particular attention should be paid to the earthing of apparatus, the continuity of protective conductors, polarity and insulation resistance, protection against mechanical damage and condition of connections at points of entry.

6.12 OFFSHORE

6.12.1 General

The isolated nature of offshore installations are hazardous. They call for greater need for safety and survival at offshore. Safety at offshore is safety of installations and safety of personnel. Safety problems and accidents at offshore have high risks due to limited space, helicopter operation, sea transport etc. Following are the general safety guidelines to be followed in addition to the safety guidelines stipulated for specific jobs dealt later on:

- i) Workers should be well trained to do their job independently with high degree of self-control and self-discipline.
- ii) On arrival at offshore, everyone should be briefed about the safety rules to be followed at offshore, evacuation system etc. All personnel should wear overall (dangri), helmet and shoes for personnel protection.
- iii) In case of emergency, workers should follow instruction of Field Production Superintendent (F.P.S.) In certain cases instructions may be given to abandon the offshore installation and evacuate the persons to safe location.
- iv) To overcome above problems, offshore personnel must receive training for using life saving appliances and other personal survival techniques.
- v) Any person working at offshore should have one person as standby for any eventuality.

6.12.2 Drilling Rigs

- i) Location of jack up rigs should not be less than 5 Kms from shipping route. Orientation of the rig, wind direction etc are required for safe landing of helicopter. Information w.r.t. sea currents, wind speed, Hi-lo tide etc are required for mooring of supply vessels.
- ii) Sea bed condition at every location should be ensured for safety of rig.
- iii) Radio and other communication facilities should be such to maintain contact with base all times.
- iv) During toeing of rig, the rig deck should be clear of load, toeing lines should be in good condition and tensions in various toeing lines should be constantly monitored.

- v) Few steps during toeing are:
 - a) crane booms should be secured to their vesta,
 - b) all hatches and water tight doors should be closed,
 - c) number of personnel on board should be restricted,
 - d) evacuate in case of emergency and operation should be completed preferably in day light.

6.12.3 Drilling

- i) In view of CO₂ and H₂S gas cut from well, effective ventilation should be provided where drilling is in progress.
- ii) Safety alarm shall be checked in advance in view of failure of ventilation system.
- iii) Suitable sensors for H₂S and Methane should be function tested time to time and suitable colour code should be given.
- iv) Working areas of the crane should be illuminated during night to avoid accident.
- v) Clear space should be available for despatch and receipt of load and, in particular, basket transfer of passengers. Persons engaged in loading/unloading of materials should be protected from falling into the sea.
- vi) Signal light should be fitted at the top of the jib.
- vii) Crane hook should be fitted with safety latches.
- viii) Experienced person should be engaged in operation of specific equipment like winches, cranes etc.
- ix) At least three cable turns shall always be there on the winch drum.
- x) Adequate communication like walkie talkie, round robin phone should be available between the crane operator, supervisor and helper.
- xi) Crane operation should be completely stopped during helicopter landing/taking off.
- xii) Except for helicopter landing deck, all decks, platforms, bridges, ladders should have rigid and fixed guard rails at least one meter high and should have one intermediate rail midway between the handrail and 100 mm toe board.
- xiii) Wooden ladders shall not be used at offshore.
- xiv) Flow sensor in the flow line should be ensured for safe working and to avoid blow out.
- xv) Hydrogen sulphide gas In offshore is of great risk and at 10 ppm (0.001%) concentration in air, a person should not be exposed for more than 8 hours, If concentration is more, then breathing apparatus should be used. Corrosion of equipment is also caused by H₂S.
- xvi) Portable H₂S gas detector should be continuously used.

6.12.4 Production Platforms

- i) In case hydrocarbon is released due to overpressure, leak, overflow, gas blow etc., shut down process to stop flow of hydrocarbon. Prevent ignition of released hydrocarbon and in case of fire shut in the process complex and follow emergency contingency plan.
- ii) Sub surface safety valve (SSSV) below the well head should be actuated during uncontrolled well -flow and they should be regularly checked.
- iii) Surface safety valve or SDV should be checked for no gas leakage from bleed port / flange etc., in the well head area. It should not be in "mechanical override" or bypassed from panel.
- iv) High pressure gas lift lines - blow down system should be O.K.
- v) Auto actuation of SDVs in the inlet of pressure vessels should be O.K. and in "normal position"

from shutdown panels. A record of status of switches normal/bypassed in auto-con* panels (PSH, PSL, LSL, ILSL) should be maintained.

* Shut Down Panels

- vi) Welders rectifier set and electrical connections to it should be checked and approved by electrical-in- charge for proper electrical safety.
- vii) "SCADA" telemetry system if available should be operational for remote opening and closing of wells at unmanned platforms (through RPMC).
- viii) Local ESD/FSD (near the work site) should be provided for jobs of very critical nature, so that the persons working can access it immediately in emergency for safety. Safety officer should judge the requirement & inform FPS for the same.
- ix) Railings and Gratings etc. in and around work area should be O.K. and inspected to avoid slippage of man into sea.
- x) Emergency shutdown (ESD) system is initiated when an abnormal condition is detected. ESD should be checked once in six months.
- xi) Platform should be manned round the clock.
- xii) Welding and cutting work should be regulated by hot work permit.
- xiii) All detectors should be calibrated as per recommendation of the manufacturer.
- xiv) No system should be by-passed which affects the system of platform.
- xv) In H2S field platforms, due care shall be taken as per recommendations.
- xvi) Follow the instructions of F.P.S. during stay at platform

6.12.5 Fire Prevention And Control

- i) Provision be made for safe handling and storage of dirty rags, trash, and waste oil. Flammable liquids and chemicals applied on platform should be immediately cleaned.
- ii) Paint containers and hydrocarbon samples, gas cylinders for welding and cutting should be stored properly. Cylinders should be transported in hand-cart.
- iii) Smoking should be restricted and no smoking area should be identified.
- iv) Special attention should be given to crude oil pump seals, diesel and gas engines which are potential source of ignition in the event of failure.
- v) Fire and smoke detectors i.e. ultraviolet heat, thermal and smoke detector should be function tested once in three months.
- vi) Fire is controlled in offshore by water spraying, Halon, CO2 flooding, DCP and sprinkler system.
- vii) Foaming agent is applied for controlling fire in liquid hydrocarbon. The system is not effective in gas fire.
- viii) Light weight breathing system should be used.
- ix) The fire control plan at offshore should reveal control station, fire alarms and fire detectors, deluge valves and sprinkler, fire extinguishing appliances, fireman outfit and ventilation system.
- x) Fire fighting equipment should be maintained in ready to use condition.

6.12.6 Life Saving Appliances

- i) Life boats with a speed of 6 knots and carrying capacity up to 50 persons are used in offshore.
- ii) No. of life boats on one installation should have a capacity to accommodate twice the number of persons onboard installation.
- iii) Launching appliances and life boat equipment should be checked every week.

