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ROYAL GOVERNMENT OF BHUTAN  
MINISTRY OF WORKS & HUMAN SETTLEMENTS  
THIMPHU THROMDE

BIDDING DOCUMENTS FOR  
SECOND BHUTAN URBAN DEVELOPMENT PROJECT

**PACKAGE-VII**

Construction of 10.00 MLD Water Treatment Plant at  
Taba LAP

Feb 2017

## **PART 1 – BIDDING PROCEDURES**

### **Section I: Instructions to Bidders (ITB)**

This Section provides relevant information to help Bidders prepare their bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of Contracts. **Section I contains provisions that are to be used without modification.**

### **Section II. Bid Data Sheet (BDS)**

This Section consists of provisions that are specific to each procurement and that supplement the information or requirements included in Section I, Instructions to Bidders.

### **Section III. Evaluation and Qualification Criteria**

This Section contains the criteria to determine the lowest evaluated bid and to ascertain the continued qualification of the Bidder to perform the contract.

### **Section IV: Bidding Forms**

This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid.

### **Section V. Eligible Countries**

This Section contains information regarding eligible countries.

## **PART 2 – WORKS REQUIREMENTS**

### **Section VI. Works Requirements**

This Section contains the Specification, the Drawings, and supplementary information that describe the Works to be procured.

## **PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS**

### **Section VII. General Conditions (GC)**

This Section contains the general clauses to be applied in all contracts. The text of the clauses in this Section shall not be modified.

### **Section VIII. Particular Conditions (PC)**

This Section consists of Part A, Contract Data, which contains data, and Part B, Specific Provisions, which contains clauses specific to each contract. The contents of this Section supplement the General Conditions and shall be prepared by the Employer.

### **Section IX: Annex to the Particular Conditions - Contract Forms**

This Section contains forms which, once completed, will form part of the Contract. The forms for **Performance Security** and **Advance Payment Security**, when required, shall only be completed by the successful Bidder after contract award.

**BIDDING DOCUMENTS  
FOR PROCUREMENT OF WORKS**

**Design, Construction, Installation, Commissioning and Operation  
& Maintenance for (3) Three years of a 10 MID Water  
Treatment Plant (WTP) at Taba (DESIGN, BUILT, OPERATE  
& TRANSFER (DBOT)**

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**ICB No** : TT/ ENG/(BUDP-II)WB-31/16-17/22

**Project Name:** Second Bhutan Urban Development  
Project (BUDP-II) and Additional financing

**Employer** : Thimphu Thromde

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## **PART 1 – BIDDING PROCEDURES**

## Section I. Instructions to Bidders

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## Section I. Instructions to Bidders

### A. General

#### 1. Scope of Bid

1.1 In connection with the Invitation for Bids **indicated in the Bid Data Sheet (BDS)**, the Employer, as **indicated in the BDS**, issues these Bidding Documents for the procurement of Works as specified in Section VI, Works Requirements. The name, identification, and number of lots (contracts) of the International Competitive Bidding (ICB) are **provided in the BDS**.

1.2 Through out these Bidding Documents:

The term “in writing” means communicated in written form and delivered against receipt; except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and “day” means calendar day.

#### 2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called “Borrower”) **indicated in the BDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) toward the cost of the project **named in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which these Bidding Documents are issued.

2.2 Payments by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the financing agreement between the Borrower and the Bank (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds. The Loan Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.

#### 3. Fraud and Corruption

3.1 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), as well as bidders, suppliers, and contractors and their agents (whether declared or not), personnel,

subcontractors, sub-consultants, service providers and suppliers, under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. <sup>1</sup>In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
  - (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party<sup>2</sup>;
  - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;<sup>3</sup>
  - (iii) “collusive practice” is an arrangement between two or more parties<sup>4</sup> designed to achieve an improper purpose, including to influence improperly the actions of another party;
  - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party<sup>5</sup> or the property of the party to influence improperly the actions of a party;
  - (v) “obstructive practice” is
    - (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

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<sup>1</sup>In this context, any action taken by a bidder, supplier, contractor, or any of its personnel, agents, sub-consultants, sub-contractors, service providers, suppliers and/or their employees to influence the procurement process or contract execution for undue advantage is improper.

<sup>2</sup>“Another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

<sup>3</sup> “Party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

<sup>4</sup> “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non-competitive levels.

<sup>5</sup> “Party” refers to a participant in the procurement process or contract execution.

- (b) Acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under sub-clause 3.1(e) below.

will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation; and

will sanction a firm or an individual, at any time, in accordance with prevailing Bank's sanctions procedures, including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract.

- 3.2 In further pursuance of this policy, Bidders shall permit the Bank to inspect any accounts and records and other documents relating to the Bid submission and contract performance, and to have them audited by auditors appointed by the Bank.
- 3.3 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 15.6 of the General Conditions.

#### 4. Eligible Bidders

- 4.1 A Bidder may be a natural person, private entity, government-owned entity—subject to ITB 4.5—or any combination of such entities in the form of a joint venture or association (JVA) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture or association:
  - (a) **unless otherwise specified in the BDS**, all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms, and
  - (b) the JVA shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the partners of the JVA during the bidding process and, in the event the JVA is awarded the Contract, during contract execution.
- 4.2 A Bidder, and all partners constituting the Bidder, may have the nationality of any country as defined under the *Guidelines*:

*Procurement under IBRD Loans and IDA Credits* (hereinafter referred to as the Guidelines), subject to the restrictions specified in Section V, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related Services.

- 4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if :
- (a) they have at least one controlling partner in common; or
  - (b) they receive or have received any direct or indirect subsidy from any of them; or
  - (c) they have the same legal representative for purposes of this bid; or
  - (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
  - (e) a Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
  - (f) a Bidder participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid;
  - (g) a Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation.
- 4.4 A Bidder that has been sanctioned by the Bank in accordance with the above ITB 3.1 (d), or in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, shall be ineligible to be awarded a Bank-financed contract, or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall determine.
- 4.5 Government-owned entities in the Employer's country shall be

eligible only if they can establish that they are legally and financially autonomous and operate under commercial law. Also, they shall not be dependent agencies of the Employer.

- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.7 Bidders shall be excluded if:
- (a) as a matter of law or official regulation, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of Works required; or
  - (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of Works or services from that country or any payments to persons or entities in that country.
- 4.8 This bidding is open only to prequalified Bidders unless an exception has been granted by the Bank, **as indicated in the BDS.**

#### **5. Eligible Materials, Equipment, and Services**

- 5.1 The materials, equipment and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.

### **B. Contents of Bidding Documents**

#### **6. Sections of Bidding Documents**

- 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

#### **PART 1 Bidding Procedures**

- Section I. Instructions to Bidders (ITB)
- Section II. Bid Data Sheet (BDS)
- Section III. Evaluation Criteria and Qualification Criteria
- Section IV. Bidding Forms

- Section V. Eligible Countries

## **PART 2 Works Requirements**

- Section VI. Works Requirements

## **PART 3 Conditions of Contract and Contract Forms**

- Section VII. General Conditions (GC)
- Section VIII. Particular Conditions (PC)
- Section IX. Annex to the Particular Conditions - Contract Forms

- 6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Documents.
- 6.3 The Employer is not responsible for the completeness of the Bidding Documents and their addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

## **7. Clarification of Bidding Documents, Site Visit, Pre-Bid Meeting**

- 7.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Employer in writing at the Employer's address **indicated in the BDS** or raise his enquiries during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received no later than twenty-one (21) days prior to the deadline for submission of bids. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the clarification result in changes to the essential elements of the Bidding Documents, the Employer shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.
- 7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for

death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

- 7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, **if provided for in the BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer not later than one week before the meeting.
- 7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3. Any modification to the Bidding Documents that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.
- 7.7 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

#### **8. Amendment of Bidding Documents**

- 8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Documents by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer should extend the deadline for the submission of bids, pursuant to ITB 22.2

### **C. Preparation of Bids**

#### **9. Cost of Bidding**

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

#### **10. Language of Bid**

- 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in

another language provided they are accompanied by an accurate translation of the relevant passages in the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

## 11. Documents Comprising the Bid

11.1 The Bid shall comprise the following:

- (a) Letter of Bid and Appendix to Bid
- (b) completed schedules as required, including priced Bill of Quantities, in accordance with ITB 12 and 14;
- (c) Bid Security, in accordance with ITB 19;
- (d) alternative bids, if permissible, in accordance with ITB 13;
- (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;
- (f) documentary evidence in accordance with ITB 17 establishing the Bidder's continued qualified status or, if post-qualification applies, as indicated in accordance with ITB 4.8, the Bidder's qualifications to perform the contract if its Bid is accepted;
- (g) Technical Proposal in accordance with ITB 16; and
- (h) Any other document required in the **BDS**.

11.2 In addition to the requirements under ITB 11.1, bids submitted by a JVA shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement.

## 12. Letter of Bid and Schedules

12.1 The Letter of Bid and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested.

## 13. Alternative Bids

**13.1 Unless otherwise indicated in the BDS**, alternative bids shall not be considered.

13.2 When alternative times for completion are explicitly invited, a statement to that effect **will be included in the BDS**, as will the method of evaluating different times for completion.

13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Documents must first price the Employer's design as described in the Bidding Documents and shall further provide all information

necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.

**13.4 When specified in the BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the Works, and such parts **will be identified in the BDS**, as will the method for their evaluating, and described in Section VI, Work's Requirements.

**14. Bid Prices and Discounts**

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Bill of Quantities shall conform to the requirements specified below.

14.2 The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.

14.3 The Bidder shall quote any unconditional discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.

**14.4 Unless otherwise provided in the BDS** and the Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings.

14.5 If so indicated in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.3, provided the bids for all lots (contracts) are submitted and opened at the same time.

14.6 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 28 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.

**15. Currencies of Bid and**

15.1 The currency (ies) of the bid and the currency (ies) of payments

- Payment** shall be **as specified in the BDS**.
- 15.2 Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Schedule of Adjustment Data in the Appendix to Bid are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.
- 16. Documents  
Comprising the  
Technical Proposal**
- 16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.
- 17. Documents  
Establishing the  
Qualifications of the  
Bidder**
- 17.1 In accordance with Section III, Evaluation and Qualification Criteria, to establish that the Bidder continues to meet the criteria used at the time of prequalification, the Bidder shall provide in the corresponding information sheets included in Section IV, Bidding Forms, updated information on any assessed aspect that changed from that time, or if post-qualification applies as indicated in accordance with ITB 4.8, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms.
- 17.2 If a margin of preference applies as indicated in accordance with ITB 33.1, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility indicated in accordance with ITB 33.1.
- 18. Period of Validity of  
Bids**
- 18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Employer in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.
- 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.
- 18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:
- (a) In the case of fixed price contracts, the Contract price shall

be the bid price adjusted by the factor **specified in the BDS**.

- (b) In the case of adjustable price contracts, to determine the Contract price, the fixed portion of the bid price shall be adjusted by the factor **specified in the BDS**.
- (c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

## 19. Bid Security

- 19.1** The Bidder shall furnish as part of its bid, either a Bid-Securing Declaration or a bid security **as specified in the BDS**, in original form and, in the case of a bid security, in the amount and currency **specified in the BDS**.
- 19.2 A Bid-Securing Declaration shall use the form included in Section IV, Bidding Forms.
- 19.3 If a bid security is specified pursuant to ITB 19.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option:
  - (a) an unconditional bank guarantee issued by a bank or surety;
  - (b) an irrevocable letter of credit;
  - (c) a cashier's or certified check; or
  - (d) another security **indicated in the BDS**,

From a reputable source from an eligible country. If the unconditional guarantee is issued by an insurance company or a bonding company located outside the Employer's Country, the issuer shall have a correspondent financial institution located in the Employer's Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to bid submission. In either case, the form must include the complete name of the Bidder. The bid security shall be valid for twenty-eight (**28**) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

- 19.4 If a bid security is specified pursuant to ITB 19.1, any bid not accompanied by a substantially responsive bid security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.
- 19.5 If a bid security is specified pursuant to ITB 19.1, the bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance

security pursuant to ITB 41.

- 19.6 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.
- 19.7 The bid security may be forfeited or the Bid-Securing Declaration executed:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid or
  - (b) if the successful Bidder fails to:
    - (i) Sign the Contract in accordance with ITB 40; or
    - (ii) Furnish a performance security in accordance with ITB 41.
- 19.8 The bid security or the Bid-Securing Declaration of a JVA shall be in the name of the JVA that submits the bid. If the JVA has not been legally constituted into a legally enforceable JVA at the time of bidding, the bid security or the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent referred to in ITB 4.1.
- 19.9 If a bid security is **not required in the BDS pursuant to ITB 19.1**, and
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 18.2, or
  - (b) if the successful Bidder fails to sign the Contract in accordance with ITB 40; or furnish a performance security in accordance with ITB 41;

the Borrower may, **if provided for in the BDS**, declare the Bidder disqualified to be awarded a contract by the Employer for a period of time **as stated in the BDS**.

## 20. Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the bid, in the number **specified in the BDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written

confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.

- 20.3 A bid submitted by a JVA shall comply with the following requirements:
- (a) Unless not required in accordance with ITB 4.1 (a), be signed so as to be legally binding on all partners and
  - (b) Include the Representative's authorization referred to in ITB 14.1 (b), consisting of a power or attorney signed by those legally authorized to sign on behalf of the JVA.
- 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

## **D. Submission and Opening of Bids**

### **21. Sealing and Marking of Bids**

- 21.1 The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope.
- 21.2 The inner and outer envelopes shall:
- (a) bear the name and address of the Bidder;
  - (b) be addressed to the Employer in accordance with ITB 22.1;
  - (c) bear the specific identification of this bidding process indicated in the BDS 1.1; and
  - (d) bear a warning not to open before the time and date for bid opening.
- 21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

### **22. Deadline for Submission of Bids**

- 22.1 Bids must be received by the Employer at the address and no later than the date and time **indicated in the BDS**. **When so specified in the BDS**, bidders shall have the option of submitting their bids electronically. Bidders submitting bids

electronically shall follow the electronic bid submission procedures **specified in the BDS**.

- 22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 23. Late Bids**
- 23.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- 24. Withdrawal, Substitution, and Modification of Bids**
- 24.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.2, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
- (a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
  - (b) received by the Employer prior to the deadline prescribed for submission of bids, in accordance with ITB 22.
- 24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.
- 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.
- 25. Bid Opening**
- 25.1 The Employer shall open the bids in public, in the presence of Bidders’ designated representatives and anyone who choose to attend, and at the address, date and time **specified in the BDS**. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be **as specified in the BDS**.
- 25.2 First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a

valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding bid being substituted, and the substituted bid shall not be opened, but returned to the Bidder. No bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding bid. No bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at bid opening. Only bids that are opened and read out at bid opening shall be considered further.

- 25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Price(s), including any discounts and alternative offers; the presence or absence of a bid security, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out at bid opening shall be considered for evaluation. **If so requested by the Employer in the BDS**, the Letter of Bid and the Bill of Quantities are to be initialed by the representatives of the Employer attending bid opening in the manner indicated in the BDS. No bid shall be rejected at bid opening except for late bids, in accordance with ITB 23.1.
- 25.4 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot if applicable, including any discounts and alternative offers; and the presence or absence of a bid security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

## **E. Evaluation and Comparison of Bids**

### **26. Confidentiality**

- 26.1 Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to all Bidders.
- 26.2 Any attempt by a Bidder to influence the Employer in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.

- 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing.
- 27. Clarification of Bids**
- 27.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids, in accordance with ITB 31.
- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Employer's request for clarification, its bid may be rejected.
- 28. Deviations, Reservations, and Omissions**
- 28.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
  - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
  - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
- 29. Determination of Responsiveness**
- 29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB11.
- 29.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) if accepted, would
    - (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
    - (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or
  - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 16, Technical Proposal, in particular, to confirm that all requirements of Section VI, Works Requirements have been met without any material deviation, reservation or omission.

29.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

**30. Nonmaterial  
Nonconformities**

30.1 Provided that a bid is substantially responsive, the Employer may waive any nonconformity in the bid that does not constitute a material deviation, reservation or omission.

30.2 Provided that a bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the bid. Failure of the Bidder to comply with the request may result in the rejection of its bid.

30.3 Provided that a bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section III, Evaluation and Qualification Criteria.

**31. Correction of  
Arithmetical Errors**

31.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:

(a) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;

(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.2 If the Bidder that submitted the lowest evaluated bid does not

accept the correction of errors, its bid shall be rejected.

- 32. Conversion to Single Currency** 32.1 For evaluation and comparison purposes, the currency(ies) of the bid shall be converted into a single currency **as specified in the BDS.**
- 33. Margin of Preference** 33.1 **Unless otherwise specified in the BDS,** a margin of preference shall not apply.
- 34. Evaluation of Bids** 34.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 34.2 To evaluate a bid, the Employer shall consider the following:
- (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including Day work items, where priced competitively;
  - (b) price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
  - (c) price adjustment due to discounts offered in accordance with ITB 14.3;
  - (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;
  - (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;
  - (f) the evaluation factors indicated in Section III, Evaluation and Qualification Criteria;
- 34.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 34.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), and the award to a single Bidder of multiple lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid Form, is specified in Section III, Evaluation and Qualification Criteria.
- 34.5 If the bid, which results in the lowest Evaluated Bid Price, is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices

with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

- 35. Comparison of Bids** 35.1 The Employer shall compare all substantially responsive bids in accordance with ITB 34.2 to determine the lowest evaluated bid.
- 36. Qualification of the Bidder**
- 36.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid either continues to meet (if prequalification applies) or meets (if post qualification applies) the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.
- 36.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.1.
- 36.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.
- 37. Employer's Right to Accept Any Bid, and to Reject Any or All Bids** 37.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

## **F. Award of Contract**

- 38. Award Criteria** 38.1 Subject to ITB 37.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 39. Notification of Award** 39.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of

Acceptance”) shall specify the sum that the Employer will pay the Contractor in consideration of the execution and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”) and the requirement for the Contractor to remedy any defects therein as prescribed by the Contract. At the same time, the Employer shall also notify all other Bidders of the results of the bidding and shall publish in *UNDB online* and in the *dgMarket* the results identifying the bid and lot numbers and the following information:

- (i) name of each Bidder who submitted a Bid;
- (ii) bid prices as read out at Bid Opening;
- (iii) name and evaluated prices of each Bid that was evaluated;
- (iv) name of bidders whose bids were rejected and the reasons for their rejection; and
- (v) name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded.

39.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

39.3 The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 39.1, requests in writing the grounds on which its bid was not selected.

#### **40. Signing of Contract**

40.1 Promptly upon notification, the Employer shall send the successful Bidder the Contract Agreement.

40.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer.

#### **41. Performance Security**

41.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the General Conditions of Contract, subject to ITB 34.5, using for that purpose the Performance Security Form included in Section IX, Annex to the Particular Conditions - Contract Forms, or another form acceptable to the Employer. If the performance security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer’s Country.

41.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute

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sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

<b>Section II. Bid Data Sheet</b>	
<b>A. Introduction</b>	
ITB 1.1	The number of the Invitation for Bids is: <b>TT/ENG/(BUDP-II)WB-31/16-17/22</b>
ITB 1.1	The Employer is: <b>ThimphuThromde, Bhutan.</b>
ITB 1.1	The name of the ICB is: <b>Design, Construction, Installation, Commissioning, and Operation &amp; Maintenance for (3) Three years of a Water Treatment Plant (WTP) of 10MLD capacity at Taba (DBOT).</b> The identification number of the ICB is: <b>TT/ENG/(BUDP-II)WB-31/16-17/22</b>
ITB 2.1	The Borrower is: <b>Royal Government of Bhutan</b>
ITB 2.1	The name of the Project is: <b>Second Bhutan Urban Development Project and Additional Financing</b>
ITB 4.8	Prequalification is not applicable
<b>B. Bidding Documents</b>	
ITB 7.1	<b>For clarification purposes only, the Employer's address is:</b> <b>Project Coordinator</b> <b>World Bank Project Office</b> <b>ThimphuThromde</b> <b>Post Box: 215</b> <b>Thimphu, Bhutan</b> <b>Telephone: 00975-02-336310-164 (O)/ 00975-17110947(M)</b> <b>Facsimile number: 00975-02-335944</b> <b>Electronic mail address: asunwar@thimphucity.gov.bt or prabgay@thimphucity.gov.bt</b>
ITB 7.4	A Pre-Bid meeting <b>will</b> take place at the following date, time and place: <b>Date: March 17, 2017</b> <b>Time: 14.00hrs</b> Place: <b>Conference hall, Thimphu Thromde Office</b> <b>A site visit shall not be organized by the Employer. However, bidders are expected to visit the site and observe the ground conditions prior to the Pre-Bid meeting.</b>
<b>C. Preparation of Bids</b>	
ITB 10.1	The language of the bid is: <b>English</b>
ITB 11.1 (h)	The Bidder shall submit with its bid the following additional documents: <b>N.A.</b>
ITB 13.1	Alternative bids <b>SHALL NOT</b> be permitted.
ITB 13.2	Alternative times for completion <b>SHALLNOT</b> be permitted.
ITB 13.4	Alternative technical solution: <b>Shall be permitted but concept and principle of the water treatment process should not be changed.</b>

ITB 14.4	Price Adjustment: The prices quoted by the bidder shall be <b>Not Applicable</b> for adjustment
ITB 15.1	<p>The currency(ies) of the bid and the payment currency(ies) shall be in accordance with Alternative A as described below:</p> <p><b>Alternative A (Bidders to quote entirely in local currency):</b></p> <p>(a) The unit rates and the prices shall be quoted by the Bidder in the Bill of Quantities, entirely in <b>Bhutanese Currency (Nu.)</b>, the name of the currency of the Employer's country and further referred to as "the local currency". A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as "the foreign currency requirements") shall indicate in the Appendix to Bid - Table C, the percentage(s) of the Bid Price (excluding Provisional Sums), needed by him for the payment of such foreign currency requirements, limited to no more than three foreign currencies of any country.</p> <p>(b) The rates of exchange to be used by the Bidder in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Bidder in the Appendix to Bid - Table C, and shall apply for all payments under the Contract so that no exchange risk will be borne by the successful Bidder.</p>
ITB 18.1	The bid validity period shall be <b>120 (One Hundred and Twenty)</b> days after the bid submission deadline.
ITB 18.3(b)	The fixed portion of the bid price shall be adjusted by the following factor: <b>Not Applicable</b>
ITB 19.1	The bidders shall furnish a bid security in the amount of <b>Nu. 4.84</b> million or <b>US\$ 74,000</b> in the form as specified in ITB 19.3
ITB 19.2 (d)	Other types of acceptable securities: <b>Demand Draft or Cash Warrant</b>
ITB 19.9	<b>Not Applicable</b>
ITB 20.1	In addition to the original set of tender document, the number of identical copies required is: <b>TWO. All three documents (1 original and 2 copies) should be closed and sealed in separate envelopes which are covered and sealed in single outer envelope.</b>
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of <b>legally enforceable power of Attorney including name and position held by each person signing the authorization.</b>
<b>D. Submission and Opening of Bids</b>	
ITB 22.1	For bid submission purposes only, the Employer's address is : <b>Executive Secretary</b> <b>ThimphuThromde</b>

	<p><b>Post Box: 215</b>  <b>Thimphu, Bhutan.</b>  <b>The deadline for bid submission is:</b>  <b>Date: March 31, 2017</b>  <b>Time: 13.00hrs</b>  In the event the specified date is declared as a holiday for the Employer, the bids will be received up to the appointed time on the next working day  Bidders <b>shall not</b> have the option of submitting their bids electronically.</p>
ITB 25.1	<p><b>The bid opening shall take place at:</b>  <b>Thimphu Thromde Office</b>  <b>NPPF Building</b>  <b>Thimphu, Bhutan</b>  <b>Time: March 31, 2017</b>  <b>Date: 14.00hrs</b></p>
ITB 25.3	<p>The Letter of Bid and Bill of Quantities <b>shall</b> be initialed by three representatives of the Employer attending the Bid opening.</p>
<p><b>E. Evaluation, and Comparison of Bids</b></p>	
ITB 32.1	<p>The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is:  <b>Bhutanese Currency (Nu)</b>  The source of exchange rate shall be: <b>BC selling rate as published by Royal Monetary Authority of Bhutan (www.rma.org.bt)</b>  The date for the exchange rate shall be: The last date for submission of the bid. If this date happens to be on holidays, the exchange rates for the previous working day shall be taken.</p> <p><b>Alternative A: Bidders quote entirely in local currency</b>  For comparison of bids, the Bid Price, corrected pursuant to Clause 31, shall first be broken down into the respective amounts payable in various currencies by using the exchange rates specified by the bidder in accordance with Sub-Clause 15.1.</p> <p>In the second step, the Employer will convert the amounts in various currencies in which the Bid Price is payable (excluding Provisional Sums but including Day work where priced competitively) to the single currency identified above at the selling rates established for similar transactions by the authority specified and on the date stipulated above.</p>
ITB 33.1	<p>Margin of preference <b>shall not apply</b>.</p>

### **Section III. *Evaluation and Qualification Criteria*** ***(Without Prequalification)***

This Section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders. In accordance with ITB 34 and ITB 36, no other factors, methods or criteria shall be used. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

## 1. Evaluation

In addition to the criteria listed in ITB 34.2 (a) – (e) the following criteria shall apply:

### 1.1 Assessment of adequacy of Technical Proposal with Requirements

1.1.1 The Bidder shall provide proposal of work methods and program, in sufficient detail to demonstrate the adequacy of the bidder's proposals to meet the technical specifications and the completion time of the Works as specified in Section VI: Works Requirements.

1.1.2 The information shall include a detailed note outlining bidders proposed methodology and programme of construction backed with equipment planning and deployment duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion.

