

## **CORRIGENDA /ADDEMDA TO 'FORM-A'**

**The following clauses shall add / modify / supplement / substitute the relevant clauses of 'Form-A'. In case there is a conflict, the provision herein shall prevail over those stated in 'Form-A'.**

### **1.0 CLAUSE NO. 1**

'Owner'/ 'Purchaser' / 'Employer' shall mean Pashchimanchal Vidyut Vitran Nigam Limited. and shall include its successors and assigns.

'Consulting Engineer / Consultant shall mean any firm or person duly appointed as such from time to time by the Owner.

The terms 'Equipment', 'stores' and Materials, shall mean and include equipment, stores and materials to be provided by the Contractor.

'Works' shall mean and include the furnishing of equipment, labour, services as per the Specification and complete erection, testing and putting into satisfactory operation including all transportation, handling, unloading and storage at the Site as defined in the Contract.

'Site' shall mean and include the land and other places on, into or through which the Works and the related facilities are to be erected or installed and any adjacent land, paths, street or reservoir which may be allocated or used by the Owner or Contractor in the performance of the Contract.

The term 'Contract Price' shall mean the lump sum price quoted by the Contractor in his Bid with additions and / or deletions as may agree and incorporated in the Contract, for the entire scope of the work.

The term 'Equipment Portion' of the Contract price shall mean the supply value of the equipment.

The term 'Erection Portion' of the Contract price shall mean the value of field activities of the works including erection, testing and putting into satisfactory operation including successful completion of performance and guarantee tests to be performed at site by the Contractor including cost of insurances.

'Manufacturer's Works' or 'Contractor's Works' shall mean the place of work used by the manufacturer, the contractor, their collaborators/associates or sub-contractors for the performance of the Contract.

The term 'Final Acceptance / Taking Over' shall mean the Owner's written acceptance or the Works performed under the Contract as specified in the accompanying Technical Specification or otherwise agreed in the Contract.

'Guarantee Period' / 'Maintenance period' shall mean the period during which the Contractor shall remain liable for repair or replacement of any defective part of the works performed under the Contract.

'Codes' shall mean the following, including the latest amendments, and/or replacements, if any:

- a) Indian Electricity Act, 1905, and Rules and Regulations made thereunder

- b) Indian Factory Act, 1948, and Rules and Regulations made thereunder
- c) Indian Explosive Act, 1884, and Rules and Regulation made thereunder
- d) Indian Petroleum Act, 1934, and Rules and Regulations made thereunder.
- e) A.S.M.E. Test Codes.
- f) A.I.E.E. Test Codes.
- g) American Society of Material Testing Codes.
- h) Standards of the Indian Standards Institution.
- i) Other internationally approved standards and/or Rules and Regulations touching the subject matter of the Contract.

In addition to the above, the following definitions shall also apply.

- a) 'All equipment and materials' to be supplied shall also apply.
- b) 'Constructed' shall mean 'erected and installed'
- c) 'Contract Performance Guarantee' shall also mean 'Contract Performance Security'.

## **2.0 CLAUSE NO. 3**

The Contract Performance Security shall be ten percent (10%) of the total contract price and shall be in accordance with the relevant clause of the 'Instructions of Tenderers'.

The term 'Contract Documents' shall mean and include the following, which shall be deemed to form an integral part of the Contract;

- a) Tender Notice, Instructions to Tenderers, General Requirements of Specifications, Form-A and their relevant Addenda / Corrigenda attached thereto.
- b) Specification of the equipment to be supplied and erected under the contract as brought out in the accompanying Technical Specification.
- c) Contractor's bid proposal and the documents attached thereto including the letters of clarifications thereto between the Contractor and the Owner prior to the Contract Agreement except to the extent of repugnancy.
- d) All the materials, literature, data and information of any sort given by the Contractor along with his bid, subject to the approval of the Owner/Consultant.
- e) Contract Agreement.

In the event of any conflict between the above-mentioned documents, the matter shall be referred to the Engineer whose decision shall be considered as final and binding upon the parties.

## **3.0 CLAUSE NO. 10.0**

The cost and responsibility of delivery of equipment / materials on final destination site(s) shall be of the Contractor.

**4.0 CLAUSE NO. 15.0**

The bidder shall arrange all tests at Site (Tests on Completion) as prescribed in the Contract to be performed by the Contractor before the Works is taken over by the Owner.

**5.0 CLAUSE NO. 18.0**

All activities like manufacture, supply, erection, testing, commissioning etc. shall be carried out under the supervision of the Engineer.

**6.0 CLAUSE NO. 25.0**

The existing clause shall be replaced by the following:

The Payment to the Contractor for the performance of the Contract will be made by the Owner as per the conditions specified herein. The terms of payment under the Contract shall be as under.

The Payment to the Contractor for the performance of the Contract will be made by the Owner as per the conditions specified herein. The terms of payment under the contract shall be as under:

**A) Supply Price:**

- ~~(i) **Advance Payments:** Ten percent (10%) of the total ex-works price shall be paid within thirty (30) days of signing of contract against a simple receipt and a bank guarantee for the equivalent amount valid until the goods are delivered and in the form provided in the bidding documents or another form acceptable to the purchaser.~~
- ~~(ii) **On delivery:** Eighty percent (80%) of the ex-works price (inclusive of 100% sales tax, freight & insurance as applicable) shall be paid on receipt of goods and upon submission of documents specified therein.~~
- (iii) On Final Acceptance:** The remaining ten (10%) percent of the ex-works price shall be paid within thirty (30) days after the date the acceptance certificate submission by the purchasers representative.