- iv) Boat landing areas should be adequately illuminated.
- v) Life raft has no power and they rely on drift.
- vi) Life jacket lifts the wearer after entering water.
- vii) Life buoys are used to rescue persons if any person accidentally falls in the sea.
- viii) All life saving appliances should be inspected by the MMD surveyor /sr. officials once a year.
- ix) Every life boat shall be inspected once a week.
- x) Every life boat and life raft should be serviced once a year by a competent authority,

6.12.7 Safety Precautions during Helicopter Transportation

- i) Passenger briefing regarding safety rules while travelling in helicopter should be carried out before boarding the helicopter.
- ii) Emergency procedure should be briefed to all the passenger In case helicopter is to ditch into the sea.
- iii) Heli-pad should have a non-skid surface. Nylon rope net should be stretched on the deck.
- iv) Proper drainage should be available on helideck.
- v) There should be no obstruction on the helideck itself and within 3 meters of its parameter. Closest super structure above the helideck should have red obstruction light.
- vi) While landing fire crew of two persons should be standby adjacent to helideck.
- vii) Heli-deck should be properly illuminated for night landing.
- viii) During switching off helicopter, persons should not be allowed to go out/ towards helicopter

6.13 DEMOLITION

6.13.1. General provisions

- i) When the demolition of any building or structure might present danger to workers or to the public:
 - (a) necessary precautions, methods and procedures should be adopted, including those for the disposal of waste or residues;
 - (b) the work should be planned and undertaken only under the supervision of a competent person.
- ii) Before demolition operations begin:
 - (a) structural details and builders' drawings should be obtained wherever possible;
 - (b) details of the previous use should be obtained to identify any possible contamination and hazards from chemicals, flammables, etc.;
 - (c) an initial survey should be carried out to identify any structural problems and risks associated with flammable substances and substances hazardous to health. The survey should note the type of ground on which the structure is erected, the condition of the roof trusses, the type of framing used in framed structures and the load-bearing walls;
 - (d) a method of demolition should be formulated after the survey and recorded in a method statement having taken all the various considerations into account and identifying the problems and their solutions;
- iii) All electric, gas, water and steam service lines should be shut off and, as necessary, capped or otherwise controlled at or outside the construction site before work commences.
- iv) If it is necessary to maintain any electric power, water or other services during demolition operations, they should be adequately protected against damage.
- v) As far as practicable, the danger zone round the building should be adequately fenced off and

sign posted. To protect the public a fence 2m high should be erected enclosing the demolition operations and the access gates should be secured outside working hours.

- vi) The fabric of buildings contaminated with substances hazardous to health should be decontaminated. Protective clothing and respiratory devices should be provided and worn.
- vii) Where plant has contained flammable materials, special precautions should be taken to avoid fire and explosion.
- viii) The plant to be demolished should be isolated from all other plant that may contain flammable materials. Any residual flammable material in the plant should be rendered safe by cleaning, purging or the application of an inert atmosphere as appropriate.
- ix) Care should be taken not to demolish any parts, which would destroy the stability of other parts.
- x) Demolition activities should not be continued under adverse climatic conditions such as high winds, which could cause the collapse of already weakened structures.
- xi) To prevent hazards parts of structures should be adequately shored, braced or otherwise supported.
- xii) Structures should not be left in a condition in which they could be brought down by wind pressure or vibration.
- xiii) Where a deliberate controlled collapse technique is to be used, expert engineering advice should be obtained, and:
 - (a) it should only be used where the whole structure is to come down because it relies on the removal of key structural members to effect a total collapse;
 - (b) it should only be used on sites that are fairly level and where there is enough surrounding space for all operatives and equipment to be withdrawn to a safe distance.
- xiv) When equipment such as power shovels and bulldozers are used for demolition, due consideration should be given to the nature of the building or structure, its dimensions, as well as to the power of the equipment being used.
- xv) If a swinging weight is used for demolition, a safety zone having a width of at least one-and-a-half times the height of the building or structure should be maintained around the points of impact.

6.13.2. Demolition of structural steelwork

- i) All precautions should be taken to prevent danger from any sudden twist, spring or collapse of steelwork, ironwork or reinforced concrete when it is cut or released.
- ii) Steel construction should be demolished tier by tier.
- iii) Structural steel parts should be lowered and not dropped from a height.

6.14 RADIOGRAPHY

6.14.1 All radiography jobs shall be carried out as per BARC Safety Regulations

6.14.2 During field radiography, nearby area around the radiation source should be cordoned off.

6.14.3 If the field radiography is to be done at the same location repeatedly, it is advisable to provide either a wire fencing around or a temporary brick enclosure.

6.14.4 Special permission/permit should be taken for radiography from area-in-charge.

6.14.5 As far as possible, field radiography should be done only during night time when there is little or no occupancy there.

6.14.6 Radiation warning signals should be pasted all along the cordoned off area.

6.14.7 Entry into the restricted area by unauthorized persons should be strictly prohibited during exposure.

6.14.8 The radiation level along with the cordon should be monitored by a suitable and well-calibrated radiation survey meter.

6.14.9 All personnel working with radiography sources should wear appropriate protective equipment and

film badges issued by BARC.

6.14.10 Protection facilities such as manipulator rod, remote handling tongs, lead pots, radiation hazard placards and means of cordon off shall be available at each site.

6.14.11 The radiography source shall never be touched or handled directly with hands.

6.14.12 The package containing radiography cameras and sources should never be carried by public transport like bus, train etc.

6.14.13 Radiography sources and cameras, when not in use, should be stored inside a source pit with lock and key arrangement as approved by BARC. The storage room should preferably be located in an isolated area of minimum occupancy and radiation level outside the storage room should not exceed 0.25 mR/hr as per BARC Regulations.

6.14.14 In case of an accident (due to loss or of damage to radiography source), action should be taken in line with BARC Safety Rules/Guidelines.

6.15 SAND/SHOT BLASTING/ SPRAY PAINTING

6.15.1 Sand blasting should be used only after approval from competent person.

6.15.2 Air Compressor used for sand/shot blasting/painting should have guard and positioned away from the work place.

6.15.3 Exhaust of the prime mover, if IC engine is used, should be directed away from the work place.

6.15.4 In case of motor driven compressor, the body of the motor as well as the compressor to be properly earthed.

6.15.5 The hoses used for compressed air should be of proper quality, and health of the same to be ensured through regular check/ test.

6.15.6 The operator of sand/shot blasting/painting should wear suitable PPE's including mask.

6.15.7 Adequate measures to be taken to suppress dust/spray particle.

6.15.8 Sand used for sand blasting should be suitably covered & protected from rain/moisture.

6.15.9 When these activities are done in confined places, adequate measure to be taken for proper ventilation.

6.16 WORK ABOVE WATER

6.16.1 General Provisions

i) Where work is done over or in close proximity to water & where possibility of drowning exists, provision should be made for:

- a) Preventing workers from falling into water;
- b) The rescue of workers in danger of drowning;
- c) Safe and sufficient transport.

ii) Provisions for the safe performance of work over or in close proximity to water should include, where appropriate, the provision and use of suitable and adequate:

- a) fencing, safety nets and safety harnesses;
- b) lifebuoys, life jackets and manned boats;
- c) protection against such hazards as reptiles and other animals.

iii) Gangways, pontoons, bridges, footbridges and other walkways or work places over water should:

- a) possess adequate strength and stability;
- b) be sufficiently wide to allow safe movement of workers;
- c) have level surfaces free from tripping hazards;

- d) be adequately lit when natural light is insufficient;
 - e) where practicable and necessary, to prevent danger, be provided with toe-boards, guard rails, hand ropes etc.
 - f) be secured to prevent dislodgment by rising water or high winds;
 - g) if necessary, be equipped with ladders which should be sound, of sufficient strength and length and be securely lashed to prevent slipping.
- iv) All deck openings including those for buckets should be fenced.

6.16.2 Rescue & Emergency procedures

- i) Persons who work over water should be provided with some form of buoyancy aid. Life jackets should provided sufficient freedom of movement, have sufficient buoyancy to bring persons to the surface and keep them afloat face upwards, be easily secured to the body, be readily visible by way of self luminous paint/strip.
- ii) Nobody should work alone on or above water.
- iii) Each worker should be trained in the procedure to be followed in the event of an emergency.

7.0 ADDITIONAL SAFETY PRECAUTION FOR UNITS WITH HYDROCARBONS

In addition to general safety precautions as outlined above for the activities in Clause 6.0, following additional safety precautions need to be taken for the sites within the operating area or nearby, where presence of Hydrocarbons cannot be ruled out.