1.1.3 The bidder shall include a detailed site Environment Management Plan.

1.2 **Multiple Contracts, if permitted under ITB 34.4, will be evaluated as follows:  
Not Permitted**

1.3 **Alternative Completion Times, if permitted under ITB 13.2, will be evaluated as follows:  
Not Permitted**

1.4 **Technical alternatives, if permitted under ITB 13.4, will be evaluated as follows:  
Not Permitted**

1.5 **Domestic Preference, if a margin of preference is provided for under ITB 33.1,  
the following procedure shall apply: NOT APPLICABLE**

## 2. Qualification

<i>Factor</i>	<b>2.1 ELIGIBILITY</b>					
<b>Sub-Factor</b>	Criteria					<b>Documentation Required</b>
	<b>Requirement</b>	<b>Single Entity</b>	<b>Bidder</b>			
			<b>Joint Venture or Association</b>			
			<b>All partners combined</b>	<b>Each partner</b>	<b>At least one partner</b>	
2.1.1 Nationality	Nationality in accordance with ITB 4.2.	Must meet requirement	Existing or intended JVA must meet requirement	Must meet requirement	N / A	Form ELI-1 and 2, with attachments
2.1.2 Conflict of Interest	No- conflicts of interests as described in ITB 4.3.	Must meet requirement	Existing or intended JVA must meet requirement	Must meet requirement	N / A	Letter of Bid
2.1.3 Bank Ineligibility	Not having been declared ineligible by the Bank as described in ITB 4.4.	Must meet requirement	Existing JVA must meet requirement	Must meet requirement	N / A	Letter of Bid
2.1.4 Government Owned Entity	Compliance with conditions of ITB 4.5	Must meet requirement	Must meet requirement	Must meet requirement	N / A	Form ELI-1 and 2, with attachments

<i>Factor</i>	<b>2.1 ELIGIBILITY</b>					
<b>Sub-Factor</b>	Criteria					<b>Documentation Required</b>
	<b>Requirement</b>	<b>Bidder</b>				
		<b>Single Entity</b>	<b>Joint Venture or Association</b>			
<b>All partners combined</b>			<b>Each partner</b>	<b>At least one partner</b>		
2.1.5 Ineligibility based on a United Nations resolution or Borrower's country law	Not having been excluded as a result of the Borrower's country laws or official regulations, or by an act of compliance with UN Security Council resolution, in accordance with ITB 4.7	Must meet requirement	Existing JVA must meet requirement	Must meet requirement	N / A	Letter of Bid

Factor	<b>2.2 HISTORICAL CONTRACT NON-PERFORMANCE</b>					
Sub-Factor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture or Association			
			All partners combined	Each partner	At least one partner	
2.2.1 History of non-performing contracts	Non-performance of a contract did not occur within the last <b>Five (05)</b> years prior to the deadline for application submission, based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract, and where all appeal instances available to the bidder have been exhausted.	Must meet requirement by itself or as partner to past or existing JVA	N / A	Must meet requirement by itself or as partner to past or existing JVA	N / A	Form CON – 2

<b>Factor</b>	<b>2.2 HISTORICAL CONTRACT NON-PERFORMANCE</b>					
<b>Sub-Factor</b>	Criteria					<b>Documentation Required</b>
	<b>Requirement</b>	<b>Bidder</b>				
		<b>Single Entity</b>	<b>Joint Venture or Association</b>			
<b>All partners combined</b>			<b>Each partner</b>	<b>At least one partner</b>		
2.2.2 Pending Litigation	All pending litigation shall in total not represent more than <b>Fifty percent (50%)</b> of the Bidder's net worth and shall be treated as resolved against the Bidder.	Must meet requirement by itself or as partner to past or existing JVA	N / A	Must meet requirement by itself or as partner to past or existing JVA	N / A	Form CON – 2

Factor	<b>2.3 FINANCIAL SITUATION</b>					
Sub-Factor	Criteria					Document ation Required
	Requirement	Bidder				
		Single Entity	Joint Venture or Association			
All partners combined			Each partner	At least one partner		
2.3.1 <b>Historical Financial Performance</b>	Submission of audited balance sheets or if not required by the law of the bidder's country, other financial statements acceptable to the Employer, for the last <b>Three [03]</b> years to demonstrate the current soundness of the bidders financial position and its prospective long term profitability.  As a minimum, a bidder's net worth calculated as the difference between total assets and total liabilities should be positive.	Must meet requirement	N / A	Must meet requirement	N / A	Form FIN -1 with attachment
<b>2.3.2. Average Annual Turnover</b>	Minimum average annual turnover of <b>Nu. 176 million</b> calculated as total certified payments received for contracts in progress or completed, within the last <b>Five (5)</b> years	Must meet requirement	Must meet requirement	Must meet <b>Twenty Five percent (25%)</b> of the requirement	Must meet <b>Fifty percent (50%)</b> of the requirement	Form FIN -2

<p><b>2.3.3. Financial Resources</b></p>	<p>The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet:</p> <p>(i) the following cash-flow requirement: <b>Nu.44 million</b> and (ii) the overall cash flow requirements for this contract and its current commitments.</p>	<p>Must meet requirement</p>	<p>Must meet requirement</p>	<p>Must meet <b>Twenty Five percent (25%)</b> of the requirement</p>	<p>Must meet <b>Fifty percent (50%)</b> of the requirement</p>	<p>Form FIN-3 Form FIN-4</p>
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Factor	<b>2.4 EXPERIENCE</b>					
SubFactor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture or Association			
				All partners combined	Each partner	At least one partner
<b>2.4.1 General Experience</b>	Experience under contracts in the role of contractor, subcontractor, or management contractor for at least the last <b>Five [5]</b> years prior to the applications submission deadline,	Must meet requirement	N / A	Must meet requirement	N / A	Form EXP-1
<b>2.4.2 Specific Experience</b>	(a)Participation as contractor, management contractor, or subcontractor, in at least One (01) contract within <b>the last five (5)</b> years, each with a value of at least <b>Nu.175 million</b> , that have been successfully and substantially completed and that are similar to the proposed Works. The similarity shall be based on the physical size, complexity, methods/technology or other characteristics as described in Section VI, Employer’s Requirements.	Must meet requirement	N/A	N/A	Must meet The requirement	Form EXP 2(a)

Factor	<b>2.4 EXPERIENCE</b>					
SubFactor	Criteria					Documentation Required
	Requirement	Bidder				
		Single Entity	Joint Venture or Association			
			All partners combined	Each partner	At least one partner	
<b>2.4.2 Specific Experience</b>	b) For the above or other contracts executed during the period stipulated in 2.4.2 (a) above, a minimum experience in the following key activities in last 5 years:  <b>Experience in “Design Built, Operation and maintenance of 5.00 MLD or more capacity drinking Water Treatment Plant</b>	Must meet requirements	N/A	N/A	Must meet the requirement	Form EXP-2(b)

## 2.5 Personnel

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

No.	Position	Nos.	Minimum Qualifications	Total Work Similar Experience (years)	In Similar Works Experience (years)
01	Project Manager	01	Bachelors in civil engineering	5	3
02	Water engineer	01	Bachelors in relevant field	05	03
03	Mechanical engineer with knowledge of instrumentation	01	Diploma/BE	05	03
04	Electrical engineer	02	Diploma/BE	05	03
06	Surveyor	2	Certificate/Diploma	05	03
07	Plumber	3	Certificate	05	03
08	Welder	1	Certificate	1	1
09	Site Supervisor	2	Certificate (Technical)	05	03

The Bidder shall provide details of the proposed personnel and their experience records using Forms PER-1 and PER-2 included in Section IV, Bidding Forms.

## 2.6 Equipment

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum Number required
1	Excavator (PC 200 equivalent)	02 Nos
2	Back Hoe or JCB or JCB JS30	1Nos
3	Tipper Trucks	2Nos
4	Concrete mixer machine	1Nos
5	Concrete vibrator	04 Nos
6	Survey Instruments ( Total station)	1 Set
7	Heavy weight lifting crane capacity of 10 ton minimum	1 set
8	Diesel Engine driven electric generating alternators, continuous output rating not less than 15kVA	2 Sets

The Bidder shall provide further details of proposed items of equipment using Form EQU in Section IV, Bidding Forms.

## 2.7 Bid capacity

Bidders who meet the minimum qualification criteria in factors / sub factors 2.1 to 2.6 above will be qualified only if their available bid capacity is more than the bid value of the works. The available bid capacity will be calculated as under;

Assessed available bid capacity =  $(A * N * 1.5 - B)$  where

A= Maximum value of works executed in any one (1) year during the last five (5) years by the bidder or sum of the maximum value of works executed in any one (1) year during the said five (5) years by each of the JV partners which will take into account the completed as well as works in progress updated to 2017 price level\*.

**B= Value at 2016\*** price level of the existing commitments and on-going works to be completed by the bidder or sum of the value at 2017\* price level of the existing commitments and ongoing works to be completed by each of the JV partner during the next **fifteen (15) months**. The bidder shall provide these details in Form FIN – 4 stipulated in Section IV.

N= Number of years prescribed for completion of the works for which the bids are invited

\* Cost of works of previous years shall be given weightage **of 8% per year** based on Ngultrum value to bring them to 2017 price level.

# Section IV. Bidding Forms

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## Bid Submission Sheet

Date: \_\_\_\_\_

ICB No.: \_\_\_\_\_

Invitation for Bid No.: \_\_\_\_\_

To: \_\_\_\_\_

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB)8 \_\_\_\_\_;
- (b) We offer to execute in conformity with the Bidding Document the following Works: \_\_\_\_\_  
\_\_\_\_\_;
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is: \_\_\_\_\_  
\_\_\_\_\_;
- (d) The discounts offered and the methodology for their application are: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_;
- (e) Our bid shall be valid for a period of \_\_\_\_\_ days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;
- (g) We, including any subcontractors or suppliers for any part of the contract, have or will have nationalities from eligible countries, in accordance with ITB4.2;
- (h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB4.3;
- (i) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3, other than alternative offers submitted in accordance with ITB13;
- (j) We, including any of our subcontractors or suppliers for any part of the contract, have not been declared ineligible by the Bank, under the Employer's country laws or official

regulations or by an act of compliance with a decision of the United Nations Security Council;

- (k) We are not a government owned entity/ We are a government owned entity but meet the requirements of ITB-4.5;<sup>6</sup>
- (l) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate “none.”)

- (m) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (n) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- (o) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Name \_\_\_\_\_ In the capacity of \_\_\_\_\_

Signed \_\_\_\_\_

Duly authorized to sign the bid for and on behalf of \_\_\_\_\_

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

<sup>6</sup>Bidder to use as appropriate

## Appendix to Bid

In the Tables A, B, and C, below, the Bidder shall (a) indicate its amount of local currency payment, (b) indicate its proposed source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings for local and foreign currency payment, and (d) list the exchange rates used in the currency conversion. In the case of very large and/or complex work contracts, it may be necessary to specify several families of price adjustment formula corresponding to the different works involved.]

### Table(s) of Price Adjustment Data (Not Applicable)

Table -A: Local Currency

Index code*	Index description*	Source of index*	Base value and date*	Bidder's related currency amount	Bidder's proposed weighting
			<b>Total</b>		<b>1.00</b>

[\*To be entered by the Employer whereas "a" should a fixed percentage, b= 0.10-0.30, c=0.10-0.20, d=0.10-0.20, e=0.05-0.15, f=0.05-0.15, g=0.05-0.15, the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

### Table C. Summary of Payment Currencies

**NOT APPLICABLE**

Table: Alternative A

**For** .....[insert name of Section of the Works]

Name of payment currency	A Amount of currency	B Rate of exchange (local currency per unit of foreign)	C Local currency equivalent $C = A \times B$	D Percentage of Net Bid Price (NBP) $\frac{100 \times C}{NBP}$
<b>Local currency</b> _____		<b>1.00</b>		
<b>Foreign currency #1</b> _____				
<b>Foreign currency #2</b> _____				
<b>Foreign currency #</b> _____				
<b>Net Bid Price</b>				<b>100.00</b>
<b>Provisional sums expressed in local currency</b>	[To be entered by the Employer]		[To be entered by the Employer]	
<b>BID PRICE</b>				

**Table: Alternative B**  
**NOT APPLICABLE**

*To be used only with Alternative B Prices directly quoted in the currencies of payment.*  
*(Clause ITB 15.1)*

Summary of currencies of the bid for \_\_\_\_\_ *[insert name of Section of the Works]*

<i>Name of currency</i>	<i>Amounts payable</i>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	

## BILL OF QUANTITIES

### A. PREAMBLE

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General Conditions of Contract, Technical Specifications and Drawings, Schedules, Annexure and Addenda.
2. The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, including the incidental to the pay item, as measured by the Contractor and verified/certified by the Engineer.
3. The rates and prices bid in the priced Bill of Quantities except insofar as it is otherwise, provided under the Contract, include all constructional plant, labor, supervision, materials, all temporary works and false works, erection, maintenance, Insurance, establishment and overhead charges, profit, taxes and duties together with all general risks, liabilities and obligations set out or implied in the Contract and including remedy of any defects during the Defects Liability period.
4. The rates and prices shall be quoted entirely in **Bhutanese Ngultrum**.
5. The rate or price shall be entered both in figures and words against those items in the Bill of Quantities, for which the quantities are given. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to have been covered by other rates and prices entered in the Bill of Quantities. However, rates are not to be quoted against those items for which quantities are not given.
6. The whole cost of complying with the provisions of the Contract shall be deemed to have included in the items provided in the priced Bill of Quantities.
7. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the priced Bill of Quantities.
8. The method of measurement of completed work for payment shall be in accordance with the requirements as stated in the individual sections of the Technical Specifications.
9. Errors will be corrected by the Employer for any arithmetical errors pursuant to clause 27, of the Instructions to Bidders.
10. Rock is defined as all material, in the opinion of the engineer require blasting or the use of metal wedge and sledge hammers or the use of compressed air drilling for their removal and that cannot be executed by ripping with an excavator of at least 150 BHP with a single rear mounted heavy duty ripper.
11. For speedy progress of work the Contractor may have to work round the clock. Arrangements for lighting and other safety requirements will have to be done for night working. No extra payment shall be made for this.

12. The Contractor shall be deemed to have read and examined the Bid Documents as well as inspected the project site thoroughly to conceive the work in totality to fill up the priced BOQ.
13. The Contractor shall be deemed to be fully conversant with the site conditions and the nature of the complexity of the work to be undertaken.
14. The cost of temporary power meters, telephones, construction water shall also be taken into contractor's quoted rates. Alternative power arrangements will be made by the contractor without any extra charge.
15. The alignment of roads, sewer lines, and water supply lines shown in the drawings may change and sometimes may be routed through a different alignment. Such change in alignment or route will have to be done by the Contractor as per the direction of the Employer's Engineer.
16. Traffic diversion will have to be done by the Contractor as per the approved programme between the Engineer and the Contractor. The traffic diversion programme shall be prepared by the Contractor and submitted to the Engineer for approval. Any cost on account of traffic diversion will have to be incorporated in the quoted price. No extra payment will be made on this account.
17. The contractor should construct/hire a site office within the project area to accommodate staffs of both the contractor and the employer. It should have basic facilities such as piped water supply, electricity, tele-fax, heavy duty printer(A3), internet/broad band with downloading limit of at least 16.0 GB. The monthly payment for the above services shall be fully borne by the contractor till the completion of the project. The office shall be equipped with basic furniture for day today office administration and general meetings & discussions.
18. If during the progress of work any extra items crop up, which in the opinion of the Engineer and Project Manager is essential to be executed then the extra item shall be analyzed and paid for as follows:
  - a) The rate for the item of work shall be analyzed using the rate from the Day work Item as quoted in the Bidding documents
  - b) It shall be derived from items contained in the BOQ.

**B. ABBREVIATIONS**

<b>Abbreviation</b>	<b>For</b>
Nu.	: Bhutanese Ngultrum
LS or SUM	: Lump Sum
Nr. or No.	: Number
Lm or m	: Linear meter
KM or km	: Kilometer
ha	: Hectare
m <sup>2</sup> or sq.m	: Square meter
m <sup>3</sup> or cu.m	: Cubic meter
l or L	: Litre
KG or kg	: Kilogram
T or MT	: Tonne
Hr	: Hours
%	: Percentage
HP	: Horse Power
PS	: Provisional Sum
IRC	: Indian Roads Congress
BIS	: Bureau of Indian Standards.
Prov.	: Provisional
Eqpt. hrs.	: Equipment hours
P.O.L.	: Petrol, Oil and Lubricants
Veh. day	: Vehicle Day
Veh. Month	: Vehicle Month
SQCA	: Standardization and Quality Control Authority
TCC	: Thimphu City Corporation
RGoB	: Royal Government of Bhutan
STP	: Sewerage Treatment Plant
WTP	: Water Treatment Plant
BSR	: Bhutan Schedule of Rates
IS	: Indian Standards
BOQ	: Bill of Quantities

### C. DAYWORK SCHEDULE

#### 1. General

Reference should be made to Sub-Clause 13.6 of General Conditions of Contract. Work shall not be executed on a day work basis except by **written order of the Engineer**. Bidders shall enter basis rates for day work items in the Schedules, which rates shall apply to any quantity of day work ordered by the Engineer. Nominal quantities have been indicated against each item of day work, and the extended total for day work shall be carried forward as Bill No. 10 to the Summary Total Bid Amount [for items priced competitively]. Unless otherwise adjusted, payments for day work shall be subject to price adjustment in accordance with the provisions in the General Conditions of Contract.

#### 2. Day work-Labor

In calculating payments due to the Contractor for the execution of day work, the hours for labor will be reckoned from the time of arrival of the labor at the job site to execute the particular item of day work to the time of return to the original place of departure, but excluding meal breaks and rest period. Only the time of classes of labor directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.

#### 3. The Contractor shall be entitled to payment in respect of the total time that labor is employed on day work, calculated at the rates entered by him in the schedule of **Day work Rates, 7.1-Labor**

- a) The basic rates for labor shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labor, transportation time, overtime, subsistence allowances, and any sums paid to or on behalf of such labor for social benefits in accordance with Indian law. The basic rates shall be stated in local currency only.
- b) The costs incurred under (a) above shall be deemed to cover the Contractor's profit overheads, superintendence, liabilities, and insurances and allowances to labor, timekeeping, and clerical and office work, the use of consumable stores, water, lighting, and power, the use and repair of staging, scaffolding, workshops, and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in local currency.

#### 4. Day work –Materials

The Contractor shall be entitled to payment in respect of materials used for day work (except for materials for which the cost is included in the percentage addition to labor costs as detailed heretofore), at the basic rates entered by him in the schedule of **Day work Rates, 7.2-Materials**.

- a) The basic rates for materials for materials shall be calculated on the basis of the invoiced rice, freight, insurance, handling expenses, damage, losses, etc. and shall provided for the delivery to store for stockpiling at the site. The basic rates shall be stated in local currency. These rates shall be deemed to include the Contractor's profit, overheads, etc.

- b) The cost of hauling materials for use on work ordered to be carried out as day work from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for labor and constructional plant in this schedule.

#### **5. Day work –Contractor’s Equipment**

The Contractor shall be entitled to payments in respect of Constructional Plant already on Site and employed on day work at the basic rental rates entered by him in the **schedule of Day work Rates, 7.3-Contractor’s Equipment**. These rates shall be deemed to include due and complete allowance for drivers, operators, depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit, and administrative costs related to the use of such equipment. The cost of drivers, operators and assistants will be paid for separately as described under the section on Day work labor.

6. In calculating the payment due to the Contractor for construction plant employed on day work, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time for the part of the site where the construction plant was located when ordered by the Engineer to be employed on day work and the time for return journey thereto shall be included for payment.

**BILL OF QUANTITIES**

**Please refer separate sheet in a CD which is attached along with this bidding documents**

### TECHNICAL PROPOSAL

Please submit your document in this order

<b>1</b>		<b>The Proposed Plant and its features</b>
<b>2</b>	<b>1.1.1-a</b>	<b>Site Organization</b>
<b>3</b>		<b>Company profile</b>
<b>4</b>		<b>Joint VE agreement</b>
<b>5</b>		<b>Power of attorney</b>
<b>6</b>	<b>1.1.1-b</b>	<b>Working Method Statement</b>
<b>7</b>	<b>1.1.1-c</b>	<b>Resource Mobilization Schedule</b>
<b>8</b>	<b>1.1.1-d</b>	<b>Construction Schedule</b>
<b>9</b>	<b>1.1.2</b>	<b>Quality Control Plan</b>
<b>10</b>	<b>1.1.3</b>	<b>Site Environmental Management Plan</b>
<b>11</b>	<b>1.2</b>	<b>Multiple Contract proposal if any</b>
<b>12</b>	<b>1.4</b>	<b>Technical Alternatives: if any</b>
<b>13</b>	<b>2.1.1</b>	<b>Nationality</b>
<b>14</b>	<b>2.1.2</b>	<b>Conflict of Interest (CoI)</b>
<b>15</b>	<b>2.1.3</b>	<b>Bank Ineligibility</b>
<b>16</b>	<b>2.1.4</b>	<b>Government Owned Entity</b>
<b>17</b>	<b>2.1.5</b>	<b>Ineligibility based on a UN resolution or Borrower's country Law</b>
<b>18</b>	<b>2.2.1</b>	<b>History of non-performing contracts</b>
<b>19</b>	<b>2.2.2</b>	<b>Pending Litigation</b>
<b>20</b>	<b>2.3.1</b>	<b>Historical Financial Performance</b>
<b>21</b>	<b>2.3.2</b>	<b>Average Annual Turnover</b>
<b>22</b>	<b>2.3.3</b>	<b>Financial Resources</b>
<b>23</b>	<b>2.4.1</b>	<b>General Experience</b>
<b>24</b>	<b>2.4.2 (a)</b>	<b>Specific Experience in financial</b>
<b>25</b>	<b>2.4.2 (b)</b>	
<b>26</b>	<b>2.5</b>	<b>Personal</b>
<b>27</b>	<b>2.6</b>	<b>Equipment</b>
<b>28</b>	<b>2.7</b>	<b>Bid capacity</b>

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**Site Organization**

*(Provide site Organization information)*

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**Method Statement**

*(Provide method statement)*

---

**Mobilization Schedule**

*(Provide Mobilization Schedule)*

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**Construction Schedule**

*(Provide Construction Schedule)*

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## Form EQU: Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

## Personnel

### Form PER-1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements stated in Section III. The data on their experience should be supplied using the Form below for each candidate.

<b>1.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>2.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>3.</b>	<b>Title of position*</b>
	<b>Name</b>
<b>4.</b>	<b>Title of position*</b>
	<b>Name</b>

\*As listed in Section III.

## Form PER-2: Resume of Proposed Personnel

**Name of Bidder**

<b>Position</b>					
<b>Personnel information</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;"><b>Name</b></td> <td style="padding: 5px;"><b>Date of birth</b></td> </tr> <tr> <td colspan="2" style="padding: 5px;"><b>Professional qualifications</b></td> </tr> </table>	<b>Name</b>	<b>Date of birth</b>	<b>Professional qualifications</b>	
	<b>Name</b>	<b>Date of birth</b>			
<b>Professional qualifications</b>					
<b>Present employment</b>	<b>Name of Employer</b>				
	<b>Address of Employer</b>				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;"><b>Telephone</b></td> <td style="padding: 5px;"><b>Contact (manager / personnel officer)</b></td> </tr> </table>	<b>Telephone</b>	<b>Contact (manager / personnel officer)</b>		
	<b>Telephone</b>	<b>Contact (manager / personnel officer)</b>			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;"><b>Fax</b></td> <td style="padding: 5px;"><b>E-mail</b></td> </tr> </table>	<b>Fax</b>	<b>E-mail</b>		
<b>Fax</b>	<b>E-mail</b>				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;"><b>Job title</b></td> <td style="padding: 5px;"><b>Years with present Employer</b></td> </tr> </table>	<b>Job title</b>	<b>Years with present Employer</b>			
<b>Job title</b>	<b>Years with present Employer</b>				

Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From	To	Company / Project / Position / Relevant technical and management experience

### Bidders Qualification without prequalification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

### Form ELI – 1: Bidders Information Sheet

Bidder's Information	
<b>Bidder's legal name</b>	
<b>In case of JV, legal name of each partner</b>	
<b>Bidder's country of constitution</b>	
<b>Bidder's year of constitution</b>	
<b>Bidder's legal address in country of constitution</b>	
<b>Bidder's authorized representative</b> (name, address, telephone numbers, fax numbers, e-mail address)	
<p><b>Attached are copies of the following original documents.</b></p> <p><input type="checkbox"/> 1. In case of single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2.</p> <p><input type="checkbox"/> 2. Authorization to represent the firm or JV named in above, in accordance with ITB 20.2.</p> <p><input type="checkbox"/> 3. In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.</p> <p><input type="checkbox"/> 4. In case of a government-owned entity, any additional documents not covered under 1 above required to comply with ITB 4.5.</p>	

## Form ELI – 2: JV Information Sheet

*Each member of a JV must fill in this form*

JV / Specialist Subcontractor Information	
<b>Bidder's legal name</b>	
<b>JV Partner's or Subcontractor's legal name</b>	
<b>JV Partner's or Subcontractor's country of constitution</b>	
<b>JV Partner's or Subcontractor's year of constitution</b>	
<b>JV Partner's or Subcontractor's legal address in country of constitution</b>	
<b>JV Partner's or Subcontractor's authorized representative information</b> (name, address, telephone numbers, fax numbers, e-mail address)	
<b>Attached are copies of the following original documents.</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2.</li> <li><input type="checkbox"/> 2. Authorization to represent the firm named above, in accordance with ITB 20.2.</li> <li><input type="checkbox"/> 3. In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5.</li> </ul>	

### Form CON – 2: Historical Contract Non-Performance

*[The following table shall be filled in for the Bidder and for each partner of a Joint Venture]*

Bidder's Legal Name: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Joint Venture Party Legal Name: \_\_\_\_\_  
 ICB No. and title: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_ pages

Non-Performing Contracts in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> Contract non-performance did not occur during the ____years specified in Section III, Qualification Criteria and Requirements, Sub-Factor 2.1.			
<input type="checkbox"/> Contract(s) not performed during the ____years specified in Section III, Qualification Criteria and Requirements, requirement 2.1			
Year	Non performed portion of contract	Contract Identification	Total Contract Amount (current value, US\$ equivalent)
		Contract Identification: Name of Employer: Address of Employer: Reason(s) for non performance:	
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2.			
<input type="checkbox"/> Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2 as indicated below.			
Year	Outcome as Percentage of Total Assets	Contract Identification	Total Contract Amount (current value, US\$ equivalent)
		Contract Identification: Name of Employer:/ Address of Employer: Matter in dispute:	

## Form FIN – 1: Financial Situation

*Each Bidder or member of a JV must fill in this form*

Financial Data for Previous 5 Years [US\$ Equivalent]		
Year 1:	Year 2:	Year 3:

### Information from Balance Sheet

<b>Total Assets</b>			
<b>Total Liabilities</b>			
<b>Net Worth</b>			
<b>Current Assets</b>			
<b>Current Liabilities</b>			

### Information from Income Statement

<b>Total Revenues</b>			
<b>Profits Before Taxes</b>			
<b>Profits After Taxes</b>			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
- All such documents reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies.
  - Historic financial statements must be audited by a certified accountant.
  - Historic financial statements must be complete, including all notes to the financial statements.
  - Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

## Form FIN – 2: Average Annual Construction Turnover

*Each Bidder or member of a JV must fill in this form*

Annual Turnover Data for the Last 5 Years (Construction only)			
Year	Amount Currency	Exchange Rate	US\$ Equivalent
<b>Average Annual Construction Turnover</b>			

The information supplied should be the Annual Turnover of the Bidder or each member of a JV in terms of the amounts billed to clients for each year for work in progress or completed, converted to US\$ at the rate of exchange at the end of the period reported.

