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नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड
(भारत सरकार का उद्यम)

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Corrigendum No. 1 Dated 02.12.2021

To

NIB No.: 406 Dated 18-11-2021

(DOMESTIC COMPETITIVE BIDDING)

FOR

"Construction of Plunge Pool and Extension of Apron at d/s of Bichom Dam under Kameng H.E. Plant,
Arunachal Pradesh"

The following corrigendum to the Bid document is hereby issued:

Part-4: Conditions of Contract

1. In Clause 71(i) (i), the word "SBI BPMCLR" shall be read as "SBI MCLR".

Part - 5(A): General Technical Specifications

2. Chapter 02 (Site Installations, Service and Environmental Obligations) stands modified and the modified Chapter is enclosed herewith at **Annexure-I**.

All others terms and conditions of the Bid Document shall remain unchanged.

Chief General Manager (C)
I/C Contracts & Procurement

Construction of Plunge Pool and Extension of Apron at d/s of Bichom Dam under Kameng H.E. Plant, Arunachal Pradesh



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Bid Document
Part-5(A): General Technical Specifications
02 Site Installations, Service and Environmental Obligations

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2. SITE INSTALLATIONS, SERVICES, AND ENVIRONMENTAL OBLIGATIONS

2.1. Scope of Work

- a) The Contractor shall be responsible for providing plant, equipment, materials and labour for the provision of all necessary Temporary Works, site installations and services required for the realization of the Works under this Contract.
- b) The Contractor shall design, furnish, set-up, maintain and operate at the Site all Temporary Works, site installations and Contractor's Equipment for his own use as specified in this Section, or required by the Contractor, including camps, workshops, warehouses, storage and assembly areas, all machinery, vehicles, scaffolding, equipment, water and power supply, etc.
- c) Temporary Works and services provided and operated by the Contractor for his own use as well as for that of the Employer and Engineer shall conform to the applicable Indian laws, regulations, standards, codes and sanitary requirements stipulated for such purpose. In addition, they shall comply fully with all Indian laws and regulations related to environmental protection, mitigating measures for reducing environmental impacts and remedial works on completion of the Works.
- d) The design, construction, operation and maintenance of the Contractor's Temporary Works and services may be subject to inspection by the Engineer-in-Charge.
- e) All plants, camp facilities, installations and services provided by the Contractor for his own use as well as for that of the Employer's and Engineer's wherever applicable shall at all times remain his property, except when otherwise specified hereinafter. Should, after the Completion of Contract, the Contractor wish to sell his plants, facilities and equipment in India, he shall pay all taxes and duties required by law, as stipulated in the Conditions of Contract; and he has to obtain relevant permission from the Government for such sale.

2.2. Submittals

- a) Within 7 (Seven) days from the date of issue of the Letter of Intent (LOI), the Contractor shall submit to the Engineer-in-Charge updated layout drawings showing, at adequate scale, the locations and arrangement of all his Temporary Works and facilities. These drawings shall be consistent with the plan submitted by the Contractor with his Tender, as well as, with any amendments and additions subsequently agreed to by the Engineer-in-Charge and the Contractor; and shall include:
 - i. Camps for Contractor's employees;
 - ii. Offices, parking areas, warehouses, storage areas, and medical care services;
 - iii. Water supply, sewerage, sewage treatment and disposal, power supply and illumination, telephone service (radio and cable);
 - iv. Construction of Access Roads to Plunge Pool Work Site;

