

PROJECT EXECUTION AGREEMENT

BETWEEN

RAPP Transmission Company Limited

AND

[XX]

FOR

**DISMANTLING, DESTROYING, TRANSPORTATION TO AND FROM STORE, SUPPLY,
CIVIL WORKS, ERECTION, AND COMMISSIONING SERVICES**

FOR

SHIFTING OF 400 kV TRANSMISSION LINES / TOWERS

This Project Execution Agreement (“Services Agreement” or “Agreement”) is made on this _____ day of _____ 2022

BETWEEN

RAPP Transmission Company Limited a company incorporated under the laws of India, having its registered office at Registered Office at Unit No101, First Floor, Windsor, Village Kole Kalyan Off CST Road, Vidyanagari Marg, Santacruz (East), Mumbai, Maharashtra-400098, India (hereinafter called as ‘the Owner’ which expressions unless repugnant to the context and meaning hereof shall include its successors and permitted assigns) OF THE FIRST PART and

[●] a _____ incorporated under the laws of _____, having its registered office at [●] (hereinafter called as ‘the Contractor’ which expressions unless repugnant to the context and meaning hereof shall include its successors and permitted assigns) OF THE OTHER PART

[Each of the parties mentioned above, are hereinafter also collectively referred to as the “Parties” and individually as a “Party”.]

WHEREAS

the Owner is involved in the business of operating and maintaining of transmission assets. The Owner has received request from National Highways Authority of India for modification/diversion of existing transmission line.

- (a) In furtherance of the above, the Contractor is willing to deliver such services and has offered to undertake the modifications work including dismantling & destringing of existing towers, transportation to and from store, supply of materials, civil works, erection, and commissioning of new towers.
- (b) Based on such offer by the Contractor, the Owner wishes to appoint the Contractor for carrying out such services and subject to the terms and conditions, as are described and mutually agreed between the Parties, hereunder;

NOW The Owner and the Contractor agree and this Agreement witnesses as follows:

1. The Works (as defined hereinafter) shall be performed by the Contractor strictly as per the terms and conditions stipulated herein and the following documents attached herewith (herein after referred to as ‘the Contract Documents’):
 - a. the Contract Price (Annexure- 1)
 - b. the Conditions of Contract. (Annexure -2)
 - c. Technical Specifications (Annexure -3)
 - d. HSE Code of Conduct (Annexure -4)
2. All Contract Documents shall form an integral part of this Services Agreement. These documents are to be taken mutually explanatory of each other. For the purposes of

interpretation, the priority of the documents shall be in accordance with the following sequence:

- a. This Services Agreement.
 - b. Conditions of Contract
 - c. The Contract Price
3. Owner shall issue Notice to Proceed to the Contractor before commencement of the Works under the Agreement.
 4. In consideration for the services to be rendered by the Contractor pursuant to the issuance of Notice of Proceed, the Owner hereby agrees to pay the Contractor, the Contract Price.
 5. This Agreement shall be governed by and interpreted in accordance with the laws of India.
 6. The Agreement shall come into effect immediately after signing of the Agreement and the term of the Agreement shall be till end of Warranty Period, unless terminated earlier as per the terms and conditions of this Agreement.
 7. This Agreement shall constitute the full and complete understanding between the Parties and the terms of this presents. It shall supersede all prior correspondence to the extent of inconsistency or repugnance to the terms and conditions contained in the Agreement. Any amendment to this Services Agreement shall be valid only when the mutual agreement of the Parties, is reduced in writing and signed by authorized representatives of Parties.
 8. This Agreement shall be executed in two counterparts, each of which shall be considered original. Both the counterpart shall however constitute one and the same Services Agreement between the Parties.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with the Indian laws.

For RAPP Transmission Company
Limited(Owner)

For [] (Contractor)

Authorized signatory

Authorized signatory

In the presence of

In the presence of

Name:

Name:

ANNEXURE- 1

Contract Price

ANNEXURE- 2**Conditions of Contract****1. GENERAL PROVISIONS****1.1 Definitions**

"As Built Drawings" shall mean the final drawings prepared by the Contractor after incorporating all the suggested by the Owner.

"Commencement Date" means the date mentioned in the Notice to Proceed for commencement of Work

"Contractor" means []

"Contractor's Documents" shall include the calculations, computer programs and other software, drawings, manuals, models, As Built Drawings and other documents of a technical nature supplied by the Contractor under this Agreement.

"Contractor's Equipment" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes temporary works and Owner's Equipment [If any].

"Contractor's Personnel" means the Contractor's Representative and all personnel whom the Contractor utilizes on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

"Contractor's Representative" means the person named by the Contractor under this Agreement or appointed from time to time by the Contractor under Sub-Clause 4.4 [Contractor's Representative] who acts on behalf of the Contractor.

"Day" means a calendar day and 'year" means 365 days.

"Defects Notification Period" means the period for notifying defects in the Works under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period], calculated from the date on which the Works is completed as certified under Sub-Clause 10.1 [Taking Over of the Works] up to a period of twelve months from the said date of Taking Over.

"Owner" means RAPP Transmission Company Limited

"Owner's Equipment" means the apparatus, machinery and vehicles, if any, made available by the Owner for the use of the Contractor in the execution of the Works.

"Owner's Representative" means the person named by the Owner in the Services Agreement or appointed from time to time by the Owner under Sub-Clause 3.1 [The Owner's Representative] who acts on behalf of the Owner.

"Owner's Requirements" means the document specifying the purpose, scope and other criteria for the Works.

"Force Majeure" is defined in Clause 17 [Force Majeure].

"Good Industry Practice" shall mean standards, methods, techniques and procedures that are employed by reputed Indian / international contractors in the power transmission sector.

"Intellectual Property Rights" means and include any and all kinds of intellectual properties including without limitation to the following:

- (a) trademarks, trade name, logos and any other insignia and trade dress elements, (whether registered or not), details whereof are specified in this Agreement and/or any such other marks in addition thereto, or in substitution of them as may be specified / declared from time to time;
- (b) domain names, websites including its webpages, other web-contents and layouts;
- (c) copyright and design copyright including (but not limited to) design, décor, colour scheme equipment, furniture, promotional material, including any material in writing or in source or object code form (including but not limited to the standard operations manual), softwares, source codes, or other work relating to or embedded in or used for the operation of the equipment;
- (d) inventions, patents or proprietary products; and
- (e) know-how, trade secrets, compilations, case-studies, customer data, vendor lists, marketing plans, business methods/concepts and any other proprietary information,

developed / used/ owned by either Party or licensed to such Party.

"Laws" means all means any statute, law, regulation, ordinance, judgment, order, decree, directive, guideline, policy, requirement, or other governmental restriction or any similar form of decision, or determination by, or any interpretation or administration of any of the foregoing by, any statutory or regulatory authority whether in effect as of the date of this Agreement or thereafter and in each case as amended in India.

"Party" means the Owner or the Contractor, as the context requires.

"Performance Bank Guarantee" means the security (or securities, if any) under Clause 4.3 [Performance Bank Guarantee]

"Person" includes any individual, corporation, partnership, (including, without limitation, association), joint stock company, banks, financial institution(s), trust, unincorporated organization or government authority.

"Site" means the place where the Work shall be executed and shall be specified in the Notice to Proceed to the Contractor.

"Subcontractor" means any person named in the Agreement as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

"Taking-Over Certificate" means a certificate issued under Clause 10 [Owner's Taking Over].

"Time for Completion" means the time for completing the Works under Sub-Clause 8.2 [Time for Completion] (with any extension under Sub-Clause 8.4 [Extension of Time for Completion]), calculated from the Commencement Date.

"Variation" means any change to the Owner's Requirements or the Works, which is instructed or approved as a variation under Clause 12 [Variations and Adjustments].

"Works" means the design, engineering, supply, erection, testing, transportation to and from store, commissioning, construction (including stipulated civil construction) as per the BOQ mentioned in Annexure -1 and Technical Specifications mentioned in Annexure -3, required for shifting of 400 kV transmission line of the Owner, by the Contractor at the Site, under this Agreement.

1.2 Interpretation

In the Service Services Agreement, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word "agree", "agreed" or "Services Agreement " require the Services Agreement to be recorded in writing, and
- (d) "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record.

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

1.3 Assignment

- (a) This Services Agreement shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and duly permitted assigns.
- (b) The Contractor shall not assign this Services Agreement or any of its rights or obligations hereunder to any third party without prior written consent of the Owner, which consent shall not be unreasonably withheld by the latter.
- (c) The Owner may assign any or all of its rights, obligations and interests under this Services Agreement to any of its affiliates and Sterlite Investment Managers Limited ("SIML"). However, such assignment shall not result in change of obligations of the Contractor/ new Owner (i.e. assignee) during execution of services as agreed in this Agreement

1.4 Care and Supply of Documents

Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Owner.

If a Party becomes aware of an error or defect of a technical nature in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.

1.5 Confidentiality

1.5.1 Both Parties shall treat the details of the Services Agreement as private and confidential, except to the extent necessary to disclose to recipient's representatives who have a need to know and to comply with applicable, Laws. Contractor shall not publish, permit to be published, or disclose any particulars of the Agreement in any trade or technical paper or elsewhere without the previous written consent of the Owner.

Subject to Sub Clause 1.5.2, each Party shall keep all books, documents (whether electronic or in hard copy) and information made available to that Party for the purposes of entering into this Agreement or in the course of the performance of this Agreement ("**Confidential Information**") confidential, and shall not disclose the same to any other Person without the prior written consent of the other Party.

1.5.2 Clause 1.5.1 shall not apply in the following circumstances:

- (a) any disclosure is required by applicable Laws or in respect of information already in the public domain;
- (b) any disclosure required by any applicable stock exchange listing rule; and
- (c) disclosure to a lender, to the extent required for the purposes of raising funds or maintaining compliance with credit arrangements.

In the event a disclosure is required by applicable Law, upon reasonable request by the non-disclosing Party, the disclosing Party shall use all reasonable efforts and co-operate with other Party's efforts to obtain confidential treatment of material so disclosed.

1.5.3 Each Party shall utilize the same degree of care to preserve and protect the other Party's Confidential Information from disclosure that they use to protect their own Confidential Information, which will not be less than reasonable care.

1.5.4 Confidential Information disclosed shall be and remain the property of the disclosing Party. The obligations of the Parties to protect Confidential Information shall survive for a period of 3 years from the date of termination / expiry of this Agreement.

1.6 Confidential Details

The Contractor shall disclose any information which the Owner may require in order to verify the Contractor's compliance with the Services Agreement.

1.7 Compliance with Laws

The Contractor shall, in performing the Services Agreement, comply with all the applicable Laws. The Contractor shall be responsible for consequences and liability, including payment of penalty and / or interest or any other levies imposed by any government department, for any negligence or offence of the Contractor or Contractor's staff and labour under the Laws.

The Contractor shall render all assistance sought by the Owner to obtain any planning, zoning or other permissions which may be required to be obtained by the Owner.

The Contractor shall give all notices, pay applicable fees, and obtain in the name of the Owner applicable permits, licenses and approvals as required by the Laws in respect of this Agreement including in relation to the execution and completion of the Works and the remedying of any defects.

2.0 OWNER

2.1 Right of access to the Site

The Owner shall give the Contractor right of access to, and endeavor to provide obstruction free possession of all parts of the Site with effect from the Commencement Date. Obtaining Right of Way (ROW) shall be the responsibility of the Owner. The Contractor shall however provide any assistance, if required by the Owner for obtaining ROW. The right and possession may not be exclusive to the Contractor. If, under the Services Agreement, the Owner is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Owner shall do so in accordance with the time and manner stated in the Owner's Requirements.

2.2 Permits, Licenses or Approvals

The Owner shall render assistance, on the request of the Contractor on best effort basis and at the cost and expenses of the Contractor in the obtaining of the permissions, approvals, and licenses. that are relevant to contractor and may be required for the execution of the Works. However, any permits, licenses and approvals which have to be obtained in the name of the Owner shall be obtained by the Owner at their cost and expenses and wherever possible the Contractor shall render assistance.

2.3 Owner's Personnel

The Owner shall be responsible for ensuring that the Owner's Personnel and advising that the Owner's other contractors on the Site:

- (a) co-operate with the Contractor's efforts under Sub-clause 4.7 [Co-operation], and
- (b) take actions similar to those which the Contractor is required to take under subparagraphs (a), (b) and (c) of Sub-Clause 4.15 [Safety Procedures] and under Sub-Clause 4.22 [Protection of the Environment].

2.4 Owner's Claims

If the Owner considers himself to be entitled to any payment under any Clause of these Conditions or otherwise in connection with the Services Agreement, and/or to any extension of the Defects Notification Period, he shall give notice and particulars to the Contractor.

The notice shall be given as soon as practicable after the Owner becomes aware of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

The Owner may deduct this amount from any moneys due, or to become due, to the Contractor. The Owner shall be entitled to set off against or make any deduction from an amount due to the Contractor, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

3.0 THE OWNER'S ADMINISTRATION

3.1 The Owner's Representative

The Owner may appoint an Owner's Representative to act on his behalf under the Services Agreement. In this event, he shall give notice to the Contractor of the name, address, duties and authority of the Owner's Representative.

The Owner's Representative shall carry out the duties assigned to him, and shall exercise the authority delegated to him, by the Owner unless and until the Owner notifies the Contractor otherwise, the Owner's Representative shall be deemed to have the full authority of the Owner under the Services Agreement, except in respect of Clause 14 [Termination by Owner]

If the Owner wishes to replace any person appointed as Owner's Representative, the Owner shall not less than 14 days, give prior intimation to the Contractor along with the replacement's name, address, duties and authority, and of the date of appointment.

3.2 Instructions

The Owner may issue to the Contractor instructions which may be necessary for the Contractor to perform its obligations under the Services Agreement. Each instruction shall be given in writing and shall state the obligations to which it relates and the Sub-Clause (or other term of the Services Agreement) in which the obligations are specified. If any such instruction constitutes a Variation, Clause 12 [Variations and Adjustments] shall apply.

The Contractor shall take instructions from the Owner or from the Owner's Representative or an assistant to whom the appropriate authority has been duly delegated under this Clause by the Owner.

3.3 Determinations

Whenever these Conditions provide that the Owner shall proceed in accordance with this Sub-Clause 3.3 to agree or determine any matter, the Owner shall consult with the Contractor in an endeavor to reach agreement. If agreement is not achieved, the Owner shall

make a fair determination in accordance with the Services Agreement, taking due regard of all relevant circumstances.

The Owner shall give notice to the Contractor of each agreement or determination, with supporting particulars. Each Party shall give effect to each agreement or determination, unless the Contractor gives notice, to the Owner, of his dissatisfaction with a determination within 3 days of receiving it. Either Party may then settle the dispute in accordance with Clause 18 [Claims, Disputes and Arbitration].

4.0 THE CONTRACTOR

4.1 Contractor's General Obligation

The Contractor shall execute and complete the Works to the satisfaction of the Owner, in accordance with the Services Agreement and Good Industry Practice, and shall remedy any defects in the Works. When completed, the Works shall be fit for the purposes for which the Works are intended as defined in the Services Agreement.

The Contractor shall provide the Contractor's Documents specified in the Services Agreement and all Contractor's Personnel, and other services, required in and for this, execution, completion and remedying of defects.

The Works shall include any work which is necessary to satisfy the Owner's Requirements, or is implied by the Services Agreement, and all works which are necessary for stability or for the completion, or safe and proper use of the Works.

The Contractor shall be responsible for the adequacy, stability and safety of all Site operations, of all methods of erection and of all the Works.

The Contractor shall, whenever required by the Owner, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without prior written consent of the Owner.

4.2 Services to be performed

Except as otherwise expressly set forth in this Services Agreement, Contractor shall perform or cause to be performed at his costs all Works including services required in connection with the dismantling & de-stringing of existing towers, transportation of the new supplied materials & dismantled materials, and design, engineering, erection, construction and commissioning, in accordance with the provisions of this Services Agreement.

Notwithstanding anything to the contrary or otherwise stated in this Agreement or elsewhere, the Works shall be executed by the Contractor as per the terms and conditions of this Agreement and to the satisfaction of the Owner.

The Contractor shall at all times comply with applicable Laws.

4.3 Performance Bank Guarantee

Within a period of 15 days from the Commencement date, the Contractor shall furnish a Performance Bank Guarantee for 20% of the Contract Price

The Performance Bank Guarantee shall be issued by a first class bank (the Guarantor) in favour of the Owner.

The Contractor shall ensure that the Performance Bank Guarantee is valid and enforceable till completion of Defects Notification Period. If the terms of the Performance Bank Guarantee specify its expiry date, and the Works have not been Taken Over by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the Performance Bank Guarantee till completion of Defects Notification Period.

The Owner shall not make a claim under the Performance Bank Guarantee, except for amounts to which the Owner is entitled under the Services Agreement in the event of:

- (a) failure by the Contractor to extend the validity of the Performance Bank Guarantee as described in the preceding paragraph, in which event the Owner may claim the full amount of the Performance Bank Guarantee,
- (b) failure by the Contractor to pay the Owner an amount due, as either agreed by the Contractor or determined under Sub-Clause 2.4 [Owner's Claims] or Clause 18 [Claims, Disputes and Arbitration], within 30 days of determination,
- (c) failure by the Contractor to remedy a default within 30 days after receiving the Owner's notice requiring the default to be remedied, provided however that this 30 days period shall not be applicable if the default is not curable, or
- (d) circumstances which entitle the Owner to terminate under Sub-Clause 14.2 [Termination by the Owner], irrespective of whether notice of termination has been given.

4.4 Contractor's Representative

The Contractor shall appoint the Contractor's Representative and shall give him all authority necessary to act on the Contractor's behalf under the Services Agreement.

The Contractor shall, prior to the Commencement Date, submit to the Owner for consent the name and particulars accompanied by a resume of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked, or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Owner, revoke the appointment of the Contractor's Representative or appoint a replacement ,except where the Contractors Representative has resigned or superannuated

The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.2 [Instructions].

4.5 Subcontractors

The Contractor shall not subcontract the whole or any section of the Works or enter into any agreement with any other party in respect of the Works to be performed under the terms of this Agreement, without the prior written consent of the Owner.

The Contractor shall be responsible and held liable for the acts, non-compliance of any of the provisions of this Agreement, non-compliance of applicable Laws or defaults of any Subcontractor, his agents or employees, as if they were the acts, non-compliances or defaults of the Contractor. The Contractor shall give the Owner prior notice of:

- (a) the intended appointment of the Subcontractor, with detailed particulars which shall include his relevant experience,
- (b) the scope of work and the intended commencement of the Subcontractor's work;
- (c) the intended commencement of the Subcontractor's work on the Site; and

The Contractor shall ensure that its Subcontractors will, to the extent applicable, comply with all the safeguards contained in Clause 6 [Staff and Labour] below when engaging personnel in relation to this Services Agreement.

It is agreed that Owner will not in any way be responsible for the debts, liabilities or obligations of the Contractor and / or its sub-contractors, employees or agents or work.