### Form FIN – 3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in Section III (Evaluation and Qualification Criteria)

Financial Resources		
No.	Source of financing	Amount (US\$ equivalent)
1		
2		
3		

### Form FIN – 4: Current Contract Commitments / Works in Progress

Bidders and each partner to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [Current US\$ Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [US\$/month]
1					
2					
3					
4					
5					

## Form EXP – 1: General Construcción Experience

*Each Bidder or member of a JV must fill in this form*

General Construction Experience				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name Name and Address of Employer Brief Description of the Works Executed by the Bidder	Role of Bidder

## Form EXP – 2(a): Specific Construction Experience

Fill up one (1) form per contract.

Contract of Similar Size and Nature		
Contract No ..... Of ..... ..	<b>Contract Identification</b>	
<b>Award Date</b>	<b>Completion Date</b>	
<b>Role in Contract</b>	<b>Contractor</b>	<b>Management Contractor</b>
		<b>Subcontractor</b>
<b>Total Contract Amount</b>	<b>US\$</b>	
<b>If partner in a JV or subcontractor, specify participation of total contract amount</b>	<b>Percent of Total</b>	<b>Amount</b>
<b>Employer's Name</b> <b>Address</b> <b>Telephone/Fax Number</b> <b>E-mail</b>		
Description of the similarity in accordance with Criteria 2.4.2(a) of Section III		

### Form EXP – 2(b): Specific Construction Experience in Key Activities

Fill up one (1) form per contract

Contract with Similar Key Activities		
<b>Contract No . . . . . of . . . . .</b> ..	<b>Contract Identification</b>	
<b>Award Date</b>	<b>Completion Date</b>	
<b>Role in Contract</b>	<input type="checkbox"/> <b>Contractor</b>	<input type="checkbox"/> <b>Management Contractor</b> <input type="checkbox"/> <b>Subcontractor</b>
<b>Total Contract Amount</b>	<b>US\$</b>	
<b>If partner in a JV or subcontractor, specify participation of total contract amount</b>	<b>Percent of Total</b>	<b>Amount</b>
<b>Employer’s Name</b> <b>Address</b> <b>Telephone Number</b> <b>Fax Number</b> <b>E-mail</b>		
Description of the key activities in accordance with Criteria 2.4.2(b) of Section III		

## Form of Bid Security

(Bank Guarantee)

\_\_\_\_\_

**Beneficiary:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**BID GUARANTEE No.:** \_\_\_\_\_

We have been informed that \_\_\_\_\_ (hereinafter called "the Bidder") has submitted to you its bid dated \_\_\_\_\_ (hereinafter called "the Bid") for the execution of \_\_\_\_\_ under Invitation for Bids No. \_\_\_\_\_ ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we \_\_\_\_\_ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of \_\_\_\_\_ (\_\_\_\_\_) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement or (ii) fails or refuses to furnish the performance security, in accordance with the ITB.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

---

*[signature(s)]*

***Note: All italicized text is for use in preparing this form and shall be deleted from the final product.***

## Form of Bid-Securing Declaration

Date: \_\_\_\_\_  
 Bid No.: \_\_\_\_\_  
 Alternative No.: \_\_\_\_\_

To:

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Borrower for the period of time of \_\_\_\_\_ starting on \_\_\_\_\_, if we are in breach of our obligation(s) under the bid conditions, because we:

- (a) have withdrawn our Bid during the period of bid validity specified in the Letter of Bid;  
or
- (b) having been notified of the acceptance of our Bid by the Employer during the period of bid validity, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the ITB.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Signed: \_\_\_\_\_

In the capacity of \_\_\_\_\_

Name: \_\_\_\_\_

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

Corporate Seal (where appropriate)

*[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.]*

## Section V. Eligible Countries

### Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated January 2011, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:

Para 1.8 (a) (i): as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the Goods or Works required, or

Para 1.8 (a) (ii): by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.

2. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:

(a) With reference to paragraph 1.8 (a) (i) of the Guidelines:

\_\_\_\_\_  
\_\_\_\_\_

(b) With reference to paragraph 1.8 (a) (ii) of the Guidelines:

\_\_\_\_\_  
\_\_\_\_\_

## PART 2 –WORKS REQUIREMENTS

### Section VI. Works Requirements

#### Contents

<b>I. Background Information</b>			
<b>1</b>	<b>Project Background</b>	ThimphuThromde desire to invite sealed Bids for Design, Construction, Erection, Testing Commissioning, Operation and Maintenance for (3) Five years of 10.00 MLD Capacity Water Treatment Plant including Civil, Mechanical, Electrical and Instrumentation work on Turnkey Basis.	
<b>2</b>	<b>Project Location and area</b>	The land identified for the proposed Water Treatment Plant is located above Taba settlement area. The coordinate of the location from Google earth is 27° 30' 34" N and 89° 38' 49" E. The Site plan of the said area, which has approximate area 2.0 acre has been <u>enclosed</u> , however the useable area would be around 1 acre only. Therefore the proposed WTP shall be oriented after the consultation with the Employer to accommodate a minimum of 5MLD capacity WTP and other associated structures in future. The proposed location is not accessible by motor-able road by about 250 mtrs	
<b>3</b>	<b>Topography</b>	The land in the proposed WTP area is of gentle slope. Site plan is enclosed.	
<b>4</b>	<b>Communication</b>	There is no fix telephone (landline) so far, but the TP area is accessible by both T-cell and B-mobile.	
<b>5</b>	<b>Electricity</b>	There is no electricity supply provision so far. This arrangement shall be made by the successful bidder at their own cost after determining the total electrical load required in the area.	
<b>6</b>	<b>Connection from and to the WTP</b>	Source of water: Water will be tapped from one of the main tributaries of Wangchu (Thimphu River) which flows between Cheri Monastery and Tango Monastery. There is an intake structure and a pre sedimentation tank at the intake location. Water will be conveyed to WTP area by another contractor in 350mm diameter Ductile Iron pipe. The same contractor will lay clear water main from WTP to distribution reservoirs. However, connecting the proposed treatment plant to the said pipe lines should be done under this package.	
<b>7</b>	<b>Water Source and Quality</b>	7.1	As is the case with all hilly streams, the flows of water in source streams vary considerably depending largely on the seasons.

		7.2	Water from the source to the plant shall be made available by another contractor. Water transmission main is designed to be completed at the same time as that of the WTP.
		7.3	The raw water main will have a carrying capacity of 15 MLD. However the flow can be controlled at source and only the required water quantity shall be conveyed to the WTP.
		7.4	<p>Characteristics of Raw Water: The Water Quality of source river has been examined by the ThimphuThromde on certain relevant parameters. The average water quality test results as obtained from the said source are outlined below, which is indicative only. It is essential that the successful bidder shall conduct all relevant water quality tests as maybe deemed essential to carry out the design work so that the Water treatment plant can provide the necessary quality of output water at all times.</p> <p>a) pH = 6.8  b) Conductivity = 12.9 <math>\mu</math>s/cm  c) Hardness 30mg/l  d) Turbidity = 30NTU  e) Faecal coli = 29CFU/100ml</p> <p>This is average and indicative only</p>

## **II. Scope of works.**

<b>General</b>	1.1	The Scope of Work under this Contract includes Design, Construction, Erection, Installation Testing, Unit Trial run, Commissioning, Operation & Maintenance, Training of the Employer's staff and performance guarantee test of 10 MLD Water Treatment Plant, at Taba, Thimphu, including setting up standard water testing laboratory , good office space, store and other amenities including a small workshop with basic tools. Sizes of rooms for these facilities should be as follows		
		<b>Particular</b>	<b>No of room</b>	
			<b>Min Plinth area of each room</b>	
		Laboratory	2	10sqm
		Store	2	9sqm
		Office with toilet facilities	3	9sqm
		Work shop	2	9sqm
	1.2	<b>Units in the plant process:</b> The bidder has to propose while submitting the bids, units of the treatment system in details with supportive designs for achieving the treated water quality as mentioned in <i>Table 1.2</i> . The details shall include but not be limited to		

			<ol style="list-style-type: none"> <li>1. Layout of the Water Treatment Plant showing the location and reference levels of various treatments unite and ancillary structures.</li> <li>2. Different units of the treatment system with preliminary design and sizing of each unit.</li> <li>3. The unit of the treatment process may includes. <ol style="list-style-type: none"> <li>a) Raw water inlet system with flow measuring provision.</li> <li>b) Chemical dosing system.</li> <li>c) Flocculation provision.</li> <li>d) Clarifier.</li> <li>e) Filtration.</li> <li>f) Disinfection.</li> <li>g) Out let flow measuring.</li> <li>h) Clear water reservoirs.</li> </ol> </li> </ol>
		1.3	<b>Presentation:</b> The successful bidder should make a detailed presentation on the process and technology adopted for the WTP to demonstrate and convince the Employer that the proposed plant is the most efficient and optimal treatment system in the current Bhutanese context to achieve given effluent standard.
		1.4	Inlet system of the WTP should make the flow laminar and make provisions of online eletro-mechanic flow meter and Parshall flume channel to enable measurement of the flow in both systems.
		a)	Layout and orientation of different treatment units within the area will also be submitted along with the bid. The Employer will evaluate the proposed system analysis for selection of the successful bidders
		1.5	<b>The battery limits</b> for the proposed WTP shall commence from inlet (raw-water-main) to outlet (clear- water-main), which goes to reservoir with necessary connections and ends.
		1.6	The following activities shall be carried out/ confirmed by the successful bidder
			Carry out studies / confirm the necessary topography survey and sub soil investigation.
			Carry out / confirm required raw water quality analysis
		1.7	<b>Submission Requirement</b> The successful bidder shall provide all detailed Designs and Drawings required for execution of the works under the contract. The Design submission shall include but not be limit to:

			<p>a) Detail layout of the WTP Process for hydraulic aspect showing the location of all units along with relative levels and sizes.</p> <p>b) Design and Drawings for; Structures, Architectural (giving Bhutanese architect), Electro-Mechanical and Instrumentation for each unit.</p> <p>c) Any other Design, Drawings and Diagrams that may be necessary for execution of the works.</p> <p>d) The plant shall have minimum of two sets of processes placed in parallel</p> <p>e) All units of the plant shall have bypassing provision</p> <p>f) Proper drainage system for the area and its discharge</p> <p>g) Drinking Water Supply system to individual buildings in the Treatment Plant area</p> <p>h) Waste water treatment and disposal system for WTP and other buildings</p> <p>i) Electrifications in-doors and out-doors with compound lights</p> <p>j) Any other site development works, to be required as suggested / proposed.</p> <p>k) Easy and safe access to all the plant levels or units</p> <p>l) All the equipment or pumps shall be in-housed</p> <p>m) All water processing unites should be under proper roofing to protect them from foreign bodies like birds dropping /birds and leaves entering the water.</p> <p>n) Prevention of fire hazards</p> <p>o) The standard sanitation facility such as wash rooms and toilet should be provided within the plant premises.</p>
<b>2</b>	<b>Civil &amp; Accessories</b>	<p>Contractor shall design and construct all civil structures reflected in general scope including but not limited to the following features:</p> <p>2.1 Storm Water Drains within the WTP area.</p> <p>2.2 Drinking Water Supply System within the WTP area.</p> <p>2.3 Separate House for Water Quality Testing Laboratory with facility to conduct following test pH, Turbidity (NTU), Conductivity (<math>\mu</math>-mhos/cm), Total hardness (mg/l as CaCO<sub>3</sub>), Total Coliform (CFU/100ml, or (MPN/100ml) and Residual Chlorine (mg/l)</p> <p>2.4 Treatment and Disposal of wastewater generated from WTP, Buildings and ancillary Units.</p>	

3	<b>Electro-Mechanical Works</b>	The scope includes design, equipment selection, supply, erection, testing and commissioning of all electro-mechanical components including Pipes, Valves, Pumps, motors and all other mechanical and electrical equipment to be required for successful operation of the plant and other infrastructure. The Bidder shall provide necessary Drawings, Sketches, schematic diagrams or notes along with detailed technical specification and or approved vendor's list and specifications for the approval of the Engineer that maybe required for completion of the works in all respects.	
4	<b>Instrumentation and Control</b>	The scope includes conceptualization, design, pre-dispatch inspections, supply, installation, pre- commissioning tests, commissioning, trial run and operation and maintenance of the entire Automation, Instrumentation and Control and Programmable Logic Control System. The system should be operative during power failure with proper backup power supply or other alternative arrangement. (Eg: Diesel Generator sets)	
5	<b>Specifications</b>	5.1	The bidder must submit the detailed specifications to be adopted to implement the work and to be approved by the Employer. The bidder must follow the prevailing specification and codes of the Bhutan. Detail specifications for the following (but not limited to) must be submitted.
		a)	General Civil work
		b)	Sanitary and plumbing works
		c)	Mechanical works
		d)	Electrical works
		e)	Instrumentation Automation and Control System
5.2	The proposed specifications as suggested by the bidder should be with reference to the official codes of any country or internationally accepted/recognized and that are to be shared with the Employer for getting prior approval. The Employer's decision in this regard is final and binding.		
6	<b>Training of Employer's Personnel</b>	6.1	The Contractor be responsible to provide Technical Intensive Training on operation, maintenance and repair of mechanical, electro-mechanical, electrical, instrumentation and other facilities of the plant in normal and special operational conditions, to all personnel selected by the Employer who will ultimately be responsible for the operation, maintenance and repair of the Plant and its facilities, to ensure that the designated personnel are adequately trained to take up their responsibilities.
		6.2	The Contractor has to provide full time skilled trainers who have minimum of (3) three years' experience in similar work.
		6.3	The trainer's curriculum vitae should be approved by the Employer prior to being deployed to the site.

		6.4	All costs for the training programme and facilities required for the training, and any incidental training expenses, shall be included in the Contract Price.
		6.5	Beside Technical Intensive Training, contractor has to provide 2 (two) refresher training to Employer's designated staff during the Contract period.
		6.6	The contractor : (i) should organize orientation for TT managers on the key areas that need attention for O&M. (ii) commit in its O&M plan a schedule where operational works will be handed over to TT staff assigned to it and that they are trained adequately to do the job independently.
<b>7</b>	<b>Completeness of the Offer</b>		The Contractor shall be fully responsible to include in his bid the whole of the Works, including each individual component, designed and constructed in accordance with good engineering practice and best Industrial standards. The offered plant should function as a whole, a fully integrated system that is capable of achieving the required treated water parameters in an efficient and economical manner and each individual unit should operate independently. The offer shall include all buildings, plant, equipment and accessories required for the efficient, safe and satisfactory operation of the facilities. The Contractor within the tendered cost shall provide any accessories which are not specifically mentioned in the specifications/requirement, but which are necessary for completion of the Works and successful performance of the plant and facilities. The Contractor shall, to the maximum extent practical and feasible, endeavor to offer standardized designs and Plant and equipment keeping in view minimization of operation and maintenance requirements. The Contractor shall ensure that his offered designs and equipment are "maintenance-friendly".
<b>8</b>	<b>Trial Run of the System</b>		After execution of the works the Contractor shall make unit trial runs of the individual components. A continuous operation of the component for a period of 15 days to the satisfaction of the Employer will be deemed to demonstrate satisfactory completion of trial run for the individual component. The cost of electricity, chemicals, and other consumables along with cost of tools and spare parts, of the plant and equipment during the period of this trial run, will be borne by the Contractor. In the event that the System or any of the facilities do not satisfactorily achieve the required performance standards during this period, the trial run period shall repeat after necessary correction, to satisfy the performance requirements, at the risk and cost of the Contractor.

<b>9</b>	<b>Commissioning of the System</b>	Once the Trial Run is completed, commissioning of the System shall be done by the Contractor. The commissioning of the system shall be considered as fully achieved after the full system has run continuously operated for a period of 10 days without any breakdown to full capacity to the satisfaction of Employer. If continuous run is not achieved fully to the satisfaction of Employer, the Contractor has to do the needful to achieve the same at his cost. All the costs thereof, including the cost of staff, maintenance, and any other consumables for operation and maintenance and electricity of the system during the commissioning period shall be borne by the Contractor.	
<b>10</b>	<b>Operation and Maintenance</b>	Once the commissioning of plant as a whole is completed successfully and certificate of commissioning is issued by the Employer, operation and maintenance period shall start. The Contractor shall be responsible for operation and maintenance of the System for a period of (3) three years commencing from the date of successful Commissioning of the system. Notwithstanding the above, the Contractor will be required to rectify any deficiencies which are attributable to defects in the workmanship or quality of materials, Plant, or equipment during the Defects Notification Period. An Operation and Maintenance Manual will be prepared and submitted by the contractor for operating and maintaining the plant. Requirements and conditions to be met during operation and maintenance tenure have been detailed later in Part IV of this Section.	
<b>11</b>	<b>Performance Guarantee tests (PG tests).</b>	Once the operation and maintenance period is successfully completed the contractor shall conduct a plant Performance Guarantee test to ensure that the plant is in fully functional and new condition except normal wear and tear to the satisfactory of Employer. In the event that the System or any of the facilities do not satisfactorily achieve the required performance standards during the test, the P G test shall be repeated after necessary correction, to satisfy the performance requirements, at the risk and cost of the Contractor.	
<b>12</b>	<b>Maintaining Quality of</b>	12.1	The plant should run on continuous bases for 24 hour a day with the daily production of 10MLD.

<b>Treated Water</b>	12.2	The quality of Treated Water to be maintained during the operation of the treatment plant has been set up based on mostly WHO guideline values. However, for some parameters, the values to be achieved would be more stringent than the guideline values according to the situation analysis. The maximum permissible limits of different parameters related to treated water quality are presented in Table 1.2. The values of parameters should never exceed the maximum permissible limit during operation of the treatment plant.	
	<b>Table 1.2: Treated Water Quality to be achieved throughout Plant Operation</b>		
	Sl.No	Parameter	Maximum Permissible value
	1	pH	6.5-8.5
	2	Turbidity (NTU)	1
	3	EC ( $\mu$ -mhos/cm)	330
	4	Total Dissolved Solids	500
	5		
	6	Total Hardness (mg/l as CaCO <sub>3</sub> )	50
	7	Colour, Hazen Units	5
	8	Odour	Unobjectionable
	9	Taste	Agreeable
	10	Nitrate (mg/l as N)	11.3
	11	Nitrite(mg/l as N)	0.91
	12	Total coliform (CFU/100ml) or (MPN/100ml)	0
13	Residual Chlorine (mg/l)- if chlorine/chlorine compound used for disinfection	0.5	
14	Presence of Organic constituents of Health significance should be within the limit as per the latest WHO Guideline Values for drinking water quality.		
The laboratory test methods for determining the concentrations of the parameters must be followed as per AWWA Standard methods (21 <sup>st</sup> Edition) or WHO standard.			

		<p>The Contractor must produce results of all the parameters after commencement of operation of the Water Treatment Plant during trial run. These analyses may have to be carried out from any Government affiliated laboratories of Bhutan or of any neighboring countries mutually agreed upon by the Employer and the Contractor. If the values of any parameter(s) exceed the limit given in table 1.2 during the test, proper operational rectifications should be made to bring down the value of the said parameters within maximum permissible limit. After that, general test for selected parameters mentioned in the Table 1.3 have to be done routinely at specified frequency as per the direction of the Employer and result should be submitted to the Employer.</p> <p><b>Table 1.3: Parameters of treated water to be examined In the Plant laboratory and frequency of Testing</b></p> <table border="1"> <thead> <tr> <th>Sl.No</th> <th>Parameter</th> <th>Frequency of testing and submission of result</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>pH</td> <td>Daily</td> </tr> <tr> <td>2</td> <td>Turbidity (NTU)</td> <td>Thrice a day and as when deemed necessary</td> </tr> <tr> <td>3</td> <td>EC (<math>\mu</math>-mhos/cm)</td> <td>Daily</td> </tr> <tr> <td>4</td> <td>Total Hardness (mg/l as <math>\text{CaCO}_3</math>)</td> <td>Daily</td> </tr> <tr> <td>5</td> <td>Total coliform (CFU/100ml) or (MPN/100ml)</td> <td>Daily and as when deemed necessary</td> </tr> <tr> <td>6</td> <td>Residual Chlorine (mg/l) - if chlorine/chlorine compound used for disinfection</td> <td>Thrice a day and as when deemed necessary</td> </tr> </tbody> </table>		Sl.No	Parameter	Frequency of testing and submission of result	1	pH	Daily	2	Turbidity (NTU)	Thrice a day and as when deemed necessary	3	EC ( $\mu$ -mhos/cm)	Daily	4	Total Hardness (mg/l as $\text{CaCO}_3$ )	Daily	5	Total coliform (CFU/100ml) or (MPN/100ml)	Daily and as when deemed necessary	6	Residual Chlorine (mg/l) - if chlorine/chlorine compound used for disinfection	Thrice a day and as when deemed necessary
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13	<b>Quality Assurance</b>	13.1	All civil work shall conform to International Standards and Bhutan specification for building road 2015 after approval from the Employer																					
		13.2	The minimum level of automation shall be ensured such that the plant operations and treated water quality parameters are not deteriorated by break down of electrical supply or due to lack of operator attention particularly in night shifts.																					
		13.3	The control schemes proposed for the WTP shall comprise the following but not limited to																					
			a)	Pressure indicating system.																				
			b)	Level sensing in flow channels																				
c)	The flow measurement system.																							
d)	Alarm & annunciation system to annunciate the plant equipment malfunction and tripping on fault as well as any other abnormality sensing.																							