- v. Equipment pools and mechanical workshops;
 - vi. Spoil areas, borrow, quarry and stockpile areas;
 - vii. Concrete and materials processing plants, including cement storage;
 - viii. Materials testing laboratory;
 - ix. Explosives magazines;
 - x. Security and safety arrangements.
- b) Within 10 (Ten) days after the day of receipt of the Notice to Commence, the Contractor shall submit to the Engineer-in-Charge the following concerning his contracts:
- i) Detailed drawings at scale 1:500 showing the camp layout, buildings, roads, recreation areas, all utilities, etc., and drawings at scale 1:50 showing typical building construction details,
 - ii) Drawings and specifications for the establishment of an infirmary and first aid stations, and details of the ambulances,
 - iii) Detailed design for industrial and potable water supply to the camps and working areas; as well as, sewerage systems, sewage treatment and disposal with an estimate of number of people to be supplied with water,
 - iv) Detailed layout drawings for electrical installations and distribution systems at the Site, showing voltages, outlets, and routing of power lines,
 - v) Detailed design and drawings including manufacturer's drawings for concrete and materials processing plants in accordance with the requirements of the pertinent Sections of these Specifications,
 - vi) Detailed break-up of all equipment to be used for material testing and in the field laboratory in accordance with the requirements of the pertinent Sections of these Specifications,
 - vii) Details of the drilling and grouting equipment,
- c) Within 10 (Ten) days after the day of receipt of the Notice to Commence, the Contractor shall submit to the Engineer-in-Charge an Environmental Monitoring and Protection Plan, which describes all measures to be taken by the Contractor. This plan will also cover all measures to be taken by the Contractor to prevent, minimize or make good all possible environmental effects of the construction work, in particular:
- i) Deterioration of the quality of water in rivers and streams, and of ground water,
 - ii) Accumulation of any pollution by solid and liquid waste material anywhere in the project area,
 - iii) Undesirable levels of noise, air pollution and dust both at the construction site, as well as, along the access road to the plunge pool site, and in quarries and borrow areas,
 - iv) Occurrence amongst site workers and their families of water-borne and other communicable illnesses, and the deterioration of levels of hygiene in the camps and

construction areas.

- d) This environmental plan will also describe the procedures to be adopted by the Contractor for reporting on the environmental protection programme and for informing and communicating with government institutions.

2.3. Site Offices, Stores, Warehouses, Materials Yard

- a) The Contractor shall provide and equip, for his own and his subcontractors' use, main and secondary offices, warehouses, materials storage areas, fuel storage areas and explosives magazines, all of which shall be maintained in good conditions until the Completion of Works.
- b) Listed hereunder are the buildings, shops and warehouses expected to be constructed and equipped by the Contractor for use in the performance of the Work under this Contract, in addition to facilities explicitly specified elsewhere in these Specifications:
- i) Mechanical repair shop,
 - ii) Electrical repair shop,
 - iii) Metalwork and wood fabrication shop,
 - iv) Main warehouse and parts store,
 - v) Bulk cement silo,
 - vi) Bagged cement store,
 - vii) Spare parts store,
 - viii) POL stations.
- c) The Contractor is required to have at the Site at least one month's minimum reserve of materials both for construction activity and other requirements. For the monsoon months, from June to September, when transport to and from site may be difficult, his reserve requirements may need to be increased.

2.4. Concrete and Materials Processing Plants

- a) The Contractor shall install and erect all necessary materials processing plants of sufficient capacity to meet the planned peak requirements during construction. The plants shall be subject to approval by the Engineer-in-Charge; and shall be well designed and fabricated, and kept in good running order to ensure compliance with the materials quality specifications. All control and measuring equipment shall be regularly serviced and calibrated.

2.5. Materials Testing Laboratory

- a) The Contractor shall build and equip an adequate field laboratory for the sampling and for testing of materials for concrete, rock or any other materials as specified in the pertinent Sections of these Specifications.
- b) The laboratory shall be located in a dust-free building properly equipped with electricity, water, etc.,

and shall have enough room for storing the samples tested as required.