4.6 Nominated Subcontractors

In this Sub-Clause, "nominated Subcontractor" means a Subcontractor whom the Owner, under Clause 12 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor. The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Owner as soon as practicable, with supporting particulars.

4.7 Co-operation

The Contractor shall, as specified in the Services Agreement or as instructed by the Owner, allow appropriate opportunities for carrying out work to:

- (a) the Owner's Personnel,
- (b) any other contractors employed by the Owner, and
- (c) the personnel of any legally constituted public authorities,

who may be employed in the execution on or near the Site of any work not included in the Services Agreement.

4.8 The materials to be supplied under this Agreement shall satisfy the following requirements:

- (a) It shall meet or exceed all technical specifications and standards of quality identified in this Agreement;

- (b) It shall be (a) new, unused and undamaged when title and the risk of loss pass to the Owner, of high quality and free from any Defect; (b) fit for the purpose intended (including for use under the climatic and normal operating conditions described in the technical specifications); and (c) in compliance with the Applicable Laws and industry standards;
- (c) It shall be free and clear of any and all rights of retention, claims, liens, security interests, attachments, charges, encumbrances and rights of other persons when title passes to and vests in the Owner.

4.9 INSPECTION AND TESTING

(a) Inspection

The inspection requirements and schedule shall be discussed and finalized between the Owner and the Contractor. The Owner shall at all times during production and manufacture, be entitled to examine, inspect, measure and test the materials and to check the progress of manufacture.

The Contractor shall bear all costs of inspection carried out by the Owner in the manufacturer's works.

The Contractor shall give the Owner full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

(b) Testing

The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, instruments, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Owner, the time, place and method for the specified testing of materials.

4.10 DELIVERY

- (a) The Contractor shall ensure that the materials shall be supplied in a manner so as to meet the overall Time for Completion.
- (b) It is clearly understood and agreed that time is the essence of this Agreement and shall be strictly adhered to by the Contractor. The program of key phases in various areas of work like design, procurement, manufacture, inspection, testing at works and dispatch of materials from the Effective Date shall be such that it meets the requirement of the Time for Completion.
- (c) Within 15 (fifteen) days from the date of this Agreement, the Contractor shall furnish a detailed manufacturing program/report indicating detailed schedule covering engineering, procurement of raw material, manufacturing, shop inspection, testing,

dispatch, and complete logistics in relation to the delivery of the materials. The manufacturing program/report shall be updated and submitted by the Contractor to the Owner every month, for the Owner's review.

- (d) The Owner at his option may also like to hold progress reviews meetings. Access to the premises where the material is being manufactured shall be organized and shall be granted to the Owner or his authorized representative(s) at all reasonable times for the purpose of ascertaining the progress and quality.

4.11 Delivery Protocol

- (a) The cost of suitable and proper packing fit for the intended purpose is included in the contract value.
- (b) The Contractor will provide the Owner with the necessary delivery information and other data as may be reasonably required by the Owner. Such information will be submitted in Excel or PDF file format and by email.
- (c) Upon unwrapping the material at Site, Owner shall undertake a visual inspection of each shipment to assess if (i) there is any apparent shortage, damage, Defect or other discrepancy between the materials delivered and the shipment's bill of lading, the dispatch clearance certificate or product description and data sheets; and (ii) there is any discrepancy with the quantity of each product type required to be included in such delivery ("**Discrepancy**").
- (d) If the Owner determines from any inspection that there is any Discrepancy, it shall submit a written notification of the same to the Contractor (accompanied, except in the case of a shortage, by photographs or other suitable evidence clearly showing such Discrepancy) (a "**Discrepancy Notice**") no later than fifteen (15) Business Days after date of such inspection. As of the date of any Discrepancy Notice, the materials listed therein as having a Discrepancy shall be deemed "**Rejected Materials**".
- (e) Upon receiving a Discrepancy Notice, the Contractor shall immediately arrange for the shipment of the materials required (a) in the case of a shortfall, to make up for such shortfall; and (b) in all other cases, to replace the Rejected Materials. Within three (3) Business Days after receiving such Discrepancy Notice, Contractor shall notify Owner in writing of the delivery date of such make up or replacement materials, which shall be no later than the one month from the date of such notification (the "**Guaranteed Replacement Delivery Date**").
- (f) Each delivery of a materials that is required to make up for a shortfall or replace a Rejected materials, shall be considered a late delivery, if the Contractor is unable to deliver such materials on or prior to the Time for Completion, and shall be subject to Delay Damages and which shall accrue from the original guaranteed Completion Date of the materials (in the case of a shortfall) or the Rejected Materials, as applicable, until the actual delivery of such make up or replacement materials.

- (g) The Owner shall make all Rejected Materials available for pick up by the Contractor at the Site. The Contractor shall pick up and transport each Rejected materials at its sole cost and expense within 30 days of the Owner making such Rejected materials available for pick up. The Contractor shall be responsible for payment of all taxes, costs and expenses in connection with the pick-up, taking away, transportation, export or disposal of the Rejected Materials. If the Contractor does not pick up such Rejected materials within such 30 day period, then Owner may, at its election, return such Rejected Materials to the Contractor and invoice the Contractor for any costs, expenses and taxes associated therewith (which shall be paid by the Contractor with fifteen (15) Business Days of the date of the invoice) or dispose of such Rejected Materials and remit any net proceeds to the Contractor.
- (h) For the avoidance of doubt, the making or failure to make an inspection of the materials pursuant to this clause shall in no way relieve the Contractor from its obligation to conform to all the requirements of this Agreement and shall in no way impair the Owner's right to reject or revoke acceptance of materials that do not conform to the technical specifications or other requirements contained in this Agreement, or to avail itself of any other remedies to which the Owner may be entitled under law or under contract.

4.12 TRANSFER OF TITLE AND RISK

(a) Warranty of Title

The Contractor warrants good and marketable title to all materials and warrants and guarantees that title, when it passes to and vests in the Owner, will be free and clear of any and all rights of retention, claims, liens, security interests, attachments, charges, encumbrances and rights of other persons whether arising as a result of any actions or failure to act of the Contractor or its representatives or not.

(b) Title and Risk of Loss

- i. Subject to Clause below, the transfer of title from the Contractor to the Owner in all materials under this Agreement shall take place at the delivery location as designated by Owner "Store" (FOR basis). Notwithstanding the foregoing transfer of title, all the risks of loss in connection with such materials shall transfer from the Contractor to the Owner only post-delivery at the "Stores". Further, notwithstanding the title transfer, the Contractor shall however retain care and custody of the materials and exercise due care thereof until delivery in accordance with the obligation under this Agreement.
- ii. Title, ownership and risk of loss for each replacement materials shall pass from the Contractor to the Owner at the Store when such replacement materials is delivered at the Store, except that where the Owner has rejected an materials, title to such Rejected Materials shall pass back to the Contractor when the Contractor picks up such materials.

- iii. Under no circumstances shall the passage of title and risk of loss be construed to impair any rights that the Owner may have for recovery of damages or to reject any materials in accordance with the terms of this Agreement.

4.13 TRANSPORTATION

- (a) The Contractor shall be responsible for the transport of the supplies from their place of origin to the agreed destination on FOR basis up to Stores. Contractor shall be responsible to ensure the safety of the material, irrespective of any inspection that may be carried out by Owner's representative. The Contractor also needs to furnish, prior to dispatch, expected duration from Material Dispatch instruction to delivery at Site
- (b) Contractor should inform the Owner approximately ten (10) days in advance about the material movement, so that necessary action can be taken. Owner will not be responsible for any additional costs or any claim brought against Owner, because of Contractor's failure to dispatch, transport and/or deliver in accordance with the terms of this Agreement, for any reason attributed to the Contractor.

4.14 Setting Out

The Contractor shall set out the Works in relation to original points, lines and levels of reference specified by the Owner in the Services Agreement. The Contractor shall be responsible for the correct positioning of all parts of the Works, and shall rectify any error in the positions, levels, dimensions or alignment of the Works.

4.15 Safety Procedures

The Contractor shall:

- (a) comply with all applicable safety related Laws,
- (b) take care for the safety of all persons on the Site,
- (c) use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,

4.16 Quality Assurance

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Services Agreement. The system shall be in accordance with the quality assurance program of the Owner. The Owner shall be entitled to audit any aspect of the system.

4.17 Site Data

The Owner shall have made available to the Contractor for his information, prior to the Commencement Date, all reasonably available and relevant data in the Owner's possession on subsurface and hydrological conditions at the Site, including environmental aspects. The

Owner shall similarly make available to the Contractor all such relevant data which may come into the Owner's possession after the Commencement Date.

The Contractor shall be responsible for independently examining, verifying and interpreting all such data. The Owner shall have no responsibility or liability in respect of the accuracy, correctness, sufficiency or completeness of any data or information provided by the Owner. It shall be presumed that before commencing the Works under this Agreement, the Contractor has satisfied itself of the accuracy, correctness, sufficiency and completeness of any information and data, whether or not provided by the Owner, upon which it may be relying for the performance of this Agreement.

4.18 Unforeseeable difficulties

Except as otherwise stated in the Services Agreement:

- (a) the Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect the Works;
- (b) by signing the Services Agreement, the Contractor accepts total responsibility for having foreseen all difficulties and costs of successfully completing the Works; and

4.19 Not used

4.20 Avoidance of Interference

The Contractor shall not interfere unnecessarily or improperly with:

- (a) the convenience of the public, or
- (b) the access to and use and occupation of all roads and footpaths, irrespective of whether they are public or in the possession of the Owner or of others.

The Contractor shall indemnify and hold the Owner harmless against and from all liability, claims, legal proceedings, damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

4.21 Contractor's Equipment

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works.

The condition of the Contractor's Equipment, including equipment temporarily brought by the Contractor for execution and completion of Works shall be in proper working order.

4.22 Protection of the Environment

The Contractor shall abide by all the environmental Laws and norms applicable to the Works under this Services Agreement. It shall take all reasonable steps to protect the environment (both on and off the Site) and to limit risk, damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall indemnify and hold the Owner harmless against and from all liability, claims, legal proceedings, damages, losses and expenses (including legal fees and expenses) resulting from all claims and liabilities arising out of any breach of this Sub-Clause in respect of this Services Agreement.

4.23 Electricity, Water

The Contractor shall be responsible for arranging electricity and water for carrying out the Works. The Owner shall however provide necessary assistance to the Contractor to arrange such inputs.

4.24 Progress Report

Daily progress reports shall be prepared by the Contractor and submitted to the Owner during execution of Works.

Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

4.25 Contractor's Operations at the Site

The Contractor shall confine his operations to the Site, and to any additional areas which may be obtained by the Contractor and agreed by the Owner as working areas. The Contractor shall take all necessary precautions to keep Contractor's Equipment and Contractor's Personnel within the Site and these additional areas, and to keep them off adjacent land.

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials, including the material obtained from unpacking / un-packaging of the supplied materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and temporary works which are no longer required.

Upon the issue of the Taking-Over Certificate for the Works, the Contractor shall clear away and remove all Contractor's Equipment, surplus material, wreckage, rubbish and temporary works. The Contractor shall leave the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such goods as are required for the Contractor to fulfill obligations under the Services Agreement. The Contractor, during its operations shall not damage any other persons' equipment and shall not disturb / damage the existing structure at the Site without the prior written consent of Owner.

4.26 Fossils

All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Owner and the same shall be the property of the Owner. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons from removing or damaging any of these findings.

The Contractor shall, upon discovery of any such finding, promptly give notice to the Owner, who shall issue instructions for dealing with it.

5.0 CONSTRUCTION DOCUMENTS

5.1 Contractor's undertaking

The Contractor undertakes that the Contractor's documents and the execution and completion of the Works will be in accordance with:

- (a) the Laws, and
- (b) this Agreement, the documents forming part of the Services Agreement, as altered or modified by Variations.

5.2 Technical Standards and Regulations

The Contractor's documents, the execution and the completion of the Works shall comply with the technical standards, building, erection, fabrication and environmental Laws, Good Industry Practices and other standards specified in the Owner's Requirements, or otherwise applicable to the Works or defined by the applicable Laws.

All these Laws shall, in respect of the Works, be those prevailing when the Works are taken over by the Owner under Clause 10 [Owner's Taking Over]. References in the Services Agreement to published standards shall be understood to be references to the edition applicable on the Commencement Date unless stated otherwise.

5.3 As-Built Documents

The Contractor shall prepare, and keep up-to-date, a complete set of as-built records of the execution of the Works, showing the exact as-built locations, sizes and details of the work as executed. These records shall be kept on the Site and shall be used exclusively for the purposes of this Sub-Clause. Copies shall be supplied to the Owner prior to the commencement of the Tests on Completion.

In addition, the Contractor shall supply to the Owner as-built drawings of the Works, showing all Works as executed and submit them to the Owner for review. The Contractor shall obtain the consent of the Owner as to their size, the referencing system, and other relevant details.

5.4 Document Error

The Contractor shall promptly inform the Owner of any error, omission, fault and other defect in the design of, or specifications for, the Works, which he may discover in the Contractor's Documents, or in the process of execution of the Works.

6. STAFF AND LABOUR

6.1 Engagement of Staff and Labour

Before the commencement of the Works, the Contractor shall obtain all requisite license(s) from the concerned authorities under the applicable labour Laws including Contract Labour

(Regulation and Abolition) Act, 1970 and shall furnish a copy each of the same to the Owner. The said license(s) shall be kept valid at least till the satisfactory completion of the Works.

6.2 Rates of Wages and Conditions of Labour

The Contractor shall pay rates of wages, and observe conditions of labour, which are as per the prevailing labour Laws applicable at Site.

6.3 Persons in the Service of Others

The Contractor shall not recruit, or attempt to recruit, staff and labour from amongst the Owner's Personnel.

6.4 Labour Laws

The Contractor shall comply with all the applicable labour Laws applicable to the Contractor's Personnel, including Laws relating to their employment, health, safety, welfare and shall allow them all their legal rights.

6.5 Working Hours

No work shall be carried out on the Site on locally recognized days of rest, or outside normal working hours, unless:

- (a) It is required in order to complete the Works within Time for Completion
- (b) otherwise stated in the Services Agreement,
- (c) the Owner gives consent, or
- (d) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Owner.

6.6 Facilities for Staff and Labour

The Contractor shall make arrangements for the payment, accommodation, sanitation, health, safety, feeding and transport of the labour engaged by him for the execution and completion of the Works. The Contractor shall comply with the applicable Laws for his obligations towards accommodation, sanitation, health, safety and feeding of labour engaged by him for the execution and completion of the Works.

6.7 Health Safety and Environment (HSE)

The Contractor shall strictly follow the HSE Code of Conduct of the Owner which is attached as Annexure 4.

6.8 Contractor's Superintendence

Throughout the design and execution of the Works, and as long thereafter as is necessary to fulfill the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.

Superintendence shall be given by a sufficient number of persons having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.

6.9 Contractor's Personnel

The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Owner may require the Contractor to remove (or cause to be removed at his cost) any person employed on the Site or works, including the Contractor's Representative if applicable, who:

- (a) persists in any misconduct or lack of care,
- (b) carries out duties incompetently or negligently,
- (c) fails to conform with any provisions of the Services Agreement, or
- (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed at his cost) a suitable replacement person.

The Contractor shall ensure that the Contractor's Personnel shall at all times be, in possession of all such documents (including security clearances) as may be required by the Laws.

6.10 Records of Contractor's Personnel and Equipment

The Contractor shall submit, to the Owner, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted in a form approved by the Owner, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.

6.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and ensure protection of persons and property on and near the Site.

7.0 WORKMANSHIP

7.1 Manner of Execution

The Contractor shall carry the execution of the Works:

- (a) in the manner specified in the Services Agreement and to the Owner's satisfaction,
- (b) in a proper workmanlike and careful manner, in accordance with Good Industry Practice

- (c) with properly equipped facilities and non-hazardous materials, except as otherwise specified in the Services Agreement.

7.2 Inspection

The Owner's Personnel shall at all times:

- (a) have full access to all parts of the Site, and
- (b) during erection and commissioning, be entitled to examine, inspect, measure and test the materials and workmanship.

The Contractor shall give the Owner's Personnel full opportunity to carry out these activities, including providing access, facilities, permissions and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility.

In respect of the work which Owner's Personnel are entitled to examine, inspect, measure and/or test, the Contractor shall give notice to the Owner whenever any such work is being performed. The Owner shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Owner does not require to do so. If the Contractor fails to give the notice, it shall, if and when required by the Owner, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.

7.3 Testing

The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests in assistance and co-operation with Owner's Suppliers, efficiently. The Contractor shall agree, with the Owner, the time and place for the specified testing of any equipment, materials and other parts of the Works.

The Owner shall give the Contractor not less than 24 hours' notice of the Owner's intention to attend the tests. If the Owner does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Owner.

The Contractor shall promptly forward to the Owner duly certified reports of the tests. When the specified tests have been passed to the Owner's satisfaction; the Owner shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect.

7.4 Rejection

If, as a result of an examination, inspection, measurement or testing any, materials, design or workmanship is found to be defective or otherwise not in accordance with the Services Agreement, the Owner may reject the materials, design or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item or portion of Works comply with the Services Agreement.

If the Owner requires this, materials, design or workmanship to be retested the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the

Owner to incur additional costs, the Contractor shall subject to Sub-Clause 2.4 [Owner's Claims] pay these costs to the Owner.

7.5 Remedial Work

Notwithstanding any previous test or certification, the Owner may instruct the Contractor to:

- (a) remove from the Site and replace any materials which is not in accordance with the Services Agreement,
- (b) remove and re-execute any other work which is not in accordance with the Services Agreement, and
- (c) execute any work which is urgently required for the safety of the Works, whether because of an accident, unforeseeable event or otherwise.

If the Contractor fails to comply with any such instruction, which complies with Sub-Clause 3.2 [Instructions], the Owner shall be entitled to employ and pay any third party to carry out the Works. Except to the extent that the Contractor would have been entitled to payment for the Works satisfactorily performed in accordance with this Agreement, the Contractor shall subject to Sub-Clause 2.4 [Owner's Claims] pay to the Owner all costs arising from this failure.

8. COMMENCEMENT, DELAYS AND SUSPENSION

8.1 Commencement of Works

The Owner or its affiliates shall issue a Notice to Proceed for commencement for Work to be carried out under this Agreement.

The Contractor shall proceed with the Works with due expedition such that the Works are completed as early as possible and in any case within the Time for Completion.

8.2 Time for Completion

Time is of essence of the Agreement. Thus mobilisation of all resources in short notice and completion of Works is of utmost importance. The Contractor shall complete the whole of the Works, within the Time for Completion for the Works, including:

- (a) achieving the passing of the Tests on Completion, and
- (b) completing all work which is stated in the Services Agreement as being required for the Works to be considered to be completed for the purposes of taking over under Sub-Clause 10.1 [Taking Over of the Works].

The Owner shall indicate the time period for mobilization of all resources when issuing Notice to Proceed for Work under the Agreement. The Time for Completion of Works shall be 60 days from the Effective Date.