		13.4	All material and equipment shall conform to International Standards after approval of the Employer The Contractor shall place orders for the material and the equipment only after approval of the Employer.
		a)	The drawing has to be approved by the Employer before manufacture and construction.
		<b>b</b>	The material has to be inspected by the Employer or by an inspecting agency approved by the Employer at the manufacturer's premise before packing and dispatching.
		c)	The inspection charges of the agency will be borne by the Employer.
		d)	The material / plant / equipment should pass the inspection and / or test as specified in the relevant codes proposed by the Contractor and approved by the Employer
		e)	The Contractor shall provide the necessary equipment and facilities for tests and the cost thereof shall be borne by the Contractor
		f)	Notwithstanding the above, the Employer, after examination of the test certificates, reserves the right to instruct the Bidder for retesting, of such equipment / material if required, in the presence of the Contractor's representative.
		g)	Following approval by the Employer the material manufactured as per the approved standards may be delivered to the Site.
		h)	For material/equipment the Employer will provide an authorization for packing and shipping after inspection.
		<b>13.5</b>	<b>Operation and Maintenance Manual</b> The Contractor before commencement of the Tests on Completion, shall submit the operation and maintenance manual, in English language, containing descriptions, illustrations, sketches, drawings, sectional drawings, sectional arrangement view and manufacturer's parts numbers to enable the connections, functions, operation and maintenance of all components of the complete plant. Manual shall include but not be limited to
		i)	The contact address and telephone number in the manual which the contractor shall provide.
		ii)	Technical data of each equipment/instrument
		iii)	Performance characteristics and other relevant details of each equipment/instrument.

		iv)	Instructions for lubricating servicing and overhauling, service life of each equipment/instrument at normal wear and tear.
		v)	Particulars of lubricating oil and grease to be used, also alternative indigenous commercial lubricating oils, grease etc. suitable for use.
		vi)	Start-up procedure for the WTP including that of various equipment/s.
		vii)	List of tools mounted on wall panels.
		viii)	List of spares provided in the spare box.
		ix)	Spare parts list, with manufacturer's part numbers and their name and address of nearest dealers/suppliers
		x)	Inventory management procedures including re-order levels for each component for item. .
		xi)	Operator's Log.
		xii)	List of the photographs/drawings of the plant and machinery as fabricated by the manufacturer.
		xiii)	Trouble shooting aspects of the process and equipment/instrument
		xiv)	Operating the plant under abnormal conditions e.g during prolonged power failure/ shut down, sudden influence of waste containing toxic chemicals and restarting the plant or its section after prolonged shut down.
		xv)	Emergency response procedures
		xvi)	Procedures for break down & preventive maintenance.
		xvii)	Preventive maintenance procedures for all the equipment.
		xviii)	Emergency maintenance management of the plant and equipment.
		xix)	Safety aspects including protection against hazards.
		xx)	Other codes of practices, protocols.
		xxi)	Duties & responsibilities of the plant staff including their rotation
		xxii)	The O&M manual which should also clearly specify the stock of chemicals and spare parts that would be required to avoid downtime of the plant

### **III. Inspection and Testing**

<b>1</b>	<b>General</b>	<b>1.1</b>	All tests shall be conducted by the contractor. All the costs thereof shall be also borne by the contractor.
		<b>1.2</b>	The contractor shall submit proposal for all the test and the test shall be conducted in the presence of the Employer.
		<b>1.3</b>	Tests on Physical Completion of Plant and Facilities.
		a)	A general inspection to check for correct assembly, installation of all equipment etc., and quality of workmanship.
		b)	A check on the presence of lubricant, cooling medium, etc.
		c)	A general check to ensure that all covers, access ladders, water proofing, guard railings, etc are in place
	d)	A check on damp-proofing, rust – proofing, vermin-proofing and particularly the sealing of apertures between building structures, chambers etc.	
<b>2</b>	<b>Hydraulic Wet Test</b>	<b>2.1</b>	Hydraulic wet tests shall be carried out on completion of dry tests. All water retaining structures, according to the positions/locations of the units shall be put for hydraulic performance test. In order to demonstrate hydraulic wet test, the Contractor shall ensure that each part of the works is hydraulically loaded to its rated throughout for a period of at least twenty-four (24) hours. In order to remove doubt, the following tests shall be carried out:
		a)	Pressure testing of all piped systems in accordance with the relevant standards;
		b)	Filling of all structures and check for leaks and structural stability;
		c)	Running of all rotating systems in order to check for:
		i	Correct functionality;
		ii	Absence of leaks;
		iii	Allowed temperature rise, smoothness of running and the absence of undue vibration, stress, and noise level; and
		iv	Check drives running currents, power-factor, efficiency etc. under full load conditions of all equipment.
		d)	Carry out calibration of instruments, especially flow meters, pressure indicators for raw water and treated water where appropriate;
		e)	Carry out valve fittings, diversions etc. to full hydraulic load (or where there is a requirement to withstand no load to overload) on each process element;

		f)	Demonstrating correct functionality of electrical, control, and instrumentation systems.
		g)	Assess leakage levels in piping, gates and valves etc.
		<b>2.2</b>	During these tests a check on the performance of Plant shall be made, as far as site facilities will allow, to compare its site performance with the factory test data and to identify any constraints on performance due to site conditions, and proper documentation shall be made for future reference.
<b>3</b>	<b>Safety Audit</b>	<b>3.1</b>	After satisfactory completion of the hydraulic wet tests and prior to the continuous introduction of raw water to the plant, a safety audit shall be carried out to ensure compliance with the necessary requirements of safety during operation of the Plant. The safety audit shall be documented. The Employer shall approve the safety audit document.
<b>4</b>	<b>Tests After Completion</b>	<b>5.1</b>	During O & M period, tests for treated water quality as mentioned in <b>Table 1.3</b> shall be done as per the frequency specified in the same table. These shall be recorded as per the standard forms approved by the Employer. The values observed on collected samples shall comply with the guaranteed values in 100% samples. For monitoring the compliance of power guaranteed and actual power consumed, the following procedure shall be adopted.
		a)	The process energy meter reading as per local authority shall be recorded in the presence of Contractor on every month. Contractor and Employer shall sign this monthly record.
		b)	The flow integrator reading will be recorded every day at appropriate time. Contractor and Employer shall sign this daily record.
		c)	The values of Coliform counts and Turbidity measured shall also be recorded and signed.
		d)	The Employer reserves the right to send part of the sample collected by the Contractor to outside laboratory of its choice, periodically without any notice.
		<b>4.1</b>	<b>Performance Guarantee tests (PG tests).</b> Once contractor has successfully completed his (3) three years operation and maintenance period, it will inform the Employer in writing that it is ready to perform “performance guarantee test” (PG Test). The performance guarantee test will be conducted at a mutually agreed convenient date.
		a)	The plant shall test on full capacity for final commissioning.

		<p><b>b)</b> The plant shall be operated at rated capacity of 10MLD. The amount of treated water should not be less than 10MLD</p>
		<p><b>c)</b> During the tests the Contractor shall take samples to demonstrate that each part of the works and the works as a whole is performing in accordance with functional guarantees. In case, functional guarantees are not met during the Performance Guarantee Test, Performance Guarantee Test shall be considered as failed.</p>
		<p><b>d)</b> In case of failure of first Performance Guarantee Test, action shall be initiated in accordance with contract. In any case, the extension for clearing the PG Tests shall not be extended beyond 90 days.</p>
		<p><b>e)</b> In case of failure of Performance Guarantee Test, in-respect of treated water quality parameters as mentioned in table 1.2 the works shall be rejected and the Performance Security shall be forfeited by the Employer without referring to the Contractor</p>
		<p><b>4.2 Performance Certificate</b></p>
		<p>The conditions for issuance of a Performance Certificate of the Conditions of Contract shall comprise of the following items:</p>
		<p><b>a)</b> The completion of the (3) three year's operation of the works to the satisfaction of the Employer</p>
		<p><b>b)</b> The submission of updated O &amp; M Manuals have been made following (3) three years of operational experience and approved by the Employer</p>
		<p><b>c)</b> All defects identified prior to Taking Over and defects identified during the (3) three year's operation of the Works have been rectified;</p>
		<p><b>d)</b> All Tests After Completion have been completed to the satisfaction of the Employer</p>
		<p><b>e)</b> Training(s) detailed as proposed by the Contractor and approved by the Employer have been completed.</p>
		<p><b>f)</b> All consumables needed for operation of the works such as laboratory chemicals, lubricants, etc and transportation of screening and wet grit, off site, shall be provided by the Contractor</p>

		<b>4.3</b>	During O & M period, tests for treated water quality as mentioned in <b>Table 1.3</b> shall be done as per the frequency specified in the same table. These shall be recorded as per the standard forms approved by the Employer. The values observed on collected samples shall comply with the guaranteed values in 100% samples. For monitoring the compliance of power guaranteed and actual power consumed, the following procedure shall be adopted.	
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<b>IV. Operation and Maintenance</b>		
<b>1</b>	<b>General Requirements for Operation and Maintenance</b>	The Contractor shall operate and maintain the entire Plant within its contract price for a total operation and maintenance period of (3) three years. All necessary cleaning, repairs, maintenance, overhaul, replacements etc., shall be made during the O & M to maintain the Plant at the status of formal handing over after the P G test. At the end of O & M period the plant shall be handed over to the Employer in fully functional and new condition except normal wear and tear. The scope of work for O & M bill shall include following but not limited:
		a)

		b)	Manpower, electricity, chemicals, and other consumables along with cost of tools, tackles, spares, lubricants, laboratory chemical, and glassware. The water and power supply facilities shall be installed by the Contractor under this package
		c)	Sampling and testing of raw water and treated water based on the tests and frequency desired by the Employer and mentioned in Section-II.
		d)	O & M of all functional and utility buildings, infrastructure and common areas within the Plant campus
		e)	Proper maintenance of Water Supply, Drainage, Sewerage, Roads, Lighting, Paths, lawns including trimming and upkeep of gardens etc.
		f)	Loading, Unloading and Transportation of screenings and sludge out of treatment Plant site at contractor cost at the place as directed by the Employer from time to time. The modalities of final disposal will be worked out by the Employer at a later date.
		g)	Maintenance of log books of all the machinery shall be done separately & collectively, at the WTP fortnightly and monthly reports of all such machinery and parameters monitored shall be generated and hardcopy along with the soft copy shall be approved by the Employer. These reports shall contain sufficient appropriate and adequate data to make the records meaningful and amenable to analysis for evaluating the performance of the Plant as well as to help in O & M decisions.
		h)	Security of the compound and contents therein shall be Contractor's responsibility.
		i)	The records maintained by the Contractor shall be produced periodically to the Employer for proper monitoring. The Engineer In Charge's remarks shall be attended to on next submission. Consolidated summary reports shall be furnished to the Employer monthly, quarterly and yearly containing salient features.
		j)	The Contractor shall also maintain history sheets of overhauling, maintenance, replacement of all the important electrical and mechanical equipment.
		k)	The O & M shall include the appropriate preventive maintenance of equipment as per the manufacturer's recommendation.

2	<b>Down time:</b>	The Plant shall never be operated at less than 50% of its design capacity due to maintenance and repair reasons. The period of such exceptional operation shall not exceed two consecutive days and shall not be more than three days a week. The maximum downtime of the whole Plant shall not exceed 8 hours.	
3	<b>Operation of the Plant as per O &amp; M Manual:</b>	The Plant shall be operated according to the rules and procedures documented in the O & M manual. The Plant must be in position to work at the design capacity 10MLD always except during downtime.	
4	<b>Awareness &amp; Cleanliness</b>	The Contractor and his staff shall maintain a high degree of awareness in operation and maintenance of the Plant and all relevant safety codes and procedures. At all times the Plant, its equipment and surrounds shall be kept clean and in order' including the buildings, floors, walls, roofs, windows, and garden etc.	
5	<b>Frequency of Preventive maintenance</b>	Preventive maintenance shall be carried out according to the preventive maintenance schedule of the Plant. The regular staff may be reinforced with short-term specialists by the Contractor, for special maintenance tasks, after duly informing the Employer of the need and the schedule.	
6	<b>Repairs</b>	Repairs shall be made as and when needed very promptly on the spot or at the Contractor's / Manufacturer's workshop. The need of repair on the spot or at the Contractor's workshop has to be defined in co-ordination with the Employer and according to the status of spare parts availability. Small workshop with basic tools shall be established at Plant	
7	<b>Spare parts</b>	The Contractor shall keep a reasonable stock of fast running spare parts so that the down time of equipment can be kept within the limits specified.	
8	<b>General Obligation</b>	8.1	The Contractor shall operate and maintain the entire Plant under this contract for the period of (3) three years as specified in this contract which shall be extendable for a further period of at the Employer's option with a suitable increase to be mutually agreed upon in the last six month of O & M period.
		8.2	The Contractor will submit a detailed operation and maintenance plan for approval of Employer. All operation and maintenance activities shall be carried out strictly in accordance with the approved plan.
		8.3	<b>Laboratory services.</b> The Contractor shall perform all tests, sampling and analyses regularly as approved by the Employer and as per the O & M standards.

		<p><b>8.4 Manpower:-</b>The Contractor shall provide experienced managerial, technical, supervisory, laboratory, administrative, and non-technical personnel and labour necessary to operate and maintain the treatment Plant. The Contractor shall propose in his tender a staff management structure for the operation and maintenance of works. The suggested structure (minimum) shall be as follows</p>																								
	<table border="1"> <thead> <tr> <th>:No.</th> <th><i>Position</i></th> <th><i>No</i></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Project Manager</td> <td>1</td> </tr> <tr> <td>2</td> <td>Civil Engineer</td> <td>1</td> </tr> <tr> <td>3</td> <td>Water Treatment Engineer</td> <td>1</td> </tr> <tr> <td>4</td> <td>Mechanical Engineer</td> <td>1</td> </tr> <tr> <td>5</td> <td>Instrumentation Engineer</td> <td>1</td> </tr> <tr> <td>6</td> <td>Electrical Engineer</td> <td>1</td> </tr> <tr> <td>7</td> <td>Supervisors</td> <td>2</td> </tr> </tbody> </table>	:No.	<i>Position</i>	<i>No</i>	1	Project Manager	1	2	Civil Engineer	1	3	Water Treatment Engineer	1	4	Mechanical Engineer	1	5	Instrumentation Engineer	1	6	Electrical Engineer	1	7	Supervisors	2	
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	<p><b>8.5 Reporting:-</b> The Contractor shall prepare consolidated daily reports, weekly and monthly reports on Plant operation and maintenance and submit to the Employer</p>																									
<p><b>9</b></p>	<p><b>Training</b></p>	<p><b>9.1</b> The Contractor shall be responsible for instruction and training of all his personnel in all aspects of Plant operation and maintenance till the end of the operation and maintenance period.</p>																								
	<p><b>9.2</b> The Contractor shall also be responsible for training personnel designated by the Employer to operate the Plant at the expiry of the contract. The training shall be organized in two (2) stages as follows:</p>																									
	<p>a) Basic technical training education to be carried out during the final stages of the construction period of the contract through literature, manuals, handouts demonstration at site, This training shall be conducted towards end of O &amp; M contract period, training shall be for duration of 30 working days</p>																									
	<p>b) Intensive on-the- job training during commissioning and maintenance period.</p>																									
	<p><b>9.3</b> By the end of this training period these personnel should be able to carry out their respective duties efficiently under the supervision of Engineer In Charges and supervisory staff of the Employer</p>																									
	<p><b>9.4</b> The Contractor shall provide at his cost all local transportation, literature and other related stationery to be used by trainers and trainees during the training period.</p>																									

<b>10</b>	<b>Record of Raw and Clear Water Flow</b>	<b>10.1</b>	Hourly inflow (raw water) and out flow (treated water) record and hydraulic load on each unit of plant must be maintained by the shift in-charge and it should contain data on Plant functioning.
		<b>10.2</b>	The Contractor may suggest and get approval from the Employer for formats for monitoring and recording of overall function of the WTP.
<b>11</b>	<b>Operation and Maintenance Manual</b>	<b>11.1</b>	The Contractor has to submit an operation and maintenance manual after the physical completion of the work. This manual will be submitted as draft at the date of physical completion and as final version one month after commissioning.
<b>12</b>	<b>As – Built Drawing</b>	<b>12.1</b>	The Contractor shall submit to the Employer within three months of actual completion, “AS BUILT” drawing. These Drawings shall be accurate and correct in all respects and shall be developed in Auto CAD –most recent version. Site plan showing all features as constructed under this contract with clear dimension and labeling. It should include details of all aspect such as architectural, civil structural and hydraulic part of Plant,
		<b>12.2</b>	Dimensional details of all control and measuring devices, probes, valves, gates, consoles, panels, switch boards; cable layout etc. for the complete Plant should be furnished. Working diagrams and circuit diagrams shall be used wherever applicable.
		<b>12.3</b>	L-Section for pipelines laid showing pipe profile, ground profile, soil condition, bedding location of specials, valves, and other accessories all complete should be furnished.
		<b>12.4</b>	Dimension details of all site development works such as roads, drainage, cables, pipelines, landscaping, etc. complete with layout, cross sections, levels, etc., all complete should be furnished.
		<b>12.5</b>	All drawings shall be prepared to appropriate scale and with adequate notes, legends, titles, etc. for clarity. The size and formats suggested by the Contractor should be approved by the engineer-in-charge prior to submission.
<b>13</b>	<b>Reason beyond the contractor control</b>		If it is determined that the facility is not capable of meeting the design parameters for any reason beyond the Contractor’s control and not attributable to him, the Contractor shall determine the specific cause of failure/ abnormality in the Plant functioning and report to the Employer and seek his directives on the necessary

			corrective action to be taken/adopted.
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<b>V. Other Technical Schedule</b>			
<b>1</b>	<b>Salient features</b>	<b>1.1</b>	All water conveying and storing metals should be of Mild Steel Cold Rolled (MSCR) sheet with epoxy painted or any other equivalent materials
		<b>1.2</b>	Flocculator arrangement should be able to achieve pin head like flocs either by glass pebbles of graded size or U.P.V.C. or such approved equivalent arrangement.
		<b>1.3</b>	Angled settlers clarifier with not less than 30 minutes detention time in M.S.C.R sheet with epoxy painted or any other equivalent materials, pre-fabricated box, tubes shall be mounted in settler basin with inclination not more than 60 <sup>0</sup> to the horizontal.
		<b>1.4</b>	Pressure sand filter in M.S.C.R Sheet with epoxy painted or any other equivalent materials, prefabricated box with graded filter sand not less than 500 mm thick, supported on false bottom floor with polypropylene nozzles spaced at not more than 500mm centres in either direction, with all facilities for washing the filter.
		<b>1.5</b>	Disinfection provision with corrosion free materials.
		<b>1.6</b>	Pipe work to ensure the smooth flow of water from one unit to another with provision of bypassing one unit or units.
		<b>1.7</b>	All civil works as per approved drawing and foundation, consisting of raised R.C.C. (M20 grade adequately reinforced) or CRM (1:3) or second class Brick Masonry (1:3) as approved as per requirement at site.
		<b>1.8</b>	Bypass arrangement in the form of pipes or M.S.C.R Sheet with epoxy painted or any other equivalent materials channels included in the design, of different units individually (limit upto 0.5m from W.T.P. face)
		<b>1.9</b>	The entire M.S.C.R Sheet with epoxy painted or any other equivalent materials fabricated tank is to be provided with F.R.P. lining not less than 05mm thick, on all inner surfaces of tanks etc. and two coats of approved epoxy painting over a coat of red oxide primer on outside surfaces. M.S.C.R. Sheet used anywhere shall not be less than 6mm thick.

		<b>1.1</b>	Designing and providing a disinfection system with chemical tank corrosion free arrangement, complete
		<b>1.11</b>	The flocculator / settling basins are to be provided with hopper bottom with slope not less than 45 <sup>0</sup> to horizontal, if hopper bottom is adopted. Adequate size, not less than 50mm dia U.P.V.C. blue casing/ S.S. drain pipes and Full way Gate Valves of same are to be provided for both the units.
		<b>1.12</b>	Flow Rating should conform to following parameters:
		a)	Velocities in channels not to exceed 0.60mtr/sec.
		b)	Velocities in filter outlet pipes and valves not to exceed 01mtr/second
		c)	Velocities in interconnecting piping and centre is not to exceed 01 mtr/sec
		d)	Filter back washing should be 210cum/hr Hp rating 10Hp Head 25 to 30mtr, duration 5-30min.
		e)	A bulk water meter to indicate output is to be fitted and fixed, cost is all inclusive.
		<b>1.13</b>	The free board in all the units not less than 300mm.
		<b>1.14</b>	Connecting the internal line from proposed Treatment Plant's to outgoing and incoming line of 350mm and 150mm dia D.I. k-9 pipes with necessary fittings such as rubber ring and tail piece; including providing and installation of valves, water flow meters and chambers
		<b>1.15</b>	It is expected that the Contractor shall quote for supply of equipment and materials of best makes which conform to international standards. The Contractor may refer to the list of preferred or approved makes (in this document) as also in notification provided in the Bhutan Schedule of Rates as acceptable for the works. In its offer, the Contractor should only consider makes from reputed manufacturers of equipment corresponding to the state-of-the-art technology and to the latest international standards.
<b>2</b>	<b>Specific Details</b>	<b>Description of the Proposed WTP Units</b> The Contractor shall describe the Water treatment system to be adopted in sufficient detail so that the Employer can assess the suitability of the Contractor's Proposal.	
		<b>Technical Requirements for WTP</b> The Contractor should provide the detailed technical parameters adopted including preliminary sizing of the Treatment units proposed. The Contractor shall submit the following information:	
		<b>Sl. No</b>	<b>Parameter</b>

A1	Description of the Treatment Units Proposed	(Attach Separate Sheet)
A2	Hydraulic Flow Chart Enclosed	(Attach Calculations)
A3	General Layout Plan	(Attach Drawings)
A4	Preliminary Sizing of the Units	(Attach Calculations)
A5	Treated Water Output	
A6	Working Hours	
	Provisions for Overload	
	■ Overall	
	■ Filter Inlet & Outlet	
	Hydraulic Level	Attach separate sheet
	■ Water level, Inlet Chamber of WTP (m)	
	■ Water level at the inlet and outlet of each treatment unit as proposed	
B1	Inlet Chamber of WTP	
	■ Size of Chamber	
	■ Size of Inlet Pipe with Flange	
B2	Raw Water Flow Measuring Channel	Attach separate sheet
	■ Width / Depth of Channel (m)	
	■ Details of Flow Measuring devices (including make and Model )	
	■ Accuracy of measurement	
	■ Size of Gate left for Future (m)	
	Details of Treatment Units	Attach Separate sheet
	For each unit the following data have to be provided*	
	■ Name of the treatment unit	
	■ Number of unit	
	■ Design consideration	
	■ Performance criteria	
	■ Details of all electro-mechanical components, if required in the unit (capacity, make, model and other details complete)	
*For example if Filter is one of the Treatment Unit, the following data may have to be furnished as given in below. Similarly, all the relevant data for each unit proposed by the Contractor		
<b>Filter Bed</b>		
■ Type		

	<ul style="list-style-type: none"> <li>■ Twin Bed / Single Bed Type</li> <li>■ Surface Loading (Normal Operation) (m)</li> <li>■ Surface Loading (With Overload) (m)</li> <li>■ Admissible Head loss across Filter Bed</li> <li>■ In Filtration (m)</li> <li>■ In Washing (m)</li> <li>■ Number of Filter Boxes</li> <li>■ Size of Each Filter Bed (m)</li> <li>■ Total Depth of Filter Box including Free Board (m)</li> <li>■ Effective Size of Filter Sand (m)</li> <li>■ Uniformity Co-efficient of Filter Sand</li> <li>■ Depth of Graded Supporting Material</li> <li>■ Type of Filter Bottom / Under Drain System</li> <li>■ If False Bed with Nozzles: <ul style="list-style-type: none"> <li>■ Size of Nozzles (mm)</li> <li>■ Spacing of Nozzles (mm)</li> </ul> </li> <li>■ If Piped Underdrain: <ul style="list-style-type: none"> <li>■ Type / Size &amp; Spacing of laterals</li> </ul> </li> <li>■ Filtered water outlet pipe size</li> <li>■ Back wash inlet pipe size</li> <li>■ Wash waste outlet pipe size</li> <li>■ Air wash inlet pipe size</li> <li>■ Surface wash inlet pipe size</li> <li>■ Proposed Backwash Cycle</li> <li>■ Wash Water Flow and Consumption Per Filter (m<sup>3</sup>/Hr)</li> <li>■ Flow of Air (m<sup>3</sup>/Hr)</li> <li>■ Flow of Surface Water (m<sup>3</sup>/Hr)</li> <li>■ Period between two Back Washings (Hr)</li> <li>■ Filter Control Console <ul style="list-style-type: none"> <li>■ Make and Type</li> <li>■ Size and Material</li> </ul> </li> <li>■ Control Functions / Indicators proposed</li> <li>■ Desludging System <ul style="list-style-type: none"> <li>■ Type of Desludging</li> <li>■ Pipe Size / Material</li> <li>■ Frequency and Duration of Desludging</li> </ul> </li> <li>■ Make and Type of Valves</li> <li><b>Back Wash Pumps</b> <ul style="list-style-type: none"> <li>■ Make and Duty of Pumps</li> </ul> </li> </ul>
--	--

■ Q & H at Duty Point		
■ Pump Efficiency at Duty Point		
■ Material of Casing / impeller / shaft		
■ Make and Type of Motor		
■ Rating of Motor		
■ Motor Efficiency at Duty Point		
■ Suction and Delivery Piping, Material and Size		
<b>Air Scour Blower</b>		
■ Make and Type of Blower		
■ Air Delivery, Pressure		
■ Overall Efficiency		
■ Volumetric Efficiency		
■ Make and Type of Motor		
■ Rating of Motor		
■ Air Pipe, Material and Size		
<b>2.1</b>	<b>Data Sheet for Mechanical Items</b> The Contractor must furnish technical details of mechanical items required in the proposed treatment plant in separate sheets for all items. Indicative Data sheet for Pumps is given below	
<b>2.1</b>	<b>Typical Data Sheet for Pumps</b>	
<b>Sl</b>	<b>Parameter</b>	<b>Data to be filled by Bidder</b>
1.01	Usage Description	
1.02	Make	
1.03	Model	
1.04	Type	
1.05	Performance	
1.06	Capacity (lps)	
1.07	Head (m)	
1.08	Efficiency (%)	
1.09	Speed (rpm)	
1.1	NPSH required (m)	
1.11	Shut off Head (m)	
1.12	Power Required at duty point (kW)	
1.13	Power required at shut off (kW)	
1.14	Recommended motor (kW)	
1.15	Construction	
1.16	Type of Impeller (Enclosed / Semi open)	

		1.17	No. of Impeller	
		1.18	Suction Size (mm)	
		1.19	Delivery Size (mm)	
		1.2	Wt. Of pump (kg)	
		1.21	$Wr^2$ with entrained water (kg m <sup>2</sup> )	
		1.22	Material	
		1.23	Casing	
		1.24	Impeller	
		1.25	Shaft	
		1.26	Casing Ring	
		1.27	Shaft Sleeve	
		1.28	Gland Packing	
		1.29	Base Plate	
		1.3	Fasteners	
		1.31	Characteristic	
		1.32	Performance curves	
		1.33	Torque-Speed Curve	
		<b>2.2</b>	<b>Data Sheet for Electrical Equipment</b>	
		The Contractor shall provide a description of all major Electrical components proposed for the WTP. The Contractor shall also include data sheet for the various process Equipment, he proposes to use viz. Transformer, Induction motor, Capacitor etc.		
		<b>2.3</b>	<b>Data Sheet for Automation, Instrumentation and Control</b>	
		The Contractor shall provide a description of the Automation and Process Control proposed for the WTP. The Contractor shall also include data sheet for the various process Equipment, he proposes to use. Typical Data Sheets for Electro-magnetic Flow Meter, level Transmitter and On-line Turbidity Analyzer are provided below for example. The details of the equipment and instruments to be used for analysis of the parameters as specified in Table 2.2 in the laboratory must be provided.		
		<b>Data sheet for Full Bore Electro-magnetic Flow meter</b>		
		<b>Sl. No.</b>	<b>Parameter</b>	
		1	Quantity with application and location	
		2	Range	
		3	Panel Mounted Flow indicator and integrators	
		4	Other Technical Specifications	
		5	Make / Name of Manufacturer	
		<b>Data sheet for level Transmitter</b>		
		<b>Sl. No.</b>	<b>Parameter</b>	

	1	Quantity with application and location
	2	Range
	3	Other Technical Specifications
	4	Make / Name of Manufacturer
	<b><i>Data sheet for On-line Turbidity Analyzer</i></b>	
	<b>Sl. No.</b>	<b>Parameter</b>
	1	Quantity with application and location
	2	Range
	3	Other Technical Specifications
	4	Make / Name of Manufacturer

**1.1 Site Organization**

Bidder shall describe the roles and responsibilities of each of the personnel proposed and shall describe the roles, relationships, and division of responsibilities between the site management and the representative head/branch office that will be responsible for the Project. In particular, the Bidder shall provide details of the technical and financial responsibility and authority of the Project Manager who will be responsible for the day-to-day operations at the Site.

