

TERMS AND CONDITIONS

Project Supervision Services for the projects at Kadmath and Kalpeni, Lakshadweep islands

1. Salient features of the assignment are given below.

Period of Contract 36 months, which will be extended, if required, till completion of Construction Contract works and also a further period of 6months for closing the contract documents

Service Details: The Consultant shall organise, plan, supervise and manage the construction activities as a whole. The Consultant shall undertake all activities related to the technical site supervision, contract management, cost checking/ controls, quality assurance/quality control, monitoring safety related issues, equipment trials, booking of work done measurements, finalization/ certification of bills and overall co-ordination, and providing comprehensive contract administration services to administer the construction contract, issuing site instructions, managing progress with respect to program, valuing progress claims and assessing variations and claims for the extensions of time and cost, liaisoning with connected agencies including UTLA, as required.

2. TECHNICAL, IMPLEMENTATION SUPPORT & ASSISTANCE WHILE EXECUTING THE WORKS BY EPC CONTRACTOR – CONSTRUCTION MANAGEMENT AND SUPERVISION

- (i) The Consultant shall organise, plan, supervise and manage the construction activities as a whole. The Consultant shall undertake all activities related to the technical site supervision, contract management, cost checking/ controls, quality assurance/quality control, monitoring safety related issues, equipment trials, booking of work done measurements, finalization/ certification of bills and overall co-ordination, and providing comprehensive contract administration services to administer the construction contract, issuing site instructions, managing progress with respect to program, valuing progress claims and assessing variations and claims for the extensions of time and cost, as required.
- (ii) The Consultant shall establish a multi-discipline team for the Project Management Services having all the requisite & necessary skills for professional management of the Project on behalf of the CoPA. An Organogram comprising minimum technical persons of various disciplines at various phases of construction with the approval of CoPA must be maintained by the Consultant at site. Organogram of the Consultant at site shall be given to the CoPA for review and approval.
- (iii) Members of the team may be located at various levels that are most appropriate for the efficient management of the Project. Prime responsibility of the Consultant shall be to complete the Work within the schedule time, cost & as per the scope of the Agreement. In general, Consultant shall act on behalf, and report to, and shall be

responsible for managing the overall Project in detail and directing Vendors / Contractors and others on behalf of the CoPA, for taking or recommending appropriate action to complete the Project on time

(iv) QUALITY ASSURANCE PLAN

The Consultant has overall responsibility to the CoPA for quality management throughout the Project. The Consultant shall prepare an integrated overall Quality Assurance Program (QAP) in discussion with the Contractor which satisfies recognized international standards e.g. ISO, BS, ASME, OISD, ASTM, API etc.

The Consultant shall have an established quality management organization which shall be responsible for monitoring and auditing compliance with the QAP throughout the whole Project. The organization shall comprise sufficient numbers of suitably trained and qualified staff to ensure that all requirements of the QAP are satisfactorily implemented by the Vendors.

The QAP shall cover, but shall not be limited to:

- (a) Scope of Third Party Inspection agency for the bought out items including all hold points/ review points.
- (b) Quality audits, once in every quarter, at each location during execution of the project & submitting the report to the CoPA highlighting adherence to the QAP.
- (c) Verification and approval of methods used and documentation produced during engineering and construction work.
- (d) Inspection, handling and identification of equipment and materials, and proper documentation.
- (e) Planning, agreement of methods, and techniques, supervision, inspection, acceptance and proper verification and acceptance of documentation during construction work.
- (f) Field inspection and testing procedures.
- (g) Consultant to assist the CoPA in filing insurance claim, if any. Consultant shall provide services for ascertaining repair cost and consultant to carry out inspection for repair of material or replacement.
- (h) Operating, maintenance and training manuals in coordination with the Vendor.

The Consultant shall prepare for the CoPA's approval and execute a program of quality audits for its own, and Vendors activities. Such program shall be submitted as part of the QAP for the CoPA's approval. the CoPA shall have the option to provide representatives to participate in any quality audits carried out on the Project.