- i) No job shall be carried out without a valid permit. Permit should be in line with OISD-STD-105 "Work Permit System".
- ii) Smoking should be prohibited in all places containing readily combustible or flammable materials and "No Smoking" notices be prominently displayed.
- iii) In confined spaces and other places where flammable gases, vapours or dusts can cause danger, following measures should be taken:
 - (a) only approved type electrical installations and equipment, including portable lamps, should be used;
 - (b) there should be no naked flames or source of ignition;
 - (c) oily rags, waste and clothes or other substances liable to spontaneous ignition should be removed without delay to a safe place;
 - (d) ventilation should be provided.
- iv) Regular inspections should be made of places where there are fire risks. These include the vicinity of heating appliances, electrical installations and conductors, stores of flammable and combustible materials, welding and cutting operations.
- v) Welding, flame cutting and other hot work should only be done after issuance of work permit in line with the requirement of OISD-STD-105 after appropriate precautions, as required, are taken to reduce the risk of fire. For carrying out other jobs also, OISD-STD-105 should be followed strictly.
- vi) Fire-extinguishing equipment should be well maintained and inspected at suitable intervals by a competent person. Access to fire-extinguishing equipment such as hydrants, portable extinguishers and connections for hoses should be kept clear at all times.
- vii) All supervisors and a sufficient number of workers should be trained in the use of fire-extinguishing equipment, so that adequate trained personnel are readily available during all working periods.
- viii) Audio means to give warning in case of fire should be provided where this is necessary to prevent danger. Such warning should be clearly audible in all parts of the site where persons are liable to work. There should be an effective evacuation plan so that all persons are evacuated speedily without panic and accounted for and all plant and processes shut down.
- ix) Notices should be posted at conspicuous places indicating:

- (a) the nearest fire alarm;
- (b) the telephone number and address of the nearest emergency services.
- x) The work site shall be cleared of all combustible materials, as Sparks and molten metal coming from the welding job can easily ignite combustible materials near or below the welding site. If the combustible materials cannot be removed from the area, the same shall be properly shielded.
- xi) A dry chemical type fire extinguisher shall be made available in the work area. Also fire protection facilities like running hoses etc. as per permit should be complied with.
- xii) Wherever required, welding screens shall be put up to protect other equipment in adjoining areas against flying sparks. Material used should be metal/asbestos/water curtain.
- xiii) Welding or cutting of vessels/ equipments used in Hydrocarbon/ hazardous chemicals shall be done after proper gas freeing and verifying the same with the explosive-meter.
- xiv) The confined space/equipment shall be gas freed and cleaned.
- xv) Absence of any toxic gas and any flammable gas above explosion limit shall be ensured with the help of gas detection instrument and explosive meter respectively.
- xvi) Used and hot electrode stubs shall be discarded in a metal bucket. xvii) Use approved and certified flame arrestors for vehicles.
- xviii) Work permit to be obtained, if construction work is carried out within existing operating area.

8.0 FIRST AID

First aid facilities should be provided in line with various statutory regulations like factory act etc. However following care should be taken:

- i) First aid, including the provision of trained personnel should be ensured at work sites. Arrangement should be made for ensuring the medical attention of the injured workers. First aid box should be as per the Factory rules.
- ii) Suitable rescue equipment, like stretchers should be kept readily available at the construction site.
- iii) First-aid kits or boxes, as appropriate and as per statutory requirements, should be provided at workplaces and be protected against contamination by dust, moisture etc.
- iv) First-aid kit or boxes should not keep anything besides material for first aid in emergencies.
- v) First-aid kits and boxes should contain simple and clear instructions to be followed, be kept under the charge of a responsible person qualified to render the first aid and be regularly inspected and stocked.
- vi) Where the work involves risk of drowning, asphyxiation or electric shock, first-aid personnel should be proficient in the use of resuscitation and other life saving techniques and in rescue procedures.
- vii) Emergency telephone numbers of nearby Hospitals, Police, Fire Station and Administration should be prominently displayed.

9.0 DOCUMENTATION

The intention of keeping documentation of all types of accident(s) is to prevent recurrence of similar accident(s). All accidents should be reported as per OISD Guidelines (OISD-GDN-107) and Factories act, 1948.

All accidents (major, minor or near miss) should be investigated, analyzed and recommendations should be documented along with implementation status.

All related data should be well-documented and further analysis highlighting the major cause(s) of accidents be done. This will help in identifying thrust areas and training needs for prevention of accidents.

10.0 SAFETY AWARENESS & TRAINING

Safety awareness to all section of personnel ranging from site-in-charge to workmen helps not only

preventing the risk but also build up the confidence. Time and expenditures also get saved as a result.

Safety awareness basically seeks to persuade/inform people on safety besides supplementing skill also. Awareness programmed may include followings:

- i) Poster: Posters with safety slogan in humorous, gruesome demonstrating manner may be used to discourage bad habits attributable to accidents by appealing to the workers' pride, self-love, affection curiosity or human aspects. These should be displayed in prominent location(s).
- ii) Safety Sign Boards: Different type of message of cautioning, attention, notice etc. should be displayed at the appropriate places for learning/ awareness of the workmen while working at site.
- iii) Films & Slides: Film(s) narrating the accident including the causes and possible remedial ways of preventing the recurrence of a similar accident should be displayed at regular intervals. Slides consisting main points of the film show may also be shown to workers.
- iv) Talks, lectures & conferences: The success of these events would depend much on audience's understandings of the speaker (s). The speakers are to be knowledgeable and good presenter. Speakers should know to hold the attention and to influence the audiences.
- v) Competitions: Organize competition(s) between the different deptts/categories of workers. The sense of reward/recognition also will improve safety awareness and result in enhancing safety levels.
- vi) Exhibitions: Exhibitions also make the workers acquainted with hazards and means of preventive measures.
- vii) Safety Publication: Safety publications including pocket books dealing with ways of investigation and prevention in the field of safety and so on, may be distributed to workers to promote the safety awareness.
- viii) Safety Drives: From time to time, an intensive safety drive by organizing a safety day or a safety week etc. should be launched.
- ix) Training: Training for covering the hazards for different trade should be imparted. Training should also include the specific hazards related to a job in addition to the general safety training as has been dealt in various chapters and should include all workers. Reference may be drawn from OISD-STD-154.

11.0 REFERENCES

- i) Factory Act, 1948
- ii) Indian Electricity Rules
- iii) Safety & Health in Construction by ILO
- iv) The Building & Other Construction Workers (Regulation, Employment and Conditions of Service) Act 1996