The Bidder shall provide a preliminary organization chart which indicates the relationship between the site management and the representative head/branch office, the direct on-site works operations, the sub-bidders and suppliers, and the Employer’s Representative. Details shall be furnished separately for the design and construction phase, and for the operations and maintenance phase.

**1.2 Plant and Construction Equipment**

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key plant and construction equipment. A separate Form shall be prepared for each item of plant and/or equipment listed, or for alternative equipment proposed by the Bidder.

The overall requirements and mobilization/deployment schedule for each major item of plant and equipment (such as Plant & Equipment to be used, excavators, concrete batching plants, hot mix plants, etc.,) shall be summarized in the format

Item of Plant/Equipment		
Equipment Information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current Status	Current location	

	Details of current commitments
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured

**2.9 Construction Schedule** The Bidder shall submit his proposed construction program in sufficient detail so as to demonstrate: the order in which he proposes to carry out the Works (including each stage of design, procurement, manufacture, pre-delivery inspection and testing, delivery to Site, construction, erection, testing and commissioning); all major events and activities in the production of Construction Documents; the periods for the design reviews and approvals and for any other submissions, approvals and consents specified in the Employer or his Requirements; the sequence of all tests specified in the Contract; etc

The Bidder should pay particular attention to demonstrating how his proposed program for supply of major items of plant and equipment to be incorporated into the Permanent Works Schedule XI is to be managed to satisfy the requirements of the Contract, including the time required for design, placing of confirmed orders, manufacturing, pre-delivery inspections and tests, delivery to the Site, storage, installation, etc

Such construction program shall be developed on a commercially available project management software (such as Primavera, MS Project or equivalent) showing level-3 activities, together with bar charts and CPM diagrams which clearly illustrate the critical path, and the resources required to be provided by the Bidder to achieve the desired results

The Bidder’s attention is drawn to the requirements set out in Section II, Particular Requirement in this Package, and the Bidder is required to clearly demonstrate how he proposes to meet the Milestone Targets that have been established to ensure that pro-rata progress is maintained on all sub-components of the Works throughout the execution period

**2.10.** Details shall be furnished separately for the design and construction phase, and for the operations and maintenance phase

List of manufacturers, Suppliers and Vendors The Bidder shall provide details on the proposed manufacturers / vendors / suppliers of major items of materials, plant and equipment that are to be incorporated into the Permanent Works

Sl. No.	Description of Item (Material / Plant / Equipment)	Name and Address of Manufacturer/ Supplier/Vendor	As per List of Preferred Makes/ Approved by SQCA
A)	Mechanical Work Components		Yes/No

Sl. No.	Description of Item (Material / Plant / Equipment)	Name and Address of Manufacturer/ Supplier/Vendor	As per List of Preferred Makes/ Approved by SQCA
			Yes/No
			Yes/No
B)	Electrical Work Components		
			Yes/No
			Yes/No
			Yes/No
C)	Instrumentation and Process Control		
			Yes/No
			Yes/No
			Yes/No
D)	Civil, Building and Road Works		
			Yes/No
			Yes/No
			Yes/No

**2.11** Energy Consumption; the bidder should clearly specify the energy (power) requirement during different stages construction work. During Operation and maintenance of the WTP, guaranteed energy consumption for each month should be specified. Price adjustment on account variation in the Electricity Tariff will be subject to the ceiling as per guaranteed energy consumption level

**2.12** Bidder's QA & QC Plan

The Bidder shall provide his proposed Quality Assurance and Quality Control (QAQC) Plan which describes the type, frequency and procedure of tests to be done on sites; type, frequency and procedure of tests to be done at manufacturers' locations outside the sites; all parameters to be measured in these tests; permissible limits of such parameters; details of laboratories to be established at sites; details of testing equipments & machines and their calibration schedules; details of the Bidder's internal systems for assuring quality control at the manufacturers' outside the sites; details of qualifications and experience of the Quality Control professionals to be deployed for the entire project; and the systems of Quality Audit to be instituted for systematic and professional management as well as adherence with the highest standards of quality of all construction works

The Bidder shall provide separate descriptions of its proposed QA/QC plan during the design and construction phase, and the subsequent operations and maintenance phase. The Bidder shall also provide copies of the company's standard rules and regulations regarding quality assurance and quality control procedures for works in general and works of a similar nature

## Scope of Works

### Introduction

The Royal Government of Bhutan (RGOB) has received a loan from the World Bank (IDA) for the Bhutan Urban Development Project-II (BUDP2) the aims of which include improving the living standards and enhancing economic activities in extended areas in northern Thimphu through provision of better urban infrastructure services.

The two key urban development challenges in Bhutan are the very rapid rates of urbanization and limited availability of serviced land, due to topographic constraints. Bhutan has experienced rapid social and economic growth as a result of sound macroeconomic management, and development of hydropower resources. Although the annual population growth rate of the country as a whole is around 1-2%, for Thimphu the figure is variously reported between 5% per annum. By year 2027, the population of Thimphu is estimated to be around 202668.01 including floating population

Thimphu is experiencing rapid development due to migration; and the population increase is exerting extreme pressure on infrastructure services and housing. The strategy of the Royal Government of Bhutan (RGOB) is to develop infrastructure services in designated development areas, called Local Area Plans (LAP), in the south and north of Thimphu, with the support of the Asian Development Bank and World Bank, respectively. RGOB has adopted the land pooling system as the alternative to acquiring land for urban development. Infrastructure services provision in the LAPs has, thus far, adopted a localized

approach, with each LAP having its own water supply and sewerage facilities, without a comprehensive infrastructure development plan which would improve the overall efficiency of infrastructure services and achieve economies of scale. Infrastructure planning on a city scale, especially for water supply and wastewater management has not been done thus far.

BUDP2 comprises provision of urban infrastructure such as roads, drainage, water supply, sanitation, street lighting, Bhutan Telecom net-work & Bhutan Power Corporation net-work in extended areas in northern Thimphu (Dechenchholing, Langjopakha & Taba). These components will be implemented by the Project Implementation Unit, World Bank Project Office of the ThimphuThromde in close coordination with the Project Management Unit, Department of Engineering Services under Ministry of Works & Human Settlement, Urban Planning Division and Engineering Division under ThimphuThromde and other concerned agencies.

### **Project Objectives**

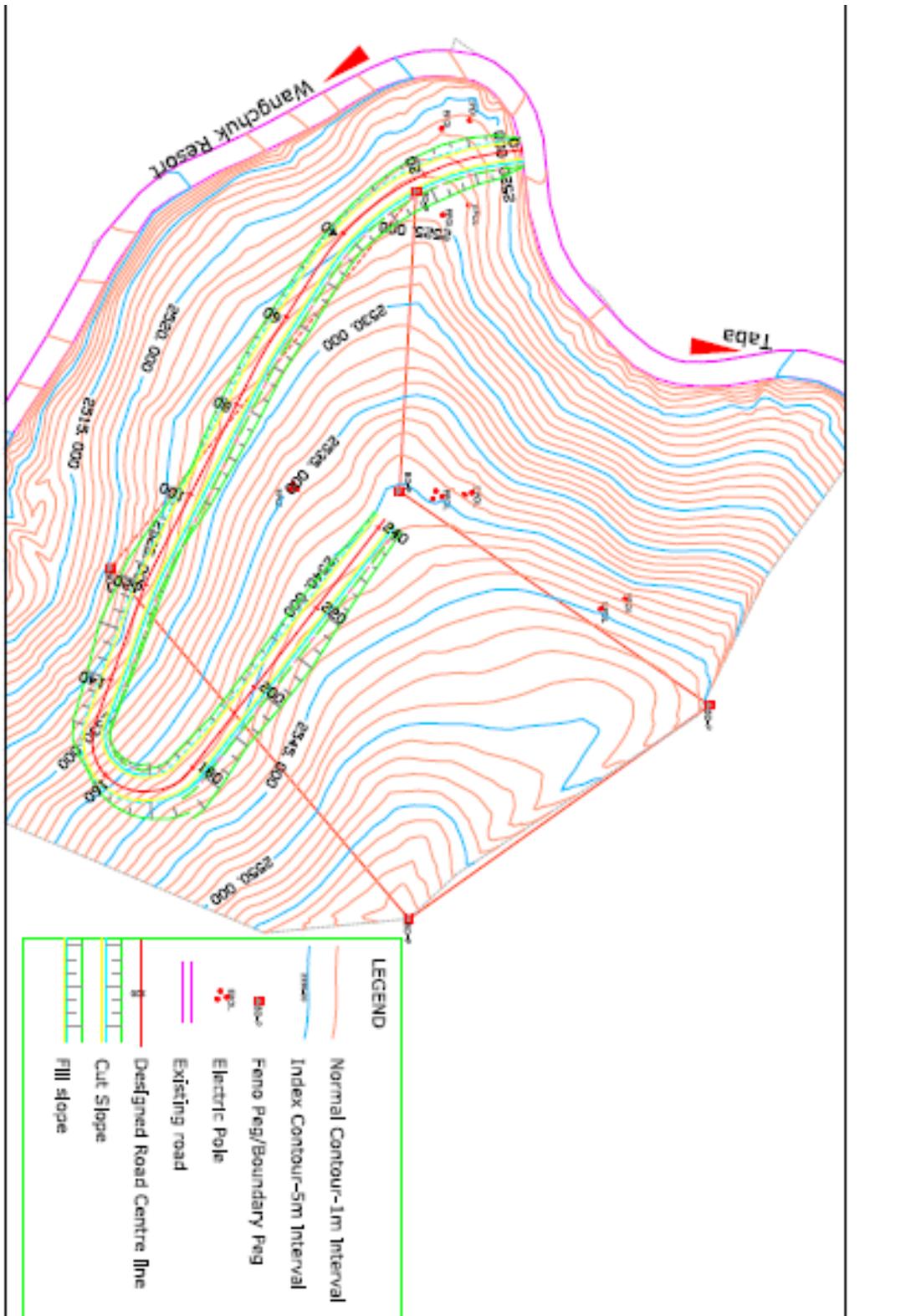
ThimphuThromde aims to improve the urban infrastructure services in northern Thimphu, where no formal services are currently available, to will improve the living standards and enhance economic activities in extended areas in northern Thimphu through provision of better urban infrastructure services.

## **PROJECT DESCRIPTION**

In this Package the following works will be executed:

**Design Construction, Installation, commissioning and operation & Maintenance for (3) Three years of water treatment Plant (WTP) of 10 MLD capacity at Taba**

**Project Location:**



The soft copy of the site plan in Auto cad format is attached .

## Specification

Unless otherwise specified, the **Specification for Building and Road Works -2015** issued by the Department of Engineering Services, Ministry of Works and Human Settlement, Royal Government of Bhutan, **should be referred**

For electrical works, kindly refer to **Specification for Electrical Materials & Works (Electrical) - 2015** issued by the Department of Engineering Services, Ministry of Works and Human Settlement, Royal Government of Bhutan.

An **additional Specifications** pertaining to the **Water Supply and Sewerage Works** is attached with the Bidding Document, which are not covered by the Specification for Building and Road Works - 2015.

The Specifications for the works included in this project can be obtained from the following office:

**Department of Engineering Services**  
Ministry of Works and Human Settlement,  
Royal Government of Bhutan,  
Thimphu.

Only in the event, if the above-mentioned Specification fails to cover the work item & methodology, then it is recommended to refer the specification from the Bureau of Indian Standard.

**Bureau Indian Standards**  
Manak Bhavan,  
9 Bahadur Shah Zafar Marg  
New Delhi 110002  
India  
[www.bis.org.in](http://www.bis.org.in)

## Drawings

Please refer separate set of drawings in soft copy provided in a CD which is attached along with bidding documents.

## Supplementary Information

The bidder should abide by the following:

1. Detailed Environmental Impact Assessment and Management Plan,
2. Relevant acts and regulations mentioned in the EIA,
3. Safety procedure as indicated by the BSB/MoLHR.
4. Development Control Regulations of ThimphuThromde.
5. Local Rules and Regulations.
6. The Bidder will be responsible for all logistics and related issues during execution of the project; however ThimphuThromde may provide assistance as a facilitator.
7. It is within the domain and responsibility of the bidder to look for areas such as casting yard, materials storage space, labor camps etc, within or outside the project area. ThimphuThromde will not be responsible to provide such areas.

## **PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS**

## **Section VII. General Conditions (GC)**



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## **Section VII. General Conditions (GC)**

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Thimphu Thromde  
Ministry of Works & Human Settlement  
Bhutan

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### Construction 10.00 MLD Water Treatment Plant at Taba LAP

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# General Conditions

## 1. General Provisions

### 1.1 Definitions

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

#### 1.1.1 The Contract

1.1.1.1 “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

1.1.1.2 “Contract Agreement” means the contract agreement referred to in Sub-Clause 1.6 [Contract Agreement].

1.1.1.3 “Letter of Acceptance” means the letter of formal acceptance, signed by the Employer, of the Letter of Tender, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

1.1.1.4 “Letter of Tender” means the document entitled letter of tender or letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

1.1.1.5 “Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

1.1.1.6 “Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.1.7 “Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in

the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

1.1.1.8 “Tender” means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as included in the Contract.

1.1.1.9 “Bill of Quantities”, “Daywork Schedule” and “Schedule of Payment Currencies” mean the documents so named (if any) which are comprised in the Schedules.

1.1.1.10 “Contract Data” means the pages completed by the Employer entitled contract data which constitute Part A of the Particular Conditions.

## **1.1.2 Parties and Persons**

1.1.2.1 “Party” means the Employer or the Contractor, as the context requires.

1.1.2.2 “Employer” means the person named as Employer in the Contract Data and the legal successors in title to this person.

1.1.2.3 “Contractor” means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 “Engineer” means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [Replacement of the Engineer].

1.1.2.5 “Contractor’s Representative” means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [Contractor’s Representative], who acts on behalf of the Contractor.

1.1.2.6 “Employer’s Personnel” means the Engineer, the assistants referred to in Sub-Clause 3.2 [Delegation by the Engineer] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer’s Personnel.

- 1.1.2.7 “Contractor’s Personnel” means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.
- 1.1.2.8 “Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.
- 1.1.2.9 “DB” means the person or three persons appointed under Sub-Clause 20.2 [Appointment of the Dispute Board] or Sub-Clause 20.3 [Failure to Agree on the Composition of the Dispute Board]
- 1.1.2.10 “FIDIC” means the Fédération Internationale des Ingénieurs-Conseils, the international federation of consulting engineers.
- 1.1.2.11 “Bank” means the financing institution (if any) named in the Contract Data.
- 1.1.2.12 “Borrower” means the person (if any) named as the borrower in the Contract Data.
- 1.1.3 Dates, Tests, Periods and Completion**
- 1.1.3.1 “Base Date” means the date 28 days prior to the latest date for submission of the Tender.
- 1.1.3.2 “Commencement Date” means the date notified under Sub-Clause 8.1 [Commencement of Works].
- 1.1.3.3 “Time for Completion” means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [Time for Completion], as stated in the Contract Data (with any extension under Sub-Clause 8.4 [Extension of Time for Completion]), calculated from the Commencement Date.
- 1.1.3.4 “Tests on Completion” means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [Tests on Completion] before the Works or a Section (as the case may be) are taken over by the Employer.
- 1.1.3.5 “Taking-Over Certificate” means a certificate issued

under Clause 10 [Employer's Taking Over].

1.1.3.6 "Tests after Completion" means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.7 "Defects Notification Period" means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [Completion of Outstanding Work and Remedying Defects], which extends over twelve months except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [Taking Over of the Works and Sections].

1.1.3.8 "Performance Certificate" means the certificate issued under Sub-Clause 11.9 [Performance Certificate].

1.1.3.9 "day" means a calendar day and "year" means 365 days.

#### **1.1.4 Money and Payments**

1.1.4.1 "Accepted Contract Amount" means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

1.1.4.2 "Contract Price" means the price defined in Sub-Clause 14.1 [The Contract Price], and includes adjustments in accordance with the Contract.

1.1.4.3 "Cost" means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 "Final Payment Certificate" means the payment certificate issued under Sub-Clause 14.13 [Issue of Final Payment Certificate].

1.1.4.5 "Final Statement" means the statement defined in Sub-Clause 14.11 [Application for Final Payment Certificate].

1.1.4.6 "Foreign Currency" means a currency in which part (or all) of the Contract Price is payable, but not the

Local Currency.

- 1.1.4.7 “Interim Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment], other than the Final Payment Certificate.
- 1.1.4.8 “Local Currency” means the currency of the Country.
- 1.1.4.9 “Payment Certificate” means a payment certificate issued under Clause 14 [Contract Price and Payment].
- 1.1.4.10 “Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [Provisional Sums].
- 1.1.4.11 “Retention Money” means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [Application for Interim Payment Certificates] and pays under Sub-Clause 14.9 [Payment of Retention Money].
- 1.1.4.12 “Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [Contract Price and Payment], for a payment certificate.

**1.1.5 Works and Goods**

- 1.1.5.1 “Contractor’s Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.
- 1.1.5.2 “Goods” means Contractor’s Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.
- 1.1.5.3 “Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.
- 1.1.5.4 “Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 “Plant” means the apparatus, machinery and other equipment intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

1.1.5.6 “Section” means a part of the Works specified in the Contract Data as a Section (if any).

1.1.5.7 “Temporary Works” means all temporary works of every kind (other than Contractor’s Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 “Works” mean the Permanent Works and the Temporary Works, or either of them as appropriate.

#### **1.1.6 Other Definitions**

1.1.6.1 “Contractor’s Documents” means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 “Country” means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 “Employer’s Equipment” means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 “Force Majeure” is defined in Clause 19 [Force Majeure].

1.1.6.5 “Laws” means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 “Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [Performance Security].

1.1.6.7 “Site” means the places where the Permanent Works are to be executed including storage and working areas and to which Plant and Materials are to be

delivered, and any other places as may be specified in the Contract as forming part of the Site.

1.1.6.8 “Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

1.1.6.9 “Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [Variations and Adjustments].

## **1.2 Interpretation**

In the Contract, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word “agree,” “agreed” or “agreement” require the agreement to be record in writing;
- (d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- (e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder ”and the words “tender documents” with “bidding documents”

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

In these Conditions, provisions including the expression "Cost plus profit" require this profit to be one-twentieth (5%) of this Cost unless otherwise indicated in the Contract Data.

## **1.3 Communications**

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- (b) delivered, sent or transmitted to the address for the recipient’s communications as stated in the Contract Data. However:

- (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
- (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

**1.4 Law and Language** The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

**1.5 Priority of Documents** The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement (if any),
- (b) the Letter of Acceptance,
- (c) the Tender,
- (d) the Particular Conditions – Part A,
- (e) the Particular Conditions – Part B
- (f) these General Conditions
- (g) the Specification,
- (h) the Drawings, and
- (i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

- 1.6 Contract Agreement** The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract Agreement shall be based upon the form annexed to the Particular Conditions. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer.
- 1.7 Assignment** Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party:
- (a) may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party, and
  - (b) may, as security in favour of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract.
- 1.8 Care and Supply of Documents** The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor.
- Each of the Contractor's Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor's Documents.
- The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor's Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer's Personnel shall have the right of access to all these documents at all reasonable times.
- If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect.
- 1.9 Delayed Drawings or Instructions** The Contractor shall give notice to the Engineer whenever the Works are likely to be delayed or disrupted if any necessary drawing or instruction is not issued to the Contractor within a

particular time, which shall be reasonable. The notice shall include details of the necessary drawing or instruction, details of why and by when it should be issued, and the nature and amount of the delay or disruption likely to be suffered if it is late.

If the Contractor suffers delay and/or incurs Cost as a result of a failure of the Engineer to issue the notified drawing or instruction within a time which is reasonable and is specified in the notice with supporting details, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

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

However, if and to the extent that the Engineer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit

#### **1.10 Employer's Use of Contractor's Documents**

As between the Parties, the Contractor shall retain the copyright and other intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed (by signing the Contract) to give to the Employer a non-terminable transferable non-exclusive royalty-free licence to copy, use and communicate the Contractor's Documents, including making and using modifications of them. This licence shall:

- (a) apply throughout the actual or intended working life (whichever is longer) of the relevant parts of the Works,
- (b) entitle any person in proper possession of the relevant part of the Works to copy, use and communicate the Contractor's Documents for the purposes of completing, operating, maintaining, altering, adjusting, repairing and

demolishing the Works, and

- (c) in the case of Contractor's Documents which are in the form of computer programs and other software, permit their use on any computer on the Site and other places as envisaged by the Contract, including replacements of any computers supplied by the Contractor.

The Contractor's Documents and other design documents made by (or on behalf of) the Contractor shall not, without the Contractor's consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause.

**1.11 Contractor's Use of Employer's Documents**

As between the Parties, the Employer shall retain the copyright and other intellectual property rights in the Specification, the Drawings and other documents made by (or on behalf of) the Employer. The Contractor may, at his cost, copy, use, and obtain communication of these documents for the purposes of the Contract. They shall not, without the Employer's consent, be copied, used or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

**1.12 Confidential Details**

The Contractor's and the Employer's Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor's compliance with the Contract and allow its proper implementation.

Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects.

**1.13 Compliance with Laws**

The Contractor shall, in performing the Contract, comply with applicable Laws. Unless otherwise stated in the Particular Conditions:

- (a) the Employer shall have obtained (or shall obtain) the planning, zoning, building permit or similar permission for the Permanent Works, and any other permissions

described in the Specification as having been (or to be) obtained by the Employer; and the Employer shall indemnify and hold the Contractor harmless against and from the consequences of any failure to do so; and

- (b) the Contractor shall give all notices, pay all taxes, duties and fees, and obtain all permits, licences and approvals, as required by the Laws in relation to the execution and completion of the Works and the remedying of any defects; and the Contractor shall indemnify and hold the Employer harmless against and from the consequences of any failure to do so, unless the Contractor is impeded to accomplish these actions and shows evidence of its diligence.

#### **1.14 Joint and Several Liability**

If the Contractor constitutes (under applicable Laws) a joint venture or other unincorporated grouping of two or more persons:

- (a) these persons shall be deemed to be jointly and severally liable to the Employer for the performance of the Contract;
- (b) these persons shall notify the Employer of their leader who shall have authority to bind the Contractor and each of these persons; and
- (c) the Contractor shall not alter its composition or legal status without the prior consent of the Employer.

#### **1.15 Inspections and Audit by the Bank**

The Contractor shall permit, and shall cause its Subcontractors and sub-consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Site and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Contractor's and its Subcontractors' and sub-consultants' attention is drawn to Sub-Clause 15.6 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under Sub-Clause 1.15 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

## **2. The Employer**

### **2.1 Right of Access to**

The Employer shall give the Contractor right of access to, and

**the Site**

possession of, all parts of the Site within the time (or times) stated in the Contract Data. The right and possession may not be exclusive to the Contractor. If, under the Contract, the Employer is required to give (to the Contractor) possession of any foundation, structure, plant or means of access, the Employer shall do so in the time and manner stated in the Specification. However, the Employer may withhold any such right or possession until the Performance Security has been received.

If no such time is stated in the Contract Data, the Employer shall give the Contractor right of access to, and possession of, the Site within such times as required to enable the Contractor to proceed without disruption in accordance with the programme submitted under Sub-Clause 8.3 [Programme].

If the Contractor suffers delay and/or incurs Cost as a result of a failure by the Employer to give any such right or possession within such time, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

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

However, if and to the extent that the Employer's failure was caused by any error or delay by the Contractor, including an error in, or delay in the submission of, any of the Contractor's Documents, the Contractor shall not be entitled to such extension of time, Cost or profit.

**2.2 Permits, Licences or Approvals**

The Employer shall provide, at the request of the Contractor, such reasonable assistance as to allow the Contractor to obtain properly:

- (a) copies of the Laws of the Country which are relevant to the Contract but are not readily available, and
- (b) any permits, licences or approvals required by the Laws of the Country:
  - (i) which the Contractor is required to obtain under

Sub-Clause 1.13 [Compliance with Laws],

- (ii) for the delivery of Goods, including clearance through customs, and
- (iii) for the export of Contractor's Equipment when it is removed from the Site.

**2.3 Employer's Personnel**

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

- (a) co-operate with the Contractor's efforts under Sub-Clause 4.6 [Co-operation], and
- (b) take actions similar to those which the Contractor is required to take under sub-paragraphs (a), (b) and (c) of Sub-Clause 4.8 [Safety Procedures] and under Sub-Clause 4.18 [Protection of the Environment].

**2.4 Employer's Financial Arrangements**

The Employer shall submit, before the Commencement Date and thereafter within 28 days after receiving any request from the Contractor, reasonable evidence that financial arrangements have been made and are being maintained which will enable the Employer to pay the Contract Price punctually (as estimated at that time) in accordance with Clause 14 [Contract Price and Payment]. Before the Employer makes any material change to his financial arrangements, the Employer shall give notice to the Contractor with detailed particulars.

In addition, if the Bank has notified to the Borrower that the Bank has suspended disbursements under its loan, which finances in whole or in part the execution of the Works, the Employer shall give notice of such suspension to the Contractor with detailed particulars, including the date of such notification, with a copy to the Engineer, within 7 days of the Borrower having received the suspension notification from the Bank. If alternative funds will be available in appropriate currencies to the Employer to continue making payments to the Contractor beyond a date 60 days after the date of Bank notification of the suspension, the Employer shall provide reasonable evidence in such notice of the extent to which such funds will be available.

**2.5 Employer's Claims**

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

notice is not required for payments due under Sub-Clause 4.19 [Electricity, Water and Gas], under Sub-Clause 4.20 [Employer's Equipment and Free-Issue Material], or for other services requested by the Contractor.

The notice shall be given as soon as practicable and no longer than 28 days after the Employer became aware, or should have become aware, of the event or circumstances giving rise to the claim. A notice relating to any extension of the Defects Notification Period shall be given before the expiry of such period.

The particulars shall specify the Clause or other basis of the claim, and shall include substantiation of the amount and/or extension to which the Employer considers himself to be entitled in connection with the Contract. The Engineer shall then proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the amount (if any) which the Employer is entitled to be paid by the Contractor, and/or (ii) the extension (if any) of the Defects Notification Period in accordance with Sub-Clause 11.3 [Extension of Defects Notification Period].