3. SITE SUPERVISION

The Consultant shall depute experienced Project Engineer and other Engineers as per Table 1 & 2 for supervision of Work executed by the EPC Contractor. The Engineers deputed shall be well versed with the Site job & shall be capable of taking day to day decisions at site. The total project envisages multi disciplinary team of Engineers required at site for execution of jobs at the same time or in stages. All expenses for maintaining the Engineers deputed at site shall be borne by the Consultant including their accommodation and logistic costs. The Work fronts may/may not be available in one single slot and staggering placement of Engineers shall be done on case to case

basis. The Engineers shall be posted at site for the relevant branch of engineering depending upon the job requirement. The same shall be planned by the Consultant and deployed for the period required. Once the job for the particular discipline of engineering is over the Engineer shall be demobilized. No payment shall be made for mobilization or demobilization of Engineers at site. Project Engineer shall provide close and meticulous supervision to ensure quality & ensure qualitative & quantitative deliverable and safe execution of the Project. Supervision of work during evening, nights and during holidays as required is deemed to be included in the scope. The Consultant shall be deemed to have full knowledge of the applicable codes and standards, laws and regulations, safety rules and regulations, conditions of labour, local conditions and environmental aspects and shall comply with the requirements thereof wherever applicable. These activities shall include, but not be limited to, the following:

- Ensure that Work is carried out as per the Agreement / Bid Document of the EPC Contract(s), approved drawings, design & data sheets.
- Monitor day to day execution & ensure that progress at site is as per the Project schedule.
- Ensure Round the clock supervision, whenever required.
- Review and recommend to the CoPA on the adequacy of EPC Contractors' supervisory personnel, and craftsmen in terms of qualifications and numbers.
- Coordinate the activities of EPC Contractors and their respective subcontractors, if any.
- Review the approved construction plan on fortnightly basis. If any time lag is observed in the progress, the Consultant to analyze & advice party for additional steps to be taken to boost the job progress and make recommendations to the CoPA on any action to be taken to maintain schedule.
- Review and recommend regularly on EPC Contractors' allocation of manpower and construction equipment.
- Review and approve, on the CoPA's behalf, after getting approval from the CoPA, EPC Contractors' work methods, with special emphasis on safety and quality.
- Review and approve the procedures proposed by EPC Contractors for the inspection by the Consultant of each item of construction work and the witnessing by the Consultant of each construction activity in so far as inspection and witnessing are required.
- Supervise, inspect and certify that quality of the EPC Contractors' Work to ensure that all Work is adequate for the purpose intended, is in accordance with good engineering and construction standards and practices, drawings and specification, and is in accordance with the quality assurance program and conforms with the contract provisions.
- Ensure that adequate records are maintained, so that expediting for rectification, if required, is easy and systematic. All reports and documents prepared by the Consultant for supervision shall be professional, precise and objective. The report formats shall be finalised in Consultation with the officials of the CoPA.

- Maintain one hard copy of all documents and drawings at Site.
- Attend all meetings as required through VC.
- Review and certify the Contractors' claims. Certify and recommend to the CoPA on the progressive payments of the work according to the work completed.
- On behalf of the CoPA supervise and agree with Contractors on a phased completion program, to facilitate a logical completion program.
- Closing the all open work orders / contracts to close project sites.
- Review EPC Contractors' detailed proposals for the startup and the conduct of the performance tests, and advise the CoPA and the Contractor accordingly to ensure that all the activities will be carried out in a safe and efficient manner.
- Report immediately about any use of materials not in accordance with the drawings, specification and contract, and supervise its removal from job site.
- Supervise all works required for modifications requested or approval by the CoPA in accordance with the Project procedures.
- Review and recommend safety and labour relations procedures prepared by EPC Contractors in line with all applicable codes, regulations and the CoPA's requirements. Monitor safety and labour relations and take action on behalf of the CoPA on all problems, violations and inquiries.
- Inspect and record site activities and oversee that documentation is kept up-to-date and in first rate condition in preparation for completion of the Project.
- Ensure that all As-built drawings for the Project are recorded correctly and compiled and submitted by the EPC Contractors as stated in the Contract. Consultant shall submit the same to the CoPA after approval.
- Maintain all registers, quality records & other documents as listed elsewhere in the Tender document.

4. BILL CERTIFICATION

- It will be the responsibility of the Consultant to ensure that bills are certified timely to ensure the cash flow to the various Vendor/ Contractors at each site.
- The Consultant shall ensure for Timely Measurement in Computerised Measurement Books of site Works & certifying the RA Bills for onward submission to the CoPA in the prescribed format for processing the bills.
- Prepare the payment master table to ensure that double billing is not done at any point of time.
- The Contract Documentation & Billing Engineer shall maintain all records of interim bill / final bill and secured advance documents submitted by the Contractor.