- c) The equipment to be supplied and the methods of testing shall be in accordance with the relevant Indian Standards or with requirements of the USBR Concrete Manual. All apparatuses and equipment shall be of the latest design and manufactured by a reputed manufacturer, and properly calibrated. The proposed type and number of items of laboratory equipment shall be presented to the Engineer-in-Charge prior to purchase.
- d) The Contractor shall operate and maintain the laboratory until Completion of the Works and make all facilities and services available to the Engineer-in-Charge, as required. All sampling and testing to be undertaken shall be under the direct supervision of the Engineer-in-Charge. The laboratory shall be run by the Contractor's personnel experienced in sampling and testing of materials, and quality control.
- e) Specialized testing, which may be required and which cannot be performed in the Contractor's laboratory due to lack of time or equipment shall be assigned to an independent organization approved by the Engineer-in-Charge. The Contractor shall accept all results, instructions or restrictions stipulated by the Engineer-in-Charge based on such tests.
- f) Upon the Completion of Works, all laboratory equipment shall remain the property of the Contractor.

2.6. Communication Systems

2.6.1 Site Communications

- a) The Contractor shall supply, install, operate and maintain a telephone switchboard, complete with standby power supply, to connect his offices with those of the Engineer's-in-Charge, campsite, laboratories, workshops, stores, aggregate plants, batching plants, infirmary and first aid stations and all of his other work areas within the Site.
- b) The Contractor shall furnish a directory of the telephones installed at the Site and make it available to the Engineer-in-Charge.
- c) In addition to the local telephone system, the Contractor shall supply, install and maintain mobile two-way radio transceiver sets for the Engineer-in-Charge and his representative, Contractor's equipments, etc. for on-site communications. Walkie-talkie transceivers may also be required to monitor critical working areas, like concreting, where telephone or mobile radio is not feasible.

2.7. Service Vehicles

- a) The Contractor shall operate and maintain sufficient service vehicles for use by his own staff and employees in the management, for the supervision and performance of the work.

2.8. Camps for Contractor's Employees

- a) The Contractor shall design, construct, provide furnishings, maintain, and operate construction camps for Contractor's managers, engineers employed at Site and Contractor's laborers.

- b) The construction camps shall be large enough to accommodate the anticipated peak work force.
- c) The Contractor shall be responsible for the necessary topographical surveys, clearing, and earthwork required for the landscaping and to provide satisfactory foundations for buildings, streets and auxiliary facilities etc.
- d) All camp buildings shall be of sound construction and neat appearance, well insulated against severe cold, air conditioned, and connected to all utility services.
- e) Food handling, preparation and serving shall be arranged by the Contractor in properly equipped canteen buildings for all his and his subcontractors' employees.
- f) The Contractor shall be responsible for keeping his camp and buildings within it in good hygienic conditions. The standards and regulations presently in force in the project area with regard to personnel treatment, sanitary conditions, and fire and accident prevention shall be duly taken into account.
- g) The prices charged by the Contractor for food, beverages, etc., available in the camp shall be calculated on a non-profit basis.

2.9. Commercial Concessions

- a) Commercial concessions such as for laundry, catering, shops, etc., granted to a third party by the Contractor for the use of the employees and residents at the Site, shall be subject to approval by the Engineer-in-Charge. Any concession shall be revoked if the concessionaire violates the law or the provisions governing the granting of the concession. Concessions shall automatically terminate upon Completion of the Works or in the event of the termination of the Contract.
- b) No concession shall be granted for activities that are contrary to statutory regulations or law of the land or are declared by the Engineer-in-Charge to be offensive to the community.
- c) Concessionaires will be regarded as subcontractors of the Contractor.

2.10. Medical Care Facilities

- a) The Contractor shall comply with laws and health standards presently in force in India. In the event of illness of an epidemic nature breaking out, the Contractor shall carry out and comply with all orders, arrangements or regulations, which may be issued by the Government or local authorities.
- b) The Contractor shall construct, equip, and maintain at the Site, the following medical care facilities:
 - i) One clinic with ambulance and driver within his main camp,
 - ii) One first aid stations at each work site.
- c) The construction of these facilities shall be such as to provide reasonable quiet, privacy, communications, adequate ventilation, air-conditioning, heating, light, hot and cold water, toilet facilities, electrical outlets, and impervious floors, walls and roofs.
- d) All enclosed portions shall be provided with natural light by means of exterior glazed openings with

an area not less than one tenth of the total floor area, and natural ventilation by means of openable exterior openings with an area not less than one twentieth of the total floor area, and shall be provided with sufficient artificial light and a mechanically operated ventilating and air-conditioning system.

