

**Project:103.4 MW LPG based Combined Cycle Power Plant Freetown,
Sierra Leone**

Quality Requirements for Civil Works Sub-Contractor:

Activity	Sub-Contractor's Response (Yes/No/NA)
1. Compliance with Design, Specifications and Codes.	
a. Adherence to Drawings: Sub-Contractor must strictly follow the design drawings and specifications provided by the client.	
b. Material Selection: Materials used must meet the standards and grades specified in the contract.	
c. Codes: All materials and construction techniques must comply with Indian standards or other relevant national or international codes.	
2. Workmanship Standards	
a. Skilled Labor-Sub-contractor shall depute dedicated and experienced person for monitoring quality aspect on jobs.	
b. Required machineries- Sub-contractor shall deploy all machineries that are required for civil construction work like excavators, bulldozers, wheel loaders, graders, compactors, pavers, etc.	
c. The sub-contractor shall follow only approved Mix design for concrete.	
d. Accuracy: Execution must be precise, particularly in aspects like leveling, alignment, reinforcement work, formwork etc. Any defect that arises from work shall be repaired by a contractor free of cost to SPEPC.	
3. Testing and Quality Control	
a. All inspection and testing as per the approved QAP shall be conducted by the sub-contractor and reported accordingly.	
b. Curing shall be done by sub-contractor using heissen cloth or applying of curing compound as applicable as per standard, spec etc.	
c. Sub-Contractor to bring and use various sizes of vibrators as necessary.	
d. Shuttering board thickness and shuttering oil as per standard.	
e. Bending wire gauges as per standard.	
f. Sub-contractor to bring and use an approved Bonding Agent in concrete cold joint and hard joint.	
g. All construction materials (cement, sand, aggregates, steel etc.) must be of approved quality as specified in the contract.	

h. Quality tests must be conducted on materials like cement, concrete, steel and soil (e.g; slump test for concrete, tensile strength test for steel, Cube compressive strength test).	
i. The use of certified materials from accredited manufacturers or suppliers may be required.	
j. In case of failure of concrete cube strength as per prevailing IS code, the sub-contractor must arrange an NDT testing as directed by SPEPC on his own cost.	
k. Material testing laboratory, calibration of testing equipment and batching plant need to be maintained by sub-contractor.	
l. One lab helper must be provided by sub-contractor.	
m. Any rejected material must be removed by the sub-contractor on his expenses.	
4. Documentation and records	
a. Progress reports	
b. As-built drawings	
c. Quality reports as per QAP / ITP	