This amount may be included as a deduction in the Contract Price and Payment Certificates. The Employer shall only be entitled to set off against or make any deduction from an amount certified in a Payment Certificate, or to otherwise claim against the Contractor, in accordance with this Sub-Clause.

### **3. The Engineer**

#### **3.1 Engineer's Duties and Authority**

The Employer shall appoint the Engineer who shall carry out the duties assigned to him in the Contract. The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties.

The Engineer shall have no authority to amend the Contract.

The Engineer may exercise the authority attributable to the Engineer as specified in or necessarily to be implied from the Contract. If the Engineer is required to obtain the approval of the Employer before exercising a specified authority, the requirements shall be as stated in the Particular Conditions. The Employer shall promptly inform the Contractor of any change to the authority attributed to the Engineer.

However, whenever the Engineer exercises a specified authority

for which the Employer's approval is required, then (for the purposes of the Contract) the Employer shall be deemed to have given approval.

Except as otherwise stated in these Conditions:

- (a) whenever carrying out duties or exercising authority, specified in or implied by the Contract, the Engineer shall be deemed to act for the Employer;
- (b) the Engineer has no authority to relieve either Party of any duties, obligations or responsibilities under the Contract; and
- (c) any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances.
- (d) Any act by the Engineer in response to a Contractor's request except otherwise expressly specified shall be notified in writing to the Contractor within 28 days of receipt.

The following provisions shall apply:

The Engineer shall obtain the specific approval of the Employer before taking action under the-following Sub-Clauses of these Conditions:

- (a) Sub-Clause 4.12 [Unforeseeable Physical Conditions]: Agreeing or determining an extension of time and/or additional cost.
- (b) Sub-Clause 13.1 [Right to Vary]: Instructing a Variation, except;
  - (i) in an emergency situation as determined by the Engineer, or
  - (ii) if such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data.
- (c) Sub-Clause 13.3 [Variation Procedure]: Approving a proposal for Variation submitted by the Contractor in accordance with Sub Clause 13.1 [Right to Vary] or 13.2

[Value Engineering].

- (d) Sub-Clause 13.4 [Payment in Applicable Currencies]:  
Specifying the amount payable in each of the applicable currencies

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 [Variations and Adjustments] and shall notify the Contractor accordingly, with a copy to the Employer.

### **3.2 Delegation by the Engineer**

The Engineer may from time to time assign duties and delegate authority to assistants, and may also revoke such assignment or delegation. These assistants may include a resident engineer, and/or independent inspectors appointed to inspect and/or test items of Plant and/or Materials. The assignment, delegation or revocation shall be in writing and shall not take effect until copies have been received by both Parties.

However, unless otherwise agreed by both Parties, the Engineer shall not delegate the authority to determine any matter in accordance with Sub-Clause 3.5 [Determinations].

Assistants shall be suitably qualified persons, who are competent to carry out these duties and exercise this authority, and who are fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language].

Each assistant, to whom duties have been assigned or authority has been delegated, shall only be authorised to issue instructions to the Contractor to the extent defined by the delegation. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by an assistant, in accordance with the delegation, shall have the same effect as though the act had been an act of the Engineer. However:

- (a) any failure to disapprove any work, Plant or Materials shall not constitute approval, and shall therefore not prejudice the right of the Engineer to reject the work, Plant

or Materials;

- (b) if the Contractor questions any determination or instruction of an assistant, the Contractor may refer the matter to the Engineer, who shall promptly confirm, reverse or vary the determination or instruction.

### **3.3 Instructions of the Engineer**

The Engineer may issue to the Contractor (at any time) instructions and additional or modified Drawings which may be necessary for the execution of the Works and the remedying of any defects, all in accordance with the Contract. The Contractor shall only take instructions from the Engineer, or from an assistant to whom the appropriate authority has been delegated under this Clause. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

The Contractor shall comply with the instructions given by the Engineer or delegated assistant, on any matter related to the Contract. Whenever practicable, their instructions shall be given in writing. If the Engineer or a delegated assistant:

- (a) gives an oral instruction,
- (b) receives a written confirmation of the instruction, from (or on behalf of) the Contractor, within two working days after giving the instruction, and
- (c) does not reply by issuing a written rejection and/or instruction within two working days after receiving the confirmation,

then the confirmation shall constitute the written instruction of the Engineer or delegated assistant (as the case may be).

### **3.4 Replacement of the Engineer**

If the Employer intends to replace the Engineer, the Employer shall, not less than 21 days before the intended date of replacement, give notice to the Contractor of the name, address and relevant experience of the intended replacement Engineer. If the Contractor considers the intended replacement Engineer to be unsuitable, he has the right to raise objection against him by notice to the Employer, with supporting particulars, and the Employer shall give full and fair consideration to this objection.

### **3.5 Determinations**

Whenever these Conditions provide that the Engineer shall proceed in accordance with this Sub-Clause 3.5 to agree or determine any matter, the Engineer shall consult with each Party in an endeavour to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination in accordance with the Contract, taking due regard of all relevant

circumstances.

The Engineer shall give notice to both Parties of each agreement or determination, with supporting particulars within 28 days from the receipt of the corresponding claim or request except when otherwise specified. Each Party shall give effect to each agreement or determination unless and until revised under Clause 20 [Claims, Disputes and Arbitration].

#### **4. The Contractor**

##### **4.1 Contractor's General Obligations**

The Contractor shall design (to the extent specified in the Contract), execute and complete the Works in accordance with the Contract and with the Engineer's instructions, and shall remedy any defects in the Works.

The Contractor shall provide the Plant and Contractor's Documents specified in the Contract, and all Contractor's Personnel, Goods, consumables and other things and services, whether of a temporary or permanent nature, required in and for this design, execution, completion and remedying of defects.

All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country as defined by the Bank.

The Contractor shall be responsible for the adequacy, stability and safety of all Site operations and of all methods of construction. Except to the extent specified in the Contract, the Contractor (i) shall be responsible for all Contractor's Documents, Temporary Works, and such design of each item of Plant and Materials as is required for the item to be in accordance with the Contract, and (ii) shall not otherwise be responsible for the design or specification of the Permanent Works.

The Contractor shall, whenever required by the Engineer, submit details of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to these arrangements and methods shall be made without this having previously been notified to the Engineer. If the Contract specifies that the Contractor shall design any part of the Permanent Works, then unless otherwise stated in the Particular Conditions:

- (a) the Contractor shall submit to the Engineer the Contractor's Documents for this part in accordance with the procedures specified in the Contract;

- (b) these Contractor's Documents shall be in accordance with the Specification and Drawings, shall be written in the language for communications defined in Sub-Clause 1.4 [Law and Language], and shall include additional information required by the Engineer to add to the Drawings for co-ordination of each Party's designs;
- (c) the Contractor shall be responsible for this part and it shall, when the Works are completed, be fit for such purposes for which the part is intended as are specified in the Contract; and
- (d) prior to the commencement of the Tests on Completion, the Contractor shall submit to the Engineer the "as-built" documents and, if applicable, operation and maintenance manuals in accordance with the Specification and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of taking-over under Sub-Clause 10.1 [Taking Over of the Works and Sections] until these documents and manuals have been submitted to the Engineer.

#### **4.2 Performance Security**

The Contractor shall obtain (at his cost) a Performance Security for proper performance, in the amount and currencies stated in the Contract Data. If an amount is not stated in the Contract Data, this Sub-Clause shall not apply.

The Contractor shall deliver the Performance Security to the Employer within 28 days after receiving the Letter of Acceptance, and shall send a copy to the Engineer. The Performance Security shall be issued by an entity and from within a country (or other jurisdiction) approved by the Employer, and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive the Performance Certificate by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.

The Employer shall not make a claim under the Performance Security, except for amounts to which the Employer is entitled under the Contract.

The Employer shall indemnify and hold the Contractor harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from a claim under the Performance Security to the extent to which the Employer was not entitled to make the claim.

The Employer shall return the Performance Security to the Contractor within 21 days after receiving a copy of the Performance Certificate.

Without limitation to the provisions of the rest of this Sub-Clause, whenever the Engineer determines an addition or a reduction to the Contract Price as a result of a change in cost and/or legislation or as a result of a Variation amounting to more than 25 percent of the portion of the Contract Price payable in a specific currency, the Contractor shall at the Engineer's request promptly increase, or may decrease, as the case may be, the value of the Performance Security in that currency by an equal percentage.

**4.3 Contractor's Representative**

The Contractor shall appoint the Contractor's Representative and shall give him all authorities necessary to act on the Contractor's behalf under the Contract.

Unless the Contractor's Representative is named in the Contract, the Contractor shall, prior to the Commencement Date, submit to the Engineer for consent the name and particulars of the person the Contractor proposes to appoint as Contractor's Representative. If consent is withheld or subsequently revoked in terms of Sub-Clause 6.9 [Contractor's Personnel], or if the appointed person fails to act as Contractor's Representative, the Contractor shall similarly submit the name and particulars of another suitable person for such appointment.

The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's Representative or appoint a replacement.

The whole time of the Contractor's Representative shall be given to directing the Contractor's performance of the Contract. If the Contractor's Representative is to be temporarily absent from the Site during the execution of the Works, a suitable replacement person shall be appointed, subject to the Engineer's prior consent, and the Engineer shall be notified accordingly.

The Contractor's Representative shall, on behalf of the Contractor, receive instructions under Sub-Clause 3.3 [Instructions of the Engineer].

The Contractor's Representative may delegate any powers, functions and authority to any competent person, and may at any time revoke the delegation. Any delegation or revocation shall not take effect until the Engineer has received prior notice signed by the Contractor's Representative, naming the person and specifying the powers, functions and authority being delegated or revoked.

The Contractor's Representative shall be fluent in the language for communications defined in Sub-Clause 1.4 [Law and Language]. If the Contractor's Representative's delegates are not fluent in the said language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

**4.4 Subcontractors**

The Contractor shall not subcontract the whole of the Works.

The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents or employees, as if they were the acts or defaults of the Contractor. Unless otherwise stated in the

Particular Conditions:

- (a) the Contractor shall not be required to obtain consent to suppliers solely of Materials, or to a subcontract for which the Subcontractor is named in the Contract;
- (b) the prior consent of the Engineer shall be obtained to other proposed Subcontractors;
- (c) the Contractor shall give the Engineer not less than 28 days' notice of the intended date of the commencement of each Subcontractor's work, and of the commencement of such work on the Site; and
- (d) each subcontract shall include provisions which would entitle the Employer to require the subcontract to be assigned to the Employer under Sub-Clause 4.5 [Assignment of Benefit of Subcontract] (if or when applicable) or in the event of termination under Sub-Clause 15.2 [Termination by Employer].

The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.

Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.

**4.5 Assignment of Benefit of Subcontract**

If a Subcontractor's obligations extend beyond the expiry date of the relevant Defects Notification Period and the Engineer, prior to this date, instructs the Contractor to assign the benefit of such obligations to the Employer, then the Contractor shall do so. Unless otherwise stated in the assignment, the Contractor shall have no liability to the Employer for the work carried out by the Subcontractor after the assignment takes effect.

**4.6 Co-operation**

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

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

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

Any such instruction shall constitute a Variation if and to the

extent that it causes the Contractor to suffer delays and/or to incur Unforeseeable Cost. Services for these personnel and other contractors may include the use of Contractor's Equipment, Temporary Works or access arrangements which are the responsibility of the Contractor.

If, under the Contract, the Employer is required to give to the Contractor possession of any foundation, structure, plant or means of access in accordance with Contractor's Documents, the Contractor shall submit such documents to the Engineer in the time and manner stated in the Specification.

#### **4.7 Setting Out**

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

The Employer shall be responsible for any errors in these specified or notified items of reference, but the Contractor shall use reasonable efforts to verify their accuracy before they are used.

If the Contractor suffers delay and/or incurs Cost from executing work which was necessitated by an error in these items of reference, and an experienced contractor could not reasonably have discovered such error and avoided this delay and/or Cost, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent the error could not reasonably have been discovered, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

**4.8 Safety Procedures** The Contractor shall:

- (a) comply with all applicable safety regulations,
- (b) take care for the safety of all persons entitled to be on the Site.
- (c) use reasonable efforts to keep the Site and Works clear of unnecessary obstruction so as to avoid danger to these persons,
- (d) provide fencing, lighting, guarding and watching of the Works until completion and taking over under Clause 10 [Employer's Taking Over], and
- (e) provide any Temporary Works (including roadways, footways, guards and fences) which may be necessary, because of the execution of the Works, for the use and protection of the public and of owners and occupiers of adjacent land.

**4.9 Quality Assurance**

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. The system shall be in accordance with the details stated in the Contract. The Engineer shall be entitled to audit any aspect of the system.

Details of all procedures and compliance documents shall be submitted to the Engineer for information before each design and execution stage is commenced. When any document of a technical nature is issued to the Engineer, evidence of the prior approval by the Contractor himself shall be apparent on the document itself.

Compliance with the quality assurance system shall not relieve the Contractor of any of his duties, obligations or responsibilities under the Contract.

**4.10 Site Data**

The Employer shall have made available to the Contractor for his information, prior to the Base Date, all relevant data in the Employer's possession on sub-surface and hydrological conditions at the Site, including environmental aspects. The Employer shall similarly make available to the Contractor all such data which come into the Employer's possession after the Base Date. The Contractor shall be responsible for interpreting all such data.

To the extent which was practicable (taking account of cost and time), the Contractor shall be deemed to have obtained all

necessary information as to risks, contingencies and other circumstances which may influence or affect the Tender or Works. To the same extent, the Contractor shall be deemed to have inspected and examined the Site, its surroundings, the above data and other available information, and to have been satisfied before submitting the Tender as to all relevant matters, including (without limitation):

- (a) the form and nature of the Site, including sub-surface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of the work and Goods necessary for the execution and completion of the Works and the remedying of any defects,
- (d) the Laws, procedures and labour practices of the Country, and
- (e) the Contractor's requirements for access, accommodation, facilities, personnel, power, transport, water and other services.

**4.11 Sufficiency of the Accepted Contract Amount**

The Contractor shall be deemed to:

- (a) have satisfied himself as to the correctness and sufficiency of the Accepted Contract Amount, and
- (b) have based the Accepted Contract Amount on the data, interpretations, necessary information, inspections, examinations and satisfaction as to all relevant matters referred to in Sub-Clause 4.10 [Site Data].

Unless otherwise stated in the Contract, the Accepted Contract Amount covers all the Contractor's obligations under the Contract (including those under Provisional Sums, if any) and all things necessary for the proper execution and completion of the Works and the remedying of any defects.

**4.12 Unforeseeable Physical Conditions**

In this Sub-Clause, "physical conditions" means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including sub-surface and hydrological conditions but excluding climatic conditions.

If the Contractor encounters adverse physical conditions which he considers to have been Unforeseeable, the Contractor shall give

notice to the Engineer as soon as practicable.

This notice shall describe the physical conditions, so that they can be inspected by the Engineer, and shall set out the reasons why the Contractor considers them to be Unforeseeable. The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [Variations and Adjustments] shall apply.

If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to notice under Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

Upon receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.

However, before additional Cost is finally agreed or determined under sub-paragraph (ii), the Engineer may also review whether other physical conditions in similar parts of the Works (if any) were more favourable than could reasonably have been foreseen when the Contractor submitted the Tender. If and to the extent that these more favourable conditions were encountered, the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the reductions in Cost which were due to these conditions, which may be included (as deductions) in the Contract Price and Payment Certificates. However, the net effect of all adjustments under sub-paragraph (b) and all these reductions, for all the physical conditions encountered in similar parts of the Works, shall not result in a net reduction in the Contract Price.

The Engineer shall take account of any evidence of the physical conditions foreseen by the Contractor when submitting the Tender, which shall be made available by the Contractor, but

shall not be bound by the Contractor's interpretation of any such evidence.

**4.13 Rights of Way and Facilities**

Unless otherwise specified in the Contract the Employer shall provide access to and possession of the Site including special and/or temporary rights-of-way which are necessary for the Works. The Contractor shall obtain, at his risk and cost, any additional rights of way or facilities outside the Site which he may require for the purposes of the Works.

**4.14 Avoidance of Interference**

The Contractor shall not interfere unnecessarily or improperly with:

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

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

**4.15 Access Route**

The Contractor shall be deemed to have been satisfied as to the suitability and availability of access routes to the Site at Base Date. The Contractor shall use reasonable efforts to prevent any road or bridge from being damaged by the Contractor's traffic or by the Contractor's Personnel. These efforts shall include the proper use of appropriate vehicles and routes.

Except as otherwise stated in these Conditions:

- (a) the Contractor shall (as between the Parties) be responsible for any maintenance which may be required for his use of access routes;
- (b) the Contractor shall provide all necessary signs or directions along access routes, and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
- (c) the Employer shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- (d) the Employer does not guarantee the suitability or availability of particular access routes; and
- (e) Costs due to non-suitability or non-availability, for the use

required by the Contractor, of access routes shall be borne by the Contractor.

**4.16 Transport of Goods**

Unless otherwise stated in the Particular Conditions:

- (a) the Contractor shall give the Engineer not less than 21 days' notice of the date on which any Plant or a major item of other Goods will be delivered to the Site;
- (b) the Contractor shall be responsible for packing, loading, transporting, receiving, unloading, storing and protecting all Goods and other things required for the Works; and
- (c) the Contractor shall indemnify and hold the Employer harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from the transport of Goods, and shall negotiate and pay all claims arising from their transport.

**4.17 Contractor's Equipment**

The Contractor shall be responsible for all Contractor's Equipment. When brought on to the Site, Contractor's Equipment shall be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any major items of Contractor's Equipment without the consent of the Engineer. However, consent shall not be required for vehicles transporting Goods or Contractor's Personnel off Site.

**4.18 Protection of the Environment**

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.

The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.

**4.19 Electricity, Water and Gas**

The Contractor shall, except as stated below, be responsible for the provision of all power, water and other services he may require for his construction activities and to the extent defined in the Specifications, for the tests.

The Contractor shall be entitled to use for the purposes of the Works such supplies of electricity, water, gas and other services as may be available on the Site and of which details and prices are given in the Specification. The Contractor shall, at his risk and cost, provide any apparatus necessary for his use of these

services and for measuring the quantities consumed.

The quantities consumed and the amounts due (at these prices) for such services shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

**4.20 Employer's  
Equipment and  
Free-Issue  
Materials**

The Employer shall make the Employer's Equipment (if any) available for the use of the Contractor in the execution of the Works in accordance with the details, arrangements and prices stated in the Specification. Unless otherwise stated in the Specification:

- (a) the Employer shall be responsible for the Employer's Equipment, except that
- (b) the Contractor shall be responsible for each item of Employer's Equipment whilst any of the Contractor's Personnel is operating it, driving it, directing it or in possession or control of it.

The appropriate quantities and the amounts due (at such stated prices) for the use of Employer's Equipment shall be agreed or determined by the Engineer in accordance with Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations]. The Contractor shall pay these amounts to the Employer.

The Employer shall supply, free of charge, the "free-issue materials" (if any) in accordance with the details stated in the Specification. The Employer shall, at his risk and cost, provide these materials at the time and place specified in the Contract. The Contractor shall then visually inspect them, and shall promptly give notice to the Engineer of any shortage, defect or default in these materials. Unless otherwise agreed by both Parties, the Employer shall immediately rectify the notified shortage, defect or default.

After this visual inspection, the free-issue materials shall come under the care, custody and control of the Contractor. The Contractor's obligations of inspection, care, custody and control shall not relieve the Employer of liability for any shortage, defect or default not apparent from a visual inspection.

**4.21 Progress Reports**

Unless otherwise stated in the Particular Conditions, monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in six copies. The first report shall cover the period up to the end of the first calendar month following the Commencement Date. Reports shall be submitted monthly thereafter, each within 7 days after the last day of the period to which it relates.

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

Each report shall include:

- (a) charts and detailed descriptions of progress, including each stage of design (if any), Contractor's Documents, procurement, manufacture, delivery to Site, construction, erection and testing; and including these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),
- (b) photographs showing the status of manufacture and of progress on the Site;
- (c) for the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates of:
  - (i) commencement of manufacture,
  - (ii) Contractor's inspections,
  - (iii) tests, and
  - (iv) shipment and arrival at the Site;
- (d) the details described in Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment];
- (e) copies of quality assurance documents, test results and certificates of Materials;
- (f) list of notices given under Sub-Clause 2.5 [Employer's Claims] and notices given under Sub-Clause 20.1 [Contractor's Claims];
- (g) safety statistics, including details of any hazardous

incidents and activities relating to environmental aspects and public relations; and

- (h) comparisons of actual and planned progress, with details of any events or circumstances which may jeopardise the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome delays.

#### **4.22 Security of the Site**

Unless otherwise stated in the Particular Conditions:

- (a) the Contractor shall be responsible for keeping unauthorised persons off the Site, and
- (b) authorised persons shall be limited to the Contractor's Personnel and the Employer's Personnel; and to any other personnel notified to the Contractor, by the Employer or the Engineer, as authorised personnel of the Employer's other contractors on the Site.

#### **4.23 Contractor's Operations on Site**

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

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

Upon the issue of a Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which the Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave that part of the Site and the Works in a clean and safe condition. However, the Contractor may retain on Site, during the Defects Notification Period, such Goods as are required for the Contractor to fulfill obligations under the Contract.

#### **4.24 Fossils**

All fossils, coins, articles of value or antiquity, and structures and other remains or items of geological or archaeological interest found on the Site shall be placed under the care and authority of the Employer. The Contractor shall take reasonable precautions to prevent Contractor's Personnel or other persons

from removing or damaging any of these findings.

The Contractor shall, upon discovery of any such finding, promptly give notice to the Engineer, who shall issue instructions for dealing with it. If the Contractor suffers delay and/or incurs Cost from complying with the instructions, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

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

## **5. Nominated Subcontractors**

### **5.1 Definition of "nominated Subcontractor"**

In the Contract, "nominated Subcontractor" means a Subcontractor:

- (a) who is stated in the Contract as being a nominated Subcontractor, or
- (b) whom the Engineer, under Clause 13 [Variations and Adjustments], instructs the Contractor to employ as a Subcontractor subject to Sub-Clause 5.2 [Objection to Notification].

### **5.2 Objection to Nomination**

The Contractor shall not be under any obligation to employ a nominated Subcontractor against whom the Contractor raises reasonable objection by notice to the Engineer as soon as practicable, with supporting particulars. An objection shall be deemed reasonable if it arises from (among other things) any of the following matters, unless the Employer agrees in writing to indemnify the Contractor against and from the consequences of the matter:

- (a) there are reasons to believe that the Subcontractor does not have sufficient competence, resources or financial strength;
- (b) the nominated Subcontractor does not accept to indemnify the Contractor against and from any negligence or misuse of Goods by the nominated Subcontractor, his agents and

employees; or

- (c) the nominated Subcontractor does not accept to enter into a subcontract which specifies that, for the subcontracted work (including design, if any), the nominated Subcontractor shall:
  - (i) undertake to the Contractor such obligations and liabilities as will enable the Contractor to discharge his obligations and liabilities under the Contract;
  - (ii) indemnify the Contractor against and from all obligations and liabilities arising under or in connection with the Contract and from the consequences of any failure by the Subcontractor to perform these obligations or to fulfil these liabilities; and
  - (iii) be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.3 [Payment to nominated Subcontractors].

**5.3 Payments to nominated Subcontractors**

The Contractor shall pay to the nominated Subcontractor the amounts shown on the nominated Subcontractor's invoices approved by the Contractor which the Engineer certifies to be due in accordance with the subcontract. These amounts plus other charges shall be included in the Contract Price in accordance with sub-paragraph (b) of Sub-Clause 13.5 [Provisional Sums], except as stated in Sub-Clause 5.4 [Evidence of Payments].

**5.4 Evidence of Payments**

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- (a) submits this reasonable evidence to the Engineer, or
- (b)
  - (i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and
  - (ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the

Contractor's entitlement,

then the Employer may (at his sole discretion) pay, direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

## **6. Staff and Labor**

### **6.1 Engagement of Staff and Labor**

Except as otherwise stated in the Specification, the Contractor shall make arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, feeding, transport, and, when appropriate, housing.

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience from sources within the Country.

### **6.2 Rates of Wages and Conditions of Labor**

The Contractor shall pay rates of wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out. If no established rates or conditions are applicable, the Contractor shall pay rates of wages and observe conditions which are not lower than the general level of wages and conditions observed locally by employers whose trade or industry is similar to that of the Contractor.

The Contractor shall inform the Contractor's Personnel about their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances and any benefits as are subject to tax under the Laws of the Country for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.

### **6.3 Persons in the Service of Employer**

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

### **6.4 Labor Laws**

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

The Contractor shall require his employees to obey all applicable Laws, including those concerning safety at work.

#### **6.5 Working Hours**

No work shall be carried out on the Site on locally recognised days of rest, or outside the normal working hours stated in the Contract Data, unless:

- (a) otherwise stated in the Contract,
- (b) the Engineer gives consent, or
- (c) the work is unavoidable, or necessary for the protection of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer.

#### **6.6 Facilities for Staff and Labor**

Except as otherwise stated in the Specification, the Contractor shall provide and maintain all necessary accommodation and welfare facilities for the Contractor's Personnel. The Contractor shall also provide facilities for the Employer's Personnel as stated in the Specification.

The Contractor shall not permit any of the Contractor's Personnel to maintain any temporary or permanent living quarters within the structures forming part of the Permanent Works.

#### **6.7 Health and Safety**

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that medical staff, first aid facilities, sick bay and ambulance service are available at all times at the Site and at any accommodation for Contractor's and Employer's Personnel, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint an accident prevention officer at the Site, responsible for maintaining safety and protection against accidents. This person shall be qualified for this responsibility, and shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall send, to the Engineer, details of any accident as soon as practicable after its occurrence. The Contractor shall maintain records and make reports concerning

health, safety and welfare of persons, and damage to property, as the Engineer may reasonably require.

HIV-AIDS Prevention. The Contractor shall conduct an HIV-AIDS awareness programme via an approved service provider, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals.