In case the Contractor defaults in adhering to the time schedule / programme approved by the Owner and the Works are not completed within 3 months from the Effective Date, the

Contractor shall be liable for damages for such delay, as per the provisions of this Services Agreement.

8.3 Programme

The Contractor shall submit a time programme to the Owner within 3 days after the Commencement Date.

Unless the Owner, within 2 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Services Agreement, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Services Agreement. The Owner's Personnel shall be entitled to rely upon the programme when planning their activities.

The Contractor shall promptly give notice to the Owner of specific probable future events or circumstances which may adversely affect or delay the execution of the Works. In this event, or if the Owner gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Services Agreement or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Owner in accordance with this Sub-Clause.

8.4 Extension of Time for Completion

The Contractor shall be entitled subject to Sub-Clause 18.1 [Contractor's Claims] to request for an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking Over of the Works] is or will be delayed by any of the following causes:

- (a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 12.2 [Variation Procedure],
- (b) a cause of delay giving an entitlement to extension of time under a Sub-Clause of these Conditions, or
- (c) any delay, impediment or prevention directly and solely caused by or attributable to the Owner, the Owner's Supplier, the Owner's Personnel, or the Owner's other contractors on the Site.

If the Contractor considers himself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Owner in accordance with Sub-Clause 18.1 [Contractor's Claims]. The Owner shall consider such notice and reasonably determine whether such extension may be granted. When determining each extension of time under Sub- Clause 18.1, the Owner shall review previous determinations and may increase or decrease the total extension of time.

8.5 Delays Caused by Authorities

If the following conditions apply, namely:

- (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,
- (b) these authorities delay or disrupt the Contractor's work, and
- (c) the delay or disruption was not reasonably foreseeable by an experienced contractor by the date for submission of the offer,

then this delay or disruption will be considered as a cause of delay under sub-paragraph (b) of Sub-Clause 8.4 [Extension of Time for Completion].

8.6 Rate of Progress

If, at any time:

- (a) actual progress is too slow to complete within the Time for Completion and/or
- (b) progress has fallen (or will fall) behind the current programme under Sub-Clause 8.3 [Programme].

other than as a result of a cause listed in Sub-Clause 8.4 [Extension of Time for Completion], then the Owner may instruct the Contractor to submit, under Sub Clause 8.3 [Programme], a revised programme and supporting report describing the revised methods which the Contractor proposes to adopt in order to expedite progress and complete within the Time for Completion.

Unless the Owner notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel, at the risk and cost of the Contractor.

8.7 Delay Damages

If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall subject to Sub-Clause, 2.4 [Owner's Claims] pay delay damages to the Owner for this default. These delay damages shall be the sum stated in Sub-Clause 19 [Damages for Delay], which shall be paid for every day which shall elapse between the relevant Time for Completion and the date stated in the Taking Over Certificate.

These delay damages shall be the damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 14.2 [Termination by Owner] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Services Agreement.

8.8 Suspension of Work

The Owner may at any time instruct the Contractor to suspend progress of part or all of the Works. During such suspension, the Contractor shall protect, store and secure such part or the goods and materials for the Works against any deterioration, loss or damage.

The Owner may also notify the cause for the suspension. If and to the extent that the cause is notified and is not on account of any default of the Owner under the Services Agreement the following Sub- Clauses 8.9 and 8.11 shall not apply.

8.9 Consequences of Suspension

If the Contractor suffers delay and/or incurs any additional Cost from complying with the Owner's instructions under Sub-Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Owner and shall be entitled subject to Sub-Clause 18.1 [Contractor's Claims] to an extension of time for any such delay, and reimbursement of any such reasonable additional Cost, as evidenced by proper supporting documentation, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and

After receiving this notice, the Owner shall proceed in accordance with Sub-Clause 3.3 [Determinations] to agree or determine these matters.

The Contractor shall not be entitled to an extension of time for, or to payment of the Cost incurred in, making good the consequences of the Contractor's faulty workmanship or materials, or of the Contractor's failure to protect store or secure in accordance with Sub-Clause 8.8 [Suspension of Work].

8.10 Prolonged Suspension

If the suspension under Sub-Clause 8.7 [Suspension of Work] has continued for more than 12 months, the Contractor may request the Owner's permission to proceed. If the Owner does not give permission within 10 days after being requested to do so or provide reasonable explanation for such continuation of suspension, the Contractor may, by giving notice to the Owner, treat the suspension as an omission under Clause 12 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works the Contractor may give notice of termination of Works under Sub-Clause 15.1 [Termination by Contractor].

8.11 Resumption of Work

After the permission or instruction to proceed is given the Parties shall jointly examine the Works and materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or materials, which has occurred during the suspension.

9. TESTS ON COMPLETION

9.1 Contractor's Obligations

With the assistance and co-operation of the Owner's Suppliers, the Contractor shall carry out the Tests on Completion in accordance with this clause and Sub-Clause 7.3 [Testing] after providing the documents in accordance with Clause 5.3 [As-Built Documents].

The Contractor shall give to the Owner not less than 3 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion (Performance Test for the Power Project). Unless otherwise agreed, Tests on Completion shall be carried out within 5 days after this date, on such day or days as the Owner shall instruct.

9.2 Delayed Tests

If the Tests on Completion are being unduly delayed by the Owner, Sub-Clause 7.3 [Testing] shall be applicable.

If the Tests on Completion are being unduly delayed by the Contractor, the Owner may by notice require the Contractor to carry out the Tests within 21 days after receiving the notice. The Contractor shall carry out the tests on such day or days within that period as the Contractor may fix and of which he shall give notice to the Owner.

If the Contractor fails to carry out the Tests on Completion within the period of 21 days, the Owner's Personnel may proceed with the Tests on Completion, at the risk and cost of the Contractor. These Tests on Completion shall then be deemed to have been carried out in the presence of the Contractor and the results of the Tests shall be accepted as accurate.

9.3 Retesting

If the Works, fail to pass the Tests on Completion, carried out by the Contractor/ Owner as the case may be, Sub-Clause 7.4 [Rejection] shall apply, and the Owner or the Contractor may require the failed Tests and Tests on Completion on any related work, to be repeated under the same terms and conditions.

9.4 Failure to Pass Tests on Completion

If the Works, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [Retesting], the Owner shall be entitled to:

- (a) order further repetition of Tests on Completion under Sub-Clause 9.3;
- (b) if the failure deprives the Owner the benefit of the Works, reject the Works (as the case may be), in which event the Owner shall have the same remedies as are provided in subparagraph (c) of Sub-Clause 11.4 [Failure to Remedy Defects]; or
- (c) issue a Taking-Over Certificate.

In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Services Agreement, and the Contract Price shall be reduced by such amount as more specifically described in the Sub-Clause 19 [Damages for Delay], which shall be appropriate to cover the reduced value to the Owner as a result of this failure.

10. OWNER'S TAKING OVER

10.1 Taking Over of the Works

Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Owner when (i) the Works have been completed in accordance with the

Services Agreement, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

The Contractor may apply by notice to the Owner for a Taking-over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion, be complete and ready for taking over.

The Owner shall, within 15 days after receiving the Contractor's application:

- (a) issue the Taking-Over Certificate to the Contractor, stating the date on which the Works were completed in accordance with the Services Agreement, except for any minor outstanding work and defects which will not substantially affect the use of the Works for their intended purpose (either until or whilst this work is completed and these defects are remedied) and all costs in operating the Works with such defects shall be borne by the Contractor; or
- (b) reject the application, giving reasons and specifying the work required to be done by the Contractor to enable the Taking-Over Certificate to be issued. The Contractor shall then complete this work before issuing a further notice under this Sub-Clause.

11. DEFECTS LIABILITY

11.1 Completion of Outstanding Works and Remedying Defects

In order that the Works shall be in the condition required by the Services Agreement (fair wear and tear excepted) by the expiry date of the relevant Defects Notification Period or as soon as practicable thereafter, the Contractor shall:

- (a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such time as is instructed by the Owner, and
- (b) execute all work required to remedy defects or damage including any defect or damage caused by the Owner / third party, except such defect or damage has been caused on account of willful misconduct on part of the Owner / third party as may be notified by the Owner on or before the expiry date of the Defects Notification Period for the Works (as the case may be).

If a defect appears or damage occurs, the Owner shall notify the Contractor accordingly. No work shall be performed by the Contractor during the Defects Notification Period until he submits a programme for carrying out the work and receives written approval from the Owner of the aforementioned programme.

11.2 Cost of Remedying Defects

All work referred to in sub-paragraph (b) of Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects] shall be executed at the risk and cost of the Contractor, if and to the extent that the work is attributable to:

- (a) the design of the construction services,
- (b) materials or workmanship not being in accordance with the Services Agreement,
- (c) improper operation or maintenance which was attributable to matters for which the Owner is not responsible, or
- (d) failure by the Contractor to comply with any other obligation.

If and to the extent that such work is attributable to any other cause, the Owner shall give notice to the Contractor accordingly, and Sub-clause 12.2 (Variation Procedure) shall apply.

11.3 Extension of Defects Notification Period

The Owner shall be entitled subject to Sub-Clause 2.4 [Owner's Claims] to an extension of the Defects Notification Period for the Works if and to the extent that the Works cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Notification Period shall not be extended by more than additional twelve months beyond Defect Notification Period.

If execution and completion of Works was suspended under Sub-Clause 8.8 [Suspension of Work] the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period.

11.4 Failure to Remedy Defects

If the Contractor fails to remedy any defect or damage within a reasonable time, a date may be fixed by (or on behalf of) the Owner, on or by which the defect or damage is to be remedied. The Contractor shall be given reasonable notice of this date.

If the Contractor fails to respond and initiate corrective actions within 14 days at the Site due to any unjustified reason(s) and to remedy the defect or damage within the time taken as per the normal industry practice, without waiting for replacements, but in any case within the Time for Completion for the particular defect or damage by notified date and this remedial work was to be executed at the cost and responsibility of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Owner may (at his option):

- (a) carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, and the Contractor shall subject to Sub-Clause 2.4 [Owner's Claims] pay to the Owner the costs incurred by the Owner in remedying the defect or damage;
- (b) agree or determine a reduction in the Contract Price in accordance with Sub-Clause 3.3 [Determinations]; or

- (c) if the defect or damage deprives the Owner of substantially the whole benefit of the Works or any major part of the Works, terminate the Works as a whole, or in respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Services Agreement or otherwise, the Owner shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning to the Contractor.

11.5 Further Tests

If the work of remedying of any defect or damage may-affect the performance of the Works, the Owner may require the repetition of any of the tests described in the Services Agreement, including Tests on Completion and/or Tests after Completion. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

These tests shall be carried out in accordance with the terms applicable to the previous tests, except that they shall be carried out at the risk and cost of the Contractor liable, under Sub-Clause 11.2 [Cost of Remedying Defect], for the cost of the remedial work.

11.6 Clearance of Site

Prior to the Taking Over, the Contractor shall at its cost remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and temporary works from the Site.

12. VARIATIONS AND ADJUSTMENTS

12.1 Right to Vary

Variations may be initiated by the Owner at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal. A Variation shall not comprise the omission of any work which is to be carried out by others.

12.2 Variation Procedure

If the Owner requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing within 7 days from such Owner's request, by submitting:

- (a) a description of the proposed work to be performed and a programme for its execution,
- (b) the Contractor's proposal for any necessary modifications to the programme according to Sub-Clause 8.3 [Programme] and to the Time for Completion, and
- (c) The Contractor's proposal for adjustment to the Contract Price.

The Owner shall, as soon as practicable after receiving such proposal, respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response except where the proposal is disapproved/ conditionally approved and fresh proposal gets approved

Each instruction to execute a Variation, shall be issued by the Owner to the Contractor, who shall acknowledge receipt.

12.3 Payment of taxes

Taxes shall be paid extra as per applicable rates.

13. CONTRACT PRICE AND PAYMENT

13.1 The Contract Price and Payment Schedule

In consideration for the Contractor performing the Works under this Agreement, the Owner hereby covenants to pay to the Contractor a sum of INR [●] (Rupees [●]Only), which shall be referred hereinafter as the "Contract Price. The detailed breakup of the Contract Price is mentioned in Annexure 1 hereunder.

The Contract Price is excluding GST which shall be paid at the applicable rates. Owner may deduct statutory taxes at source ("TDS") and provide TDS certificate as proof.

The Contract Price shall not be subject to any variation and shall remain firm and binding throughout the term of this Agreement. The unit prices will remain firm & binding for the quantity variation of +/- 15% of the ordered quantity during the term of this Agreement. The unit prices shall be inclusive of all the routine, acceptance & type tests charges.

Payment Schedule:

10% of Contract Price shall be released as advance on submission of Advance Bank Guarantee of equivalent amount from a first class bank in a form acceptable to the Owner.

80% of Contract Price shall be released on submission of monthly bills on prorated basis.

Balance 10% of Contract Price shall be released on completion of Taking Over of the Works by the Owner.

The payment shall be released by way of electronic fund transfer by the Owner within 30 days of acceptance of undisputed invoice submitted along with relevant supporting documentation.

13.2 Currencies of Payment

The Contract Price shall be paid in Indian Rupees.

The making of any payment by the Owner under this Services Agreement shall in no event constitute the acceptance of any Works performed by the Contractor pursuant to this Services Agreement.

13.3. INSURANCE

13.3.1 The Contractor shall take necessary insurance policies for an appropriate value so as to cover all risks required as per statute as well as may be required by the Owner. The said insurance policies shall also cover fire and allied risks, miscellaneous accidents workman compensation risks, loss or damage in transit, theft, pilferage, riot and strikes and malicious damages, civil commotion, weather conditions, accidents of all kinds, comprehensive risks during transportation, handling, storage, erection and commissioning. Besides, the Contractor shall also take an "All Risks" insurance, Third Party Liability insurance, Personal Accident Insurance in respect of Contractor's Supervisory Personnel and workmen and such other insurance as required as per statute.

13.3.2 The Owner shall be the principal beneficiary of the policy along with the Contractor and shall reserve the exclusive right to assign the policy.

13.3.3 In the event of loss or damage, the Contractor shall be solely responsible to lodge the claims and settle the same. The Contractor shall proceed with repair or replacement of the goods without waiting for settlement of the claim. It is further clarified that neither extension of completion schedule nor any extra claim shall be admissible on account of insurance.

13.3.4 The Contractor shall take adequate professional liability insurance as well as adequate insurance for their personnel. The Owner undertakes no responsibility in respect of any life, health, accident, travel and other insurance which may be necessary or desirable.

13.3.5 Copy of such insurance policies shall be submitted to Owner prior to commencement of the work.

14. TERMINATION BY OWNER

14.1 Notice to Correct

If the Contractor fails to carry out any obligation under the Services Agreement the Owner may by notice require the Contractor to make good the failure and to remedy it within a specified time.

14.2 Termination by Owner

The Owner shall be entitled to terminate the Works and/or Services Agreement if the Contractor:

- (a) fails to comply with Sub-clause 4.3 [Performance Bank Guarantee] with a notice under Sub-Clause 14.1 [Notice to Correct],
- (b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Services Agreement,
- (c) without reasonable excuse fails to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension],
- (d) subcontracts the whole or any section of the Works or assigns the Services Agreement without the prior written consent of the Owner,

(e) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:

(i) for doing or forbearing to do any action in relation to the Services Agreement or

(ii) for showing or forbearing to show favour or disfavor to any person in relation to the Services Agreement,

(f) is in breach of any conditions of this Agreement,

(g) is in breach of any of its representations and warranties under Sub- Clause 20 [Representations and Warranties]

or, if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (e).

In any of these events or circumstances, the Owner may, upon giving 14 days' written notice to the Contractor, terminate the Services Agreement or the Works as the case may be and expel the Contractor from the Site. However, in the case of sub-paragraph (e) or (g) and Sub-Clause 16.3.7, the Owner may by notice terminate the Services Agreement immediately.

The Owner's election to terminate the Services Agreement shall not prejudice any other rights of the Owner, under the Services Agreement or otherwise.

After termination, the Owner may complete the Works and/or arrange for any third party to do so. The Contractor agrees that the Owner and such third party may then use any, Contractor's Documents and other design documents made by or on behalf of the Contractor.

The Owner shall then give notice that the Contractor's Equipment and temporary works will be released to the Contractor at or near the Site. The Contractor shall promptly arrange their removal, at the risk and cost of the Contractor. However, if by this time the Contractor has failed to make a payment due to the Owner, these items may be sold by the Owner in order to recover this payment. Any balance of the proceeds shall then be paid to the Contractor.

14.3 Valuation at Date of Termination

As soon as practicable after a notice of termination under Sub-Clause 14.2 [Termination by Owner] has taken effect, the Owner shall proceed in accordance with Sub-Clause 3.3 [Determinations] to agree or determine the value of the Works.

14.4 Payment after Termination

After a notice of termination under Sub-Clause 14.2 [Termination by Owner] has taken effect, the Owner may:

(a) proceed in accordance with Sub-Clause 2.4 [Owner's Claims],

- (b) with-hold further payments to the Contractor until the costs of design for construction, execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Owner, have been established, and/or
- (c) recover from the Contractor any losses and damages incurred by the Owner and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 14.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Owner shall pay any balance to the Contractor.

14.5 Owner's Entitlement to Termination

Notwithstanding Clause 14.2 [Termination by Owner], the Owner shall be entitled to terminate the Works and/or Services Agreement, at any time for the Owner's convenience, by giving notice of such termination to the Contractor. The termination shall take effect 30 days after the Contractor receives this notice.

After this termination, the Contractor shall proceed in accordance with Sub-Clause 15.2 [Cessation of Work and Removal of Contractor's Equipment] and shall be paid in accordance with Sub-Clause 17.5 [Optional Termination, Payment and Release].

15. TERMINATION BY CONTRACTOR

15.1 Termination by Contractor

The Contractor shall be entitled to terminate the Services Agreement or the Works as the case may be, if:

- (a) there is Prolonged Suspension (not less than 12 months)
- (b) the Owner substantially fails to perform its material obligations under the Services Agreement,
- (c) the Owner has been finally adjudged bankrupt or insolvent by a competent Court,
- (d) the Contractor does not receive the undisputed amount due within 90 days after the expiry of the time stated in Sub-Clause 13.1 [Timing of Payments] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.4 [Owner's Claims]),

In any of these events or circumstances, the Contractor may, upon giving 30 days' written notice to the Owner, terminate the Services Agreement.

15.2 Cessation of Work and Removal of Contractor's Equipment

After a notice of termination under Sub-Clause 14.5 [Owner's Entitlement to Termination], Sub-Clause 15.1 [Termination by Contractor] or Sub-Clause 17.5 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

- (a) cease all further work, except for such work as may have been instructed by the Owner for the protection of life or property or for the safety of the Works
- (b) hand over Contractor's Documents, materials and other work, for which the Contractor has received payment, and
- (c) remove all other material from the Site, except as necessary for safety, and leave the Site.