**B) Erection Price:**

- (i) Ninety percent (90%) of the erection price shall be paid on progressive monthly basis depending on the actual measurement of work done certificate of the same by the Engineer.
- (ii) Balance ten percent (10%) of the erection price shall be paid after testing & commissioning and taking over of the substation by the Owner as per the Contact.

**C) Mode of Payment**

All payment under the contract shall be made to the Contractor by cheque from the account of PVVNL through its designated unit for the purpose.

**7.0 CLAUSE NO. 31 (DELETED)****8.0 CLAUSE NO.35.0**

Upon successful completion of all the tests to be performed at Site on the equipment furnished and erected by the Contractor, the contractor shall intimate in writing to Engineer for taking over the completed job. Within a week time of receipt of this information, the PVVNL shall arrange a joint inspection for the work and after which taking over certificate shall be issued accordingly.

**9.0 CLAUSE NO. 36.0**

The existing clause shall be replaced the following:

- a) The contractor shall warrant that the equipment will be new, unused and in accordance with the Contract Documents and free from defects in material and workmanship for a period of ~~Thirty six (36) calendar months~~ commencing immediately upon the satisfactory commissioning. The Contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his sub-Contractors, under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the Site and not in meantime essential in the commercial use of the equipment. Such replaced / defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer/Purchaser when the equipment is under the supervision of the Contractor's supervisory Engineer.
- b) In the event of any emergency where in the judgement of the Engineer, delay would cause serious loss or damages, repairs or adjustment may be made by the Engineer or a third party chosen by the Engineer without advance notice to the Contractor and the cost of such work shall be paid by the Contractor. In the event such action is taken by the Engineer, the Contractor will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the Contractor of his liabilities under the terms and conditions of the Contract.
- c) If it becomes necessary for the Contractor to replace or renew any defective portions of the Works, the provisions of this clause shall apply to that portion of the Works so replaced or renewed until the expiry of Twelve (12) months from the date of such replacement or renewal or Thirty Six (36) months from the date of initial commissioning of the equipment which ever is later. If any defects are not remedied within a reasonable time, the Engineer may proceed to do the work at the Contractor's risk and cost, but without prejudice to any other rights which the Owner may have against the Contractor in respect of such defects.
- d) The repaired or new parts will be furnished and erected free of cost by the Contractor. If any repair is carried out on his behalf at the Site, the Contractor shall bear the cost of such repairs.
- e) The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the equipment or defective work carried out by the Contractor, the same shall be borne by the Contractor.

- f) The acceptance of the equipment by the Engineer shall in no way relieve the Contractor of his obligations under this clause.
- g) In the case of those defective parts which are not repairable at Site but are essential for the commercial operation of the equipment, the Contractor and the Engineer shall mutually agree to a programme of replacement or renewal which will minimize interruption to the maximum extent, in the operation of the equipment.
- h) At the end of the Guarantee Period, the Contractor's liability ceases.
- i) In the respect of goods supplied by Sub-Contractor to the Contractor where a longer guarantee (more than 36 months) is provided by such Sub-Contractor, the Owner shall be entitled to the benefit of such longer guarantees.
- j) The provisions contained in this clause will not be applicable:
  - (i) If the owner has not used the equipment according to generally approved industrial practice and in accordance with the conditions of operation specified and in accordance with the operating manuals, if any.
  - (ii) In case of normal wear and tear of the parts to be specifically mentioned by the contractor in the offer.

**10.0 CLAUSE NO. 38**

**ARBITRATIONS:** UP State Electricity Board may be read as Pashchimanchal Vidyut Vitran Nigam Limited, Chairman should be read as MD, PVVNL. Arbitration Act 1940 should be read as Arbitration and conciliation Act 1996.

**11.0 CLAUSE NO. 39**

**CONSTRUCTION OF THE CONTRACT**

Notwithstanding anything stated elsewhere in the bid documents, the Contract to be entered into will be treated as an indivisible supply cum erection Contract.

The Contract shall in all respects be construed and governed according to Indian laws.

**12.0 TIME – THE ESSENCE OF CONTRACT**

12.1 The time and the date of completion of the Contract as stipulated in the Contract by the Owner without or with modifications, if any, and so incorporated in the Contract, shall be deemed to be the essence of the Contract. The Contractor shall so organize his resources and perform his work as to complete it not later than the date agreed to.

12.2 The Contractor shall submit a detailed PERT network/bar chart within the time frame agreed consisting of adequate number of activities covering various key phases of the work such as design, procurement, manufacturing, shipment and field erection activities within fifteen (15) days of the date of notification of Award of Contract. This network shall also indicate the interface facilities to be provided by the Owner and the dates by which such facilities are needed. The Contractor shall discuss the network so submitted with the Owner and the agreed network shall form part of the Contract Documents.

12.3 During the performance of the Contract, if in the opinion of the Engineer, proper progress is not maintained, suitable changes shall be made in the Contractor's operations to ensure proper progress without any cost implication to the Owner. The interface facilities to be provided by the Owner in accordance with the agreed network shall also be reviewed while reviewing the progress of the Contractor.

12.4 Based on the above agreed network/bar chart fortnightly reports shall be submitted by the Contractor as directed by the Engineer.

### **13.0 EFFECTIVENESS OF CONTRACT**

The Contract shall be considered as having come into force from the date of the Notification of Award unless otherwise provided in the Notification of Award.