ANNEXURE TO APPENDIX III

LIST OF SAFETY CODES FOR CIVIL WORKS PUBLISHED BY BUREAU OF INDIAN STANDARDS

Sr.No	Code No.	Title
01.	IS : 818	Code of Practice for Safety and Health Requirements in Electric and Gas Welding and Cutting Operations - First Revision.
02.	IS : 875	Code of practice for Structural safety of buildings: Masonry walls
03.	IS : 933	Specification for Portable Chemical Fire Extinguisher, Foam Type - Second Revision.
04.	IS : 1179	Specification for Equipment for Eye and Face Protection during Welding - First Revision.
05.	IS : 1904	Code of practice for Structural safety of buildings: Shallow foundations
06.	IS : 1905	Code of practice for Structural safety of buildings: Masonry walls
07.	IS : 2171	Specification for Portable Fire Extinguishers, Dry Powder Type -Second Revision.
08.	IS : 2361	Specification for Building Grips - First Revision.
09.	IS : 2750	Specification for Steel Scaffoldings.
10.	IS : 2925	Specification for Industrial Safety Helmets - First Revision.
11.	IS : 3016	Code of Practice for Fires Precautions in Welding and Cutting Operations - First Revision.
12.	IS : 3521	Industrial safety belts and harnesses
13.	IS : 3696 - Part I	Safety Code for Scaffolds and Ladders : Part I - Scaffolds.
14.	IS : 3696 - Part II	Safety Code for Scaffolds and Ladders : Part II - Ladders.
15.	IS : 3764	Safety Code for Excavation Work.
16.	IS : 4014 -Part I & II	Code of practice for Steel tubular scaffolding
17.	IS : 4081	Safety Code for Blasting and Related Drilling Operations.
18.	IS : 4082	Recommendations on staking and storage of construction materials at site
19.	IS : 4130	Safety Code for Demolition of Buildings - First Revision.
20.	IS : 4138	Safety Code Working in Compressed Air-First Revision
21.	IS : 4756	Safety code for Tunneling works
22.	IS : 4912	Safety requirements for Floor and Wall Openings, Railings and toe Boards -First Revision.
23.	IS : 5121	Safety Code for Piling and other Deep Foundations.
24.	IS : 5916	Safety Code for Construction involving use of Hot Bituminous Materials.
25.	IS : 5983	Specification for Eye Protectors - First Revision.
26.	IS : 6922	Structures subject to underground blasts, criteria for safety and design of
27.	IS : 7155	Code of recommended practices for conveyor safety
28.	IS : 7205	Safety Code for Erection on Structural Steel Works.
29.	IS : 7069	Safety Code for Handling and Storage of Building Materials.
30.	IS : 7293	Safety Code for Working with Construction Machinery.
31.	IS : 7323	Guidelines for operation of Reservoirs
32.	IS : 7969	Safety code for handling and storage of building material

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| 33. | IS : 8758 | Recommendation for Fire Precautionary Measures in construction of Temporary Structures and Pandals. |
| 34. | IS : 8989 | Safety Code for Erection of Concrete Framed Structures. |
| 35. | IS : 9706 | Code of Practices for construction of Aerial ropeways for transportation of material |
| 36. | IS : 9759 | Guidelines for de-watering during construction |
| 37. | IS : 9944 | Recommendations on safe working load for natural and man-made fibrope slings |
| 38. | IS : 10291 | Safety code for dress divers in civil engineering works |
| 39. | IS : 10386 - Part I | Safety Code for Construction, Operation and Maintenance for River Valley Projects. |
| 40. | IS : 10386 - Part II | Safety Code for Construction, Operation and Maintenance of River Valley Projects. |
| 41. | IS : 11057 | Code of practice for Industrial safety nets |
| 42. | IS : 13415 | Code of Practice on safety for Protective barriers in and around building |
| 43. | IS : 13416 | Recommendations for preventive measures against hazards at working places |

Annexure 1

FORM OF CONTRACT

THIS CONTRACT made at ____ this _____ day of _____;

BETWEEN

INDIAN OIL CORPORATION LTD., a Government of Indian Undertaking registered in India under the Indian Companies Act 1956, having its registered office at G-9, Ali Yavar Jung Marg, Bandra (East), Bombay- 400 051 and the Headquarters of _____ Division at _____ (hereinafter referred to as the "OWNER" which expression shall include its successors and assigns) of the One Part;

AND

_____ carrying on business in sole proprietorship/carrying on business in partnership under the name and style of _____ a Company registered in India under the Indian Companies Act, 1913/1956/2013 having its registered office at _____

(hereinafter referred to/as collectively referred to as the "Contractor" which expression shall include his/their/its executors, administrators, representatives and permitted assigns/successors and permitted assign) of the other part:

WHEREAS

The OWNER desires to have executed the work of _____

_____ more specifically mentioned and described in the contract documents (hereinafter called the "work" which expression shall include all amendments therein and/or modifications thereof) and has accepted the tender of the CONTRACTOR for the said work.

NOW, THEREFORE. THIS CONTRACT WITNESSETH as follows:

ARTICLE - 1
CONTRACT DOCUMENTS

1.1 The following documents shall constitute the Contract documents, namely :

- (a) This Contract;
- (b) Tender Documents as defined in the General Instructions to Tenderers;
- (c) Letter of Acceptance of Tender along with Fax/Telegram of Intent.

1.2 A copy of each of the Tender Documents is annexed hereto and the said copies have been collectively marked Annexure 'A' while a copy of the Letter of Acceptance of Tender along with annexures thereto have been collectively marked as Annexure - 'B'.

ARTICLE - 2
WORK TO BE PERFORMED

2.1 The CONTRACTOR shall perform the said work upon the terms and conditions and within the time specified in the Contract Documents.

ARTICLE - 3
COMPENSATION

3.1 Subject to and upon the terms and conditions contained in the Contract documents, the OWNER shall pay CONTRACTOR compensation as specified in the Contract documents upon the satisfactory completion of the work and/or otherwise as may be specified in the Contract documents.

ARTICLE - 4
ARBITRATION & JURISDICTION

4.1 The Arbitration institute for administering the arbitration in terms of Clause 9 of General Conditions of Contract shall be _____.

- 4.2 Notwithstanding any other court or courts having jurisdiction to decide the question(s) forming the subject matter of the reference if the same had been the subject matter of a suit, any and all actions and proceedings arising out of or relative to the Contract (including any arbitration, if applicable in terms thereof) shall lie only in the court of competent civil jurisdiction in this behalf at _____ and only the said Court(s) shall have sole and exclusive jurisdiction to entertain and try any such action(s) and/or proceeding(s) to the exclusion of all other Courts.

ARTICLE - 5
ENTIRE CONTRACT

- 5.1 The Contract documents mentioned in Article - 1 hereof embody the entire Contract between the parties hereto, and the parties declare that in entering into this Contract they do not rely upon any previous representation, whether express or implied and whether written or oral, or any inducement, understanding or agreements of any kind not included within the Contract documents and all prior negotiations, representations, contracts and/or agreements and understandings relative to the work are hereby cancelled.

ARTICLE – 6
NOTICES

- 6.1 Subject to any provisions in the Contract documents to the contrary, any notice, order or communication sought to be served by the CONTRACTOR on the OWNER with reference to the Contract shall be deemed to have been sufficiently served upon the OWNER (notwithstanding any enabling provisions under any law to the contrary) only if delivered by hand or by Registered Acknowledgment Due Post to the Engineer-in-Charge as defined in the General Conditions of Contract.
- 6.2 Without prejudice to any other mode of service provided for in the Contract Documents or otherwise available to the OWNER, any notice, order or other communication sought to be served by the OWNER on the CONTRACTOR with reference to the Contract, shall be deemed to have been sufficiently served if delivered by hand or through Registered Post Acknowledgement Due to the principal office of the CONTRACTOR at or to the CONTRACTOR's representatives as referred to in the General Conditions of Contract forming part of the Contract Documents.

ARTICLE-7
WAIVER

- 7.1 No failure or delay by the OWNER in enforcing any right or remedy of the OWNER in terms of the Contract or any obligation or liability of the CONTRACTOR in terms thereof shall be deemed to be a waiver of such right, remedy, obligation or liability, as the case may be, by the OWNER and notwithstanding such failure or delay, the OWNER shall be entitled at any time to enforce such right, remedy, obligation or liability, as the case may be.
- 7.2 The CONTRACTOR hereby waives all rights contrary to the terms and conditions of the Contract.

ARTICLE-8
NON-ASSIGNABILITY

- 8.1 The Contract and benefits and obligations thereof shall be strictly personal to the CONTRACTOR and shall not on any account be assignable or transferable by the CONTRACTOR.

ARTICLE- 9
CONTRACT LANGUAGE

- 9.1 The language of the Contract shall be English and all communications, drawings, design, data, information, codes specifications and other document whatsoever supporting the bid or otherwise exchanged under the Contract shall be in English. In the event that any technical documentation is in any language other than English, the document should be translated and presented to the OWNER/Engineer-in-Charge in English and English document/translated document shall be regarded as the only authentic document.