15.3 Payment on Termination

After a notice of termination under Sub-clause 15.1 [Termination by Contractor] has taken effect, the Owner shall promptly:

- (a) return the Performance Bank Guarantee to the Contractor,
- (b) pay for the portion of the Works which have been completed, and
- (c) pay to the Contractor the Cost of removal of temporary works and Contractor's Equipment from the Site

16. RISK AND RESPONSIBILITY

16.1 Indemnities

The Contractor shall indemnify and hold harmless the Owner, the Owner's Personnel, and their respective agents, against and from all liability, claims, legal proceedings, damages, losses and expenses (including legal fees and expenses) in respect of:

- (a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of execution and completion of the Works and the remedying of any defects, and
- (b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss:
 - i. arises out of or in the course of or by reason of the design, execution, inspection and completion of the Works and the remedying of any defects,
- (c) non-compliance of any of applicable Laws in respect of this Agreement

Without prejudice to the above, the Contractor shall indemnify and hold harmless the Owner, the Owner's Personnel and their respective agents against any loss, damage, caused or suffered by the Owner due to the failure on the part of the Contractor to perform any of its obligations under this Services Agreement; any losses arising directly / indirectly from any claims / sanctions / penalties by any government authorities & for any tax related default.

16.2 Contractor's Care of Works

The Contractor shall take full responsibility for the care of the Works from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works] for the Works, when responsibility for the care of the Works shall pass to the Owner.

After responsibility has accordingly passed to the Owner, the Contractor shall take responsibility for the care of any work which is outstanding on the date stated in a Taking-Over Certificate, until this outstanding work has been completed.

If any loss or damage happens to the Works during the period when the Contractor is responsible for their care, the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works conform with the Services Agreement.

The Contractor shall be liable for any loss or damage caused by actions performed by the Contractor after a Taking-Over Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Taking- Over Certificate has been issued and which arose from a previous event for which the Contractor was liable.

16.3 Intellectual Property Rights

16.3.2 Each party acknowledges and agrees that any Intellectual Property Rights of the Owner shall always remain its exclusive property. Further, Owner shall be the sole and exclusive owner of all rights, title and interest in any Intellectual Property Rights created or developed in respect of this Agreement, including without limitation in respect of any design developed for performance of Works under this Agreement.

16.3.3 The Contractor agrees and confirms that it shall not have or claim any rights, title or interest in such Intellectual Property Rights as may be created or developed by it, pursuant to this Agreement.

16.3.4 During the term of this Agreement and after its expiry, the Contractor represents and warrants that it:

- (a) shall not improperly disclose such Intellectual Property Rights to any third party;
- (b) shall not use or permit the use of the Intellectual Property Rights in the Works by any third party, unless expressly provided for by this Agreement or otherwise permitted by law or equity;
- (c) shall not infringe or permit the infringement of the Intellectual Property Rights by any third party; and
- (d) shall use the Intellectual Property Rights for Permitted Use only.

16.3.5 The Owner hereby grants to the Contractor, a one-time, non-exclusive, royalty free, non-assignable, and limited license to use, print, affix, incorporate and/or reproduce the Intellectual Property Rights, and use the Works solely by itself and strictly for the purpose of performance of its obligations under this Agreement ("**Permitted Use**").

16.3.6 To protect the Owner's rights in the Intellectual Property Rights and the goodwill associated therewith, the Contractor hereby agrees and undertakes that it shall:

- (a) make Permitted Use of the Intellectual Property Rights only for use in relation to the Works performed under this Agreement and not for any other purposes whatsoever;
- (b) strictly comply with requirements of the Owner as to use of the Intellectual Property Rights and its form, manner, scale, and context of marketing indicia and of such statements to accompany them, in line with its corporate standards, guidelines, code of practice and other policies, as communicated by the Owner from time to time;
- (c) make Permitted Use of the Intellectual Property Rights in compliance with all other requirements of applicable Laws, rules and regulations applicable to the Contractor, failing which the Contractor shall compensate the Owner for any loss caused by its willful default or negligence to comply;
- (d) not use its own trademarks or trade name or logos or any other trade mark, trade name (or any abbreviation, modification or colorable imitation) in relation to the Works, other than what is expressly authorized by the Owner in writing;
- (e) not, at any time during validity or after expiry of this Agreement, contest or assist any other person in contesting, the validity or ownership or registration or enforceability of any of the Intellectual Property Rights and/or claim adversely or assist in any claim adversely to the Owner concerning any right, title or interest therein;
- (f) not, directly or indirectly apply for, register, attempt to, or obtain control of, or interfere with the Owner's efforts to obtain registration or ownership of the Intellectual Property Rights or part thereof, or any name, trademark, service mark, or other identifying name related to the Owner anywhere in the world;
- (g) not at any time do anything which may in any way prejudice the rights of the Owner in the Intellectual Property Rights, nor shall authorize any other person to take any action that is likely to prejudice their rights and use its best endeavor to preserve and maintain the distinctiveness thereof;
- (h) not alter, modify, obscure, remove, distort or disparage the Intellectual Property Rights or part thereof and use the same only in such manner such that its distinctiveness, reputation or validity, used as trade name, trade mark or marketing indicia is not impaired or its identity tampered in any manner whatsoever;
- (i) not assign, sub-license, transfer or create any rights in favor of third parties relating to the Intellectual Property Rights, without prior written consent of the Owner;
- (j) promptly notify the Owner of any apparent infringement or challenge to its use of any of the Intellectual Property Rights, or any claim by another person of any rights in any of the Intellectual Property Rights. The Owner will have sole

discretion to take such action as deemed appropriate and will have the right to control exclusively any litigation or trademark office or similar proceeding arising out of any such infringement, challenge or claim or otherwise relating to any of the Intellectual Property Rights; and

- (k) co-operate with the Owner in taking such legal or other necessary action relating to Intellectual Property Rights and sign any and all documents, render such assistance and do such things as may be advisable in the opinion of the Owner to protect its interests in any litigation or trademark office or other administrative proceeding including becoming a nominal party to any legal action. To the extent that such litigation is the result of the Contractor's use of the Intellectual Property Rights in a manner inconsistent with the terms of this Agreement, the Contractor shall indemnify the Owner of all the losses, costs including attorney's fees, damages or cost of settlement.

16.3.7 The Contractor further acknowledges and confirms that the use of the Intellectual Property Rights and any goodwill established thereby, shall inure to the sole and exclusive benefit of the Owner and this Agreement does not create any goodwill or other interests in the Intellectual Property Rights in favour of the Contractor. In the event, the Contractor derives any rights or goodwill in the Intellectual Property Rights or creates, generates or develops any new intellectual properties based on the Intellectual Property Rights or part thereof, the Contractor agrees and undertakes to assign the same in favour of the Owner by executing assignment or other necessary documents the Owner may request to evidence or secure its ownership in such ideas, concepts, methods, techniques and/or any form of Intellectual Property Rights.

16.3.8 The Contractor hereby acknowledges, undertakes, agrees and confirms that:

- (a) it shall ensure that its representatives, agents and sub-contractors comply with the above provisions to the satisfaction of the Owner, failing which the Contractor shall indemnify the Owner from any losses/damages;
- (b) any use of the Intellectual Property Rights by the Contractor and/or its representatives, agents and sub-contractors, in violation of the provisions of this Agreement will cause irreparable damage to the Owner and will constitute an incurable and material breach of this Agreement, and will be a ground for immediate termination of this Agreement, without any prior notice; and the obligations set out under this provision shall continue to remain in full force and effect even after the termination of this Agreement and shall be binding on the Contractor.
- (c) Nothing in this provision shall be interpreted as granting to the Contractor of any of the Intellectual Property Rights.
- (d) The Parties agree this provision shall survive termination or expiry of this Agreement.

The Contractor shall indemnify and hold the Owner harmless against and from any claim alleging an infringement of any intellectual property rights of third parties (i) in connection with the performance of this Services Agreement, (ii) the Contractor's design for engineering services and execution of Works; (iii) the use of Contractor's Equipment, or (iv) the proper use of the Works.

16.4 Limitation of Liability

Neither Party shall be liable to the other Party for loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Services Agreement, other than Sub-Clause 16.1 [Indemnities].

This Sub-Clause shall not limit liability in any case of fraud, deliberate default, negligence or reckless misconduct, breach of confidentiality obligation or infringement of intellectual property rights by the Contractor.

17.0 FORCE MAJEURE

17.1 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

- (a) which is beyond a Party's control; and
- (b) which such Party could not reasonably have provided against before entering into the Services Agreement; and
- (c) which, having arisen, such Party could not reasonably have avoided or overcome; and
- (d) which is not attributable to such Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- i. war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- ii. rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war,
- iii. riot, commotion, disorder, strike or lockout in the industry / sector affecting the performance of Services Agreement by persons other than the Contractor's Personnel and other employees of the Contractor and Subcontractors,
- iv. munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity, and
- v. natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

Notwithstanding the above, COVID -19 shall not be considered as Force Majeure event, unless more onerous applicable Laws are imposed by governmental authorities, than those applicable Laws, in force, as on date of this Agreement.

17.2 Notice of Force Majeure

If a Party is or will be prevented from performing any of its obligations under the Services Agreement by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is prevented. The notice shall be given within 14 days after the Party became aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, may suspend performance of such obligations for so long as such Force Majeure prevents it from performing them.

Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Services Agreement.

17.3 Duty to Minimize Delay

Each Party shall at all times use all reasonable endeavors to minimize any delay in the performance of the Services Agreement as a result of Force Majeure.

A party shall give immediate notice to the other Party when it ceases to be affected by the Force Majeure.

17.4 Consequences of Force Majeure

If the Contractor is prevented from performing any of his obligations under the Services Agreement by Force Majeure of which notice has been given under Sub-Clause 18.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 18.1 [Contractor's Claims] to request for an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4[Extension of Time for Completion].

After receiving this notice, the Owner shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these matters.

17.5 Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 120 days by reason of Force Majeure of which notice has been given under Sub-Clause 17.2 [Notice of Force Majeure], or for multiple periods which total more than 180 days due to the same notified Force Majeure, then either Party may give to the other Party a written notice of termination of the Works under the Services Agreement in this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 15.2 [Cessation of Work and Removal of Contractor's Equipment]

Upon termination, as per (i) Sub-Clause 15.3 [Payment on Termination] read with Sub-Clause 15.1 [Termination by Contractor] or (ii) of this Sub-Clause 17.5:

- (a) the amounts payable for the Works carried out for which a price is stated in the Services Agreement; and

(b) the Cost of removal of temporary works and Contractor's Equipment from the Site

18. CLAIMS, DISPUTES AND ARBITRATION

18.1 Contractor's Claims

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any payment, under any provision of these Conditions or otherwise in connection with the Services Agreement the Contractor shall give notice to the Owner, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, but not later than 5 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 5 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to payment, and the Owner shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

The Contractor shall also submit any other notices which are required by the Services Agreement, and supporting particulars for the claim, all as relevant to such event or circumstance.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at another location acceptable to the Owner. Without admitting liability, the Owner may, after receiving any notice under this Sub-Clause, monitor the record-keeping and/or instruct the Contractor to keep further contemporary records. The Contractor shall permit the Owner to inspect all these records, and shall (if instructed) submit copies to the Owner.

Within 10 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Owner, the Contractor shall send to the Owner a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or payment claimed. If the event or circumstance giving rise to the claim has a continuing effect:

- (a) this fully detailed claim shall be considered as interim;
- (b) the Contractor shall send further interim claims at monthly intervals, giving the accumulated delay and/or amount claimed, and such further particulars as the Owner may reasonably require; and
- (c) the Contractor shall send a final claim within 28 days after the end of the effects resulting from the event or circumstance, or within such other period as may be proposed by the Contractor and approved by the Owner.

Within 15 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Owner and approved by the Contractor, the Owner shall respond with approval, or with disapproval and detailed

comments. The Owner may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within such time.

The Owner shall proceed in accordance with Sub-Clause 3.3 [Determinations] to agree or determine i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion] and/or (ii) the payment (if any) to which the Contractor is entitled under the Services Agreement.

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or payment shall take account of the extent (if any) to which the failure has prevented or prejudiced proper evaluation of the claim unless the claim is excluded under the second paragraph of this Sub-Clause 18.

18.2 Arbitration

If any dispute arises between the Parties under this Agreement, the Parties shall make all endeavor to resolve the dispute amicably.

Any dispute remaining unresolved after 60 days of it being raised by either Party and communicated in writing to the other Party, shall be submitted to and finally resolved by arbitration. Such arbitration shall be conducted as per the provisions of the Indian Arbitration and Conciliation Act 1996, as amended from time to time. The seat and venue of arbitration shall be Mumbai. The language of arbitration shall be English.

Any arbitral award shall be final and binding upon the Parties thereto and shall be enforceable in accordance with its terms.

19. DAMAGES FOR DELAY

19.1 Damages for delay in timely completion

In case the Contractor defaults in adhering to the time schedule stipulated under Sub-Clause 8.2 [Time for Completion] the Contractor shall be liable for damages for such delay at the rate of 1% of the Contract Price per week or part thereof subject to a maximum of 20% of the Contract Price.

19.2 Damages fair and reasonable

The Contractor agrees that the damages payable hereinabove under this Clause 19 [Damages for Delay], are fair and reasonable and genuine pre- estimate of the likely loss or damages that the Owner would suffer as a result of the Contractor's default in performing its respective obligations under this Services Agreement.

19.3 Contractor not relieved of his Obligations

Notwithstanding the payment of damages by the Contractor in accordance with this Clause 19 [Damages for Delay], the Contractor shall not be relieved of its liability to perform its obligations under this Services Agreement.

20. REPRESENTATIONS AND WARRANTIES

The Contractor hereby represents and warrants that:

- (a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and it has full power and authority to execute the Services Agreement and deliver and perform its obligations and to carry out the transactions contemplated hereby; (b) it has taken all necessary corporate and other action under the applicable laws and its constitutional documents to authorize the execution, delivery and performance of the Services Agreement; it holds all valid licenses, registration and permissions that are required under the applicable Laws for carrying out the Works.
- (c) It will comply with applicable Laws in performing its obligations including procurement of licenses, permissions, approvals, certificates, and payment of taxes, if required; it shall perform its obligations hereunder in a lawful, proficient and diligent manner;
- (d) it has the financial standing and capacity to undertake the execution of Works in accordance with the Services Agreement; is not adjudged insolvent by any competent Court.
- (e) the Services Agreement constitutes legal, valid and binding obligations enforceable against it in accordance with the terms thereof;
- (f) all the information furnished by the Contractor in its tender is true and correct and give a true and fair view of its affairs;
- (g) the execution, delivery and performance of the Services Agreement will not be in contravention of, conflict with, result in the breach of, constitute a default under any of the terms of its constitutional documents or any applicable Laws or any other agreement entered by Contractor with any other party, this Services Agreement, understanding, decree or order to which, it is a party or by which it or any of its properties or assets is bound or affected;
- (h) no person has been retained or employed to solicit this Services Agreement upon any arrangement or understanding for the payment of any commission, fee or other compensation of any kind, except for compensation to bona fide employees of the Contractor;
- (i) the Works performed by the Contractor and Subcontractors, including inspections performed by Contractor and Subcontractors under this Services Agreement, shall be adequate and sufficient for the purposes intended, in conformity with the terms of this Services Agreement and free of defects and deficiencies, including that the fabrication, erection and installation of the Works shall be in accordance with the designs, drawings and specifications prepared in accordance herewith and approved by Owner and all workmanship of the Contractor and Subcontractors shall be in full conformity with the requirements of this Services Agreement and free of defects and

deficiencies (including latent defects) and that the Works shall be fit for the purposes and uses intended and capable of operation in the manner contemplated hereby and in accordance with this Services Agreement;

- (j) no representation or warranty by the Contractor contained herein or in any other document furnished by it to the Owner or to any governmental agency in relation to applicable permits in relation to this Services Agreement contains or will contain any untrue statement of material fact or omits or will omit to state a material fact necessary to make such representation or warranty not misleading;
- (k) it shall duly and satisfactorily perform the Works during the term of this Agreement; it will provide regular updates at such intervals as may be specified by Owner with respect to the Works provided in terms of this Agreement;
- (l) it shall ensure that the Works performed under this Agreement are of high order, quality and standard, performance which must be commensurate with the expectations of Owner;
- (m) it shall comply and act in accordance with the internal policies of the Owner including its Code of Ethical Business Conduct (as may be provided by the Owner or as published on its website); it shall perform and observe all rules and regulations of the Owner, as may be applicable;
- (n) it shall observe highest standards of integrity, not influence any official of the Owner in any manner, not indulge in any unethical practice and comply with applicable Laws pertaining to the same including those relating to anti-bribery and anti-corruption;
- (o) no criminal proceedings/investigations are initiated or pending against it or its directors, promoters, or partners and they are not subject to any criminal liability or disqualification;
- (p) it shall not use the name and / or logo of Owner in any manner either for credit arrangements or otherwise;
- (q) it shall not do or cause to be done anything, which is prejudicial to the interest of Owner or whereby the business or reputation of Owner may be injured or damaged;

The Owner hereby represents and warrants that:

- (a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and it has full power and authority to execute the Services Agreement and deliver and perform its obligations and to carry out the transactions contemplated hereby;

(b) it has taken all necessary corporate and other action under the applicable laws and its constitutional documents to authorize the execution, delivery and performance of the Services Agreement;

(c) the Services Agreement constitutes legal, valid and binding obligations enforceable against it in accordance with the terms thereof;

The Contractor recognizes that Owner has entered into this Agreement in good faith relying on the representations, and warranties herein contained. In the event of any of these representations/ warranties being found to be untrue at any time or breach of the foregoing representations and warranties or agreements shall constitute a material breach of this Services Agreement and shall give the Owner the immediate right to terminate this Services Agreement.

21. NOTICES AND COMMUNICATIONS

The language for communication for this Services Agreement shall be English.

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices and requests, these communications shall be by email transmission (with the original by courier / mail or by hand delivery, if necessary) or by overnight courier and shall be effective (i) if sent by email (with the original by courier / mail or by hand delivery, if necessary), one (1) day after the email is sent and (ii) if sent by courier, one (1) day after deposit with an overnight courier. The notice hereunder shall be served / signed by the person duly authorized by the Parties and shall be served at the respective address set out below or such other addresses as may be nominated for that purpose in writing by each Party:

Owner : Kind Attention: Mr. Amitanshu Srivastava

Email: amitanshu.srivastava@indigrid.com

Address: 101, Windsor, Off CST Road, Kalina, Santacruz East, Mumbai
400098

Contractor : Kind Attention: [●]

Email: []

Address: []

Either Party from time to time may change its address, email or other information for the purpose of notices to such Party by giving notice specifying such change to the other Party in writing.

22. AMENDMENT

Any amendment to this Services Agreement will only be with the mutual agreement of the Parties shall be in writing and signed by authorized representatives of the Parties.

23. LEGAL RELATIONSHIP

This Services Agreement does not in any respect make the Contractor an agent or a partner of the Owner, nor does it establish any joint venture between the Parties or authorize the Contractor to transact any business in the name of the Owner or to incur any obligation or liability for or on behalf of the Owner.