### **14.0 PATENT RIGHTS AND ROYALTIES**

Royalties and fees for patents covering materials, Articles, apparatus, devices, equipment or processes used in the works shall be deemed to have been included in the Contract Price. The Contractor shall satisfy all demands that may be made at any time such royalties or fees and he alone shall be liable for any damages or claims for patent infringements and shall keep the Owner indemnified in that regard. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patents involved in the works, and, In case of an award of damages, the Contractor shall pay for such award. In the event of any suit or other proceedings instituted against the Owner. But it shall be understood that no such machine, plant, work, material or thing has been used by the Owner for any purpose or any manner other than that for which they have been furnished and installed by the Contractor by the Owner will not be made while any such suit or claim remains unsettled. In the event any apparatus or equipment, or any part thereof furnished by the Contractor, is in such suit or proceedings held to constitute infringement, and its use is enjoined, the Contractor shall at his option and his own expense, either procure for the Owner, the right to continue the use of said apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it, so it becomes non-infringing apparatus or equipment or modify it, so it becomes non-infringing.

### **15.0 CO-OPERATION WITH OTHER CONTRACTORS AND CONSULTING ENGINEERS**

The Contractor shall co-operate with the Owner's other Contractors and Consulting Engineers and freely exchange with them such technical information as is necessary to obtain the most efficient and economical design and to avoid unnecessary duplication of efforts. The Engineer shall be provided shall to provided with three copies of all correspondence addressed by the Contractor to other Contractors and Consulting Engineers of the Owner in respect of such exchange of technical information.

### **16.0 DEDUCTIONS FROM CONTRACT PRICE**

All costs, damages or expenses which the Owner may have paid, for which, under the Contract, the Contractor is liable, will be claimed by the Owner. The Owner shall deduct the amount, from any monies due or becoming due by him to the Contractor under the Contract or may be recovered by actions of Law or otherwise.

**17.0 TRANSFER OF THE TITLE**

Transfer of the title in respect of equipment and materials supplied by the Contractor to Owner pursuant to the terms of the Contract shall pass on to the Owner on delivery of the equipment and materials at final destination site(s).

This Transfer of Title shall not be construed to mean the acceptance and the consequent “Taking over” of equipment and materials. The Contractor shall continue to be responsible for the quality and performance of such equipment and materials and for their compliance with the specifications until “Taking Over” and the fulfillment of guarantee provisions of this Contract.

This Transformer of Title shall not relieve the contractor from the responsibility for all risks of loss or damage to the equipment and materials as specified under the clause entitled ‘insurance’ of this section.

**18.0 LIABILITY FOR ACCIDENTS AND DAMAGES**

Under the Contract, the Contractor shall be responsible for loss or damage to the plant until the successful completion of commissioning as defined else where in the Tender Documents.

**19.0 DELAYS BY OWNER OR HIS AUTHORISED AGENTS**

In case of the Contractor’s performance is delayed due to any act of omission on the part of the Owner or his authorized agents, then the Contractor shall be given due extension of time for the completion of the Works, to the extent such omission on the part of the Owner has caused delay in the Contractor’s performance of the Contract. Regarding reasonableness or otherwise of the extension of time, the decision of the Engineer shall be final.

In addition, the Contractor shall be entitled to claim demonstrable and reasonable compensation, if such delays have resulted in any increase in cost. The Owner shall examine the jurisdiction for such a request for claim and if satisfied, the extent of compensation shall be mutually agreed depending upon the circumstances at the time of such an occurrence.

**20.0 FORCE MAJEURE**

Force majeure is herein defined as any cause which is beyond the control of the Contractor or the Owner as the case may be, which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affects the performance of the Contract, such as:

- a) Natural phenomena including but not limited to floods, droughts, earthquakes and epidemics;
- b) Acts of any Government, domestic or foreign, including but not limited to war, declared or undeclared, priorities, guaranties, embargoes.

Provided either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such causes.

The Contractor or the Owner shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and/or defined above.

The date of completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after Contractor's performance of obligation has been delayed due to other causes.

## **21.0 SUSPENSION OF WORK**

21.1 Owner reserves the right to suspend and reinstate execution of the whole or any part of the Works without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the Works will be issued by the Engineer to the Contractor in writing. The time for completion of works will be extended for a period equal to duration of the suspension.

## **22.0 CONTRACTOR'S DEFAULT**

22.1 If the Contractor shall neglect to execute the works with due diligence and expected or shall refuse or neglect to comply with any reasonable order given to him, in by the Engineer in connection with the works or shall contravene the provisions of the Contract, the Owner may give notice in writing to the Contractor to make good the failure neglect or contravention complained of. Should the Contractor fail to comply with the notice, then and in such case the Owner shall be at the date of serving the notice, thane and in such case the Owner shall be at liberty to employ other workmen and forthwith execute such part of the works as the Contractor may have neglected to do or if the Owner shall think fit, without prejudice to any other right he may have under the Contract to take the work wholly or in part out of the Contractor's hands and recontract with any other person or persons to complete the works or an part thereof and in that event the Owner shall have free use of all Contractor's equipment that may have been at the time on the Site in connection with works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same, and the Owner shall be entitled to retain and apply any balance which may otherwise be due on the Contract by him to the Contractor, or such part thereof as may be necessary, to the payment of the cost of executing the said part of the Works or of completing the Works as the case may be. If the cost of completing the works or executing a part thereof as aforesaid shall exceed the balance due to the Contractor, the Contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay which the Contractor shall have to pay if the completion of works is delayed.

22.2 In addition, such action by the Owner as aforesaid shall not relieve the Contractor of his liability to pay liquidated damages for delay in completion of Works as defined in clause 13.0 of this section.