IndianOil

GENERAL CONDITIONS OF CONTRACT

IN WITNESS WHEREOF the parties hereto have executed this Contract in duplicate the place,
day and year first above written.

SIGNED AND DELIVERED
for and on behalf of INDIAN OIL
CORPORATION LTD.
by.....

In the presence of :

1.

2.

SIGNED AND DELIVERED

for and on behalf of (CONTRACTOR)

by..... (this day of 2000)

Annexure 2

Format for Bank Guarantee in Lieu of EMD

1. In consideration of the Indian Oil Corporation Limited (hereinafter called 'The Corporation') having agreed to accept from _____ (name of the tenderer) (hereinafter called the said tenderer') Earnest money in the form of Bank Guarantee, under the terms _____ and conditions of tender No., _____ dated _____. In connection with _____ (mention the details of the tender) (hereinafter called "the said tender"), for the due observance by the said tenderer of the stipulation to keep the offer open for acceptance for a period of _____ days from the date of the opening of the tender and other stipulations of the tender. we, _____ (indicate the name of the bank) hereinafter referred to as "The Bank" at the request of _____ (mention the name of the tenderer) do hereby undertake to pay on demand to the Indian Oil Corporation Limited an amount not exceeding Rs. _____ in the event of the said tenderer having Incurred forfeiture of earnest money as aforesaid or for the breach of any of the terms or conditions or the stipulations of the said tender and/ or the contract, if awarded, including but not limited to non-performance of the contract caused due to revision in price/ pricing basis after close of the pricing part of the tender under an order of the Indian Oil Corporation limited.
2. We, _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Indian Oil Corporation limited stating that the amount claimed is due by way of forfeiture of earnest money or any loss or damage caused to or suffered or would be caused to or suffered by the Indian Oil Corporation Limited by reason of breach by the said tenderer any of the terms or conditions or stipulations perform the stipulations of the said tender. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs _____
3. We _____ (indicate the name of the bank) undertake to pay to the Indian Oil Corporation Limited any money so demanded notwithstanding any dispute or disputes raised by the tenderer in any suit or proceeding pending before any court or Tribunal or arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by the bank under this bond shall be a valid discharge of our liability for payment there under and the tenderer shall have no claim against us for making such payment.
4. We _____ (indicate the name of the bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the terms, conditions or stipulation of the said tender and that it shall continue to be enforceable till all the dues of the Indian Oil Corporation Limited under or by virtue of the said tender/ contract have been fully paid and its claims satisfied or discharged or till Indian Oil Corporation Limited certifies that the terms and conditions of the said tender have been fully and properly carried out by the said tender and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ we shall be discharged from all liability under this guarantee thereafter.
5. We _____ (indicate the name of the bank) further agree with the Indian Oil Corporation Limited that the Indian Oil Corporation Limited shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said tender or to extend time of performance by the said tenderer from time to time or to postpone for any time or from time to time any of the powers exercisable by the Indian Oil Corporation Limited against the said tenderer and to forbear or enforce any of the terms and conditions relating to the said tender and shall not be

relieved from our liability by reason of any such variation, or extension being granted to the said tenderer or for any forbearance, act or omission on the part of Indian Oil Corporation Limited or any indulgence by the Indian Oil Corporation Limited to the said tenderer or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the bank or the tenderer.
7. We, _____ (indicate the name of the bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Indian Oil Corporation Limited in writing.
8. Notwithstanding anything contained herein above,
- i) The liability of the Bank under this Bank Guarantee shall not exceed the amount of Rs. _____ (Rupees _____ only);
 - ii) This Bank Guarantee shall be valid up to _____ (Expiry Date) irrespective of whether or not the original BG returned to us.
 - iii) We are liable to pay the BG amount or any part thereof under this BG only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this BG has been extended.

Dated the _____ day of _____ 20____
For _____
(Indicate the name of Bank)

Place :
Date :

Annexure 3

**Format for Bank Guarantee in Lieu of Security Deposit
/ Initial Security Deposit**

1. In consideration of the Indian Oil Corporation Limited having its Registered Office at _____ (hereinafter called "The Corporation") having agreed to exempt _____ (hereinafter called "The said Contractor(s) / Supplier(s) / Seller(s)") from the demand under the terms and conditions of an Agreement dated _____ made between _____ and _____ for _____ (hereinafter called "The said Agreement"), of Security Deposit for the due fulfillment by the said Contractor(s) / Supplier(s) / Seller(s) of the terms and conditions contained in the said Agreement, on production of a Bank Guarantee for Rs. _____ (Rupees _____ only). We _____ (hereinafter referred to as "The Bank") at the request of _____ Contractor(s) / Supplier(s) / Seller(s) do hereby undertake to pay to the Corporation an amount not exceeding Rs. _____ against any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by reason of any breach by the said Contractor(s) / Supplier(s) / Seller(s), of any of the terms or conditions contained in the said Agreement.
2. We _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Corporation stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Corporation by reason of breach by the said Contractor(s) / Supplier(s) / Seller(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) / Supplier(s) / Seller(s)' failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and this guarantee shall be restricted to an amount not exceeding Rs. _____.
3. We _____ (indicate the name of the bank) undertake to pay to the Corporation any money demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) / Seller(s) in any suit or proceeding pending before any court or Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) / Supplier(s) / Seller(s) shall have no claim against us for making such payment.
4. We, _____ (Indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said agreement have been fully paid and its claims satisfied or discharge or till _____ office / department at _____ certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) / Supplier(s) / Seller(s) and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ we shall be discharged from all liability under this guarantee thereafter.
5. We, _____ (Indicate the name of Bank) further agree with the corporation that the corporation shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) / Supplier(s) / Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the corporation against the said Contractor(s) / Supplier(s) / Seller(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) / Supplier(s) / Seller(s) or forbearance, act or omission on the part of the corporation or any indulgence by the corporation to the said Contractor(s) / Supplier(s) / Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.

6. We _____ (indicate the name of the Bank) further agree that the Corporation shall be entitled to invoke the Bank Guarantee (BG) in part, provided that the amount of the invocation shall not exceed the aggregate value of the BG at any given time. Such partial invocation can be made multiple times, and the Bank shall pay the Corporation the amounts requested, subject to the total sum not exceeding the aggregate value of the BG. The remaining amount of the BG shall continue to be valid until the full amount of the BG has been invoked or the BG is otherwise discharged in accordance with the terms herein."
7. This guarantee Will not be discharged due to change in the constitution of the Bank or the Contractor(s) / Supplier(s) / Seller(s).
8. We, _____ (Indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the corporation in writing.
9. Notwithstanding anything contained herein above,
- i) The liability of the Bank under this Bank Guarantee shall not exceed the amount of Rs. _____ (Rupees _____ only);
 - ii) This Bank Guarantee shall be valid up to _____ (Expiry Date) irrespective of whether or not the original BG returned to us.
 - iii) We are liable to pay the BG amount or any part thereof under this BG only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this BG has been extended.

Dated the _____ day of _____ 20____
For _____
(Indicate the name of Bank)

Place :
Date :

Annexure 4

Format for Bank Guarantee For Mobilisation Advance

1. In consideration of the Indian Oil Corporation Ltd (Marketing Division) having its Registered Office at Mumbai (hereinafter called "The Corporation" which expression shall include its successors and assigns) has awarded M/s _____ (hereinafter called "The Contractor" which expression shall include its successors and assigns) the work of designing, manufacturing, fabricating, supply, installation, testing & commissioning of (name of the work) _____ in terms of a contract as constituted by Purchase Order No. _____ dated _____ issued by the Corporation to the Contractor (hereinafter called "The Contract" which expression include any formal contract entered in to between the Corporation & the Contractor in super session of the said Purchase Order and/or all the amendments and/or modifications of the Purchase Order).