Each Party confirms it is acting on its own behalf and not for the benefit of any other Party. Notwithstanding this, all affiliates of Owner and SIML shall be entitled to benefit from this Agreement.

24. GOVERNING LAW AND SEVERANCE

24.1 This Agreement, including non-contractual rights and obligations arising out of or on connection with this Agreement, shall be governed by the laws of India.

24.2 Any legal proceedings arising out of this Agreement shall only be instituted in the courts of Mumbai, to the exclusion of other Courts.

24.3 If any provision or part-provision of this Agreement is or becomes invalid, illegal or unenforceable, it shall be deemed modified to the minimum extent necessary to make it valid, legal and enforceable. If such modification is not possible, the relevant provision or part-provision shall be deemed deleted. Any modification to or deletion of a provision or part-provision under this clause shall not affect the validity and enforceability of the rest of this Agreement, unless such above mentioned contravening provision relates to a material part of this Agreement and / or is not severable, in which case, the whole agreement would be terminated by way of the Parties' agreement or an arbitral award.

25. SURVIVAL

Sub-clauses on (Termination by Owner), (Confidentiality), (Intellectual Property Rights), (Indemnities), (Arbitration) and (Governing Law & Severance), or any provision which by its nature is intended to survive the termination or expiry of this Agreement, shall survive for a period of 3 years from the date of termination or expiry of this Agreement.

26. WAIVER

Failure or delay of either Party at any time to require performance of any provision of this Agreement shall not affect the right to require full performance thereof at any time thereafter and the waiver by either Party of a breach of any provision shall not be taken or held to be a waiver of any subsequent breach thereof or as nullifying or restricting the effectiveness of such provision.

27. ENTIRE AGREEMENT

This Agreement, including and together with any related annexures, sets forth the entire agreement and understanding between the Parties with respect to the subject matter hereof and supersedes and cancels all minutes of meeting, term sheet, memorandum of understanding, letter of intent etc. earlier discussions and negotiations of understandings, agreements, representations, warranties, whether written or oral, express or implied, between them excluding any specific assumptions to price as maybe notified from the Owner to the Contractor.

ANNEXURE-4**HSE Code of Conduct**

Health, Safety & Environment (HSE) Code of Conduct for contracts
(as relevant and applicable to contract scope of work)

Document No. IGT_HSE_005 HSE code of conduct

	Prepared by	Reviewed by	Approved by
	Vishal Shah	Ramneek Teng	Satish Talmale
nation	Head – HSE	Head – OpEx	COO
	20-Aug-2020	04-Sep-2020	11-Sep-2020

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Purpose

This document sets out Contractor Safety requirement in order to ensure safety at the workplace. It will result in achieving our vision of “Zero Harm”, by creating a systematic approach to managing Contractors and making them aware of the risks associated with working on site.

The intention of this document is to develop health and safety practices to be followed by Contractors on IndiGrid sites to a level that will be recognized among best in India and comparable to the highest standards achieved worldwide.

This can only be achieved if there is a commitment from all parties involved, from the most senior level of managers within the Employer and the Contractors, to the workers on the sites.

The Employer shall actively support the efforts and initiatives that are instigated by the Contractors and sub-Contractors for achieving high standards of health and safety on Sites. This document represents the minimum standards that the Employer will accept on matters of Occupation Health and Safety. The organization will use its best endeavours to ensure that all of the Contractors employed on the sites achieve these Standards.

Scope

This document applies to the Contractor’s scope of work as relevant and applicable to contract scope of work, including aspects conducted by sub-Contractors and all other agencies.

These Conditions are issued in addition to the General Conditions of Contracts issued by Supply Chain/Contract department.

“The requirements with regards to Health, Safety and environment (HSE) as contained in this document are in addition to the terms and conditions as mentioned in the Contract/ Agreement.”

Abbreviation

HSE	: Health, Safety & Environment,
OHS	: Occupational Health and Safety
PPE	: Personal Protective Equipment
PTW	: Permit to work
LTI	: Loss time injury
HIRA	: Hazard Identification & Risk Analysis
BBS	: Behaviour Based Safety
CEA	: Central Electricity Authority

Terms and Definition

Terms

- **Shall:** The use of ‘shall’ indicates a **mandatory** requirement.
- **Should:** The use of ‘should’ indicates a requirement that is **strongly recommended**.
- **May:** The use of ‘may’ indicates a requirement that is **to be considered**.

Definition

- **Site** shall mean the Works/Facilities being set up by the Employer at various locations throughout India or abroad.
- **Employer** means the company (IndiGrid) who is owner of Site and shall include its legal successors in title and permitted assignees as well as its authorized Officers / Representatives.
- **Contractor** means the company / agency who is awarded the Contract and shall be deemed to include its legal successors in title and permitted assignees as well as its authorized Officers / Representatives.
- **Safety** means the freedom from unacceptable risks of personal harm, i.e. the avoidance of accidents and incidents.
- **Occupational Health** means the physical wellbeing of a person and freedom from any illness caused due to working conditions.
- **Hazard** means a situation with the potential to cause harm including human injury, damage to property, plant or equipment, damage to the environment, or economic loss.
- **Risk** means the probability of something adverse happening and its severity. It is a combination of the probability, or frequency, of the occurrence of a defined hazard and the magnitude of the consequences of the occurrence.
- **Risk Assessment:** The process of analysing the level of risk considering those in danger, and evaluating whether hazards are adequately controlled, taking into account any measures already in place.
- **Risk Management:** The process of identifying hazards, assessing risk, taking action to eliminate or reduce risk, and monitoring and reviewing results.
- **Foreseeable** means that which is likely or possible.
- **Harm:** Includes death, injury, physical or mental ill health, damage to property, loss of production, or any combination of these.
- **Housekeeping:** Maintaining the working environment in a tidy manner.
- **Incident:** An event that:
 - Results in death or injury to person where the injury requires medical attention (Including first aid)
 - Results in injury/damage to persons, property or process;
 - Is not in compliance with statutory requirements, safe work procedures or inhouse guidelines.
- **Unsafe act or condition:** Any act or condition that deviates from a generally recognised safe way or specified method of doing a job and increases the potential for an accident
- **Near Miss (NM):** Near Miss is an incident that could have resulted into injury or illness, property damage, environment release, adverse community reaction or business interruption.
- **First-aid cases (FAC):** A minor injury that calls for only simple treatment and does not call for follow-up treatment by a health-care professional is an FAC. A case can be classified as an FAC even if a health-care professional administers the first aid.

- **Medical Treatment Cases (MTC):** A MTC is a work-related case for which medical treatment is provided by professional medical practitioner but that does not result in lost work day or work restrictions.
- **Restricted Workday Case (RWC):** An RWC is a case in which an injury or illness prevents the employee from working a complete shift (or from doing any tasks that are part of his or her regularly scheduled job that may be performed or assigned) but which does not result in lost workdays.
- **Reportable – Loss time injury (R-LTI):** If an employee is unable to work on a subsequent scheduled shift because of an injury or illness, the case is classified as an LWC. The shift on which the case occurred is not counted as a lost workday.
- **Recordable Loss Time Injury (Rec. LTI):** As per Factories Rules, 1969, an incident “which cause such bodily injury as will prevent or will probably prevent the person injured from working for a period of 48 hours immediately following the accident” is defined as Loss Time Injury Recordable and to be reported in prescribed format to The Directorate – Industrial Safety and Health (DISH) Department. Follow the respective state factories rules and prescribed forms (say Form 17). Seek HSE leader support for meet the compliance
- **Fatal Case (FC):** Fatal Case is an event causing a loss of life immediately on the spot or subsequently arising out of that incident.
- **Occupational Illness:** A health condition caused, precipitated or aggravated by exposure to workplace over a period of time. According to the WHO, Chronic respiratory diseases, musculoskeletal disorders, noise-induced hearing loss and skin problems are the most common occupational diseases. Work-related noncommunicable diseases (NCDs) as well as cardiovascular diseases and depression caused by occupational stress result in increasing rates of long-term illness and absence from work. Occupational NCDs include occupational cancer, chronic bronchitis and asthma caused by air pollution in the workplace and radiation.
- **Fire:** Any event of un-intended combustion, regardless of the extent, with or without flame.
- **Environment Release:** All incidents which have potential adverse impact on the environment; normally those incidents where prescribed limits as per statutory, if any, are exceeded.
- **Reportable Loss time injury frequency Rate:** R – LTIFR is a representation of business’s safety – it refers to the number of lost-time injuries sustained per million hours worked.
- **Reportable Loss time injury Severity Rate:** R – LTISR is calculated based on Man days lost due to reportable injury per million man-hours worked, consider all man days lost due to reportable incident and fatal incident.
- **Personal Protective Equipment (PPE):** All equipment and clothing intended to be utilised, which affords protection against one or more risks to health and safety. This includes protection against adverse weather conditions.
- **Dangerous Occurrence is defined as:**
 - Collapse or failure of lifting appliances or hoist or conveyors or other similar equipment / machine;
 - Collapse or failure of a crane, derrick, winch, hoist or other appliance used in raising or lowering persons or goods or any part thereof, or the overturning of a crane

- Explosion or fire causing damage to the structure of any room or place in which persons are employed, or to any machine or plant, resulting in the complete suspension of ordinary work
- Electrical short circuit or failure of electrical machinery, plant or apparatus, attended by explosion or fire, causing structural damage involving its stoppage or disuse;
- Collapse in whole or part from any cause whatsoever of any roof, wall, floor, Structure or foundation forming part of the construction site in which persons are employed;

Legal References

The procedures in this manual should be read in conjunction with statute and amendments issued time to time.

Indian statutory requirements

Contractor shall develop thorough understanding about the statutory regulations, (mentioned below) not only to satisfy the regulatory body perspective but to use legislation as the strongest tool for effective implementation of OHS management at work sites. Contractor is strongly advised to practice the principle of voluntary compliance.

In order to facilitate the Contractor for better understanding on the various provisions of the above Acts & Rules, a tabulated information highlighting the Sections / Rules referring to the corresponding registration of Contractors, maintenance of registers and records, hours of work and wages, welfare, medical facilities and safety requirements are given in **Annexure 1**. It is an indicative one and not a limiting list. In addition, works shall be undertaken in accordance with all applicable legislation and Indian statutory requirements listed below but not limiting to:

- CEA (Safety requirement for Construction, O&M of Electrical Plants & Lines) Regulations 2011 & amendments
- The Indian Electricity Act 2003 & amendments
- Central Motor Vehicles Act 1988, Rules 1989 & amendments
- The Environment (Protection) Act and Rules 1986 & amendments
- Hazardous Wastes (management, handling and trans-boundary movement) Rules 2016 & amendments
- The Air (Prevention and control of Pollution) Act, 1981 & amendments
- The Water (Prevention and Control of Pollution) Act, 1974 & amendments
- “The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act” 1996 & amendments
- “The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Central Rules 1998 & amendments
- The Factories Act, 1948
- The Chemical Accidents (Emergency Planning, Preparedness & Response) Rules, 1996
- Manufacture Storage & Import of Hazardous Chemicals Rules 1989 & amendments
- Noise Pollution (Regulation & control) Rules & amendments
- The Batteries (management & handling) Rules 2001 & amendments
- Bio-Medical Waste Management Rules, 2016 & amendments
- The Petroleum Act 1934 & Petroleum Rules 2002
- The Public Liability Insurance Act 1992
- The Workmen’s Compensation Act 1923 & amendments
- The Contract Labor (Regulation & abolition) Act, 1971 & amendments
- The Child Labor (Prohibitions & Regulations) Act, 1986 and Rules 1988
- The Minimum Wages Act, 1948 and Rules 1950 & amendments
- Employee State Insurance (Central Rules), 1950 & amendments
- Central Ground Water Board, Act January 1997 & amendments
- Notification on Control of Noise from Diesel Generator (DG) sets, 2002 & amendments
- National Building Code, 2005
- Other Laws of India, Regulations, Rules and Codes of Practice on Safety and Health that may be applicable.

Note 1: The Contractor shall ensure that all his employees / workmen are covered under 'Workmen Compensation Act' and shall pay compensation to his workmen as and when the eventuality for the same arises.

Note 2: Notwithstanding the above Act / Rules, there is nothing in those to exempt the Contractor from the purview of any other Act or Rule in Republic of India for the safety of men and materials.

International Standards, Guidelines & Certifications

The works should be undertaken in accordance with the applicable international guidelines, standards and specifications on OHS. The important Indian Standards as applicable to the work of this contract and every Contractor shall aim to achieve certification of ISO 45001:2018.

Duties of Contractors / Sub Contractors and persons employed

Securing safe, healthy places of work requires full co-operation of Contractors and sub-Contractors and the persons employed by them. It is imperative that there is no ambiguity with regard to the responsibilities of any individuals in connection with duties relating to health and safety.

Every person employed by Contractors and sub-Contractors on construction sites are obliged to comply with the general duties imposed on them under the Contract. Every person employed should, not only avoid careless or reckless behaviour, but should also take positive steps to understand workplace hazards. They must follow all necessary safety rules and regulations and procedures and ensure that their acts or omissions at work do not put the health and safety of self or others at risk.

Every Contractor and sub-Contractor shall: -

- Be responsible for complying with all statutory and contractual requirements on HSE including the general duties imposed on them under the Laws and Regulations of the Government of India and State Government. The Employer shall only deal with health and safety matters through the Contractor and shall hold the Contractor responsible for all his and his Sub- Contractors, actions.
- ensure that an adequate level of competent supervision is always maintained at the workplace by supervisory staff having the relevant knowledge, training, and experience to enable them to supervise the work in a proper manner.
- be responsible for the provision of suitably trained and qualified safety staff to carry out regular safety inspections, safety promotion, and safety audits and for retention of records of all such activities for inspection by the Employer.
- be responsible for providing health and safety training to all workers and supervisors on site, and for retention of records of such activities for inspection by the Employer.
- be responsible for organizing site safety committees which shall meet at least monthly.
- be responsible for reporting incidents and accidents to the Employer's Representative by the quickest practicable means.
- promptly provide the Employer with any information (including any relevant part of any risk assessment in his possession or control) which —
 - might affect the health or safety of any person carrying out the construction work or of any person who may be affected by it,
 - has been identified for inclusion in the health and safety file in pursuance of rules & regulations

- comply with any directions of the Employer given to him under applicable Acts, rules & regulation and any site rules.
- consult workers or their representatives in good time on matters connected with the project which may affect their health, safety or welfare
- so far as is reasonably practicable, be suitable and sufficient safe access to and egress from every place of work and to and from every other place provided for the use of any person while at work, which access and egress shall be properly maintained.

Discipline

Any major breaches of the HSE Manual, relevant Statutory Provisions and Safety Codes, or any other blatant disregard for the health and safety by any person directly or indirectly associated with the works may result in the Employer exercising their authority in requiring the removal from the Site of the Contractor's Site Manager and/or other personnel.

The Contractors shall develop a system of disciplinary measures and procedures, which shall be implemented immediately that the site activities commence. These measures and procedures should include amongst other things:

- The issue of Warning Notices.
- The removal from site of personnel who disregard safety instructions.

Any person who is removed from the site for breach of safety measures shall not be allowed to be re-employed on any other Employer's worksite without specific approval from the Employer's HSE Head.

Responsibilities and accountabilities of Contractor

It is the objective of the Employer to ensure that the Contract is completed on time, within budget, and to conforming standards of Occupational Health and Safety as per this document.

Governance System

The Contractor shall be responsible for constituting and participating in site level HSE committee involving management and workmen under chairmanship of the site in-charge and shall review HSE performance including leading indicators (training, reported UA/UC/NM cases) and lagging indicators (FAC, MTC, RWC, 'Lost Time Injuries' etc.). The committee shall be responsible for submitting HSE related MIS to the concerned Hub managers.

Appointment of HSE Resources

Contractor shall be accountable to ensure that team working are continuously identifying and correcting Unsafe Acts (UA) and Unsafe conditions (UC) and all incidents including near misses (NM), accidents are reported, recorded, investigated and recommendations are acted upon in a time bound manner.

Contractor shall appoint necessary and agreed competent HSE resources for the job. As a best practice, Contractor should ensure availability of One HSE Officer in case of up to 50 deployed employees. However, if deployed employees are >50 numbers then minimum one HSE Manager is required and for every additional 50 employees, an additional HSE officer shall be required. These HSE resources shall be approved by IndiGrid based on available criteria. The Contractor should also deploy trained HSE stewards at the rate of one for every fifty (50) personnel for ensuring safety vigilance.

Pre- Employment Medical check up

The Contractor shall carry out a pre-employment medical check-up for all its personnel and shall be able to produce the certificate of fitness to the Employer prior to the deployment of such personnel at Site. The Contractor shall also organize periodical medical check-up (six monthly) for the following category persons:

- drivers and equipment operator: check for vision and hearing.
- height workers: check for vision, hearing, vertigo and acrophobia.
- dangerous substances handlers: effect of chemicals and substances.

Personal Protective Equipment (PPEs)

- The Contractor shall ensure availability and use of suitable quality personal protective equipment to its personnel. Use of safety helmets, safety shoes, high visibility jackets, handgloves fit for the purpose and safety eye wear shall be mandatory. Based on the job requirement, other PPEs like gum-boot, respiratory mask for dust nuisance or other chemical fumes protection, full body harness with lifeline support, retractable fall arrester, arc flash suit, flame retardant cloths, welder's masks with suitable screen numbered visor, gas cutter goggles, runner etc., shall be used as indicated in Work Permit and Job Safety Analysis.
- All PPEs used by the personnel shall, at all times, be in accordance with at least one of the following internationally recognized standards: (i) ANSI; (ii) ISO; (iii) BS; (iv) IS or (v) EU. The Contractor shall take prior approval of the Employer, for any deviation in the PPE standards proposed to be used for the performance of the Scope of Work. (Please refer point 11.28 for more information)

Qualification and Experience

The minimum educational qualification and the work experience are

- HSE Manager must be qualified as per legal requirement made under Indian Electricity Rules and CEA regulations and with more than 6 years of experience
- HSE Officers must be qualified as per Legal requirements made under Indian Electricity Rules and CEA regulations and with minimum 3 to 5 years of experience.
- HSE steward should be a graduate with Diploma in Safety having minimum 3 to 4 years of experienced on project site.

Approval from Employer

All Contractors must take consent for deployment of HSE Manager and HSE Officer from the HSE Head of IndiGrid before deployment.

- The name, address, educational qualification, work experience and health condition of each personnel deployed for HSE jobs shall be submitted to the Employer in the format prescribed for the purpose for comments and consent well before the start of the work.
- Only on consent by the Employer these personnel are authorized to work.
- In case any of the HSE personnel leaves the Contractor site, the same shall be intimated to the Employer. The Contractor shall recruit new personnel and fill up the vacancy within a week if required.