5. SITE DOCUMENTATION

Project Engineer shall maintain as a minimum the following site documents as given below:

- a. Daily Log book
- b. All datasheets, execution drawings required for the project
- c. Hindrance Register
- d. Incoming Material Inspection Report
- e. Measurement Book
- f. Material Test Certificates
- g. Reconciliation of various materials received Vs required Vs issued
- h. Welder Qualification Certificate
- i. Earth Pit Testing Report
- j. Equipment manuals which will be supplied by various vendors
- k. Minutes of meeting and various correspondence for the Project

6. COMMISSIONING OF PROJECT

- The Consultant shall depute experienced Engineer/s of required discipline/s (minimum experience as given at Table 1) to plan and execute the commissioning activities.
- The Consultant shall be responsible to ensure that commissioning of all structures/equipments are done in line with any statutory code.
- The Consultant shall be responsible to co-ordinate with various vendors, work Contractors for ensuring that all materials, consumables etc. required for commissioning of the facility is available at the site before commissioning call is raised.
- It may be noted that the commissioning for various equipment's may happen in stagger manner as and when the facilities are ready for commissioning.

7. HANDING OVER & CLOSURE OF PROJECT

- The Consultant shall be responsible for preparing the Final reconciliation statement for all the hardware items received and consumed for the location for all the activities.
- After successful completion of commissioning for various items and stabilization for safety systems, the Consultant shall submit all the Project related documents for handing over & closure of the sites.
- The Consultant shall recommend any financial recovery along with back up documents/ Rate analysis owing to any deviations taken during execution of Project against the Agreement / Bid Document specification, terms & condition.
- The Consultant shall recommend certificates of provisional acceptance to the CoPA after commissioning at the respective facilities.
- Final acceptance of the Consultant's Assignment occurs at the expiry of the Defects Liability Period of all Construction / Supply Contracts pertaining to this Project plus three months.

8. MAN POWER REQUIREMENT AND RESPONSIBILITIES OF TEAM MEMBERS

The Consultant shall comprise a multi-disciplinary team for the subject Assignment having all the requisite & necessary skills for professional management of the Project. Team members may be located at various levels that are most appropriate for the efficient management of the Project. The prime responsibility of the Consultant shall be to assist the CoPA at every stage till completion of the Project, within the scheduled time with no

cost / time overrun, including taking appropriate corrective action in case of any substantial deviations from the Project path.

The requirement of officials/experts and staff during the Assignment shall be as per the following man power deployment presented in Table 1 and Table 2. Any external/ internal experts as and when required for tackling technical matters, shall be arranged by the Consultant at no extra cost to the CoPA/UTLA.

Table 1: Team Personnel Requirement at Office of the Consultant and Site –
Qualification, Experience & Responsibilities

Sl. No.	Particulars	Minimum Educational Qualification	Minimum experience	Responsibilities
1	Team Leader - 1 No.	Graduate in Civil / Mechanical / Electrical / Port & Harbour / Ocean Engineering or MBA in Construction Management with Degree in Civil / Mechanical / Electrical Engineering	Min. 15 years in Construction of infrastructure projects in which atleast one will be a Marine work costing not less than Rs.100 Crore and Electro Mechanical Works costing not less than Rs.5 Crore	He will lead, co-ordinate the Consultancy Team for delivering the Consultancy works in a timely manner
2	Contract Expert - 1 No.	Graduate in Civil/ Mechanical / Electrical Engineering	Min. 10 years in Contract Management of Construction/ Contract Management of infrastructure projects costing not less than Rs.150 Crore	He will be responsible for Contract Management, Legal issues etc. of the projects.
3	Project Engineer – 2 Nos.	Graduate in Civil / Harbour/ Port & Harbour / Ocean Engineering	Min. 10years in the field of construction of Infrastructure projects in which atleast one will be a Marine work costing not less than Rs.75Crore	He shall be responsible for the overall performance and administration of the Consultant's Team at the Project Site. The Project Engineer will also act as the Engineer's Representative and shall be overall in-charge for the Consultant's

				Supervision team for the entire Project.
4	Site Engineer - Civil – 6 Nos.	Graduate / Diploma in Civil Engineering	Graduate with Min. 7 years or Diploma with Min. 12 years in the field of construction of Infrastructure projects. However, diploma holders shall not exceed 50% of total requirement of Site Engineers-Civil.	He will assist the Project Engineer in day to day Work and report directly to the Project Engineer. He will ensure performance of the Work in strict accordance with the drawings, plans and specifications, maintain a detailed diary of the day Work activities, issues, Work approved or rejected, hours of operation, labour and equipment used, etc.
5	Site Engineer – MEP – 2 Nos.	Graduate / Diploma in Electrical/Mechanical Engineering	Graduate with Min. 7 years or Diploma with Min. 12 years in the field of construction of Infrastructure projects. However, diploma holders shall not exceed 50% of total requirement of Site Engineers-MEP.	He will coordinate with the Contractor in charge of the Work on a frequent basis to ensure that no issues are encountered, report to the Project Engineer any failure of the Contractor to conform to drawings, plans and specifications and to provide good workmanship, ensure that the Works are being constructed to the latest construction and shop drawings, ensure that Works are compliant with the Contractor's HSE plans at all times etc.
6	Quality Control Engineer – Civil – 2 Nos.	Graduate / Diploma in Civil Engineering	Graduate with Min. 7 years or Diploma with Min. 12 years in the field of construction of	Responsible for preparation / Review the Quality Assurance plans in