- e) The medical facilities will have an emergency power supply.

2.11. Power Supply and Illumination

- a) The Contractor shall provide, install and keep operational throughout the Time for Completion his own generating facilities of such capacity as considered necessary to supply all participants at his Site and in his camps. The power generating sets shall be installed in separate concrete or steel structure buildings on concrete foundations. The power supply to the construction sites, camps and the entire project area shall be designed for continuous operation, 24 hours a day, with sufficient capacity to satisfy peak and emergency demands.
- b) The Contractor shall install, operate and maintain electrical distribution systems which shall include all other necessary transformers, circuit breakers, disconnect and safety switches, voltage regulators, transmission lines, poles, pole hardware, conductors, meters and other equipment necessary for power distribution throughout the Site and temporary facilities.
- c) Local standby generating units to prevent the interruption of work during the failure of the primary power source and capable of maintaining minimum services such as illumination, water supply, dewatering, etc., safety and security shall also be provided by the Contractor.
- d) The Contractor shall ensure adequate illumination for all his operations at the Site and at the camp, including illumination of the streets. The minimum intensities for illumination, measured at floor level, in general shall be as follows:

Area or Operation		Luminous Intensity
a)	Excavation and spoil areas, and outdoor access ways	35 Lux
b)	General construction areas, outdoor concrete placement, active storage areas, loading platforms, refueling, and field maintenance areas	55 Lux
c)	General construction plant and shops, e.g. batching plants, mechanical and electrical, equipment rooms, carpentry shops, active storerooms, barracks or living quarters, lockers or dressing rooms, mess halls, and indoor toilets	100 Lux
d)	First aid stations, and infirmaries	550 Lux
e)	General offices (for incandescent light = 14 W/m ² /of floor area)	140 Lux

Area or Operation		Luminous Intensity
f)	Drafting and Engineering rooms	240 Lux
g)	General interiors warehouses, corridors, hallways and exit ways	50 Lux
h)	Welding	330 Lux

- e) It is not binding to NEEPCO for supply of power from Grid or otherwise. However, in case NEEPCO can make available this facility, the rate of per unit of such electricity consumption shall be fixed by NEEPCO. Non-availability of power however, would not entitle the Contractor to make any claims whatsoever either for time extension or extra payments.

2.12. Water Supply

- a) The Contractor shall design, install, operate and maintain two separate water supply systems at the Site:
- i) Industrial water: for general construction use, treated to the extent necessary to meet specified requirements (e.g. for concrete),
 - ii) Potable water: for supply to all buildings and plants requiring high quality water meeting relevant requirements for drinking water.
- b) Water shall be supplied by the Contractor from suitable natural sources available within the Project area. The water shall be free of contamination and unaffected by the Site construction work. In isolated areas with no natural sources, the Contractor shall provide sufficient number of water-carts to cover the requirements on both the industrial as well as potable water.
- c) The Contractor shall furnish, install, operate and maintain all pumps, piping, fittings, valves, storage tanks, purification plant and chlorination for the water supply and distribution systems, adequate in quantity and pressure. Industrial water shall be used for construction purposes only if the same is of adequate quality. There shall be no cross connections of any kind between the industrial and potable water supply systems. Only potable water shall be piped into buildings.
- d) Throughout the duration of the construction, the Contractor shall take regular samples from all water supplies to examine it for suitability and treatment required and makes bacteriological tests from potable water systems.

2.13. Sanitation and Sewerage

- a) All offices, workshops, laboratory and other occupied work buildings shall be provided with toilets connected to properly constructed and regularly maintained septic tanks approved by the Engineer-in-Charge.
- b) The campsites shall be provided with a complete, properly maintained and operated sewerage

system, including septic tanks, sewage treatment and disposal facilities. Facilities for washing clothes shall also be provided and linked to the sewerage system.