Conduct and Competency

The conduct and functions of the Contractor's HSE personnel shall be monitored by the Employer. Any default or deficiency shall attract penalty as per details given below:

- Violation with respect to lack of valid gate-pass, basic PPEs and / or other traffic violations: Indian Rupees One Thousand Only (INR 1000) per violation.
- Violation with respect to work at height, electrical, confined space entry, excavation, hot jobs, barricading, heavy motor vehicle, crane: Indian Rupees Five Thousand Only (INR 5000) per violation with a ceiling of Indian Rupees One Lakh Only (INR 1,00,000) per contract exceeding which the Employer can terminate the Contract.
- Fatal accident: Indian Rupees Fifteen Lakhs Only (INR 15,00,000) or five percent (5%) of the SO Price, whichever is less, for the first fatality and Indian Rupees Twenty Lakhs Only (INR 20,00,000) or five percent (5%) of the SO Price, whichever is less, for the second fatality. For any further fatalities, the Employer may at its discretion levy appropriate damages or may choose to terminate the SO at the risk and cost of the Contractor.
- Lost time injury (on 24 hours basis) or non-reporting of incidents: Indian Rupees Fifty Thousand Only (INR 50,000) for each lost time injury or incident not reported.
- Serious (grievous) injury, such as loss of limb or a loss of more than twenty one (21) man-days: Indian Rupees Five Lakhs (INR 5,00,000) or five percent (5%) of the SO Price, whichever is less, for the first grievously injured person; and Indian Rupees Seven Lakhs (INR 7,00,000) or five percent (5%) of the SO Price, whichever is less, for every subsequent grievously injured person. For the purpose of levying these damages, "grievous injury" shall have the meaning ascribed to the term in the Employee's Compensation Act, 1923.
- Dangerous occurrences: Indian Rupees One Lakh (INR 1,00,000) or five percent (5%) of the SO Price, whichever is less, for the first violation and Indian Rupees Two Lakh (INR 2,00,000) or five percent (5%) of the SO Price, whichever is less, for subsequent violations.
- Procedural violation, including absence of method statement, staging and shuttering plan, concreting plan, erection/dismantling plan or non-compliance with any statutory requirement: Indian Rupees Fifty Thousand (INR 50,000) or five percent (5%) of the SO Price.
- Any incident involving injury to a member of the public: Indian Rupees Fifty Thousand (INR 50,000) or five percent (5%) of the SO Price, whichever is less for first violation and Indian Rupees One Lakh (INR 1,00,000) or five percent (5%) of the SO Price, whichever is less, for subsequent violations.

The Contractor shall ensure that all personnel are competent to perform the job assigned to them. In the event that the Contractor is unable to demonstrate the competency of any person whose activities can directly impact on the site HSE performance, the Employer shall remove that person from the site without any procedural formalities.

The Employer shall have the right to stop the work at his sole discretion, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and / or property, and / or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury / accident.

The Contractor shall not proceed with the work until he has complied with each direction to the satisfaction of Employer.

The Contractor shall not be entitled for any damages / compensation for stoppage of work, due to safety reasons and the period of such stoppage of Work shall not be taken as an

extension of time for Completion of the Facilities and will not be the ground for waiver of levy of liquidated damages.

Access Control Security System

The Contractor shall be responsible to provide valid identity card as approved by the Employer's site team to its personnel. This should indicate basic detail about the Contractor's personnel. These should be issued only when the Contractor's personnel have attended HSE orientation / induction and passed health screening.

Personnel Access, Vehicle and Material/Equipment Movement Control

- All personnel, vehicles and materials moving in and out of the Site shall move only through the designated security check points.
- All personnel must register their ingress and egress by going through the security checkpoint to ensure that they are accounted for.
- Materials / equipment moving in and out of the Site shall be accompanied by approved gate pass.
- All personnel bringing their property such as personal computers, tools, equipment and samples must declare at the security check points using the Material/Equipment Gate Pass before entering the Site.
- Approval will be required from the authorized signatories before bringing out any personal property from the Site which was not previously declared at the security checkpoints.

HSE Awareness, Training and Communication

HSE Orientation

All Contractors, and SubContractors are required to attend Site HSE orientation / induction training, prior to entry to the Site.

The information provided during the orientation shall include:

- Job rules, personal safety and conduct
- IndiGrid Life Saving Rules, hazards reporting
- reporting of injuries/pre-existing conditions; emergency procedures
- firefighting
- HSE activities and program including disciplinary measure and incentives and
- JSA and PTW as outlined above.

Contractor shall also issue personnel HSE handbook in a language known to the workers, which provides information on HSE and emergency procedures that all personnel working on contract are required to know and the need to follow. Contractor shall ensure that this is distributed, and its content introduced to all personnel working at the site.

HSE Training

HSE Training is an important factor in managing safety on work sites. The behaviours of people at all levels of the Contractor are critical for HSE performance.

- The Contractor shall organize quality HSE training to engage Managers, Supervisors and Other personnel to improve safety performance.
- A class room with all required facilities should be arranged by Contractor at site for imparting HSE training to the workforce. It should also contain all Personal

Protective equipment (PPEs) & exhibition of posters along with Do's and Don'ts. Special physical arrangement of situations shall be made to impart special trainings on practical aspects of his works.

- The Contractor shall analyse the training requirements for all the employees and initiate a training program to demonstrate that all persons employed, including subContractors, are suitably qualified, competent and fit.
- The Contractor shall arrange behaviour-based training programs for all the executives to identify recognize and eliminate unsafe act and unsafe conditions.
- All Contractors shall provide as a minimum the following types of training in addition to HSE orientation. The HSE Training shall be conducted as per prepared HSE Training Matrix.

Job Specific Training

Persons with hazardous tasks, such as Crane Operators, Slings and Plant/ equipment Operators, Electrician, Welder and Cutter, Vehicle drivers etc. should have training certificate from competent authority for relevant jobs based on the scope of work.

All vehicle drivers and operators shall be trained in defensive driving techniques, as may be provided by a State Government Licensing Authority or approved equivalent agency. All vehicle drivers shall also undergo refresher training once in 6 months.

Regulatory Training:

Specific training is recommended in many act, rules & regulations in certain circumstances base on the scope of work the regulatory training needs are recommended shall be conducted for

- Hazard Communication CPR / First aid Emergency Response Respiratory protection
- Power-operated hand tools Gas welding and cutting Confined space entry
- Lock Out Tag Out Excavation / Trenching

On-the Job (Spot Practical Skill Development) Training

On the job training on safety issues, shall also be conducted with all foremen / workmen associated with these activities for relevant jobs based on the scope of work including

- Working at Heights, Safety in Scaffolding,
- Safety in Lifting and Shifting Crane safety,
- Welding safety, Electrical safety, Lock Out Tag Out
- Excavation / Trenching Safety Traffic safety etc.

Refresher Training

Refresher Training shall be conducted at least every six months to ensure that all workers on worksite are kept up to date with safety requirements on site.

All training that is carried out shall be formally recorded on dated and signed attendance records, with copies of the records being kept on the sites for inspection by the employer's Representative

HSE Promotional program

The Contractors at each of their Project sites in the interests of promoting safety awareness amongst the workforce shall devise and implement practical HSE Promotion Programs in coordination with IndiGrid and project manager team.

The objective of these HSE Program is to inculcate and sustain safety culture amongst all employees working on project site and continually improve HSE performances and recognize and reward individuals who continually endeavour to work in a safe manner.

HSE Award & Reward:

The Contractors at sites shall introduce HSE award and reward scheme in coordination with IndiGrid and project manager team. Suggestions for such Safety Award and Reward / promotions may be invited time to time.

HSE Performance Review of the contractor including Sub-Contractor shall be conducted every month through Monthly HSE score card. Repetitive low scores shall lead to penalty and even work stoppage at Employer's discretion.

The Employer shall also monitor the Contractor's HSE performance through Compliance report of various recommendations given during Audit / inspection / incident investigation.

Awards and Rewards by the Employer

The following categories will be considered for significant awards by the Client: -

- For 100% Safe million-man hour working without any reportable incidents for the Project
- Zero fatality contracts at the end of Contract
- Safest Contractor of the year based on HSE Score card

Appropriate Certificate & trophy shall be issued by the Client as awards.

Award and Reward by Contractor

The Contractor shall also monitor the HSE performance of his Workers, Supervisors, Staff & Sub-Contractors. He shall conduct motivational award ceremony every month and issue awards/trophy/certificates in following category: -

- Safe Workman of the Month
- Safe Supervisor of the Month
- Safe Staff of the Month
- Safe Sub-Contractor of the Quarter.

HSE Communication:

The Contractor shall ensure full involvement of all his employees recognizing their right to consultation on health and safety matters. The supervisors of the various areas, in conjunction with the HSE officers shall be responsible for ensuring employees involvement through routine HSE inspections, hazard and risk assessment in new and changed works and their control.

The Contractor shall take every effort to communicate the Health, Safety and Environment management measures through regular Poster Campaigns / Billboards / Banners / Glow signs.

- Posters should be in Hindi, English and other suitable regional language deemed appropriate.
- Posters / Billboards / Banners / Glow signs should be changed at least once a month to maintain their impact.

The Contractor should follow **Annexure 2: HSE Calendar days**

HSE Inspections and Audits

The Contractor shall maintain a procedure for HSE Inspections at routine intervals to provide assurance that the instituted HSE procedures are in place to prevent deviations from established standards that could lead to a HSE hazard and consequential risk.

The Contractor shall evolve and administer a system of conducting HSE inspections and other risk management analysis on a periodical basis as like regular, intermittent, weekly and monthly etc. with developed check lists specifically for these works.

Planned General Inspection

Planned general inspections are performed at predetermined intervals and it usually involves the representation from both Contractor and the Employer.

Inspections that will be classified under this inspection program are:

- Daily safety inspection by Contractor site HSE team.
- Weekly safety inspection by construction supervisors (Contractors and Sub-Contractors).
- Monthly Contractor and sub-Contractors site safety committee Inspection. Any other Inspection organized or type of inspection issued by the Employer shall be undertaken.

Routine Inspection

Routine inspections are often referring to the inspection of worksite, equipment, work activities performed by equipment operators and temporary structure erectors etc.

Inspections that will be classified under this inspection program are:

- Daily Inspection of plant and equipment by operator.
- Weekly Inspection of scaffold by scaffolding supervisor as per procedure.
- Monthly Inspection of electrical hand tools, electrical equipment, temporary electrical systems by competent electrical supervisor as per inspection procedure with specific checklist.
- Quarterly Inspection of access equipment, Fire extinguishers, Hand tools, civil equipment, mechanical equipment etc., by competent supervisor as per inspection procedure with specific checklist.
- Half-yearly inspection of lifting machines, lifting appliances, equipment and gears by Govt. approved competent person.

The list mentioned above is not exhaustive. Contractor may add additional categories.

Contractors' Site HSE Manager will ensure that routine inspections are carried out periodically to all plants, equipment, powered tools and any other temporary structures that will pose a hazard to operators and workmen.

Specific Inspection

Specific inspections are performed on activities without a predetermined date. Competent supervisors usually perform inspections for ensuring an activity whether it is executed in accordance to a general set of rules; method statement submitted or developed procedures.

- Mandatory Inspections by Govt.
- Departments Inspection by Project HSE management team

All inspection records and reports will be properly kept and filed for audit purpose. Inspection reports of Planned General Inspection and Routine Inspection will be used for discussion during Safety Committee Meetings.

HSE Audits

Project Manager and Contractors staff are required to carry out periodical (as mutually agreed) site HSE audits and prepare reports of such audits. Copies of the completed audit reports shall be kept on site and available for inspection by the Employer's Representative. The frequency of the audits shall be determined by site activities and general conditions. However, the audits should be conducted at a minimum of once a month.

Audit reports should be discussed with the relevant Hub / Regional Managers. These shall also be discussed with the sub-Contractors and other levels of site management in the Site HSE committee meetings.

The Employer's representatives may carry out site HSE audits, which shall be attended by the Contractors' Site Manager and HSE Manager.

Contractor's Site HSE Committees

The objective of the HSE Committee is to promote a safe and healthy work environment for the site by creating a strong awareness of environment safety & health and reducing or eliminating accidents, injuries, and illnesses throughout the completion of project work. All employees should be able to participate in the making and monitoring of arrangements for safety and health at their place of work. The establishment of site HSE committees in which employees and Contractor and sub-Contractor management are represented can increase the involvement and commitment of employees. The Contractor shall set up such site HSE committees to promote and monitor safety and health on their worksites. A copy of the agenda shall be forwarded to the Employer's Representative seven days prior to the meeting date, in order that they can decide if it is necessary for them to attend.

Composition and Functions of Contractor's Safety Committees

The Contractor shall also appoint a HSE Committee comprising of the representatives from the various areas. The committee shall meet at periodic intervals to discuss the status and adequacy of the HSE management, and any concerns of the employees.

- The committee shall also formulate and validate the safety procedures incorporating controls to prevent or mitigate hazards and risks before submission for approval.
- The minutes of the HSE Committee meeting shall be submitted to the Employer.
- The Contractor's Safety Head / Safety Officer shall maintain the records of the meetings.
- Site HSE committee shall be constituted within 14 days of award of contract and notification regarding the same shall be communicated to the members and employees. Function of HSE committee should be as follows.
 - To monitor the adequacy of the HSE procedures at sites and ensure its implementation.
 - To monitor safety inspection / audit reports; discuss detected unsafe practices and unsafe conditions, recommend remedial measures for their rectifications including first- aid medical and welfare facilities.

- To study accident statistics and trends so as to identify unsafe practices and conditions; identify probable causes of accident and to suggest remedial measures.
- To review the emergency and rescue procedures;
- Review the last HSE committee meeting minutes and take follow up actions on minutes of meeting. and take action against persons / sub- Contractors for non- compliance if any
- To bring to the notice of the Employer the hazards associated with use, handling and maintenance of the equipment
- To suggest measures for improving welfare amenities in the construction site and other miscellaneous aspect of safety, health and welfare in building or other construction work.
- To review safety promotional & awareness programs organized (like safety week, safety competition etc.

Agenda

The Secretary shall circulate the agenda of the meeting at least seven working days in advance of the scheduled date of the meeting to all members

The agenda should broadly cover the following:

- Chairman's review / overview of site HSE performance / conditions.
- Previous month HSE statistics
- Incident and Accident Investigation / dangerous occurrence / near miss report
- Site HSE inspection
- Sub-Contractors' HSE issues
- Report from Employer

The Membership of the committee should be as follows.

Chairman: The Contractor's most Senior Manager for the Contract.

Secretary: The Contractor's HSE Manager / Officer

Members: Contractor's and Sub-Contractor's management representatives and staff.

Minutes of the meeting

Minutes of the Site HSE Committee shall be sent to all members within two working days of the meeting preferably by mail followed by hardcopy. HSE Committee meeting minutes shall also be displayed on the notice board.

Disciplinary Action

The chairman shall inform the members of any outstanding issues in the meeting and in case of repeated offence / non-compliance by some members or others (co- Contractors / sub-Contractors) and propose suitable disciplinary action including provisions of monetary penalty as per the relevant contract clauses, the Employer shall ensure that the same is implemented.

Industrial Health, and Welfare

The Contractor shall be responsible for maintaining healthy working conditions for all his, and his subContractors, workers. In particular, he shall pay attention to the effects of noise, dust, air pollution and the use of chemicals. If it is not possible to remove the cause of harm, then suitable and sufficient Personal Protective Equipment (PPE) should be provided to those workers who could be affected.

If the use of PPE is the only means of providing protection the Contractor shall ensure that all the workers affected are properly trained in the use of the PPE and that adequate supervision is provided to ensure its proper use.

Storage of Hazardous Materials

- Hazardous materials shall be stored on solid bases. Solid bases shall include compacted earth, pallets, concrete or asphalt platforms or paving. Hazardous materials shall be stored, stacked and secured to prevent toppling, spillage or other unintended dislodgement. Hazardous materials shall be stacked in such a manner that an observer standing in the aisle can read their labels and legend.
- Each hazardous material contained shall be identified by a legible label or legend as per governing statute, code or regulation. The label shall identify the item, quantity and appropriate warnings.
- Hazardous materials which if brought in contact with each other could react or pose equal or greater hazard than either material stored alone shall be stored at a distance not lesser than twenty feet apart.
- Warnings shall be posted and maintained in a legible condition at all access points clearly defining the specific hazardous nature of the stored materials such as 'Corrosive', 'Flammable', 'Explosive', 'Oxidizing', 'Compressed Gas' or other hazardous nature.
- Where hazardous materials are unloaded in the Contractor's storage maintained at site in a semi-permanent installation, such installations shall be approved by relevant statutory bodies. Copies of licenses for storage shall be lodged with the Employer. The containers and storage shall display quantities stored with name of the hazardous material and the UN hazard classification label in prescribed colour code prominently painted in a conspicuous manner.
- The CONTRACTOR shall inspect the hazardous storages and installations daily and shall undertake any requisite preventive action necessary to avoid HSE risks.

Health Hazards & Environment Control

The Contractor shall strive to exceed established minimum performance norms in waste and pollution control. All drains shall be identified as clean water and foul water to aid non-armful disposal.

Air Quality

- The Contractor shall take all necessary precautions to minimize fugitive dust emissions from operations involving excavation, grading, and clearing of land and disposal of waste. He shall not allow emissions of fugitive dust from any transport, handling, or storage activity

- The Contractor shall use equipment designed and equipped to minimize or control air pollution. He shall maintain evidence of such design and equipment and make these available for inspection by Employer.
- If after commencement of activity, Employer believes that the Contractor's equipment or methods of working are causing unacceptable air pollution impacts then these shall be inspected and remedial proposals shall be drawn up by the Contractor, submitted for review to the Employer and implemented.
- In developing these remedial measures, the Contractor shall inspect and review all dust sources that may be contributing to air pollution. Remedial measures include use of additional / alternative equipment by the Contractor or maintenance / modification of existing equipment of the Contractor. If approved remedial measures are not being implemented and serious impacts persist, the Employer may direct the Contractor to suspend work until the measures are implemented, as required under the Contract.
- Contractor's transport vehicles and other equipment shall conform to emission standards fixed by Statutory Agencies of Government of India or the State Government from time to time. The Contractor shall carry out periodical checks and undertake remedial measures including replacement, if required, to operate within permissible norms.
- The Contractor shall establish and maintain records of routine maintenance program for internal combustion engine powered vehicles and equipment used on this project. He shall keep records available for inspection by Employer.

Water Quality

- The Contractor shall comply with the Indian Government legislation and other State regulations in existence in so far as they relate to water pollution control and monitoring.
- The Contractor shall provide adequate precautions to ensure that no spoil or debris of any kind is pushed, washed, falls or deposited on land adjacent to the site perimeter including public roads or existing stream courses and drains within or adjacent to the site. In the event of any spoil or debris from construction works being deposited or any silt washed down to any area, then all such spoil, debris or material and silt shall be immediately removed and the affected land and areas restored to their natural state by the Contractor to the satisfaction of the Employer.
- All water and waste products (surface runoff and wastewater) arising on the site shall be collected and removed from the site via a suitable and properly designed drainage system and disposed-off at a location and in a manner that will cause neither pollution nor nuisance.
- The Contractor shall take measures to prevent discharge of oil and grease during spillage from reaching drainage system or any water body. Oil removal / interceptors shall be provided to treat oil waste from workshop areas etc.