22.3 Such action by the owner as aforesaid the termination of the contract under this clause shall not entitle the Contractor to reduce the value of the Contract Performance Guarantee nor the time thereof. The Contract Performance Guarantee shall be valid for the full value and for the full period of the Contract including guarantee period.

**23.0 TERMINATION OF CONTRACT ON ONWER’S INITIATIVE**

- 23.1 The owner reserves the right to terminate the Contract either in part or in full due to reasons other than those mentioned under clause entitled Contractor’s default. The Owner shall in such an event give fifteen (15) days notice in writing to the Contractor of his decision to do so.
- 23.2 The Contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and contracts to the extent they are related to the work terminated and terms satisfactory to the owner, stop all further sub-contracting or purchasing activity related to the work terminated, and assist the owner in maintenance, protection, and disposition of the Works acquired under the Contract by the Owner.
- 23.3 In the event of such a termination the Contractor shall be paid compensation, equitable and reasonable, dictated by the circumstances prevalent at the time of termination.
- 23.4 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies then unless the Owner is satisfied that the legal representatives of the individual contractor or of the proprietor of the propriety concern and in the case of partnership, the surviving the partners, are capable of carrying out and completing the contract the Owner shall be entitled to cancel the contract as to is incomplete part without being in any way liable to payment of any compensation to the estate of deceased Contractor and/or to the surviving partners of the Contractor’s firm on account of the cancellation of the Contract. The decision of the Owner that the legal representatives of the deceased Contractor or surviving partners of the Contractor’s firm cannot carry out and complete the Contract shall be final; and binding on the parties. In the event of such cancellation the Owner shall not hold the estate of the deceased Contractor and/or the surviving partners of the estate of the deceased Contractor and/or the surviving partners of the Contractor’s firm liable to damage for not completing the Contract.

**24.0 FRUSTRATION OF CONTRACT**

- 24.1 In the event of frustration of the Contract because of supervening impossibility in items of Section 56 of the Indian Contract Act, the parties shall be absolved of their responsibility to perform the balance portion of the Contract.
- 24.2 In the event of non-availability or suspension of funds for any reasons whatsoever (except for reason of willful or flagrant breach by the Owner and/or Contractor) then the works under the Contract shall be suspended.
- 24.3 In the event referred to in sub-clauses 23.1 & 23.2 above, the parties shall mutually discuss to arrive at reasonable settlement on all issued including amounts due to either party for the work already done on “quantum merit” basis which shall be determined by mutual agreement between the parties.

**25.0 REGULATIONS OF LOCAL AUTHORITIES AND STATUTES**

- 25.1 The Contractor shall comply with all the rules and regulations of local authorities during the performance of his field activities. He shall also comply with the Minimum Wages Act,

1948 and the Payment of Wages Act (both of the Government of India) and the rules made thereunder in respect of any employee or workman employed or engaged by him or is Sub-Contractor.

- 25.2 All registration and statutory inspection fees, if any, in respect of his work pursuant to this Contract shall be to the account of the Contractor. However, any registration, statutory inspection fees lawfully payable under any statutory laws and its amendments from time to time during erection in respect of the equipment ultimately to be owned by the Owner, shall be to the account of the Owner. Should any such inspection or registration need to be re-arranged due to the fault of the Contractor or his Sub-Contractor, the additional fees to such inspection and/or registration shall be borne by the Contractor.

## **26.0 ACCESS TO SITE AND WORKS ON SITE**

- 26.1 Suitable access to the Site shall be afforded to the Contractor by the Owner in reasonable time.
- 26.2 In the execution of the Works, no person other than the Contractor or his duly appointed representative, Sub-Contractor and workmen, shall be allowed to do work on the site, except by the special permission, in writing of the Engineer or his representative.

## **27.0 CONTRACTOR'S SITE OFFICE ESTABLISHMENT**

- 27.1 The Contractor shall establish a Site Office at the Site and keep posted an authorized representative for the purpose of the Contract. Any written order or instruction of the Engineer or his duly authorized representative shall be communicated to the said authorized resident representative of the Contractor and the same shall be deemed to have been communicated to the Contractor at his legal address.

## **28.0 CO-OPERATION WITH OTHER CONTRACTORS**

- 28.1 The Contractor shall co-operate with all other Contractors or tradesmen of the owner, who may be performing other works on behalf of the Owner and the workmen who may be employed by the Owner and doing work in the vicinity of the Works under the Contract. The Contractor shall also so arrange to perform his work as to minimize, to the maximum extent possible, interference with the work of other Contractors and their workmen. Any injury or damage that may be sustained by the employees of the other Contractors and the Owner, due to the Contractor's work shall promptly be made good at the Contractor's own expense. The Engineer shall determine the resolution of any difference or conflict that may arise between the Contractor and other Contractors or between the Contractor and the workmen of the owner in regard to their work. If the work of the Contractor is delayed because of any acts of omission of another Contractor, the Contractor shall have no claim against the Owner on that account other than an extension of time for completing his Works.
- 28.2 The Engineer shall be notified promptly by the Contractor of any defects in the other contractor's works that could affect the Contractor's Works. The Engineer shall determine the corrective measures if any required to rectify this situation after inspection of the works and such decisions by the Engineer shall be binding on the Contractor.

**29.0 DISCIPLINE OF WORKMEN**

29.1 The Contractor shall adhere to the disciplinary procedure set by the Engineer in respect of his employees and Workmen at Site. The Engineer shall be at liberty to object to the presence of any representative or employee of the Contractor at the Site, if in the opinion of the Engineer such employee has misconducted himself or is incompetent or negligent or otherwise undesirable and then the Contractor shall remove such a person objected to and provide in his place a competent.