The Contractor shall throughout the contract (including the Defects Notification Period): (i) conduct Information, Education and Consultation Communication (IEC) campaigns, at least every other month, addressed to all the Site staff and labor (including all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities) and to the immediate local communities, concerning the risks, dangers and impact, and appropriate avoidance behavior with respect to of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular; (ii) provide male or female condoms for all Site staff and labor as appropriate; and (iii) provide for STI and HIV/AIDS screening, diagnosis, counseling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labor.

The Contractor shall include in the program to be submitted for the execution of the Works under Sub-Clause 8.3 [Programme] an alleviation program for Site staff and labor and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.

- 6.8 Contractor's Superintendence** Throughout the execution of the Works, and as long thereafter as is necessary to fulfil the Contractor's obligations, the Contractor shall provide all necessary superintendence to plan, arrange, direct, manage, inspect and test the work.
- Superintendence shall be given by a sufficient number of persons having adequate knowledge of the language for communications (defined in Sub-Clause 1.4 [Law and Language]) and of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents), for the satisfactory and safe execution of the Works.
- 6.9 Contractor's Personnel** The Contractor's Personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative if applicable, who:
- (a) persists in any misconduct or lack of care,
  - (b) carries out duties incompetently or negligently,
  - (c) fails to conform with any provisions of the Contract, or
  - (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment.
- If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.
- 6.10 Records of Contractor's Personnel and Equipment** The Contractor shall submit, to the Engineer, details showing the number of each class of Contractor's Personnel and of each type of Contractor's Equipment on the Site. Details shall be submitted each calendar month, in a form approved by the Engineer, until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking-Over Certificate for the Works.
- 6.11 Disorderly Conduct** The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst the Contractor's Personnel, and to preserve peace and protection of persons and property on and near the Site.
- 6.12 Foreign Personnel** The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if

requested by the Contractor, use his best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

- 6.13 Supply of Foodstuffs** The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.
- 6.14 Supply of Water** The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.
- 6.15 Measures against Insect and Pest Nuisance** The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce their danger to health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.
- 6.16 Alcoholic Liquor or Drugs** The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift barter or disposal thereto by Contractor's Personnel.
- 6.17 Arms and Ammunition** The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.
- 6.18 Festivals and Religious Customs** The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.
- 6.19 Funeral Arrangements** The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

- 6.20 Prohibition of Forced or Compulsory Labor** The contractor shall not employ "forced or compulsory labor" in any form. "Forced or compulsory labor" consists of all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.
- 6.21 Prohibition of Harmful Child Labor** The Contractor shall not employ any child to perform any work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.
- 6.22 Employment Records of Workers** The Contractor shall keep complete and accurate records of the employment of labor at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer, and these records shall be available for inspection by Auditors during normal working hours. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].
- 6.23 Workers' Organizations** In countries where the relevant labor laws recognize workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the Contractor shall comply with such laws. Where the relevant labor laws substantially restrict workers' organizations, the Contractor shall enable alternative means for the Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where the relevant labor laws are silent, the Contractor shall not discourage the Contractor's Personnel from forming or joining workers' organizations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organizations and bargain collectively. The Contractor shall engage with such workers' representatives. Workers' organizations are expected to fairly represent the workers in the workforce.

**6.24 Non-Discrimination and Equal Opportunity**

The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where the relevant labor laws provide for non discrimination in employment, the Contractor shall comply with such laws. When the relevant labor laws are silent on nondiscrimination in employment, the Contractor shall meet this Sub-Clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination.

**7. Plant, Materials and Workmanship**

**7.1 Manner of Execution**

The Contractor shall carry out the manufacture of Plant, the production and manufacture of Materials, and all other execution of the Works:

- (a) in the manner (if any) specified in the Contract,
- (b) in a proper workmanlike and careful manner, in accordance with recognised good practice, and
- (c) with properly equipped facilities and non-hazardous Materials, except as otherwise specified in the Contract.

**7.2 Samples**

The Contractor shall submit the following samples of Materials, and relevant information, to the Engineer for consent prior to using the Materials in or for the Works:

- (a) manufacturer's standard samples of Materials and samples specified in the Contract, all at the Contractor's cost, and
- (b) additional samples instructed by the Engineer as a Variation.

Each sample shall be labelled as to origin and intended use in the Works.

**7.3 Inspection**

The Employer's Personnel shall at all reasonable times:

- (a) have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- (b) during production, manufacture and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production

and manufacture of Materials.

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

The Contractor shall give notice to the Engineer whenever any work is ready and before it is covered up, put out of sight, or packaged for storage or transport. The Engineer shall then either carry out the examination, inspection, measurement or testing without unreasonable delay, or promptly give notice to the Contractor that the Engineer does not require to do so. If the Contractor fails to give the notice, he shall, if and when required by the Engineer, uncover the work and thereafter reinstate and make good, all at the Contractor's cost.

#### **7.4 Testing**

This Sub-Clause shall apply to all tests specified in the Contract, other than the Tests after Completion (if any).

Except as otherwise specified in the Contract, the Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel, consumables, instruments, labour, materials, and suitably qualified and experienced staff, as are necessary to carry out the specified tests efficiently. The Contractor shall agree, with the Engineer, the time and place for the specified testing of any Plant, Materials and other parts of the Works.

The Engineer may, under Clause 13 [Variations and Adjustments], vary the location or details of specified tests, or instruct the Contractor to carry out additional tests. If these varied or additional tests show that the tested Plant, Materials or workmanship is not in accordance with the Contract, the cost of carrying out this Variation shall be borne by the Contractor, notwithstanding other provisions of the Contract.

The Engineer shall give the Contractor not less than 24 hours' notice of the Engineer's intention to attend the tests. If the Engineer does not attend at the time and place agreed, the Contractor may proceed with the tests, unless otherwise instructed by the Engineer, and the tests shall then be deemed to have been made in the Engineer's presence.

If the Contractor suffers delay and/or incurs Cost from complying with these instructions or as a result of a delay for which the Employer is responsible, the Contractor shall give

notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

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

The Contractor shall promptly forward to the Engineer duly certified reports of the tests. When the specified tests have been passed, the Engineer shall endorse the Contractor's test certificate, or issue a certificate to him, to that effect. If the Engineer has not attended the tests, he shall be deemed to have accepted the readings as accurate.

## **7.5 Rejection**

If, as a result of an examination, inspection, measurement or testing, any Plant, Materials or workmanship is found to be defective or otherwise not in accordance with the Contract, the Engineer may reject the Plant, Materials or workmanship by giving notice to the Contractor, with reasons. The Contractor shall then promptly make good the defect and ensure that the rejected item complies with the Contract.

If the Engineer requires this Plant, Materials or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If the rejection and retesting cause the Employer to incur additional costs, the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay these costs to the Employer.

## **7.6 Remedial Work**

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

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

The Contractor shall comply with the instruction within a reasonable time, which shall be the time (if any) specified in the instruction, or immediately if urgency is specified under subparagraph (c).

If the Contractor fails to comply with the instruction, the Employer shall be entitled to employ and pay other persons to carry out the work. Except to the extent that the Contractor would have been entitled to payment for the work, the Contractor shall be subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer all costs arising from this failure.

**7.7 Ownership of Plant and Materials**

Except otherwise specified in the Contract, each item of Plant and Materials shall, to the extent consistent with the Laws of the Country, become the property of the Employer at whichever is the earlier of the following times, free from liens and other encumbrances:

- (a) when it is incorporated in the Works;
- (b) when the Contractor is paid the corresponding value of the Plant and Materials under Sub-Clause 8.10 [Payment for Plant and Materials in Event of Suspension].

**7.8 Royalties**

Unless otherwise stated in the Specification, the Contractor shall pay all royalties, rents and other payments for:

- (a) natural Materials obtained from outside the Site, and
- (b) the disposal of material from demolitions and excavations and of other surplus material (whether natural or man-made), except to the extent that disposal areas within the Site are specified in the Contract.

## **8. Commencement, Delays and Suspension**

**8.1 Commencement of Works**

Except otherwise specified in the Particular Conditions, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Engineer's instruction recording the agreement of both Parties on such fulfillment and instructing to commence the Works is received by the Contractor:

- (a) signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities in the Country;
- (b) delivery to the Contractor of reasonable evidence of the Employer's Financial arrangements (under Sub-Clause 2.4

[Employer's Financial Arrangements])

- (c) except if otherwise specified in the Contract Data, possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works; and
- (d) receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor.
- (e) If the said Engineer's instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [Termination by Contractor].

The Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date, and shall then proceed with the Works with due expedition and without delay.

## **8.2 Time for Completion**

The Contractor shall complete the whole of the Works, and each Section (if any), within the Time for Completion for the Works or Section (as the case may be), including:

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

## **8.3 Programme**

The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice under Sub-Clause 8.1 [Commencement of Works]. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

- (a) the order in which the Contractor intends to carry out the Works, including the anticipated timing of each stage of design (if any), Contractor's Documents, procurement, manufacture of Plant, delivery to Site, construction, erection and testing,
- (b) each of these stages for work by each nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]),

- (c) the sequence and timing of inspections and tests specified in the Contract, and
- (d) a supporting report which includes:
  - (i) a general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution of the Works, and
  - (ii) details showing the Contractor's reasonable estimate of the number of each class of Contractor's Personnel and of each type of Contractor's Equipment, required on the Site for each major stage.

Unless the Engineer, within 21 days after receiving a programme, gives notice to the Contractor stating the extent to which it does not comply with the Contract, the Contractor shall proceed in accordance with the programme, subject to his other obligations under the Contract. The Employer's Personnel shall be entitled to rely upon the programme when planning their activities.

The Contractor shall promptly give notice to the Engineer of specific probable future events or circumstances which may adversely affect the work, increase the Contract Price, or delay the execution of the Works. The Engineer may require the Contractor to submit an estimate of the anticipated effect of the future event or circumstances, and/or a proposal under Sub-Clause 13.3 [Variation Procedure].

If, at any time, the Engineer gives notice to the Contractor that a programme fails (to the extent stated) to comply with the Contract or to be consistent with actual progress and the Contractor's stated intentions, the Contractor shall submit a revised programme to the Engineer in accordance with this Sub-Clause.

#### **8.4 Extension of Time for Completion**

The Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to an extension of the Time for Completion if and to the extent that completion for the purposes of Sub-Clause 10.1 [Taking-Over of the Works and Sections] is or will be delayed by any of the following causes:

- (a) a Variation (unless an adjustment to the Time for Completion has been agreed under Sub-Clause 13.3 [Variation Procedure]) or other substantial change in the quantity of an item of work included in the Contract,
- (b) a cause of delay giving an entitlement to extension of time

under a Sub-Clause of these Conditions,

- (c) exceptionally adverse climatic conditions,
- (d) Unforeseeable shortages in the availability of personnel or Goods caused by epidemic or governmental actions, or
- (e) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors.

If the Contractor considers himself to be entitled to an extension of the Time for Completion, the Contractor shall give notice to the Engineer in accordance with Sub-Clause 20.1 [Contractor's Claims]. When determining each extension of time under Sub-Clause 20.1, the Engineer shall review previous determinations and may increase, but shall not decrease, the total extension of time.

#### **8.5 Delays Caused by Authorities**

If the following conditions apply, namely:

- (a) the Contractor has diligently followed the procedures laid down by the relevant legally constituted public authorities in the Country,
- (b) these authorities delay or disrupt the Contractor's work, and
- (c) the delay or disruption was Unforeseeable,

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

#### **8.6 Rate of Progress**

If, at any time:

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

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

Unless the Engineer notifies otherwise, the Contractor shall adopt these revised methods, which may require increases in the working hours and/or in the numbers of Contractor's Personnel and/or Goods, at the risk and cost of the Contractor. If these revised methods cause the Employer to incur additional costs, the Contractor shall subject to notice under Sub-Clause 2.5 [Employer's Claims] pay these costs to the Employer, in addition to delay damages (if any) under Sub-Clause 8.7 [Delay Damages] below.

Additional costs of revised methods, including acceleration measures, instructed by the Engineer to reduce delays resulting from causes listed under Sub-Clause 8.4 [Extension of Time for Completion] shall be paid by the Employer, without generating, however, any other additional payment benefit to the Contractor.

### **8.7 Delay Damages**

If the Contractor fails to comply with Sub-Clause 8.2 [Time for Completion], the Contractor shall be subject to notice under Sub-Clause 2.5 [Employer's Claims] pay delay damages to the Employer for this default. These delay damages shall be the sum stated in the Contract Data, which shall be paid for every day which shall elapse between the relevant Time for Completion and the date stated in the Taking-Over Certificate. However, the total amount due under this Sub-Clause shall not exceed the maximum amount of delay damages (if any) stated in the Contract Data.

These delay damages shall be the only damages due from the Contractor for such default, other than in the event of termination under Sub-Clause 15.2 [Termination by Employer] prior to completion of the Works. These damages shall not relieve the Contractor from his obligation to complete the Works, or from any other duties, obligations or responsibilities which he may have under the Contract.

### **8.8 Suspension of Work**

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

The Engineer may also notify the cause for the suspension. If and to the extent that the cause is notified and is the responsibility of the Contractor, the following Sub-Clauses 8.9 [Consequences of Suspension], 8.10 [Payment for Plant and Materials in Event of Suspension] and 8.11 [Prolonged Suspension] shall not apply.

**8.9 Consequences of Suspension**

If the Contractor suffers delay and/or incurs Cost from complying with the Engineer's instructions under Sub-Clause 8.8 [Suspension of Work] and/or from resuming the work, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

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

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

**8.10 Payment for Plant and Materials in Event of Suspension**

The Contractor shall be entitled to payment of the value (as at the date of suspension) of Plant and/or Materials which have not been delivered to Site, if:

- (a) the work on Plant or delivery of Plant and/or Materials has been suspended for more than 28 days, and
- (b) the Contractor has marked the Plant and/or Materials as the Employer's property in accordance with the Engineer's instructions.

**8.11 Prolonged Suspension**

If the suspension under Sub-Clause 8.8 [Suspension of Work] has continued for more than 84 days, the Contractor may request the Engineer's permission to proceed. If the Engineer does not give permission within 28 days after being requested to do so, the Contractor may, by giving notice to the Engineer, treat the suspension as an omission under Clause 13 [Variations and Adjustments] of the affected part of the Works. If the suspension affects the whole of the Works, the Contractor may give notice of termination under Sub-Clause 16.2 [Termination by Contractor].

**8.12 Resumption of Work**

After the permission or instruction to proceed is given, the Contractor and the Engineer shall jointly examine the Works and the Plant and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Plant or Materials, which has occurred during the suspension after receiving from the Engineer an instruction to this effect under Clause 13 [Variations and Adjustments].

**9. Tests on Completion****9.1 Contractor's Obligations**

The Contractor shall carry out the Tests on Completion in accordance with this Clause and Sub-Clause 7.4 [Testing], after providing the documents in accordance with sub-paragraph (d) of Sub-Clause 4.1 [Contractor's General Obligations].

The Contractor shall give to the Engineer not less than 21 days' notice of the date after which the Contractor will be ready to carry out each of the Tests on Completion. Unless otherwise agreed, Tests on Completion shall be carried out within 14 days after this date, on such day or days as the Engineer shall instruct.

In considering the results of the Tests on Completion, the Engineer shall make allowances for the effect of any use of the Works by the Employer on the performance or other characteristics of the Works. As soon as the Works, or a Section, have passed any Tests on Completion, the Contractor shall submit a certified report of the results of these Tests to the Engineer.

**9.2 Delayed Tests**

If the Tests on Completion are being unduly delayed by the Employer, Sub-Clause 7.4 [Testing] (fifth paragraph) and/or Sub-Clause 10.3 [Interference with Tests on Completion] shall be applicable.

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

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

**9.3 Retesting**

If the Works, or a Section, fail to pass the Tests on Completion, Sub-Clause 7.5 [Rejection] shall apply, and the Engineer or the Contractor may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

**9.4 Failure to Pass Tests on Completion**

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

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

In the event of sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure. Unless the relevant reduction for this failure is stated (or its method of calculation is defined) in the Contract, the Employer may require the reduction to be (i) agreed by both Parties (in full satisfaction of this failure only) and paid before this Taking-Over Certificate is issued, or (ii) determined and paid under Sub-Clause 2.5 [Employer's Claims] and Sub-Clause 3.5 [Determinations].

**10. Employer's Taking Over****10.1 Taking Over of the Works and Sections**

Except as stated in Sub-Clause 9.4 [Failure to Pass Tests on Completion], the Works shall be taken over by the Employer when (i) the Works have been completed in accordance with the Contract, including the matters described in Sub-Clause 8.2 [Time for Completion] and except as allowed in sub-paragraph (a) below, and (ii) a Taking-Over Certificate for the Works has been issued, or is deemed to have been issued in accordance with this Sub-Clause.

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

Contractor may similarly apply for a Taking-Over Certificate for each Section.

The Engineer shall, within 28 days after receiving the Contractor's application:

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

If the Engineer fails either to issue the Taking-Over Certificate or to reject the Contractor's application within the period of 28 days, and if the Works or Section (as the case may be) are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

## **10.2 Taking Over of Parts of the Works**

The Engineer may, at the sole discretion of the Employer, issue a Taking-Over Certificate for any part of the Permanent Works.

The Employer shall not use any part of the Works (other than as a temporary measure which is either specified in the Contract or agreed by both Parties) unless and until the Engineer has issued a Taking-Over Certificate for this part. However, if the Employer does use any part of the Works before the Taking-Over Certificate is issued:

- (a) the part which is used shall be deemed to have been taken over as from the date on which it is used,
- (b) the Contractor shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the Employer, and
- (c) if requested by the Contractor, the Engineer shall issue a Taking-Over Certificate for this part.

After the Engineer has issued a Taking-Over Certificate for a part of the Works, the Contractor shall be given the earliest opportunity to take such steps as may be necessary to carry out

any outstanding Tests on Completion. The Contractor shall carry out these Tests on Completion as soon as practicable before the expiry date of the relevant Defects Notification Period.

If the Contractor incurs Cost as a result of the Employer taking over and/or using a part of the Works, other than such use as is specified in the Contract or agreed by the Contractor, the Contractor shall (i) give notice to the Engineer and (ii) be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to payment of any such Cost plus profit, which shall be included in the Contract Price. After receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this Cost and profit.

If a Taking-Over Certificate has been issued for a part of the Works (other than a Section), the delay damages thereafter for completion of the remainder of the Works shall be reduced. Similarly, the delay damages for the remainder of the Section (if any) in which this part is included shall also be reduced. For any period of delay after the date stated in this Taking-Over Certificate, the proportional reduction in these delay damages shall be calculated as the proportion which the value of the part so certified bears to the value of the Works or Section (as the case may be) as a whole. The Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine these proportions. The provisions of this paragraph shall only apply to the daily rate of delay damages under Sub-Clause 8.7 [Delay Damages], and shall not affect the maximum amount of these damages.

**10.3 Interference with Tests on Completion**

If the Contractor is prevented, for more than 14 days, from carrying out the Tests on Completion by a cause for which the Employer is responsible, the Employer shall be deemed to have taken over the Works or Section (as the case may be) on the date when the Tests on Completion would otherwise have been completed.

The Engineer shall then issue a Taking-Over Certificate accordingly, and the Contractor shall carry out the Tests on Completion as soon as practicable, before the expiry date of the Defects Notification Period. The Engineer shall require the Tests on Completion to be carried out by giving 14 days' notice and in accordance with the relevant provisions of the Contract.

If the Contractor suffers delay and/or incurs Cost as a result of this delay in carrying out the Tests on Completion, the Contractor shall give notice to the Engineer and shall be entitled

subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

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

**10.4 Surfaces  
Requiring  
Reinstatement**

Except as otherwise stated in a Taking-Over Certificate, a certificate for a Section or part of the Works shall not be deemed to certify completion of any ground or other surfaces requiring reinstatement.

## **11. Defects Liability**

**11.1 Completion of  
Outstanding  
Work and  
Remedying  
Defects**

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

- (a) complete any work which is outstanding on the date stated in a Taking-Over Certificate, within such reasonable time as is instructed by the Engineer, and
- (b) execute all work required to remedy defects or damage, as may be notified by (or on behalf of) the Employer on or before the expiry date of the Defects Notification Period for the Works or Section (as the case may be).

If a defect appears or damage occurs, the Contractor shall be notified accordingly, by (or on behalf of) the Employer.

**11.2 Cost of  
Remedying  
Defects**

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

- (a) any design for which the Contractor is responsible,
- (b) Plant, Materials or workmanship not being in accordance with the Contract, or
- (c) failure by the Contractor to comply with any other

obligation.

If and to the extent that such work is attributable to any other cause, the Contractor shall be notified promptly by (or on behalf of) the Employer and Sub-Clause 13.3 [Variation Procedure] shall apply.

**11.3 Extension of Defects Notification Period**

The Employer shall be entitled subject to Sub-Clause 2.5 [Employer's Claims] to an extension of the Defects Notification Period for the Works or a Section if and to the extent that the Works, Section or a major item of Plant (as the case may be, and after taking over) cannot be used for the purposes for which they are intended by reason of a defect or by reason of a damage attributable to the Contractor. However, a Defects Notification Period shall not be extended by more than two years.

If delivery and/or erection of Plant and/or Materials was suspended under Sub-Clause 8.8 [Suspension of Work] or Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work], the Contractor's obligations under this Clause shall not apply to any defects or damage occurring more than two years after the Defects Notification Period for the Plant and/or Materials would otherwise have expired.

**11.4 Failure to Remedy Defects**

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

If the Contractor fails to remedy the defect or damage by this notified date and this remedial work was to be executed at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Employer may (at his option):

- (a) carry out the work himself or by others, in a reasonable manner and at the Contractor's cost, but the Contractor shall have no responsibility for this work; and the Contractor shall subject to Sub-Clause 2.5 [Employer's Claims] pay to the Employer the costs reasonably incurred by the Employer in remedying the defect or damage;
- (b) require the Engineer to agree or determine a reasonable reduction in the Contract Price in accordance with Sub-Clause 3.5 [Determinations]; or
- (c) if the defect or damage deprives the Employer of substantially the whole benefit of the Works or any major part of the Works, terminate the Contract as a whole, or in

respect of such major part which cannot be put to the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the Works or for such part (as the case may be), plus financing costs and the cost of dismantling the same, clearing the Site and returning Plant and Materials to the Contractor.

**11.5 Removal of Defective Work**

If the defect or damage cannot be remedied expeditiously on the Site and the Employer gives consent, the Contractor may remove from the Site for the purposes of repair such items of Plant as are defective or damaged. This consent may require the Contractor to increase the amount of the Performance Security by the full replacement cost of these items, or to provide other appropriate security.

**11.6 Further Tests**

If the work of remedying of any defect or damage may affect the performance of the Works, the Engineer may require the repetition of any of the tests described in the Contract. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

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

**11.7 Right of Access**

Until the Performance Certificate has been issued, the Contractor shall have such right of access to the Works as is reasonably required in order to comply with this Clause, except as may be inconsistent with the Employer's reasonable security restrictions.

**11.8 Contractor to Search**

The Contractor shall, if required by the Engineer, search for the cause of any defect, under the direction of the Engineer. Unless the defect is to be remedied at the cost of the Contractor under Sub-Clause 11.2 [Cost of Remedying Defects], the Cost of the search plus profit shall be agreed or determined by the Engineer in accordance with Sub-Clause 3.5 [Determinations] and shall be included in the Contract Price.

**11.9 Performance Certificate**

Performance of the Contractor's obligations shall not be considered to have been completed until the Engineer has issued the Performance Certificate to the Contractor, stating the date on which the Contractor completed his obligations under the Contract.

The Engineer shall issue the Performance Certificate within 28 days after the latest of the expiry dates of the Defects Notification Periods, or as soon thereafter as the Contractor has supplied all the Contractor's Documents and completed and tested all the Works, including remedying any defects. A copy of the Performance Certificate shall be issued to the Employer.

Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

#### **11.10 Unfulfilled Obligations**

After the Performance Certificate has been issued, each Party shall remain liable for the fulfilment of any obligation which remains unperformed at that time. For the purposes of determining the nature and extent of unperformed obligations, the Contract shall be deemed to remain in force.

#### **11.11 Clearance of Site**

Upon receiving the Performance Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If all these items have not been removed within 28 days after receipt by the Contractor of the Performance Certificate, the Employer may sell or otherwise dispose of any remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer.

### **12. Measurement and Evaluation**

#### **12.1 Works to be Measured**

The Works shall be measured, and valued for payment, in accordance with this Clause. The Contractor shall show in each application under Sub-Clauses 14.3 [Application for Interim Payment Certificates], 14.10 [Statement at Completion], and 14.11 [Application for Final Payment Certificate] the quantities and other particulars detailing the amounts which he considers to be entitled under the Contract.

Whenever the Engineer requires any part of the Works to be measured, reasonable notice shall be given to the Contractor's Representative, who shall:

- (a) promptly either attend or send another qualified representative to assist the Engineer in making the

measurement, and

- (b) supply any particulars requested by the Engineer.

If the Contractor fails to attend or send a representative, the measurement made by (or on behalf of) the Engineer shall be accepted as accurate.

Except as otherwise stated in the Contract, wherever any Permanent Works are to be measured from records, these shall be prepared by the Engineer. The Contractor shall, as and when requested, attend to examine and agree the records with the Engineer, and shall sign the same when agreed. If the Contractor does not attend, the records shall be accepted as accurate.

If the Contractor examines and disagrees the records, and/or does not sign them as agreed, then the Contractor shall give notice to the Engineer of the respects in which the records are asserted to be inaccurate. After receiving this notice, the Engineer shall review the records and either confirm or vary them and certify the payment of the undisputed part. If the Contractor does not so give notice to the Engineer within 14 days after being requested to examine the records, they shall be accepted as accurate.

### **12.2 Method of Measurement**

Except as otherwise stated in the Contract and notwithstanding local practice:

measurement shall be made of the net actual quantity of each item of the Permanent Works, and

The method of measurement shall be in accordance with the Bill of Quantities or other applicable Schedules.