Noise

Industrial deafness is caused by over exposure to high levels of noise from plant, machinery or construction processes. Once a part of a person's hearing has been lost it can never be recovered. Deafness can also lead to further accidents on site with workers being unable to hear warnings and other instructions.

- Workers should not be exposed to sound levels exceeding 90dB (A) unless they are wearing suitable hearing protectors, which effectively reduce the sound level at the user's ear to, or below, 90dB (A).
- The Contractor shall carry out noise assessments to establish what noise levels his workers are being exposed to. If excessive noise levels above 90dB (A) are found, then the Contractor shall introduce a noise control program to protect his workers.

Consideration should always be given first to reducing the noise level at source. Examples of noise reduction methods include;

- More efficient silencers on compressors and maintenance of exhaust systems;
- Fitting acoustic lining to machinery panels;
- Use of Acoustic screens and sheds to protect other workers;
- Using noise reduced tools;
- Sighting of noisy plant away from the workplace

Where it is not possible to reduce the noise level to which the worker is exposed the Contractor shall provide the workers with suitable and sufficient hearing protection to protect them. The Contractor shall ensure that all the workers affected are properly trained in the use of the Hearing Protection and that adequate supervision is provided to ensure its proper use.

Illumination

The Contractor shall provide lighting natural or artificial to enable work Processes are carried out safely. Artificial lighting shall be adequate especially in the nights and emergencies. The lumen levels shall meet the statutory requirements

The Contractor shall take every effort to illuminate the work site as per the Employer's requirement illustrated in table below.

Facility /Area	Luminance- Lux Labels
Administrative Office, Meeting Room	250
Access Ways	110
Parking Areas	55
Work Areas (General)	325
First Aid rooms	325
Toilets /Wash Areas	110
Storage Areas (Indoor/Outdoor)	110
Maintenance Areas/ Welding areas	150
Crane Operation Area	150

Waste

The CONTRACTOR shall ensure that he has sufficient waste bins that are identified for different wastes and maintained in clearly demarcated areas. Wastes with oily or other ignitable materials such as oily cotton wastes and hand gloves shall be stored separately with covers to prevent fires and shall be made of metal. Different wastes shall be segregated

and stored separately and disposed-off. These shall be emptied at routine intervals to prevent that they do not overflow with wastes.

The Contractor shall handle waste in a manner that ensures they are held securely without loss or leakage thus minimizing potential for pollution. The Contractor shall maintain and clean waste storage areas regularly.

The Contractor shall remove waste in a timely manner and disposed off at landfill sites after obtaining approval for disposal.

Burning of wastes is prohibited. The Contractor shall not burn debris or vegetation or any other waste on the site but remove it in accordance with standard procedure.

Welfare Measures

The Contractor shall provide welfare facilities to ensure a high standard of cleanliness for all activities and rest. The Contractor shall provide facilities for his employees such as ablutions, toilets change rooms, kitchens and cafeterias etc. adequate and in a clean and hygienic state

Toilets (Latrine and Urinal Accommodation)

- The Contractors shall ensure that an adequate number of toilets are made available at the work sites.
- The toilets shall always have adequate water supply and be kept in a clean and tidy condition.

Drinking Water

- The Contractors shall ensure that effective arrangements are made to provide and maintain at suitable points a sufficient supply of drinking water.
- The Contractor shall make in every worksite, effective arrangements to provide sufficient supply of drinking water with minimum quantity of 5 liters per workman per day.
- Quality of the drinking water shall conform to the requirements of national standards on IS -10500.
- While locating these drinking water facilities due care shall be taken so that these are easily accessible within a distance of 200m from the place of work for all workers at all location of work sites.
- All such points shall be legibly marked "Drinking Water" in Hindi, English and local language.

Premises and House-keeping Orderly Workplace

The Contractor shall maintain a well-managed safe working place in sound clean condition. The Contractor shall ensure that there is a place for everything and everything in its place so that optimum use is made of valuable floor space with commensurate cleanliness and reduced handling time. He shall ensure that his entire infrastructure including temporary and semi-temporary buildings are kept clean and good repair.

HSE Procedures

Permit to Work

The Contractor shall be familiar with permit requirements and shall be responsible for ensuring compliance with such permit requirements. No work shall be carried out without work permits authorized by the Employer unless exempted at the Site. The

work permit shall be issued with a validity of only one shift which can be renewed shift-wise. However, the Employer shall have the right to issue the work permit for a longer duration, based on the nature of work. No work permit shall be issued unless the Contractor has a written job safety analysis (JSA) approved by the Employer, preferably in the local language prevalent at the Site. All work performed after 10pm shall require a separate 'night work permit' to be issued by the Employer and the same has to be procured and acknowledged by the Contractor. For avoidance of doubt, it is clarified that when night work is required a period of 'overlap' shall be scheduled such that the day and night engineers can discuss the work and align themselves on the Work to be performed under such night work permit. For Sunday and holidays, separate work permit shall be required which shall be authorized by the Employer's concerned line manager and/or HSE officer.

Work at Height (W@H)

The Contractor shall have a written plan for W@H, in addition to the relevant certificate(s), certifying the right to W@H. Such plan shall ensure that:

- Height works above one point eight (1.8) metres have safe access, egress, and safe platform. Otherwise people shall be secured through use of full body harness with double lanyard including shock absorber and sufficient strengthened lifeline support.
- Working platform shall have handrail, mid rail and toe board. Certified horizontal lifeline shall be used, preferably 8mm wire rope.
- Working at more than five (5) metres (e.g. transmission tower etc.), or requiring different body posture even at lesser height shall require "Fall Arrestor" (for vertical movement).
- Suitable arrangements such as Safety net to prevent Falling objects shall be installed to arrest such objects.
- Step ladder / platform should be used if any personnel intends to work at height. Use of empty drums to climb up is banned. People taking tools for working at height shall have tool kits to facilitate three (3) point contact during access and egress.

All the personnel involved in designing fall prevention measures or fall protection measures shall be subject to formal competency checks by the Contractor, prior to the personnel commencing the assigned work, to ensure that such personnel have the necessary training, experience and qualification to perform the assigned work. The Contractor shall also have a rescue plan in writing, which provides for, inter alia, the manner and mechanism in which all persons at the Site, including people working at a height, are to be rescued.

Electrical installation

The Contractor shall ensure that:

- Any temporary power distribution system including the source shall be designed and approved by Employer's electrical engineer.
- All cables overhead should be more than two point five (2.5) metres on insulated or wooden support and no temporary cable shall be laid over the ground.
- All electrical installations, distribution box and welding machines should be prominently marked for identifications with hazard signs and following information shall be

provided: identification number, name of the Contractor / SubContractor, source of incoming / outgoing power and danger sign in case of 440V DB.

- Power supply points are of adequate capacity, provided with proper switch and fuse arrangement and installed at strategic locations.
- Panel rooms / distribution box pathways are clear and free from any obstructions.
- While working near the live electrical conductors, arc flash suit of sufficient rating, as per JSA and PTW, shall be used.
- Temporary electrical installations must meet the same electrical code requirements as permanent installation, i.e. proper earthing, glands and seals at electrical boxes and cable repairs equal to the original cable insulation.
- Earth Leakage Circuit Breaker (ELCB) or Residual Current Circuit Breaker (RCCB): earth protection for personnel on the Sites shall be provided by a thirty milli-ampere (30mA) ELCB / RCCB. It should not be replaced by MCB.
- The Electricity Rules, including amendments & revisions and HSE requirements specified under the applicable regulations issued by the Central Electricity Authority are complied with and the following are adhered to:
 - Engage a wireman and technician or engineer (license holder) to work on all electrical installations.
 - Ensure that only industrial type plug and sockets are used, and proper earth is provided on electrical installations.
 - Electrical distribution boxes are installed on mountings at predetermined locations with its nomenclature.
 - Rain protections are provided on electrical installations and DBs.
 - Only three core double insulated cables are used for any temporary wiring or portable / handheld tools or lightings.
 - Use authorized cable jointers / connectors to join the cables.
 - Handles / body of portable electrical tools shall be of rubber or insulating material; and electrical system shall be handled by a competent and authorized person for the voltage as per authorization and in line with the applicable statutory requirements.

LOTO

- The Contractor's supervisor shall ensure that lock-out and tag-out is performed according to the plan and no personnel works beyond the facilities protected through lockout and danger tags.
- All people involved directly or indirectly in the work associated with hazardous energy sources shall be involved in the control of these hazards. This involvement may include developing and / or reviewing the lockout plan, placing the locks and danger tag on isolation devices or group locks system or at least verifying the lock / tag on the equipment on which they are supposed to work.
- The Contractor shall ensure that its personnel will try to ensure proper isolation before allowing people to work on the equipment. After ensuring proper lock-out and tag-out, key to the lock shall be made available to the concerned supervisor or the engineer in-charge.

Motor Vehicle

All motor vehicles to be used in the performance of the Scope of Work shall be strictly fit for the purpose. Following must be ensured: a valid driving license and vehicle insurance, adequate road worthiness (vehicles less than ten (10) years old for heavy vehicle and less than five (5) years for passengers vehicle, good tyre, engine condition, working front and back lights, horn and reverse horn, three (3) way mirrors, registration number clearly visible, good body condition, good brake system, retractable three (3) point seat belt, ABS and air bags for passenger vehicle. Vehicle should have periodic maintenance record as per OEM. The driver shall not be less than twenty five (25) years of age with minimum of five (5) years of driving experience with good eyesight. Drivers shall not be allowed to drive for more than two (2) hours at a stretch.

- Transportation of passengers shall only be permitted in the passenger compartment of vehicles. All the passengers and driver shall use seat belt irrespective of their sitting position and the driver shall not be driving using mobile phone or under influence of alcohol, drugs or any other narcotic or hallucinogenic substance.
- The driver shall not exceed the posted speed limit. The speed limit on the Site for construction vehicles/ cranes is fifteen (15) km/h. Any load being dispatched from or received at the Site shall not exceed the carrying capacity of the vehicle.
- Tractor trailers while being used for the work of the Employer shall not be used for transporting passengers unless agreed and approved by Site team. These tractors (with trailer/ tanker) shall be driven at a speed of less than twenty (20) KMPH or should have fitted speed governors, should have four (4) wheeled tanker with capacity more than two thousand (2000) litres. The tractor trolley connector pin (coupling) should be either auto-disconnector type or three hundred sixty-degree (360°) rotation type.

Barricades and Signs

- The Contractor shall furnish, erect and dismantle all barricades as required for indicating (warning) and protecting from hazards such as excavated area, opening of a platform, crane swing area, overhead work, to carry out work on road and such other locations. Protective barricades shall be made of sheet metal or 40 NB pipe, painted with yellow and black stripes or red and white stripes, with caution signage on it and strong enough. For warning, indicative barricades can be made of fluorescent tape, cable and ropes with signs affixed. No excavated pit shall be left unprotected or without signs indicating caution during the job till backfilling is completed. Caution tape shall be used to highlight hazards to other personnel that may need to access the area.
- Any barricade must be at least one point five (1.5) metres from the edge of the excavation or opening. No overburden soil, or vehicle movement shall be allowed within one point five (1.5) m of an excavated pit.
- Barricades, in areas with night traffic by vehicles or people, must be lit with warning flashers (red or yellow) every fifty (50) metres and there shall be caution boards and warning flags.

Winch Machine Safety

The winch machine shall be fit for the purpose in terms of its integrity, rope size, diameter and quality, brakes liners, electrical integrity, condition of isolators, double earth for motor and panels, overloading relay setting with respect to rated current of the motor, solid support in its installation –either through a concrete column or steel column. Machine shall be locked with the column with the help of wire rope or foundation bolt and shall have interlocking arrangement in case of sudden increase in speed. Total lifting process of the rope shall be done in the multiple of thirty (30) meters in case where height is more than thirty (30) meters.

Excavation

Before an excavation begins, the Contractor shall verify Site specific conditions such as traffic, vibrations, proximity of structures, soil, surface water and groundwater, chemical contamination of water, water table, overhead and underground utilities along with Site map, weather condition etc.

Precautions required are:

- Remove or stabilize all surface impediments including by way of removal of loose rock or soil that could fall and create hazards to persons.
- Erect either warning barricades (with depth of less than one (1) metres) or rigid, protective barricades (with depth of more than one (1) metre) to avoid leaving an excavation hazard unprotected. However, a spoil pile of one point five (1.5) metre high can be used as a barricade on one side of the excavation.
- Keep spoil dirt and any material or equipment that may fall into an excavation at least one point five (1.5) metre from the edge.
- Excavated pits deeper than one point five (1.5) metres will have a maximum height of vertical wall of one point five (1.5) metres with sloped edges at forty-five degrees (45°).
- Protect, support, or remove underground installations (e.g. electrical ducts, water lines, sewer lines, or fire lines).
- Prohibit personnel from working or passing under the loads of lifting or digging equipment inside the pit.
- Provide support systems such as shoring, bracing, or underpinning to ensure the stability of adjoining buildings, walls or structures, particularly if depth is more than one point five (1.5) metre. In such cases, confined space entry shall be obtained and safe access / egress path shall be provided.
- That no worker shall be allowed to work alone in a trench at any time.

Hot Job

- The Contractor shall obtain and adhere to written work permit while carrying out any hot work involving welding, cutting, brazing, polishing or heating a metal drum, barrel, or tank. Sealed container, cylinder etc. must not be welded or gas cut in any case.
- All operators involved in hot work shall be trained on the hazard and risk control measures as per JSA and should be qualified. Flammable source must be removed or protected from heat using fire retardant mat(s). There shall be flash back arrester on both end at cylinder and torch, precaution related to gas cylinder safety shall be adhered to and welding machine shall be certified by Employer's electrical engineer for suitability and integrity. The Contractor shall not use AC transformer type welding machine and only generator / rectifier type machine shall be used. Electrical DB supply must be fitted with ELCB / RCCB set for thirty milli-ampere (30mA). Spatters generated from hot work must be arrested and the area shall be barricaded if hot

work is performed at height. The Contractor shall ensure availability and use of recommended PPEs as outlined in the JSA and PTW. A trained fire watcher must be placed for all critical hot work. Job and machine grounding must be ensured. In case of hot job in Confined Space, atmospheric test must be carried out by an authorized person.

- The Contractor shall provide fire extinguisher during hot work which shall be periodically inspected and checked for the purposes of being fit to use.

Working Over or Near to Water Bodies

The Contractor shall comply with Employer's standard requirement on working over or near to water bodies including medical suitability, necessary statutory certification, use of life jacket, involving skilled team, rescue system in case person falls in the water and use of insulated powered tools.

Working in Forest

In case Contractor is required to work in forest then Contractor shall:

- ensure entry/work permit from Forest Authority & follow forest regulations.
- maintain Entry Exit Register for the workers entering in forest.
- assess the possible wildlife attack/crawler bite risks; Know the escape routes & Follow defined emergency procedures in case of emergency.
- train the workers about risks & precautions including emergency.
- ensure first aid box, emergency supplies (Water, food, Medicine, torch, Whistle, bells, pocketknife, stick, pepper spray, etc.), and a trained first aider in the workers group.
- ensure adequate PPE (Reflective Full sleeves clothing, boots, gloves, hard hats) usage by the workers.
- ensure Map, compass & communication device with the workers group entering in forest.
- ensure that workers don't enter forest in adverse weather (rain, thunder, storm).
- plan the work in such a way that workers return out of forest before sunset. Camping is not allowed in forest.
- ensure that workers follow defined work procedure.
- ensure competent supervision during forest work.
- ensure that workers Stay in group & no lone working is practiced.
- ensure that the workers do not disturb/harm flora or fauna.
- ensure that workers do not throw waste foods inside forest.
- ensure no workers smoke or fire inside the forest premises.
- ensure that workers practice good hygiene inside forest & never taste forest shrubs.

Corridor Clearance or Vegetation Removal

During the corridor clearance or vegetation removal Contractor shall

- start the vegetation removal work only after getting Permission/NOC from relevant authority (MoEF, State Authority, etc.) in hand.
- prepare a vegetation clearing plan & HIRA and submit to the Client for review and approval.
- Provide Safety Induction training to the gang, communicate the risks involved & precautions required during work to the gang through special training session & daily Toolbox talks.
- barricade the work/tree felling area & fix red flags & Warning sign boards on boundaries.
- ensure presence of Competent Supervisor and Safety Steward during working hours.
- ensure Use of right tool as per requirement.
- ensure adequate PPE usage like Reflective jackets, Helmets, Safety Shoe, Hand gloves, goggles, Face Shield, etc.
- ensure that No unauthorised person is allowed in tree felling area.
- ensure that No lone working is allowed.
- deploy signaller/flagman for working near roadside.

Fire Prevention and Protection

Fire prevention policies of the Employer require prevention and mitigation training on fire emergency, segregated storage area for flammable and combustible material, safety in welding and burning operation, high risk welding operations, etc. and shall be complied with by the Contractor.

Scaffolds

Contractor shall ensure compliance with standard practices for all scaffold related activities. Some of them are:

- Every scaffold and its support shall be of good construction and be of suitable and sound material and strength. Use of wood and bamboo scaffolds are banned.
- All elevated structures/ working platform areas should be guarded on all sides with railings and toe board as described
- Scaffolds shall be designed to support at least four (4) times the anticipated weight of men and material. It shall have standard inclined ladder / staircase for access and egress.
- Landing platform shall be provided at every nine (9) metres of height. Extra support can be taken from existing nearby structure. Maintain a safe distance from power lines.
- Fall protection when erecting, dismantling, modifying scaffolds shall be under the direction of a competent person.
- Scaffold shall be designed, erected, and certified for use by competent persons. Ready for use scaffolding shall be tagged with green board while other scaffolding shall be tagged with red tag and shall not be used pending certification.

Portable Ladders

The Contractor shall ensure that:

- Only commercially available and approved ladders of metal / aluminium / fiber glass can be used.
- Metal ladders shall not be used by persons performing electric welding or working near energized electric lines or services, unless otherwise approved in writing by the Employer for a specific job.
- Painted ladders are not permitted.
- All ladders shall be inspected by a qualified person or inspection agency as per the statutory requirements or requirements of the Employer.
- Bends, dents, cracks, loose or missing rivets, disconnected braces, condition of steps and corrosion seriously weaken a ladder. Destroy or repair any defective ladders immediately in accordance with manufacturers' recommendations

Portable Tools and Equipment

- The Contractor shall ensure that tools and equipment requiring a formal periodic inspection must be tagged, marked, labelled, tested, certified and calibrated (as applicable) to indicate that the formal inspection has been performed. All formal inspections must have inspection records. The Contractor shall be required to ensure use of all certified, adequately insulated, tested, checked and quality manufactured tools and tackles including cutting, brazing, welding, cutting torch, rock breaker, driller, lifting gear etc.
- Any tools and equipment found defective or in need of inspection must be tagged with a "defective" tag and returned to the appropriate person for repair or inspection. The tool or equipment must be removed from the Site until repaired or inspected. All portable grinding / grinding equipment must have adequate and valid wheel, insulation, guard cover and good quality wire. The Contractor shall ensure that cables for all power tools shall be without any cable joints and 2 Pin/3 Pin shall be used for power connection.