**30.0 CONTRACTOR'S FIELD OPERATION**

30.1 The Contractor shall keep the Engineer informed in advance regarding his field activity plans and schedules for carrying out each part of the works. Any review of such plan or schedule or method of work by the Engineer shall not relieve the Contractor of any of his responsibilities towards the field activities. Such reviews shall also not be considered as an assumption of any risk or liability by the Engineer or the Owner or any of his representatives and no claim of the Contractor will be entertained because of the failure or inefficiency of any such plan or schedule or method of work reviewed. The Contractor shall be solely responsible for the safety, adequacy and efficiency of plant and equipment and his erection methods.

30.2 The Contractor shall have the complete responsibility for the conditions of the work-site including the safety of all persons employed by him or his Sub-Contractor and all the properties under his custody during the performance of the work. This requirement shall apply continuously till the completion of the Contract and shall not be limited to normal working hours. The construction review by the Engineer is not intended to include review of Contractor's safety measures in, on or near the work site, and their adequacy or otherwise.

**31.0 PROTECTION OF WORK**

31.1 The Contractor shall have total responsibility for protecting his works till it is finally taken over by the Engineer. No claim will be entertained by the owner or by the Engineer for any damage or loss to the Contractor's works and the Contractor shall be responsible for complete restoration of the damaged works to original conditions to comply with the specification and drawings, should any such damage to the Contractor's works occur because of any other party not being under his supervision or control. The contractor shall make his claim between the Contractor and the other party or parties concerned regarding the responsibility for damage to the contractor's works, the same shall be resolved as per the provisions of the Clause 28.0 above entitled "Cooperation with other Contractors". The Contractor shall not cause delay in the repair of such damaged works because of any delay in the resolution of such dispute. The Contractor shall proceed to repair the Work immediately and no cause thereof will be assigned pending resolution of such disputes.

**32.0 EMPLOYMENT OF LABOUR**

32.1 The Contractor will be expected to employ on the work only his regular skilled employees with experience of his particular work. No female labour shall be employed after darkness. No person below the age of eighteen years shall be employed.

- 32.2 All traveling expenses including provisions of all necessary transport to and from Site, lodging allowances and other payments to the Contractor's employees shall be the sole responsibility of the Contractor.
- 32.3 The hours of work on the Site shall be decided by the Owner and the Contractor shall adhere to it. Working hours will normally be eight (8) hours per day – Monday through Saturday.
- 32.4 The Contractor's employees shall wear identification badges while on work at Site.
- 32.5 In case the Owner becomes liable to pay any wages or dues to the labour or any Government agency under any of the provisions of the Minimum Wages Act, Workmen Compensation Act, Contract Labour Regulation Abolition Act or any other law due to act of omission of the Contractor, the Owner may make such payments and shall recover the same from the Contractor's bills.

### **33.0 FACILITIES TO BE PROVIDED BY THE CONTRACTOR**

#### **33.1 Tools, tackles and scaffoldings**

The Contractor shall provide all the construction equipment; tools tackles and scaffoldings required for pre-assembly, erection, testing and commissioning of the equipment covered under the Contract. He shall submit a list of all such materials to the Engineer before the commencement of pre-assembly at Site. These tools and tackles shall not be removed from the Site without the written permission of the Engineer.

#### **33.2 First-Aid**

The Contractor shall provide necessary first-aid facilities for all his employees, representatives and workmen working at the Site. Enough number of Contractor's personnel shall be trained in administering first – aid.

#### **33.3 Cleanliness**

The Contractor shall be responsible for keeping the entire area allotted to him clean and free from rubbish, debris etc. during the period of Contract. The Contractor shall employ enough number of special personnel to thoroughly clean his work-area at least once in a day. All such rubbish and scrap material shall be stacked or disposed in a place to be identified by the Engineer. Materials and stores shall be so arranged to permit easy cleaning of the area. In areas where equipment might drip oil and cause damage to the floor surface, a suitable protective cover of a flame resistant, oil proof sheet shall be provided to protect the floor from such damage.

### **34.0 SECURITY**

- 34.1 The Contractor shall have total responsibility for all equipment and materials in his custody/stores, loose, semi-assembled and/or erected by him at Site. The contractor shall make suitable security arrangements including employment of security personnel to ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss. All materials of the Contractor shall enter and leave the project Site only with the written permission of the Engineer in the prescribed manner.

**35.0 CONTRACTOR'S AREA LIMITS**

35.1 The Engineer will mark-out the boundary limits of access roads, parking spaces, storage and construction areas for the Contractor and the Contractor shall not trespass the areas not so marked out for him. The Contractor shall be responsible to ensure that none of his personnel move out of the areas marked out for his operations. In case of such a need for the Contractor's personnel to work out of the areas marked out for him, the same shall be done only with the written permission of the Engineer.

**36.0 CONTRACTOR'S CO-OPERATION WITH THE OWNER**

36.1 In case where the performance of the erection work by the Contractor affects the operation of the system facilities of the Owner, such erection work of the contractor shall be scheduled to be performed only in the manner stipulated by the Engineer and the same shall be acceptable at all times to the Contractor. The Engineer may impose such restriction on the facilities provided to the Contractor such as electricity, water etc. as he may think fit in the interest of the Owner and the Contractor shall strictly adhere to such restriction and co-operate with the Engineer. It will be the responsibility of the Contractor to provide all necessary temporary instrumentation and other measuring devices required during start-up and operation of the equipment systems which are erected by him. The Contractor shall also be responsible for flushing and initial filling of all the oil and lubricants required for the equipment furnished and erected by him, so as to make such equipment ready for operation. The Contractor shall be responsible for supplying such flushing oil and other lubricants unless otherwise specified elsewhere in the document and specification.