AND WHEREAS the Corporation has agreed to advance to the Contractor, at his request, a sum of _____ (Rupees _____ only) (hereinafter called "The said Advance" to the Contractor) as financial assistance under the Contract on the condition, inter-alia, that the said Advance together with interest thereon at the rate of before ____% (percent) per annum on the amount of the said Advance for the time being outstanding shall without prejudice to any other mode of recovery available to the Corporation be recoverable by the Corporation by deduction from the gross accepted amount of any Running Account Bills and the Final Bill of the Contractor commencing from the first Running Account Bill of the Contractor, and meanwhile, the said Advance shall be secured by a Bank Guarantee the details of which are mentioned below.

We _____ (details of the Bank issuing BG) (hereinafter referred to as "The Bank" at the request of the Contractor do hereby undertake to pay to the Corporation an amount not exceeding Rs. _____ (Rupees _____) against any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the agreement.

2. We (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Corporation stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Corporation by reason of breach by the said Contractor(s) / Supplier(s) / Seller(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) / Supplier(s) ' failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and this guarantee shall be restricted to an amount not exceeding Rs. _____
3. We (indicate the name of the bank) undertake to pay to the Corporation any money demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) / Seller(s) in any suit or proceeding pending before any court or Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) / Supplier(s) / Seller(s) shall have no claim against us for making such payment.
4. We, _____ (Indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said agreement have been fully paid and its claims satisfied or discharge or till _____ office / department at _____ certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) / Supplier(s) / Seller(s) and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____ we shall be discharged from all liability under this guarantee thereafter.
5. We, _____ (Indicate the name of Bank) further agree with the corporation that the corporation shall have the fullest liberty without our consent and without affecting In any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) / Supplier(s) / Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the corporation against the said Contractor(s)

/ Supplier(s) / - Seller(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) / Supplier(s) / Seller(s) or forbearance, act or omission on the part of the corporation or any Indulgence by the corporation to the said Contractor(s) / Supplier(s) / Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have affect of so relieving us.

6. We _____ (indicate the name of the Bank) further agree that the Corporation shall be entitled to invoke the Bank Guarantee (BG) in part, provided that the amount of the invocation shall not exceed the aggregate value of the BG at any given time. Such partial invocation can be made multiple times, and the Bank shall pay the Corporation the amounts requested, subject to the total sum not exceeding the aggregate value of the BG. The remaining amount of the BG shall continue to be valid until the full amount of the BG has been invoked or the BG is otherwise discharged in accordance with the terms herein."
7. This guarantee Will not be discharged due to change in the constitution of the Bank or the Contractor(s) / Supplier(s) / Seller(s).
8. We, _____ (Indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the corporation in writing.
9. Notwithstanding anything contained herein above,
 - iv) The liability of the Bank under this Bank Guarantee shall not exceed the amount of Rs. _____ (Rupees ____ only);
 - v) This Bank Guarantee shall be valid up to ____ (Expiry Date) irrespective of whether or not the original BG returned to us.
 - vi) We are liable to pay the BG amount or any part thereof under this BG only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this BG has been extended.

Dated the _____ day of _____ 20____
For _____
(Indicate the name of Bank)

Place :
Date :

Annexure 5 (A)

Format for Insurance Surety Bond in Lieu of EMD

1. In consideration of the Indian Oil Corporation Limited (hereinafter called 'The Corporation' which expression shall include its successors and assigns) having agreed to accept from,____ (name of the tenderer) (hereinafter called 'the said tenderer' which expression shall include its successors and assigns) Earnest money in the form of Insurance Surety Bond (ISB), under the terms and conditions of tender No.,__dated __

In connection with __ (mention the details of the tender) (hereinafter called "the said tender"), for the due observance by the said tenderer of the stipulation to keep the offer open for acceptance for a period of __ days from the date of the opening of the tender and other stipulations of the tender we, (indicate the name of the Insurer).

Registered under the Insurance Act, 1938, hereinafter referred to as 'Surety' which expression shall include its successors and assigns, at the request of __ (mention the name of the tenderer) do hereby undertake to pay on demand to the Corporation an amount not exceeding Rs __ in the event of the said tenderer having incurred forfeiture of earnest money as aforesaid or for the breach of any of the terms or conditions or the stipulations of the said tender and/ or the contract if awarded including but not limited to non- performance of the contract caused due to revision in price/ pricing basis after close of the pricing part of the tender under an order of the Corporation.

2. We, _ (indicate the name of the Insurer) do hereby unconditionally and irrevocably undertake to pay the amounts due and payable under this ISB without any demur, protest, or proof or satisfaction or condition and without reference to the tenderer, merely on demand from the Corporation stating that the amount claimed is due by way of forfeiture of earnest money or any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by reason of breach by the said tenderer any of the terms or conditions or stipulations perform the stipulations of the said tender. Any such demand made on the Surety shall be conclusive as regards the amount due and payable by the Surety under this ISB. However, our liability under this ISB shall be restricted to an amount not exceeding Rs. _
3. We _ (indicate the name of the Insurer) undertake to pay to the Corporation any money so demanded notwithstanding any dispute or disputes raised by the tenderer in any suit or proceeding pending before any court or Tribunal or arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by the Surety under this bond shall be a valid discharge of our liability for payment there under and the tenderer shall have no claim against us for making such payment.
4. We _____ (indicate the name of the Insurer) further agree that the Corporation shall be entitled to invoke the ISB in part, provided that the amount of the invocation shall not exceed the aggregate value of the ISB at any given time. Such partial invocation can be made multiple times, and the Surety shall pay the Corporation the amounts requested, subject to the total sum not exceeding the aggregate value of the ISB. The remaining amount of the ISB shall continue to be valid until the full amount of the ISB has been invoked or the ISB is otherwise discharged in accordance with the terms herein."
5. It shall not be necessary for the Corporation to proceed against the Tenderer before proceeding against the Surety and the ISB herein contained shall be enforceable against the Surety as Principal debtor notwithstanding the existence of any other undertaking or security for any indebtedness of the Tenderer to the Corporation and notwithstanding that any such security shall at the time when claim is made against the Surety or proceedings taken against the Surety hereunder, be outstanding or unrealized.

6. The amount stated by the Corporation in any demand, claim or notice made with reference to the ISB, as between the Surety and the Corporation for the purpose of these Presents, be conclusive of the amount payable by the Surety to the Corporation hereunder.
7. We _ (indicate the name of the Insurer) further agree that the ISB herein contained shall remain in full force and effect during the period that would be taken for the performance of the terms, conditions or stipulation of the said tender and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said tender/ contract have been fully paid and its claims satisfied or discharged or till the Corporation certifies that the terms and conditions of the said tender have been fully and properly carried out by the said tender and accordingly discharge this ISB. Unless a demand or claim under this ISB is made on us in writing a letter / e-Mail / on or before _____ (expiry date) we shall be discharged from all liability under this ISB thereafter.
8. We _____(indicate the name of the Insurer) further agree with the Corporation that the Corporation shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said tender or to extend time of performance by the said tenderer from time to time or to postpone for any time or from time to time any of the powers exercisable by the Corporation against the said tenderer and to forbear or enforce any of the terms and conditions relating to the said tender and shall not be relieved from our liability by reason of any such variation, or extension being granted to the said tenderer or for any forbearance, act or omission on the part of the Corporation or any indulgence by the Corporation to the said tenderer or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.
9. This ISB shall not be determined or discharged or affected by the liquidation or winding up or dissolution or change of constitution or insolvency of the Tenderer or any change in the legal constitution of the Surety or Corporation.
10. We, _____ (indicate the name of the Insurer) lastly undertake not to revoke / amend this ISB during its currency except with the previous consent of the Corporation in writing.
11. Notwithstanding anything contained herein above,
 - i. The liability of the Surety under this ISB shall not exceed the amount of Rs. (Rupeesonly)
 - ii. This ISB is valid up to ----- irrespective of whether or not the original ISB returned to us.
 - iii. We are liable to pay the ISB amount or any part thereof under this ISB only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this ISB has been extended