Hoisting/ Mobile lifting equipment

- The Contractor's personnel are forbidden to ride on any hook, load, or headache ball. Equipment operator certifications shall be submitted to the Employer's Site team. Unauthorized lifts (including tandem lifts) are not permitted. The Employer's site engineer must be notified prior to any critical lift (a critical lift is any lift that exceeds eighty percent (80%) of the design capacity of the lifting device / or exceeds 02 tons) being carried out.
- All lifting equipment, tools and tackles and devices shall be tested, certified and maintained to manufacturer specifications. For man lift and other industrial lifts, the Contractor shall ensure that the Contractor, prior to deployment of the lifting equipment, tools and tackles and devices at the Site, procures a certificate from third party inspection agencies as per the statutory requirements, certifying the successful testing of such lifts at Site.

Lifting Equipment

- The Contractor shall ensure that different man and material lifting equipment (different cranes, winch machine, hydraulic lift, etc.), tools and tackles proposed to be used at the Sites are suitable for the job and approved for use by the site team. The Contractor shall use the Employer's site checklist of different cranes / heavy vehicle etc. before hiring or bringing any such equipment to Site for use. After that the Contractor shall use periodic and daily checklist to ensure continued suitability. These equipment and tools should have all valid legal documents and maintenance record available with them. The operator shall have necessary statutory certification, training record on manufacturer's training and refresher training of every three (3) years with minimum experience of five (5) years in the job before coming to the Site. All cranes used at the Site must have safe load indicator, over run cut-off switch (anti-two block switch) and audio-visual alarms.
- The safe working load, date of last testing and due date for next testing should be clearly marked on the body. Use of first generation hydra at the Sites are banned.
- All material lift job should have a documented plan as approved by the Site team and for any critical lifts (with weight of more than two (2) tons, as minimum normal practice but can be different as agreed by Site team) should have detail material lift plan validating soil compactness, crane placement, man and material locations, detail sling specification, angle of lift, approval and presence of competent mechanical engineer during lift. Critical lifts are normally not permitted at night at the Sites.

Machine Guarding

Contractor shall be responsible for ensure guarding of rotating machines adequately to prevent exposure of personnel.

Confined Space (CS)

The Contractor shall:

- Confirm with site engineer about working in confined spaces and follow Site specific confined space entry procedure if any.
- Prepare safe entry procedure and obtain entry and work permits.
- Provide on the job training to persons entering confined spaces and have stand-by person and rescue team for any incidents.
- Ensure proper ventilation (forced or exhaust), illumination using 24 V power supply
- Carry out checks for presence of toxic/ flammable gases, monitor the oxygen content in confined spaces and ensure availability of communication media between stand-by confined spaces attendant and people inside confined spaces
- Ensure availability of self-contained breathing apparatus or equivalent and use of all relevant personal protective equipment as per JSA and PTW.
- ensure that all persons exit from the confined space upon completion of the work. To ensure such exit, head count of the men entering shall be performed and record to be maintained in a register.

Heavy Earth Moving Equipment (HEME)

All HEME supplied or used at the Sites shall have all mandatory attributes for safe operation including rollover protection structure (ROPS), fall-over protection structure (FOPS), reverse and side camera, automatic reverse alarm, fire extinguisher, functional wipers, heating and air conditioning vent as applicable, illumination lamp etc. Operators must be trained sufficiently for keeping it away from over-head power line, not allowing anybody within 10 m radius from the vehicle. Driver shall be required to stop engine and come out from cabin for any discussion. Wearing all PPEs, movement against edge from trenches / excavated area, parking the vehicle with all levers in locked condition and daily and periodic inspection by the operator shall be mandatory and should be trained accordingly.

- The Contractor shall ensure that only safe and well-maintained plant and equipment shall be allowed to operate on any of the sites.
- All operators of heavy plant such as, earth movers, piling rigs, etc. shall be medically fit, over eighteen years of age and be thoroughly trained and experienced to operate the equipment.
- No unauthorized person shall be permitted to ride on plant.
- The operators shall conduct daily inspections of their respective items of plant with the results of these inspections being recorded and the records kept available for inspection by the Employer's Representative.
- All mobile heavy plant shall be equipped with at least one 5kg Dry Powder Fire Extinguisher, carried at a suitable position so as to ensure its easy availability.
- Whenever heavy plant is operating in congested areas, thoroughly trained and experienced banks men shall be deployed to control the plant and personnel movement and interface.
- Any waste engine oil and filters following any on site servicing and maintenance shall be removed from the sites and disposed of in an environmentally conscious manner at authorized disposal locations.
- All drums of fuel oil shall be stored on drip trays or the fuel shall be kept in bunded bulk storage fuel tanks, with quantities stored being kept to a minimum.
- The storage areas shall have dry powder fire extinguishers positioned in close proximity to their location for use in an emergency.

Concreting

- Formwork shall be in line with the current version of approved, released and accepted drawing. The Contractor shall be responsible for adherence to 'Bar Bending Schedule' and 'Concreting Plan' and shall submit and obtain approval for method statement, shuttering and staging plan including rebar spacing and chair design. Formwork shall be inspected by a competent person before pouring of concrete begins. All projected reinforcement bars shall be covered / bent when work is being carried out overhead. Any timber form work shall be carefully inspected for cracks and excessive knots before use. Tubular steel shall be inspected for rusting, dents, damaged welds etc. before it is erected. All vertical supports shall be vertically braced and cross bar support. Footings under the support shall be set on firm soil or other suitable materials which assures stability and the prop shall be of full length and not of two or three pieces joined together.
- During pouring of concrete there should be continuous inspection of centring wedges and adjustment screws. Before removing the forms, the Contractor shall ensure that the concrete has developed sufficient strength to support itself and all loads that will be impinging on it.

- Formwork structure shall have sufficient catwalks and other secure access for inspection.

Concrete Vibrators

Vibrating unit shall be completely enclosed and belt transmitting the power to the unit adequately shall be totally enclosed and be protected against overloads by suitable overload relays and shall be effectively earthed. Sufficient length of cable to the vibrator shall be ensured. Needle load shall be firmly locked while inserting in the vibrator and inner core shall be adequately lubricated.

Concrete Mixers

- All gears, chains and rollers of concrete mixer should be adequately guarded to prevent damage / danger.
- Concrete mixer hopper shall be protected by side railing to prevent workers from passing under them and operators shall make sure before lowering the skip bucket that no one is there. Hopper hoist, wire rope and anchoring brake, skip hoist clutch, has to be checked for its condition and adjusted periodically. Nothing should be kept inside the motor enclosure.
- The Operator shall ensure that motor fan guard is secured firmly, wiring is properly connected and insulated, and double earthing is done for electric mixers.

Medical/First Aid Treatment

- The Contractor shall maintain first aid box and/or medical centre as per statutory requirement and shall have a tie-up with nearby good specialty hospital to manage medical emergencies. When an injury occurs at the Site and requires medical treatment, the Contractor shall ensure that such personnel is transported to the nearest hospital.
- If the Employer has a first-aid centre and other similar facilities at the Site, the Employer may, at its option, make available such facilities for the treatment of the Contractor's personnel, who have been injured or have become ill while being engaged in the performance of the Scope of Work.

Accident Investigation and Reporting

- The Employer's policy requires that all incidents and environmental releases, regardless of severity, are reported immediately to the Employer's project manager and HSE manager first by verbal and then by a written "preliminary" Initial Incident Report (IIR). Subsequently, a joint written investigation should be conducted by incident investigation team. The Employer's team shall record these incidents.
- Where the actual or potential severity of the incident or behaviour is significant or occurs frequently, the Hub Head shall appoint a committee to investigate, the accident/incident, verifying the information and complete a root cause analysis. All corrective actions shall be carried out, monitored by the HSE Department.

Emergency Preparedness Plan

The Contractor shall prepare an Emergency Response Plan for all work sites. The plan shall integrate the emergency response plans of the Contractor and all other subContractors. The

Emergency Response Plan shall detail the Contractor's procedures, including detailed communications arrangements, for dealing with all emergencies that could affect the Site. This include where applicable, injury, sickness, evacuation, fire, chemical spillage, severe weather and rescue from any situation like height, confined & excavations etc.

Emergency Situations

Every Contractor shall formulate an Emergency Preparedness Plan for each of his sites. These plans will address foreseeable emergencies that may arise during the construction activities. Examples of activities for which plans should be prepared include amongst other things:

- Fire and explosion.
- Collapse of building, sheds or structure etc.
- Gas leakage or spillage of dangerous goods or chemicals.
- Bomb threatening, criminal or terrorist attack
- Drowning of workers-An accident which results in death or major injury.
- A serious fire that threatens life.
- Floods, Earthquake, storms and other natural calamities
- Working at height- hanging of the person on safety belt/ fall arrester
- Landslides getting workers buried
- Snake and reptile bite

An Emergency Preparedness plan should include details of the following; arrangements for emergency medical treatment and evacuation of the victim in the event of an accident or dangerous incident occurring, the chain of command and the responsible persons of the Contractor with their telephone numbers and addresses for quick communication shall be adequately publicized and conspicuously displayed in the workplace.

- The name, location and phone number of the Emergency Co-coordinator;
- Designated Personnel with locations and phone numbers;
- Details of the Emergency Response Team with locations & phone numbers;
- Functions of the Emergency Response Team;
- Resources for handling the emergencies
- The means of Escape;
- Communication with the Emergency Services;
 - Police
 - Fire Services
 - Ambulance and Hospital Services
- First-Aid Facilities;
- Site plans;
- Suppliers of emergency equipment such as sump pumps, lighting, Carnage, etc.

Contractors shall require liaising with the local hospitals and fire stations for prompt attendance to the injured. The Contractor shall keep emergency vehicles on standby duty during all working hours for this purpose.

Copies of the emergency procedures and the Contractor's rescue organization should be displayed at each place of work and notice boards. This information should be reviewed and updated as often as is required, but at least once annually.

Drills should be arranged to test the efficiency in mobilizing the necessary personnel and equipment. These Drills should be carried out at least every three months.

Regular joint exercises between the Contractor's rescue teams and the Fire and Emergency Services should also be carried out for the major contracts.

It shall be the responsibility of the Contractor to keep the Local Law & Order Authorities informed and seek urgent help to mitigate the consequences of an emergency. The Contractor shall make prompt communication to Employer initially by telephone and followed by a written report.

Personal Protective Equipment (PPEs)

The Contractor shall at all times keep and maintain an adequate supply of suitable personnel protective equipment which shall be readily available for use at all times on the sites, and would include amongst others the following items:

- Safety Helmets.
- Hearing Protection.
- Respiratory Protection.
- Eye Protection.
- Protective Gloves.
- Safety Footwear.
- High Visibility Clothing to BS EN 471 Class 3 standard

All sites shall be designated as HARD HAT and SAFETY BOOTS SITES and as such an adequate supply of safety helmets and safety boots shall be kept available for use by all staff, workers and authorized visitors to the sites.

If the Contractor fails to provide the personnel Protective Equipment, the same may be provided by the Employer at the rate of 1.5 times the actual cost to the Contractor and the cost will be deducted from the Contractor's RA Bills.

The Contractor shall remove from the site any worker who consistently refuses to wear the appropriate personal protective equipment.

Head Protection

The Contractor shall comply with requirements of IS 2925. Hard hats shall be used and worn where a hazard of falling or flying objects exist. Safety Helmets (Hard hats) intended for use by visitors shall have replaceable paper lining.

Eye and Face Protection

Eye protection shall be worn during all operations by operators and people in the vicinity, where there is a danger of flying particles of metal such as generated during use of hand tools such as chisels, grinding, welding and cutting lathe work on brass and cast iron acid and alkali splash, high pressure jet cleaning or insulation removal from heights using high pressure jets. The Contractor shall meet the requirements of IS 8520 entitled 'Guide for Selection of Industrial Safety Equipment for Eye, Face and Ear Protection.

Footwear

Safety shoes, boots and gumboots fitted with steel toe-caps of approved quality conforming to prescribed Indian or international standards. Wearing of unsafe safety shoes such as jogging shoes, tennis shoes, slippers and sandal etc. are prohibited. The Contractor shall meet the requirements of IS 10667 Entitled 'Guide for Selection of Industrial Safety Equipment for Protection of Foot and Leg.

Hand Protection

The Contractor shall provide appropriate hand gloves as per IS 8807 entitled 'Guide for Selection of Industrial Safety Equipment for Protection of Arms and Hands' to prevent injuries to hands during work. The CONTRACTOR shall maintain appropriate inventory of gloves for different applications like acid and alkali handling, general- purpose work gloves and asbestos or heat resistant hand gloves etc.

Hearing Protection

The Contractor shall ensure reasonable precautions are taken to avoid injury to the hearing of the employees. All noise levels shall be controlled within 85 dBA. The Contractor shall identify noise areas where noise levels exceed prescribed safe level for arranging for appropriate engineering revision. Where this is not feasible, appropriate earplugs / earmuffs or protectors shall be provided to workmen ensuring these are worn by those exposed to noise levels beyond safe levels. Periodic hearing acuity tests shall be conducted on such persons exposed to high noise levels to ensure that they do not suffer any hearing impairment as per requirements of IS 8520.

Respiratory Protection

The Contractor shall maintain where appropriate, procedures for training and use of Self-Contained Breathing Apparatus (SCBA). The SCBA shall be provided together with lifelines and rescue teams to safeguard personnel working in areas where gases such as carbon monoxide, methane chlorine and such life endangering atmospheres are present.

The Contractor shall meet requirements of IS 9623 for 'Selection, Use and Maintenance of Respiratory Protective Devices'. The CONTRACTOR shall have trained adequate number of personnel including the identified firefighting teams, hose teams and SAs in the use of the SCBA.

The Contractor shall use the periodic safety drills to demonstrate, train and establish competence of personnel in the use of SCBA.

Fall Protection - Safety Harness or Fall Arrest

The Contractor shall provide safety harness or means of restraint such as safety belts, harness and lifelines etc. to workmen engaged to work in heights such as open-sided floors, open-sided scaffoldings, floor and roof openings, overhead construction works of various nature etc. where there is a falling hazard of 1.8 meter or above.

Storage, issue, wearing and maintenance of safety harness shall be under strict supervision and records shall be maintained. All fall arrests shall consist of full-body harnesses, lanyards with shock absorbers, lifelines, rope grab, safety nets, crawling ladders and associated hardware.

Two alternate lanyards shall be used to facilitate tying off at a new location before disconnecting from the previous location. Practices for safety harnesses and fall arrests shall conform to IS 4912, IS 11972 and IS 8519 or equivalent international codes.

Protective Clothing

The Contractor shall prevent hazards of loose clothes worn by workmen getting caught in moving machine parts. Loose and thin garments such as dhoti and pajamas are prohibited. While the Contractor shall ensure that all workmen wear long sleeved shirts, jackets or the like with the sleeves rolled down and secured at the cuff, long pants/ trousers extending up to the top of the safety shoes so as to prevent injuries caused by contact with heat, cold abrasive and sharp surfaces shall be strictly enforced.

Such protective clothing shall be mandatory in hazardous areas especially during start-up operations involving hot, inflammable, and other chemical hazards, furnaces and Boilers and such fired equipment and asphaltting plants. Personnel exposed to acids and alkalis hot fluids and steam during such operations shall be provided with appropriate heat or corrosion resistant clothing.

The Contractor shall meet the requirements of IS 8990 entitled 'Maintenance and Care of Industrial Safety Clothing'

In case of any Night working / Dark areas, it will be mandatory to wear florescent jacket.

Visitors to Site

All visitors to site shall report to the Contractors site offices where they shall be issued with appropriate Personal Protective Equipment if they are to go out onto the site work areas. Any visitors going out to the site work areas shall be accompanied at all times by a member of the site personnel.

Annexure 1: Safety, Welfare and Occupational Health Requirements

(This list has been prepared in chronological order with primary importance to Section of Act and secondary to Rules)

S - Refers Relevant Sections in BOCWA

R - Refers Relevant Rules in BOCWR

C - Refers Relevant Chapter No. in BOCWR

BOCW act and rules are not applicable during O&M phase still it provides a clear understanding of the HSE related requirement.

SR. No.	Items	BOCW Act Section	Central BOCWR Rules	Form No and Schedule
1	Registration of Establishment	S - 7	R - 23 to 27	
2	Display of Registration Certification	S - 7	R - 26 (5)	
3	Hours of work	S - 28	R - 234 to 237	
4	Weekly rest and payment at rest		R - 235	
5	Night shift		R - 236	
6	Maintenance of workers registers and records	S - 30	R - 238	
7	Notice of commencement and completion	S - 46	R - 239	
8	Register of persons employed		R - 240	
9	Muster roll and Wages Register		R - 241 (1) (a)	XVI & XVII
10	Register of overtime	S -28 & 29	R - 241 (1)	XXII
11	Register of Damage or Loss		R - 241 (1) (a)	XIX, XX, & XXI
12	Issue of wages book		R - 241 (2) (a)	XXIII
13	Service certificate for each worker		R - 241(2) (b)	XXIV
14	Display an abstract of BOCWA and BOCWR		R - 241(5)	
15	Annual return		R - 242;	XXV
16	Drinking water	S - 32		
17	Latrines and Urinals	S - 33	R - 243	
18	Accommodation	S - 34		
19	Crèches	S - 35		
20	First-aid boxes	S - 36	R - 231	Schedule III
21	Canteens	S - 37	R - 244	
22	Food & other items served in the canteens		R - 245	
23	Supply of tea and snacks in work place		R - 246	
24	Food charges on no loss no profit basis		R - 247	
25	Payment of wages		R - 248	
26	Display of notice of wages regarding		R - 249	
27	Safety committee	S - 38	R - 208	
28	Safety officer	S - 38	R - 209	Schedule VIII
29	Reporting of accidents and DO	S - 39	R - 210	
30	Procedure for inquiry into the case of accidents		R -211	
31	Responsibility of Owner	S - 44	R - 5	
32	Responsibility of Architect, Project engineer & Designer		R - 6	
33	Responsibility of workmen		R - 8	
34	Responsibility for payment of wages &	S - 45		

	compensation			
35	Penalties and Procedures	S - 47 & 55		
36	Excessive noise, vibration etc.		R - 34	
37	Fire Protection		R - 35	

Annexure 2: HSE Calendar

1st Monday to Sunday of January	Road Safety Week (Subjected to confirmation from Ministry of Road Transport, Govt. of India every year)
16th February	Kyoto Protocol Day
March	Red Cross Month
4th March	National Safety Day
7th April	World Health Day
14th April	Fire Safety Day
April 18 to 22	Earth Week
20th April	Earth Day
20th April	Noise Awareness Day
28th April	ILO World Day for Safety and Health at Work
May 1 to 7	Emergency Preparedness Week
5th June	World Environmental Day
12th June	World Day against Child Labours
9th July	Occupational Health Day
17th October	World Trauma Day
1st December	World AIDS Day