**37.0 MATERIALS HANDLING AND STORAGE**

37.1 All the equipment furnished under the Contract and arriving at Site shall be promptly received, unloaded, transported and stored in the storage spaces by the Contractor.

37.2 Contractor shall be responsible for examining all the shipment and notify the Engineer immediately of any damage, shortage, discrepancy etc. for the purpose of Engineer's information only. The Contractor shall submit to the Engineer every week a report detailing all the receipts during the week. However, the Contractor shall be solely responsible for any shortages or damage in transit, handling and/or in storage and erection of the equipment at Site. Any demurrage, wharfage and other such charges claimed by the transporters, railway etc. shall be to the account of the Contractor.

37.3 The Contractor shall maintain an accurate and exhaustive record detailing out the list of all equipment received by him for the purpose of erection and keep such record open for the inspection of the Engineer-in-Charge.

37.4 Equipment shall be handled very carefully to prevent any damage or loss. No bare wire ropes; slings, etc. shall be used for unloading and/or handling of the equipment without the specific written permission of the Engineer. The equipment stored shall be properly protected to prevent damage either to the equipment or the floor where they are stored. The equipment from store shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at Site.

37.5 All electrical panels, control gears, motors and such other devices shall be properly dried by heating before they are installed and energized. Motor bearings, slip rings, commutators

and other exposed parts shall be protected against moisture ingress and corrosion during storage and periodically inspected.

- 37.6 All the electrical equipment such as motors, generators, etc. shall be tested for insulation resistance at least once in three months from the date of receipt till the date of commissioning and a record of such measured insulation values maintained by the Contractor. Such records shall be open for inspection by the Engineer.
- 37.7 The Contractor shall ensure that all the packing materials and protection devices used for the various equipment during transit and storage are removed before the equipment are installed.
- 37.8 The consumable and other supplied likely to deteriorate due to storage must be thoroughly protected and stored in a suitable manner to prevent damage or deterioration in quality by storage.
- 37.9 All the materials stored in the open or dusty location must be covered with suitable weather-proof and flame proof covering material wherever applicable.
- 37.10 If the materials belonging to the Contractor are stored in areas other than those earmarked for him, the Engineer will have the right to get it moved to the area earmarked for the Contractor at the Contractor's cost.
- 37.11 The Contractor shall be responsible for making suitable indoor storage facilities to store all equipment which require indoor storage. Normally, all the electrical equipment such as motors, control gear, generators, exciters and consumables like electrodes, lubricants etc. shall be stored in the closed storage space. The Engineer, in addition, may direct the Contractor to move certain other materials, which in his opinion will require indoor storage, so indoor storage areas which the contractor shall strictly comply with.

## **38.0 CONSTRUCTION MANAGEMENT**

- 38.1 The field activities of the Contractors Working at Site, will be coordinated by the Engineer and the Engineer's decision shall be final in resolving and disputes or conflicts between the Contractor and other Contractors and tradesmen of the owner regarding scheduling and co-ordination of work. Such decision by the Engineer shall not be a cause for extra compensation or extension of time for the Contractor.
- 38.2 The Engineer shall hold weekly meetings of all the Contractor's working at Site, at a time and place to be designated by the Engineer. The Contractor shall attend such meetings and take notes of discussions during the meeting and the decision of the Engineer and shall strictly adhere to those decisions in performing his works. In addition to the above weekly meeting, the Engineer may call for other meeting either with individual contractors or with selected number of Contractors and in such a case the Contractor if called, will also attend such meetings.
- 38.3 Time is the essence of the Contract and the Contractor shall be responsible for performance of his works in accordance with the specified construction schedule. If at any time, the Contractor is falling behind the schedule, he shall take necessary action to make good for such delays by increasing his work force or by working overtime or otherwise accelerate the progress of the work comply with the schedule and shall communicate such actions in

writing to the Engineer, satisfying that his action will compensate for the delay. The Contractor shall not be allowed any extra compensation for such action.

38.4 The Engineer shall, however, not be responsible for provision of additional labour and/or materials or supply or any other services to the Contractor except for the coordination work between various Contractors as set out earlier.

#### **39.0 FILED OFFICE RECORDS**

39.1 The Contractor shall maintain at his Site office up-to-date copies of all drawings, specifications and other Contract Documents and any other supplementary data complete with all the latest revisions thereto. The Contractor shall also maintain in addition the continuous record of all changes to the above Contract Documents, drawings, specifications, supplementary data, etc. effected at the field and on completion of his total assignment under the Contract shall incorporate all such changes on drawings and other engineer data to indicate as installed conditions of the equipment furnished and erected under the Contract. Such drawings and engineering data shall be submitted to the Engineer in required number of copies.

#### **40.0 CONTRACTOR'S MATERIALS BROUGHT ON TO SITE**

40.1 The Contractor shall bring to Site all equipment, components, parts, materials, including construction equipment, tools and tackles for the purpose of the works under intimation to the Engineer. All such goods shall, from the time of their being brought vest in the Owner, but may be used for the purpose of the Works only and shall not on any account be removed or taken away by the Contractor without the written permission of the Engineer. The Contractor shall nevertheless be solely liable and responsible for any loss or destruction thereof and damage thereto.