			Infrastructure projects as Quality Control Engineer. However, Diploma holders shall not exceed 50% of total requirement of Quality Control Engineers-Civil.	line with civil design and ensuring the quality of materials and workmanship and also maintaining all documents in respect of quality, materials & works .
7	Contract Documentation & Billing Engineer – 2 Nos.	Graduate / Diploma in Civil / Mechanical / Electrical Engineering	Graduate with Min. 7 years or Diploma with Min. 12 years in the field of construction of Infrastructure projects as Contract Documentation & Billing Engineer. However, Diploma holders shall not exceed 50% of total requirement of Contract Documentation & Billing Engineers.	Responsible for preparation of all documents / registers as per the approved formats required for the project, document all the activities of the project including hindrances / instructions etc and review of bills /invoices submitted by the Contractor, including variations and ensure timely payment.
8	Safety Officer/ HSE Engineer – 2 Nos.	Graduate / Diploma in Civil / Mechanical / Electrical / Safety Engineering / Graduate in Science with Diploma in Industrial Safety	Graduate with Min. 7 years or Diploma with Min. 12 years or Graduate in Science with Diploma in Industrial Safety with Min. 12 years in the field of construction of Infrastructure projects as Safety Officer / HSE Engineer. However, Diploma holders shall not exceed 50% of total requirement of Safety Officer / HSE Engineers	Responsible for ensuring a safe and compliant workplace, health, safety & environment at the project site, address issues regarding HSE matters of the EPC contractors. He shall identify and mitigate hazards, enforcing safety protocols, conducting inspections and shall ensure that safe procedures are followed in connection with the erection & testing of cranes, winches,

				various machineries etc.
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Table 2 : Team Personnel Requirement at Office and Site – Deployment Details

Sl. No.	Particulars	Number of Engineers to be deployed		Max Man Months to be deployed per site
		Kalpeni	Kadmath	
	<u>At Office</u>			
1	Team Leader	1		42 (Considering his 50% time available for this work)
2	Contract Expert	1		42 (Considering his 33 $\frac{1}{3}$ % time available for this work)
	<u>At Site</u>			
3	Project Engineer	1	1	42
4	Site Engineer - Civil	1 + 1 + 1	1 + 1 + 1	42/ 36 /30
5	Site Engineer - MEP	1	1	30
6	Quality Control Engineer – Civil	1	1	33
7	Contract Documentation & Billing Engineer	1	1	36
8	Safety Officer/ HSE Engineer	1	1	33

9. While submitting the Budgetary offers the following shall be considered:
- Performance Security @10% of the Award Price / Contract Price to be submitted
 - Advance Payment upto 5% of the Contract price is allowed on submission of an unconditional Bank Guarantee from a Scheduled bank acceptable to the CoPA in amounts equal to 110% (one hundred ten per cent) of the amount of the advance payment being requested. The Advance payment shall be recovered from the Consultant from the first five running bills in equal instalments”.
 - Insurance charges for Technical Personnel against the risks, and for the coverage applicable law including Labour Codes
 - Professional Indemnity Insurance : Professional Indemnity Insurance, with a minimum coverage equal to value of contract price shall be submitted by the Consultant before signing of the Agreement
 - The Key Experts shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave.

- (f) Substitution of the first 10% of key personnel at the request of the Consultant shall be subject to without reduction of remuneration. The reduction in remuneration shall be 5% and 5%, respectively, for the subsequent two slabs of 10% substitutions of key personnel (i.e., till 30% substitution).
- (g) If applicable under relevant tax laws and rules, the CoPA shall deduct from all payments and deposit required taxes to respective authorities on account of Tax Deducted at Source (TDS), and Tax Collected at Source (TCS) relating to Income Tax, labour cess, royalty etc.
- (h) The remuneration rates shall cover: (i) such salaries and allowances as the Consultant shall have agreed to pay to the Experts as well as factors for social charges and overheads (bonuses or other means of profit-sharing shall not be allowed as an element of overheads), (ii) transportation, accommodation and allowances for food, if any (iii) the cost of backstopping (reinforcement/ support) by home office staff (iv) the Consultant's profit, and (v) any other items as specified.

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