Dated the __ day of __20
For _____
(Indicate the name of Insurer)

Place :

Date :

Annexure 5 (B)

**Format for Insurance Surety Bond in Lieu of Security Deposit /
Initial Security Deposit**

1. In consideration of the Indian Oil Corporation Limited having its Registered Office at _ (hereinafter called "The Corporation" which expression shall include its successors and assigns) having agreed to exempt ____ (hereinafter called "The said Contractor(s) / Supplier(s) / Seller(s)" which expression shall include its successors and assigns) from the demand under the terms and conditions of an Agreement dated _____ made between _ and _ for _ (hereinafter called "The said Agreement"), of Security Deposit for the due fulfillment by the said Contractor(s) / Supplier(s) / Seller(s) of the terms and conditions contained in the said Agreement, on production of a Insurance Surety Bond (ISB) for (Rupees_ only), we _____ (indicate the name of the Insurer), registered under the Insurance Act, 1938 (hereinafter referred to as "Surety" which expression shall include its successors and assigns) at the request of ____ Contractor(s) / Supplier(s) / Seller(s) do hereby undertake to pay to the Corporation an amount not exceeding Rs. _ against any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by reason of any breach by the said Contractor(s) / Supplier(s) / Seller(s), of any of the terms or conditions contained in the said Agreement.
2. We _____ (indicate the name of the Insurer) do hereby unconditionally and irrevocably undertake to pay the amounts due and payable under this ISB without any demur, protest or proof or satisfaction or condition and without reference to the Contractor(s) / Supplier(s) / Seller(s), merely on a demand from the Corporation stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Corporation by reason of breach by the said Contractor(s) / Supplier(s) / Seller(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) / Supplier(s) / Seller(s) failure to perform the said Agreement. Any such demand made on the Surety shall be conclusive as regards the amount due and this ISB shall be restricted to an amount not exceeding Rs. _____
3. The obligation of the Surety to the Corporation shall be as Principal to Principal and shall be wholly independent of the agreement and it shall not be necessary for the Corporation to proceed against the Contractor (s) / Supplier(s) / Seller(s) before proceeding against the Surety and the ISB herein contained shall be enforceable against the Surety notwithstanding the existence of any other Bond or security for any indebtedness of the Contractor (s) / Supplier(s) / Seller(s) to the Corporation (including relative to the said Security Deposit) and notwithstanding that any such undertaking or security shall at the time when claim is made against the Surety or proceedings taken against the Surety hereunder, be outstanding or unrealized.
4. The amount stated by the Corporation in any demand, claim or notice made with reference to the ISB, as between the Surety and the Corporation for the purpose of these Presents, be conclusive of the amount payable by the Surety to the Corporation hereunder.
5. This ISB shall not be determined or discharged or affected by the liquidation or winding up or dissolution or change of constitution or insolvency of the Contractor(s) / Supplier(s) / Seller(s) or any change in the legal constitution of the Surety or the Corporation.
6. We _____ (indicate the name of the Insurer) undertake to pay to the Corporation any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) / Seller(s) in any suit or proceeding pending before any court or Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by the Surety under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) / Seller(s) shall have no claim against us for making such payment.

7. We _____ (indicate the name of the Insurer) further agree that the Corporation shall be entitled to invoke the ISB in part, provided that the amount of the invocation shall not exceed the aggregate value of the ISB at any given time. Such partial invocation can be made multiple times, and the Surety shall pay the Corporation the amounts requested, subject to the total sum not exceeding the aggregate value of the ISB. The remaining amount of the ISB shall continue to be valid until the full amount of the ISB has been invoked or the ISB is otherwise discharged in accordance with the terms herein."

8. We, _____ (indicate the name of the Insurer) further agree that the ISB herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till _____ office / department at _____ certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) / Supplier(s) / Seller(s) and accordingly discharge this

ISB. Unless a demand or claim under this ISB is made on us in writing a letter / e-Mail on or before _____ (expiry date) we shall be discharged from all liability under this ISB thereafter.

9. We, _____ (Indicate the name of Insurer) further agree with the Corporation that the Corporation shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) / Supplier(s) / Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Corporation against the said Contractor(s) / Supplier(s) / Seller(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) / Supplier(s) / Seller(s) or forbearance, act or omission on the part of the Corporation or any Indulgence by the Corporation to the said Contractor(s) / Supplier(s) / Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.

10. We, _____ (Indicate the name of Insurer) lastly undertake not to revoke / amend this ISB during its currency except with the previous consent of the Corporation in writing.

11. Notwithstanding anything contained herein above,

i. The liability of the Surety under this ISB shall not exceed the amount of Rs. _____ (Rupees _____ only),

ii. This ISB shall be valid up to _____ (Expiry Date) irrespective of whether or not the original ISB returned to us.

iii. We are liable to pay the ISB amount or any part thereof under this ISB only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this ISB has been extended.

Dated the ____ day of ____ 20

For _____

(Indicate the name of Insurer)

Place :

Date :

Annexure 5 (C)

Format for Insurance Surety Bond for Mobilisation Advance

1. In consideration of the Indian Oil Corporation Ltd (Marketing Division) having its Registered Office at Mumbai (hereinafter called "The Corporation" which expression shall include its successors and assigns) has awarded M/s _____ (hereinafter called "The Contractor" which expression shall include its successors and assigns) the work of designing, manufacturing, fabricating, supply, installation, testing & commissioning of (name of the work) _____ in terms of a contract as constituted by Purchase Order No. _____ dated _____ issued by the Corporation to the Contractor (hereinafter called "The Contract" which expression include any formal contract entered in to between the Corporation & the Contractor in super session of the said Purchase Order and/or all the amendments and/or modifications of the Purchase Order).

AND WHEREAS the Corporation has agreed to advance to the Contractor, at his request, a sum of _____ (Rupees _____ only) (hereinafter called "The said Advance" to the Contractor) as financial assistance under the Contract on the condition, inter-alia, that the said Advance together with interest thereon at the rate of _____% (percent) per annum on the amount of the said Advance for the time being outstanding shall without prejudice to any other mode of recovery available to the Corporation be recoverable by the Corporation by deduction from the gross accepted amount of any Running Account Bills and the Final Bill of the Contractor commencing from the first Running Account Bill of the Contractor, and meanwhile, the said Advance shall be secured by a Insurance Surety Bond the details of which are mentioned below.

We _____ (details of the Insurer issuing ISB) (hereinafter referred to as "The Surety" at the request of the Contractor do hereby undertake to pay to the Corporation an amount not exceeding Rs. _____ (Rupees _____) against any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the agreement.