40.2 The owner shall have a lien on such goods for any sum or sums which may at any time to due or owing to him by the Contractor, under, in respect of or by reasons of the Contract. After giving a fifteen (15) days notice in writing of his intention to do so, the Owner shall be at liberty to sell and dispose off any such goods, in such manner as he shall think fit include public auction or private treaty and to apply the proceeds in or towards the satisfaction of such sum or sum due as aforesaid.

40.3 After the completion of the Works, the Contractor shall remove from the Site under the direction of the Engineer, the materials such as construction equipment, erection tools and tackles, scaffolding etc. with the written permission of the Engineer. If the Contractor fails to remove such materials, with fifteen (15) days of issue of a notice by the Engineer to do so then the Engineer shall have the liberty to dispose of such materials as detailed under clause 23.2 above and credit the proceeds thereto to the account of the Contractor.

#### **41.0 PROTECTION OF PROPERTY AND CONTRACTOR'S LIABILITY**

41.1 The Contractor shall be responsible for any damage resulting from his operations. He shall also be responsible for protection of all persons including members of public and employees of the Owner and the employees of other contractors and sub-contractors and all public and private property including structures, building, other plants and equipment and utilities either above or below the ground.

41.2 The Contractor will ensure provisions of necessary safety equipment such as barriers, sign-boards, warning lights and alarms, etc. to provide adequate protection to persons and property. The Contractor shall be responsible to give reasonable notice to the Engineer and the Owner of public or private property and utilities when such property and utilities are likely to get damaged or injured during the performance of his works and shall make all necessary arrangements with such owners, related to removal and/or replacement or protection of such property and utilities.

## **42.0 INSURANCE**

42.1 In addition to the conditions covered under the Clause entitled “Insurance” in General Terms and conditions of Contract/Technical Specification of this Volume, the following provisions will also apply to the portion of works to be done beyond the Contractor’s own or his Sub-Contractor’s manufacturing Works.

### **42.2 Workman’s Compensation Insurance**

This insurance shall protect the Contractor against all claims applicable under the Workmen’s Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability, disease or death of his or his Sub-Contractor’s employee, which for any reason are not covered under the Workmen’s Compensation Act, 1948. The liabilities shall not be less than:

Workman’s Compensation: As per statutory Provisions

Employee’s liability: As per statutory Provisions

### **42.3 Comprehensive Automobile Insurance**

This insurance shall be in such a form to protect the Contractor against all claims for injuries, disabilities, disease and death to members of public including the Owner’s men and damage to the property of other arising from the use of motor vehicles during on or off the Site operations, irrespective of the ownership of such vehicles.

### **42.4 Comprehensive General Liability Insurance**

The insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the Contractor, his agents his employees, his representatives and Sub-contractors or from riots, strikes and civil commotion. This insurance shall also cover all the liabilities of the Contractor arising out of the Clause entitled Defence of Suits under General Terms and Conditions of Contract.

The hazards to be covered will pertain to all the works and areas where the Contractor, his Sub-contractors, his agents and his employees have to perform work pursuant to the Contract.

The above are only illustrative list of insurance covers normally required and it will be the responsibility of the Contractors to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect, in pursuance of the Contract.

**43.0 UNFAVOURABLE WORKING CONDITIONS**

43.1 The Contractor shall confine all his field operations to those works which can be performed without subjecting the equipment and materials to adverse effects during inclement weather conditions, like monsoon, storms, etc. and during other unfavourable construction conditions. No field activities shall be performed by the Contractor under conditions which might adversely affect the quality and efficiency thereof, unless special precautions or measures are taken by the Contractor in a proper and satisfactory manner in the performance of such Works with the concurrence of the Engineer. Such unfavourable construction conditions will in no way relieve the Contractor of his responsibility to perform the Works as per the Schedule.

**44.0 PROTECTION OF MONUMENTS AND REFERENCE POINTS**

44.1 The Contractor shall ensure that any finds such as relic, antiquity, coins, fossils, etc. which may come across during the course of performance of his Works either during excavation or elsewhere, are properly protected and handled over to the Engineer. Similarly the Contractor shall ensure that the bench marks, reference points, etc., which are marked either with the help of Engineer or by the Engineer shall not be disturbed in any way during the performance of his Works. If, any work is to be performed which disturb such reference the same shall be done only after these are transferred to other suitable locations under the direction of the Engineer. The Contractor shall provide all necessary materials and assistance for such relocation of reference points etc.

**45.0 WORK & SAFETY REGULATIONS**

45.1 The Contractor shall ensure proper safety of all the workmen, materials plant and equipment belonging to him or to PVVNL or to others, working at the Site. The Contractor shall also be responsible for provision of all safety notices and safety equipment required both the by relevant legislations and the Engineer as he may deem necessary

45.2 The Contractor will notify well in advance to the Engineer of his intention to bring to the Site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals which may involve hazards. The Engineer shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the Contractor shall strictly adhere to and comply with such instructions. The Engineer shall have the right at his sole discretion to inspect any such container or such construction plant/equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by the Owner and the Owner shall not entertain any claim of the Contractor tower is additional safety provisions/conditions to be provided for/constructed as per the Engineer's instructions.

45.3 Further, any such decision of the Engineer shall not, in any way, absolve the Contractor of his responsibilities and in case, use of such a container or entry thereof into the Site area is forbidden by the Engineer, the Contractor shall use alternative methods with the approval of the Engineer without any cost implication of PVVNL or extension of work schedule.

45.4 Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the Contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934,

Explosives Act, 1948, and Petroleum and Carbide of Calcium Manual published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Engineer. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the Contractor shall be responsible for obtaining the same.