2.14. Waste and Garbage Disposal

- a) The Contractor shall collect waste material and garbage from camp, offices and workshops on a daily basis and transport it to an area approved by the Engineer-in-Charge where it shall be incinerated and buried.
- b) The Site shall be kept clean and free of refuse at all times. No waste shall be dumped in areas other than those approved by the Engineer-in-Charge for waste disposal. No waste of any kind shall be deposited in any watercourses.

2.15. Fencing and Site Security

- a) The Contractor's offices, workshops and storage compounds, campsites and all construction areas where exclusion of unauthorized personnel is necessary for safety and security, shall be adequately fenced, gated and guarded.
- b) The Contractor shall employ an adequate force of properly trained security guards at the work site and at the construction camp on 24-hour duty including Sundays and holidays. Storage areas shall be fenced, lighted and regularly patrolled by security guards. Warehouse buildings and explosive magazines shall be kept locked and keys accounted for at all times.
- c) All employees engaged in the execution and maintenance of the Works shall wear identification badges when at the work site.
- d) The Contractor shall be responsible for the losses occurring in his installations and those of the NEEPCO resulting from carelessness on his part.

2.16. Construction of Access Roads to Work Site

- a) At present there is approach road to Bichom Dam from the adjoining Buragaon-Bichom Road. However, the access road to the Plunge Pool Work Site from the existing approach road to Bichom Dam is not available. To start the work immediately, the Contractor shall make necessary access for taking the track construction equipment and other associated machineries by pulling/ towing at no extra cost to the Corporation.
- b) Accordingly, the contractor shall concurrently construct the access road to Plunge Pool construction site. Concreting for Plunge Pool works, shall be done by developing suitable concrete conveyance arrangement till completion of the vehicular access road at no extra cost to the corporation.
- c) In order to facilitate Plunge Pool construction works, the contractor shall require to construct access road to the Plunge Pool Work Site for vehicular movement. The access roads shall be constructed as per the direction of the Engineer-in-Charge. Measurement & payment for individual

items pertaining to road works viz. Excavation, Slope Protection, Concreting, if any, shall be guided by relevant technical specification & Bill of Quantities.

- d) For vehicular access, roads to Plunge Pool Work Site shall be concurrently constructed as per the direction of the Engineer-in-Charge. Concreting shall be done by developing suitable concrete conveyance arrangement till completion of the vehicular access road at no extra cost to the corporation.
- e) The roads shall be wide enough to allow movements of heavyweight traffic in both directions. To prevent excessive erosion, no steeper longitudinal slope than 10% shall be used, except when specifically approved by the Engineer-in-Charge.
- f) Except where rock is encountered, the back slopes of cut banks shall be stable and compatible with existing topography, and shall be flattened and rounded as far as practicable into natural ground surface.
- g) The Contractor shall install suitable devices and drainage structures in sufficient numbers to prevent accumulation of excessive water and erosion of the road surface, drainage ditches, and excavated area as per the direction of the Engineer-in-Charge.
- h) All the access roads shall be frequently sprayed with water during dry weather to prevent the formation of dust clouds. Access Roads shall be well drained and graded to ensure a firm, non-sliding surface during the rains and in winter.
- i) Upon completion of the Works, the access roads shall be handed over to NEEPCO. Those access roads, which NEEPCO does not choose to keep, shall be made impassable to vehicular traffic and the surfaces shall be scarified and left in a condition, which will facilitate natural vegetation.

2.17. Inspection by the Engineer-in-Charge

The Employer and the Engineer-in-Charge have the right at any time to inspect any part of the Contractor's site facilities, without advance notification, and to instruct immediate rectification of any contravention of the specified requirements.

2.18. Final Clean-up

- a) Upon the Completion of Works, or when any plant has completed its works the Contractor shall dismantle and demobilize all temporary facilities erected by himself or his subcontractors, and remove all debris, objectionable material, and all other refuse which may have been deposited on Site during the construction period. Such materials may be deposited only in areas approved by the Engineer-in-Charge.
- b) All excavated areas shall be filled, graded and dressed in a clean and orderly condition acceptable to the Engineer-in-Charge. As far as possible, such areas should conform to the natural appearance of the landscape.