2. We _____ (indicate the name of the Insurer) do hereby unconditionally and irrevocably undertake to pay the amounts due and payable under this ISB without any demur, protest or proof or satisfaction or condition and without reference to the Contractor(s) / Supplier(s) / Seller(s), merely on a demand from the Corporation stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Corporation by reason of breach by the said Contractor(s) / Supplier(s) / Seller(s) of any of the terms or conditions contained in the said Agreement or by reason of the Contractor(s) / Supplier(s) / Seller (s) failure to perform the said Agreement. Any such demand made on the Surety shall be conclusive as regards the amount due and this ISB shall be restricted to an amount not exceeding Rs. _____
3. The obligation of the Surety to the Corporation shall be as Principal to Principal and shall be wholly independent of the agreement and it shall not be necessary for the Corporation to proceed against the Contractor (s) / Supplier(s) / Seller(s) before proceeding against the Surety and the ISB herein contained shall be enforceable against the Surety notwithstanding the existence of any other Bond or security for any indebtedness of the Contractor (s) / Supplier(s) / Seller(s) to the Corporation (including relative to the said Security Deposit) and notwithstanding that any such undertaking or security shall at the time when claim is made against the Surety or proceedings taken against the Surety hereunder, be outstanding or unrealized.
4. The amount stated by the Corporation in any demand, claim or notice made with reference to the ISB, as between the Surety and the Corporation for the purpose of these Presents, be conclusive of the amount payable by the Surety to the Corporation hereunder.
5. This ISB shall not be determined or discharged or affected by the liquidation or winding up or dissolution or change of constitution or insolvency of the Contractor(s) / Supplier(s) / Seller(s) or any change in the legal constitution of the Surety or the Corporation.
6. We _____ (indicate the name of the Insurer) undertake to pay to the Corporation any

money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) / Seller(s) in any suit or proceeding pending before any court or Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by the Surety under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) / Seller(s) shall have no claim against us for making such payment.

7. We _____ (indicate the name of the Insurer) further agree that the Corporation shall be entitled to invoke the ISB in part, provided that the amount of the invocation shall not exceed the aggregate value of the ISB at any given time. Such partial invocation can be made multiple times, and the Surety shall pay the Corporation the amounts requested, subject to the total sum not exceeding the aggregate value of the ISB. The remaining amount of the ISB shall continue to be valid until the full amount of the ISB has been invoked or the ISB is otherwise discharged in accordance with the terms herein."
8. We, _____ (indicate the name of the Insurer) further agree that the ISB herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till _____ office / department at _____ certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) / Supplier(s) / Seller(s) and accordingly discharge this ISB. Unless a demand or claim under this ISB is made on us in writing a letter / e-Mail on or before _____ (expiry date) we shall be discharged from all liability under this ISB thereafter.
9. We, _____ (Indicate the name of Insurer) further agree with the Corporation that the Corporation shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) / Supplier(s) / Seller(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Corporation against the said Contractor(s) / Supplier(s) / Seller(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) / Supplier(s) / Seller(s) or forbearance, act or omission on the part of the Corporation or any Indulgence by the Corporation to the said Contractor(s) / Supplier(s) / Seller(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provisions have effect of so relieving us.
10. We, _____ (Indicate the name of Insurer) lastly undertake not to revoke / amend this ISB during its currency except with the previous consent of the Corporation in writing.
11. Notwithstanding anything contained herein above,
 - i. The liability of the Surety under this ISB shall not exceed the amount of Rs. _____ (Rupees _____ only),
 - ii. This ISB shall be valid up to _____ (Expiry Date) irrespective of whether or not the original ISB returned to us.
 - iii. We are liable to pay the ISB amount or any part thereof under this ISB only and if we receive from the Corporation a written claim or demand on or before _____ (Expiry date) or the date of expiry of any extension (s) thereof if this ISB has been extended.

Dated the __ day of __20
For _____
(Indicate the name of Insurer)

Place :

Date :

Annexure 6

**Proforma for furnishing details on proceedings under Insolvency and
Bankruptcy Code, 2016**

Contract /LOA/WO No : _____

Job Name : _____

Bidder/Contractor Name : _____

I/We hereby declare that:

[Application for initiation of CIRP/ liquidation/ bankruptcy proceedings (*strike off whichever is not applicable*) has been filed against me/us by *[Insert name of the creditor which has filed the application]*, the details of which are attached, including copy of the relevant petition

OR

Application for initiation of CIRP/ liquidation/ bankruptcy proceedings (*strike off whichever is not applicable*) filed by *[Insert name of the creditor which has filed the application]* has been admitted against me/us by *[Insert name of NCLT/DRT]* on *[Insert date]* the details of which are attached, including copy of the relevant petition along with the order admitting the said petition

OR

I/We have obtained *[insert details of the approval i.e., board/ shareholders' resolution or approval by any other name]* for initiation of voluntary CIRP/ liquidation/ bankruptcy proceedings (*strike off whichever is not applicable*), the details of which are attached, including copy of the relevant approval/resolution (*strike out whichever is not applicable*)

It is understood that if this declaration is found to be false, Indian Oil Corporation Limited shall have the right to reject my bid and forfeit the EMD, and if the bid has resulted in a contract, the contract will be liable for termination, without any liability on the part of Indian Oil Corporation Limited, and such termination would be without prejudice to any other right or remedy (including black listing or holiday listing) available to Indian Oil Corporation Limited.

Place:

Date:

Signature of Bidder/Contractor

Name of Signatory

Annexure ESG I

[Company Name]
[Company Address]
[City, State, ZIP Code]
[Date]

Subject: Undertaking on Prevention of Sexual Harassment

As part of our unwavering commitment to providing a safe, inclusive, and respectful workplace, We M/s [Company Name] hereby affirm its zero-tolerance policy towards sexual harassment and other forms of discrimination. We take the issue of sexual harassment seriously and have implemented strict measures to ensure that our workplace remains free from any behavior that could undermine the dignity, safety, and well-being of our employees.

We are committed to maintaining an environment in which every individual is treated with respect, fairness, and dignity. Sexual harassment in any form, whether physical, verbal, or non-verbal—will not be tolerated. This policy applies to all employees, contractors, visitors, clients, and anyone who interacts with our company.

We undertake to ensure the above policies are in place and complied with by our vendors, contractors and sub-contractors.

Signed by:

[Name]
[Title]
[Company Name]

Annexure ESG II

[Company Name]
[Company Address]
[City, State, ZIP Code]
[Date]

Subject: Undertaking on Prevention of Discrimination in the Workplace**To whom it may concern**

At **[Company Name]**, we are firmly committed to fostering an inclusive, respectful, and equitable workplace for all employees, regardless of race, color, religion, gender, sexual orientation, gender identity, age, disability, marital status, national origin, or any other characteristic protected by law. We believe that diversity enriches our work environment and enhances our collective success. Discrimination of any kind, whether overt or subtle, is not only unlawful but also contrary to our core values.

We ensure the above policies are in place and complied with by our vendors, contractors and sub-contractors.

In line with our commitment to a discrimination-free workplace, **[Company Name]** hereby provides the above undertaking.

Signed by:

[Name]
[Title]
[Company Name]
Date:
[Date]

Annexure ESG III

[Company Name]
[Company Address]
[City, State, ZIP Code]
[Date]

Subject: Undertaking on Working Conditions**To whom it may concern**

At [Company Name], we are dedicated to ensuring that all employees work in conditions that promote health, safety, dignity, and well-being. We recognize that the quality of working conditions directly impacts productivity, morale, and overall success of our organization. As such, we commit to providing an environment that meets or exceeds the standards set forth by relevant labor laws, industry best practices, and ethical guidelines.

We ensure the above policies are in place and complied with by our vendors, contractors and sub-contractors.

In line with this commitment, we hereby provide the above undertaking.

Signed by:

[Name]
[Title]
[Company Name]
Date:
[Date]

Annexure ESG IV**[Company Name]**

[Company Address]

[City, State, ZIP Code]

[Date]

Subject: Undertaking on Health and Safety Practices**To whom it may concern**

At **[Company Name]**, we prioritize the health, safety, and well-being of our employees, contractors, and visitors. We recognize that a safe and healthy work environment is essential to our organization's success and to the overall satisfaction and productivity of our workforce. As such, we are committed to maintaining the highest standards of health and safety in compliance with applicable laws and the industry's best practices.

We ensure the above policies are in place and complied with by our vendors, contractors and sub-contractors.

This undertaking outlines our commitment to ensuring the safety and health of all individuals associated with our company, and to continuously improving our safety management systems.

Signed by:

[Name]

[Title]

[Company Name]

Date:

[Date]