- 45.5 All equipment used in construction and erection by Contractor shall meet Indian/International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipments shall be strictly operated and maintained by the Contractor in accordance with manufacturer's operation Manual and safety instruction and as per Guidelines/Rules of PVVNL in this regard.
- 45.6 Periodical Examinations and all tests for all lifting/hoisting equipment & tackles shall be carried-out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by the Engineer or by the person authorized by him.
- 45.7 The Contractor shall be fully responsible for the safe storage of his and his sub-contractor's radioactive sources in accordance with BARC/DAE Rules and other applicable provisions. All precautionary measures stipulated by BARC/DAE in connection with use, storage and handling of such material will be taken by Contractor.
- 45.8 The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need, as may be directed by the Engineer who will also have right to examine these safety equipment to determine their suitability, reliability, acceptability and adaptability.
- 45.9 Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced, qualified and competent person strictly in accordance with the Code of Practices/Rules framed under Indian Explosives Act pertaining to handling, storage and use of explosives.
- 45.10 The Contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings, etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, good and standard quality of material only shall be used by the Contractor.
- 45.11 The Contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Owner or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by PVVNL to handle such fuses, wiring or electrical equipment.
- 45.12 Before the Contractor connects any electrical appliances to any plug or socket belonging to the other Contractor or Owner, he shall:
- a) Satisfy the Engineer that the appliance is in good working condition:
  - b) Inform the Engineer of the maximum current rating, voltage and phases of the appliances;

- c) Obtain permission of the Engineer detailing the sockets to which the appliances may be connected.

45.13 The Engineer will not grant permission to connect until he is satisfied that;

- a) The appliance is in good condition and is fitted with suitable plug;
- b) The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.

45.14 No electric cable in use by the Contractor/Owner will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.

45.15 No repair work shall be carried out on any live equipment. The equipment must be declared safe by the Engineer and a permit to work shall be issued by the Engineer before any repair work is carried out by the Contractor. While working on electric lines/equipment whether live or dead, suitable type and sufficient quantity of tools will have to be provided by Contractor to electricians/workmen/officers.

45.16 The Contractors shall employ necessary number of qualified, full time electricians/Electrical Supervisors to maintain his temporary electrical installations.

45.17 The Contractor employing more than 250 workmen whether temporary, casual, probationer, regular or permanent or on contract, shall employ at least one full time officer exclusively as safety officer to supervise safety aspects of the equipment and workmen, who will coordinate with the Project Safety Officer. In case of work being carried out through sub-contractors, the sub-contractor's workmen/employees will also be considered as the Contractor's employees/workmen for the above purpose.

The name and address of such Safety Officer of Contractor will be promptly informed in writing to Engineer with a copy of Safety Officer before he starts work or immediately after any change of the incumbent is made during currency of the Contract.

45.18 In case any accident occurs during the construction/erection or other associated activities undertaken by the Contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the Engineer in prescribed form and also to all the authorities envisaged under the applicable laws.

45.19 The Engineer shall have the right at his sole discretion to stop the work, 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 and he shall comply to remove short-comings promptly. The Contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Engineer within 3 days of such stoppage or work and decision of the Engineer in this respect shall be conclusive and binding on the Contractor.

45.20 The Contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in para 28.18 above and the period of such stoppage of

work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.

45.21 It is mandatory for the Contractor to observe during the execution of the works, requirements of safety rules which would generally include but not limited to following:

**Safety Rules:**

- a) Each Employee shall be provided with initial indoctrination regarding safety by the Contractor, so as to enable him to conduct his work in a safe manner.
- b) No employee shall be given a new assignment of work unfamiliar to him without proper introduction as to the hazards incident thereto, both to himself and his fellow employees.
- c) Under no circumstances shall an employee hurry or take unnecessary chance when working under hazardous conditions.
- d) Employees must not leave naked fires unattended. Smoking shall not be permitted around fireprone areas and adequate fire fighting equipment shall be provided at crucial locations.
- e) Employees under the influence of any intoxicating beverage, even to the slightest degree shall not be permitted to remain at work.
- f) There shall be a suitable arrangement at every work site for rendering prompt and sufficient first aid to the injured.
- g) The staircases and passageways, shall be adequately lighted.
- h) The employees when working around moving machinery must not be permitted to wear loose garments. Safety shoes are recommended when working in shops or places where materials or tools are likely to fall. Only experienced workers shall be permitted to go behind guard rails or to clean around energized or moving equipment.
- i) The employees must use the standard protection equipment intended for each job. Each piece of equipment shall be inspected before and after it is used.
- j) Requirements of ventilation in underwater working to licensed and experienced divers, use of gum boots for working in slushy or in inundated conditions are essential requirements to be fulfilled.
- k) In cases or rock excavation blasting shall invariably be done through licensed blasters and other precautions during blasting and storage/transport of charge material shall be observed strictly.

45.22 The Contractor shall follow and comply with all PVVNL Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservation. In case of any discrepancy between statutory requirement and PVVNL Safety Rules

referred above, the later shall be binding on the Contractor unless the statutory provisions are more stringent.

**46.0 OWNER SUPPLIED MATERIALS**

46.1 The list of equipment owned by PVVNL and existing in various substations which are to be dismantled, transported and re-erected elsewhere is given in the technical specification. The Contractor shall provide the services for dismantling, loading, transportation, unloading, handling, erection, testing and commissioning of the above equipment. The bidder shall quote their charges for the above services under the head of "Erection charge" in the relevant price schedule. All special tools, tackled, cranes etc. required for the above shall be arranged by the Contractor at his cost. The likely date of dismantling of the equipment at the existing substation site shall be incorporated in the PERT Network.