- c) No demobilization or removal of temporary facilities and equipment shall be made without prior approval of the Engineer-in-Charge.

2.19. Environmental Obligations

- a) The Contractor shall, during the whole period of the Works comply fully with all Indian laws and regulations relating to environmental protection, mitigating measures for reducing environmental impacts and remedial works on completion of the Works. This obligation shall extend to the construction sites themselves, all the Contractor's site installations, and all quarries, borrow areas and tips.
- b) Notwithstanding any specific obligations as these may be specified in prevailing Indian laws and regulations, the Contractor shall at all times comply with the following particular requirements for the protection of the environment, the local population and the workers at the construction site (to the satisfaction of the Engineer-in-Charge):
- i) Collect, treat, remove from site and dispose of in accordance with the regulations all domestic and industrial waste and excess construction materials (both solid and liquid), fuel, chemicals and other matter,
 - ii) Take all possible steps to prevent pollution of streams, rivers, and other water supplies, at or in the vicinity of the Site and shall comply with applicable laws, orders and regulations in force in India concerning the control and abatement of water pollution,
 - iii) Under no circumstances shall the sewage from the camps, or other contaminated water, be released directly into the River or other natural streams or any open areas without prior treatment,
 - iv) Make every effort to minimize the harmful effects of transport to and from the site, in particular vehicle emissions and noise and the control of dust on roads,
 - v) Provide its work force with fuel for cooking and heating and ensure that workers on the site do not cut wood or other vegetation as firewood,
 - vi) Take measures and construct works, on the instructions of the Engineer-in-Charge, to prevent soil erosion from slopes in the construction area,
- c) In order to reduce adverse effect on public health resulting from the influx into the project area on construction workers, the Contractor will be obliged to undertake during the whole construction period the following preventive measures:
- i) Ensure that any workers suffering from contagious illnesses are removed from site for treatment and are not permitted to return to the site without an update medical certificate,
 - ii) Carry out regular spraying of all parts of the site and site installations to control mosquito vector diseases, using approved insecticides,

- iii) Implement a control programme to ensure the maintenance of satisfactory sanitary conditions on the site and in the living areas, and report to the Engineer-in-Charge all cases of serious enteric and/or water-borne illness.
- d) In view of the limited space available for the site accommodation facilities and in order to avoid problems of assimilation with the present population of the project region, the Contractor shall keep the number of workers imported from other areas to the minimum required for him to complete the Works on time and in accordance with the specifications. The Contractor will cooperate with the local authorities at all times to prevent migration to the area of unauthorized persons not involved directly in the construction work. To this end, he will at all time strictly control the movement of persons into and out of the construction areas and camps.

2.20. Payment for Site Installation and Services excluding construction of access roads to Plunge Pool Work Site

- a) The initial mobilization costs such as purchase and transport of Contractor's Equipment and materials to the Site, planning, designing, installing, operating, maintaining and removing of all Temporary Works, site installations, services and facilities specified in this Section, making submittals to the Engineer-in-Charge, recruiting and transferring staff, obtaining rights of way, clearing, grading and excavating in areas for temporary facilities, and any other costs involved in preparation for constructing Permanent Works will not be paid separately and the entire cost thereof shall be included in the Unit Prices for other items of the Works.
- b) No separate payment shall be made for complying with any environmental obligations required by Indian national and state laws and regulations, and/or as described in this Section, and all such costs incurred by the Contractor to this end shall be considered as being included in the Contractor's Unit Prices.

2.21. Payment for construction of access roads to Plunge Pool Work Site

Measurement for various items of works viz. excavation, concreting, slope protection, etc. under access road construction shall be in accordance with the provisions in the relevant portions of the particular section under technical specification and payment shall be at the unit price in the BoQ of particular item of work.

End of Chapter "Site Installation, Service and Environmental Obligations"