### **12.3 Evaluation**

Except as otherwise stated in the Contract, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the Contract Price by evaluating each item of work, applying the measurement agreed or determined in accordance with the above Sub-Clauses 12.1 [Works to be Measured] and 12.2 [Method of Measurement] and the appropriate rate or price for the item.

For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract or, if there is no such item, specified for similar work.

Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be

paid for separately.

However, a new rate or price shall be appropriate for an item of work if:

- (a)
  - (i) the measured quantity of the item is changed by more than 25% from the quantity of this item in the Bill of Quantities or other Schedule,
  - (ii) this change in quantity multiplied by such specified rate for this item exceeds 0.25% of the Accepted Contract Amount,
  - (iii) this change in quantity directly changes the Cost per unit quantity of this item by more than 1%, and
  - (iv) this item is not specified in the Contract as a “fixed rate item”;

or

- (b)
  - (i) The work is instructed under Clause 13 [Variations and Adjustments],
  - (ii) No rate or price is specified in the Contract for this item, and
  - (iii) No specified rate or price is appropriate because the item of work is not of similar character, or is not executed under similar conditions, as any item in the Contract.

Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of the matters described in sub-paragraph (a) and/or (b), as applicable. If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with profit, taking account of any other relevant matters.

Until such time as an appropriate rate or price is agreed or determined, the Engineer shall determine a provisional rate or price for the purposes of Interim Payment Certificates as soon as the concerned Works commences.

**12.4 Omissions**

Whenever the omission of any work forms part (or all) of a Variation, the value of which has not been agreed, if:

- (a) the Contractor will incur (or has incurred) cost which, if the work had not been omitted, would have been deemed to be covered by a sum forming part of the Accepted Contract Amount;
- (b) the omission of the work will result (or has resulted) in this sum not forming part of the Contract Price; and
- (c) this cost is not deemed to be included in the evaluation of any substituted work;

Then the Contractor shall give notice to the Engineer accordingly, with supporting particulars. Upon receiving this notice, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine this cost, which shall be included in the Contract Price.

**13. Variations and Adjustments****13.1 Right to Vary**

Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by a request for the Contractor to submit a proposal.

The Contractor shall execute and be bound by each Variation, unless the Contractor promptly gives notice to the Engineer stating (with supporting particulars) that (i) the Contractor cannot readily obtain the Goods required for the Variation, or (ii) such Variation triggers a substantial change in the sequence or progress of the Works. Upon receiving this notice, the Engineer shall cancel, confirm or vary the instruction.

Each Variation may include:

- (a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
- (b) changes to the quality and other characteristics of any item of work,
- (c) changes to the levels, positions and/or dimensions of any part of the Works,
- (d) omission of any work unless it is to be carried out by others,

- (e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
- (f) changes to the sequence or timing of the execution of the Works.

The Contractor shall not make any alteration and/or modification of the Permanent Works, unless and until the Engineer instructs or approves a Variation.

### **13.2 Value Engineering**

The Contractor may, at any time, submit to the Engineer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operating the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer.

The proposal shall be prepared at the cost of the Contractor and shall include the items listed in Sub-Clause 13.3 [Variation Procedure].

If a proposal, which is approved by the Engineer, includes a change in the design of part of the Permanent Works, then unless otherwise agreed by both Parties:

- (a) the Contractor shall design this part,
- (b) sub-paragraphs (a) to (d) of Sub-Clause 4.1 [Contractor's General Obligations] shall apply, and
- (c) if this change results in a reduction in the contract value of this part, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine a fee, which shall be included in the Contract Price. This fee shall be half (50%) of the difference between the following amounts:
  - (i) such reduction in contract value, resulting from the change, excluding adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost], and
  - (ii) the reduction (if any) in the value to the Employer of the varied works, taking account of any reductions in quality, anticipated life or operational efficiencies.

However, if amount (i) is less than amount (ii), there shall not be a fee.

### **13.3 Variation Procedure**

If the Engineer requests a proposal, prior to instructing a Variation, the Contractor shall respond in writing as soon as practicable, either by giving reasons why he cannot comply (if this is the case) or by submitting:

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

The Engineer shall, as soon as practicable after receiving such proposal (under Sub-Clause 13.2 [Value Engineering] or otherwise), respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.

Each instruction to execute a Variation, with any requirements for the recording of Costs, shall be issued by the Engineer to the Contractor, who shall acknowledge receipt.

Each Variation shall be evaluated in accordance with Clause 12 [Measurement and Evaluation], unless the Engineer instructs or approves otherwise in accordance with this Clause.

### **13.4 Payment in Applicable Currencies**

If the Contract provides for payment of the Contract Price in more than one currency, then whenever an adjustment is agreed, approved or determined as stated above, the amount payable in each of the applicable currencies shall be specified. For this purpose, reference shall be made to the actual or expected currency proportions of the Cost of the varied work, and to the proportions of various currencies specified for payment of the Contract Price.

### **13.5 Provisional Sums**

Each Provisional Sum shall only be used, in whole or in part, in accordance with the Engineer's instructions, and the Contract Price shall be adjusted accordingly. The total sum paid to the Contractor shall include only such amounts, for the work, supplies or services to which the Provisional Sum relates, as the Engineer shall have instructed. For each Provisional Sum, the Engineer may instruct:

- (a) work to be executed (including Plant, Materials or services

to be supplied) by the Contractor and valued under Sub-Clause 13.3 [Variation Procedure]; and/or

- (b) Plant, Materials or services to be purchased by the Contractor, from a nominated Subcontractor (as defined in Clause 5 [Nominated Subcontractors]) or otherwise; and for which there shall be included in the Contract Price:
  - (i) the actual amounts paid (or due to be paid) by the Contractor, and
  - (ii) a sum for overhead charges and profit, calculated as a percentage of these actual amounts by applying the relevant percentage rate (if any) stated in the appropriate Schedule. If there is no such rate, the percentage rate stated in the Contract Data shall be applied.

The Contractor shall, when required by the Engineer, produce quotations, invoices, vouchers and accounts or receipts in substantiation.

### **13.6 Daywork**

For work of a minor or incidental nature, the Engineer may instruct that a Variation shall be executed on a daywork basis. The work shall then be valued in accordance with the Daywork Schedule included in the Contract, and the following procedure shall apply. If a Daywork Schedule is not included in the Contract, this Sub-Clause shall not apply.

Before ordering Goods for the work, the Contractor shall submit quotations to the Engineer. When applying for payment, the Contractor shall submit invoices, vouchers and accounts or receipts for any Goods.

Except for any items for which the Daywork Schedule specifies that payment is not due, the Contractor shall deliver each day to the Engineer accurate statements in duplicate which shall include the following details of the resources used in executing the previous day's work:

- (a) the names, occupations and time of Contractor's Personnel,
- (b) the identification, type and time of Contractor's Equipment and Temporary Works, and
- (c) the quantities and types of Plant and Materials used.

One copy of each statement will, if correct, or when agreed, be signed by the Engineer and returned to the Contractor. The

Contractor shall then submit priced statements of these resources to the Engineer, prior to their inclusion in the next Statement under Sub-Clause 14.3 [Application for Interim Payment Certificates].

**13.7 Adjustments for Changes in Legislation**

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract. If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost, which shall be included in the Contract Price.

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

Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the table of adjustment data in accordance with the provisions of Sub-Clause 13.8 [Adjustments for Changes in Cost].

**13.8 Adjustments for Changes in Cost**

In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data for local and foreign currencies included in the Schedules. If there is no such table of adjustment data, this Sub-Clause shall not apply.

If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labour, Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any

rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

$P_n = a + b L_n / L_o + c E_n / E_o + d M_n / M_o + \dots$  where:

“ $P_n$ ” is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period “ $n$ ”, this period being a month unless otherwise stated in the Contract Data ;

“ $a$ ” is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

“ $b$ ”, “ $c$ ”, “ $d$ ”, ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works, as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

“ $L_n$ ”, “ $E_n$ ”, “ $M_n$ ”, ... are the current cost indices or reference prices for period “ $n$ ”, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

“ $L_o$ ”, “ $E_o$ ”, “ $M_o$ ”, ... are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.

In cases where the “currency of index” (stated in the table) is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.

Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price: whichever is more favourable to the Employer.

The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

## **14. Contract Price and Payment**

### **14.1 The Contract Price**

Unless otherwise stated in the Particular Conditions:

- (a) the Contract Price shall be agreed or determined under Sub-Clause 12.3 [Evaluation] and be subject to adjustments in accordance with the Contract;
- (b) the Contractor shall pay all taxes, duties and fees required to be paid by him under the Contract, and the Contract Price shall not be adjusted for any of these costs except as stated in Sub-Clause 13.7 [Adjustments for Changes in Legislation];
- (c) any quantities which may be set out in the Bill of Quantities or other Schedule are estimated quantities and are not to be taken as the actual and correct quantities:
  - (i) of the Works which the Contractor is required to execute, or
  - (ii) for the purposes of Clause 12 [Measurement and Evaluation]; and

- (d) the Contractor shall submit to the Engineer, within 28 days after the Commencement Date, a proposed breakdown of each lump sum price in the Schedules. The Engineer may take account of the breakdown when preparing Payment Certificates, but shall not be bound by it.
- (e) Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be exempt from the payment of import duties and taxes upon importation.

**14.2 Advance Payment** The Employer shall make an advance payment, as an interest-free loan for mobilisation and cash flow support, when the Contractor submits a guarantee in accordance with this Sub-Clause. The total advance payment, the number and timing of instalments (if more than one), and the applicable currencies and proportions, shall be as stated in the Contract Data.

Unless and until the Employer receives this guarantee, or if the total advance payment is not stated in the Contract Data, this Sub-Clause shall not apply.

The Engineer shall deliver to the Employer and to the Contractor an Interim Payment Certificate for the advance payment or its first instalment after receiving a Statement (under Sub-Clause 14.3 [Application for Interim Payment Certificates]) and after the Employer receives (i) the Performance Security in accordance with Sub-Clause 4.2 [Performance Security] and (ii) a guarantee in amounts and currencies equal to the advance payment. This guarantee shall be issued by an entity and from within a country (or other jurisdiction) approved by the Employer, and shall be in the form annexed to the Particular Conditions or in another form approved by the Employer.

The Contractor shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Contractor as indicated in the Payment Certificates. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

Unless stated otherwise in the Contract Data, the advance payment shall be repaid through percentage deductions from the interim payments determined by the Engineer in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates], as

follows:

- (a) deductions shall commence in the next interim Payment Certificate following that in which the total of all certified interim payments (excluding the advance payment and deductions and repayments of retention) exceeds 30 percent(30%) of the Accepted Contract Amount less Provisional Sums; and
- (b) deductions shall be made at the amortisation rate stated in the Contract Data of the amount of each Interim Payment Certificate (excluding the advance payment and deductions for its repayments as well as deductions for retention money) in the currencies and proportions of the advance payment until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the time when 90 per cent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.

If the advance payment has not been repaid prior to the issue of the Taking-Over Certificate for the Works or prior to termination under Clause 15 [Termination by Employer], Clause 16 [Suspension and Termination by Contractor] or Clause 19 [Force Majeure] (as the case may be), the whole of the balance then outstanding shall immediately become due and in case of termination under Clause 15 [Termination by Employer] and Sub-Clause 19.6 [Optional Termination, Payment and Release], payable by the Contractor to the Employer.

#### **14.3 Application for Interim Payment Certificates**

The Contractor shall submit a Statement in six copies to the Engineer after the end of each month, in a form approved by the Engineer, showing in detail the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the report on the progress during this month in accordance with Sub-Clause 4.21 [Progress Reports].

The Statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- (a) the estimated contract value of the Works executed and the Contractor's Documents produced up to the end of the month (including Variations but excluding items described in sub-paragraphs (b) to (g) below);
- (b) any amounts to be added and deducted for changes in legislation and changes in cost, in accordance with Sub-

Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost];

- (c) any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;
- (d) any amounts to be added for the advance payment and (if more than one instalment) and to be deducted for its repayments in accordance with Sub-Clause 14.2 [Advance Payment];
- (e) any amounts to be added and deducted for Plant and Materials in accordance with Sub-Clause 14.5 [Plant and Materials intended for the Works];
- (f) any other additions or deductions which may have become due under the Contract or otherwise, including those under Clause 20 [Claims, Disputes and Arbitration]; and
- (g) the deduction of amounts certified in all previous Payment Certificates.

#### **14.4 Schedule of Payments**

If the Contract includes a schedule of payments specifying the instalments in which the Contract Price will be paid, then unless otherwise stated in this schedule:

- (a) the instalments quoted in this schedule of payments shall be the estimated contract values for the purposes of subparagraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates];
- (b) Sub-Clause 14.5 [Plant and Materials intended for the Works] shall not apply; and
- (c) if these instalments are not defined by reference to the actual progress achieved in executing the Works, and if actual progress is found to be less or more than that on which this schedule of payments was based, then the Engineer may proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine revised instalments, which shall take account of the extent to which progress is less or more than that on which the instalments were previously based.

If the Contract does not include a schedule of payments, the Contractor shall submit non-binding estimates of the payments which he expects to become due during each quarterly period.

The first estimate shall be submitted within 42 days after the Commencement Date. Revised estimates shall be submitted at quarterly intervals, until the Taking-Over Certificate has been issued for the Works.

**14.5 Plant and Materials intended for the Works**

If this Sub-Clause applies, Interim Payment Certificates shall include, under sub-paragraph (e) of Sub-Clause 14.3, (i) an amount for Plant and Materials which have been sent to the Site for incorporation in the Permanent Works, and (ii) a reduction when the contract value of such Plant and Materials is included as part of the Permanent Works under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates].

If the lists referred to in sub-paragraphs (b)(i) or (c)(i) below are not included in the Schedules, this Sub-Clause shall not apply.

The Engineer shall determine and certify each addition if the following conditions are satisfied:

- (a) the Contractor has:
  - (i) kept satisfactory records (including the orders, receipts, Costs and use of Plant and Materials) which are available for inspection, and
  - (ii) submitted a statement of the Cost of acquiring and delivering the Plant and Materials to the Site, supported by satisfactory evidence;

and either:

- (b) the relevant Plant and Materials:
  - (i) are those listed in the Schedules for payment when shipped,
  - (ii) have been shipped to the Country, en route to the Site, in accordance with the Contract; and
  - (iii) are described in a clean shipped bill of lading or other evidence of shipment, which has been submitted to the Engineer together with evidence of payment of freight and insurance, any other documents reasonably required, and a bank guarantee in a form and issued by an entity approved by the Employer in amounts and currencies equal to the amount due under this Sub-Clause: this guarantee may be in a similar form to the form referred to in Sub-Clause 14.2 [Advance Payment] and shall be valid until the Plant and Materials are properly stored on Site and

protected against loss, damage or deterioration;

or

- (c) the relevant Plant and Materials:
  - (i) are those listed in the Schedules for payment when delivered to the Site, and
  - (ii) have been delivered to and are properly stored on the Site, are protected against loss, damage or deterioration, and appear to be in accordance with the Contract.

The additional amount to be certified shall be the equivalent of eighty percent of the Engineer's determination of the cost of the Plant and Materials (including delivery to Site), taking account of the documents mentioned in this Sub-Clause and of the contract value of the Plant and Materials.

The currencies for this additional amount shall be the same as those in which payment will become due when the contract value is included under sub-paragraph (a) of Sub-Clause 14.3 [Application for Interim Payment Certificates]. At that time, the Payment Certificate shall include the applicable reduction which shall be equivalent to, and in the same currencies and proportions as, this additional amount for the relevant Plant and Materials.

#### **14.6 Issue of Interim Payment Certificates**

No amount will be certified or paid until the Employer has received and approved the Performance Security. Thereafter, the Engineer shall, within 28 days after receiving a Statement and supporting documents, deliver to the Employer and to the Contractor an Interim Payment Certificate which shall state the amount which the Engineer fairly determines to be due, with all supporting particulars for any reduction or withholding made by the Engineer on the Statement if any.

However, prior to issuing the Taking-Over Certificate for the Works, the Engineer shall not be bound to issue an Interim Payment Certificate in an amount which would (after retention and other deductions) be less than the minimum amount of Interim Payment Certificates (if any) stated in the Contract Data. In this event, the Engineer shall give notice to the Contractor accordingly.

An Interim Payment Certificate shall not be withheld for any other reason, although:

- (a) if anything supplied or work done by the Contractor is not

in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and/or

- (b) if the Contractor was or is failing to perform any work or obligation in accordance with the Contract, and had been so notified by the Engineer, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Engineer may in any Payment Certificate make any correction or modification that should properly be made to any previous Payment Certificate. A Payment Certificate shall not be deemed to indicate the Engineer's acceptance, approval, consent or satisfaction.

#### **14.7 Payment**

The Employer shall pay to the Contractor:

- (a) the first instalment of the advance payment within 42 days after issuing the Letter of Acceptance or within 21 days after receiving the documents in accordance with Sub-Clause 4.2 [Performance Security] and Sub-Clause 14.2 [Advance Payment], whichever is later;
- (b) the amount certified in each Interim Payment Certificate within 56 days after the Engineer receives the Statement and supporting documents or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the amount shown on any statement submitted by the Contractor, within 14 days after such statement is submitted, any discrepancy being rectified in the next payment to the Contractor; and
- (c) the amount certified in the Final Payment Certificate within 56 days after the Employer receives this Payment Certificate or, at a time when the Bank's loan or credit (from which part of the payments to the Contractor is being made) is suspended, the undisputed amount shown in the Final Statement, within 56 days after the date of notification of the suspension in accordance with Sub-Clause 16.2.

Payment of the amount due in each currency shall be made into the bank account, nominated by the Contractor, in the payment country (for this currency) specified in the Contract.

#### **14.8 Delayed Payment**

If the Contractor does not receive payment in accordance with Sub-Clause 14.7 [Payment], the Contractor shall be entitled to

receive financing charges compounded monthly on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.7 [Payment], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Unless otherwise stated in the Particular Conditions, these financing charges shall be calculated at the annual rate of three percentage points above the discount rate of the central bank in the country of the currency of payment, or if not available, the interbank offered rate, and shall be paid in such currency.

The Contractor shall be entitled to this payment without formal notice or certification, and without prejudice to any other right or remedy.

#### **14.9 Payment of Retention Money**

When the Taking-Over Certificate has been issued for the Works, the first half of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a

Taking-Over Certificate is issued for a Section or part of the Works, a proportion of the Retention Money shall be certified and paid. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section or part, by the estimated final Contract Price.

Promptly after the latest of the expiry dates of the Defects Notification Periods, the outstanding balance of the Retention Money shall be certified by the Engineer for payment to the Contractor. If a Taking-Over Certificate was issued for a Section, a proportion of the second half of the Retention Money shall be certified and paid promptly after the expiry date of the Defects Notification Period for the Section. This proportion shall be half (50%) of the proportion calculated by dividing the estimated contract value of the Section by the estimated final Contract Price.

However, if any work remains to be executed under Clause 11 [Defects Liability], the Engineer shall be entitled to withhold certification of the estimated cost of this work until it has been executed.

When calculating these proportions, no account shall be taken of any adjustments under Sub-Clause 13.7 [Adjustments for Changes in Legislation] and Sub-Clause 13.8 [Adjustments for Changes in Cost].

Unless otherwise stated in the Particular Conditions, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a guarantee, in the form annexed to the Particular Conditions or in another form approved by the Employer and provided by an entity approved by the Employer, for the second half of the Retention Money. The Contractor shall ensure that the guarantee is in the amounts and currencies of the second half of the Retention Money and is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects, as specified for the Performance Security in Sub-Clause 4.2. On receipt by the Employer of the required guarantee, the Engineer shall certify and the Employer shall pay the second half of the Retention Money. The release of the second half of the Retention Money against a guarantee shall then be in lieu of the release under the second paragraph of this Sub-Clause. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.

If the Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under it when the Taking-Over Certificate is issued is more than half of the Retention Money, then the Retention Money guarantee will not be required. If the amount guaranteed under the Performance Security when the Taking-Over Certificate is issued is less than half of the Retention Money, the Retention Money guarantee will only be required for the difference between half of the Retention Money and the amount guaranteed under the Performance Security.

#### **14.10 Statement at Completion**

Within 84 days after receiving the Taking-Over Certificate for the Works, the Contractor shall submit to the Engineer six copies of a Statement at completion with supporting documents, in accordance with Sub-Clause 14.3 [Application for Interim Payment Certificates], showing:

- (a) the value of all work done in accordance with the Contract up to the date stated in the Taking-Over Certificate for the Works,
- (b) any further sums which the Contractor considers to be due, and
- (c) an estimate of any other amounts which the Contractor considers will become due to him under the Contract. Estimated amounts shall be shown separately in this

Statement at completion.

The Engineer shall then certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates].

**14.11 Application for Final Payment Certificate**

Within 56 days after receiving the Performance Certificate, the Contractor shall submit, to the Engineer, six copies of a draft final statement with supporting documents showing in detail in a form approved by the Engineer:

- (a) the value of all work done in accordance with the Contract, and
- (b) any further sums which the Contractor considers to be due to him under the Contract or otherwise.

If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require within 28 days from receipt of the said draft and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer the final statement as agreed. This agreed statement is referred to in these Conditions as the “Final Statement”.

However if, following discussions between the Engineer and the Contractor and any changes to the draft final statement which are agreed, it becomes evident that a dispute exists, the Engineer shall deliver to the Employer (with a copy to the Contractor) an Interim Payment Certificate for the agreed parts of the draft final statement. Thereafter, if the dispute is finally resolved under Sub-Clause 20.4 [Obtaining Dispute Board’s Decision] or Sub-Clause 20.5 [Amicable Settlement], the Contractor shall then prepare and submit to the Employer (with a copy to the Engineer) a Final Statement.

**14.12 Discharge**

When submitting the Final Statement, the Contractor shall submit a discharge which confirms that the total of the Final Statement represents full and final settlement of all moneys due to the Contractor under or in connection with the Contract. This discharge may state that it becomes effective when the Contractor has received the Performance Security and the outstanding balance of this total, in which event the discharge shall be effective on such date.

**14.13 Issue of Final Payment Certificate**

Within 28 days after receiving the Final Statement and discharge in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall deliver to the Employer and to the Contractor,

the Final Payment Certificate which shall state:

- (a) the amount which he fairly determines is finally due, and
- (b) after giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled, the balance (if any) due from the Employer to the Contractor or from the Contractor to the Employer, as the case may be.

If the Contractor has not applied for a Final Payment Certificate in accordance with Sub-Clause 14.11 [Application for Final Payment Certificate] and Sub-Clause 14.12 [Discharge], the Engineer shall request the Contractor to do so. If the Contractor fails to submit an application within a period of 28 days, the Engineer shall issue the Final Payment Certificate for such amount as he fairly determines to be due.

#### **14.14 Cessation of Employer's Liability**

The Employer shall not be liable to the Contractor for any matter or thing under or in connection with the Contract or execution of the Works, except to the extent that the Contractor shall have included an amount expressly for it:

- (a) in the Final Statement and also
- (b) (except for matters or things arising after the issue of the Taking-Over Certificate for the Works) in the Statement at completion described in Sub-Clause 14.10 [Statement at Completion].

However, this Sub-Clause shall not limit the Employer's liability under his indemnification obligations, or the Employer's liability in any case of fraud, deliberate default or reckless misconduct by the Employer.

#### **14.15 Currencies of Payment**

The Contract Price shall be paid in the currency or currencies named in the Schedule of Payment Currencies. If more than one currency is so named, payments shall be made as follows:

- (a) if the Accepted Contract Amount was expressed in Local Currency only:
  - (i) the proportions or amounts of the Local and Foreign Currencies, and the fixed rates of exchange to be used for calculating the payments, shall be as stated in the Schedule of Payment Currencies, except as otherwise agreed by both Parties;
  - (ii) payments and deductions under Sub-Clause 13.5 [Provisional Sums] and Sub-Clause 13.7

[Adjustments for Changes in Legislation] shall be made in the applicable currencies and proportions; and

- (iii) other payments and deductions under sub-paragraphs (a) to (d) of Sub-Clause 14.3 [Application for Interim Payment Certificates] shall be made in the currencies and proportions specified in sub-paragraph (a)(i) above;
- (b) payment of the damages specified in the Contract Data, shall be made in the currencies and proportions specified in the Schedule of Payment Currencies;
- (c) other payments to the Employer by the Contractor shall be made in the currency in which the sum was expended by the Employer, or in such currency as may be agreed by both Parties;
- (d) if any amount payable by the Contractor to the Employer in a particular currency exceeds the sum payable by the Employer to the Contractor in that currency, the Employer may recover the balance of this amount from the sums otherwise payable to the Contractor in other currencies; and
- (e) if no rates of exchange are stated in the Schedule of Payment Currencies, they shall be those prevailing on the Base Date and determined by the central bank of the Country.

## **15. Termination by Employer**

**15.1 Notice to Correct** If the Contractor fails to carry out any obligation under the Contract, the Engineer may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

**15.2 Termination by Employer** The Employer shall be entitled to terminate the Contract if the Contractor:

- (a) fails to comply with Sub-Clause 4.2 [Performance Security] or with a notice under Sub-Clause 15.1 [Notice to Correct],
- (b) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,

- (c) without reasonable excuse fails:
  - (i) to proceed with the Works in accordance with Clause 8 [Commencement, Delays and Suspension], or
  - (ii) to comply with a notice issued under Sub-Clause 7.5 [Rejection] or Sub-Clause 7.6 [Remedial Work], within 28 days after receiving it,
- (d) subcontracts the whole of the Works or assigns the Contract without the required agreement,
- (e) becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events, or
- (f) gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward:
  - (i) for doing or forbearing to do any action in relation to the Contract, or
  - (ii) for showing or forbearing to show favour or disfavour to any person in relation to the Contract,

or if any of the Contractor's Personnel, agents or Subcontractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this sub-paragraph (f). However, lawful inducements and rewards to Contractor's Personnel shall not entitle termination.

In any of these events or circumstances, the Employer may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor from the Site. However, in the case of sub-paragraph (e) or (f), the Employer may by notice terminate the Contract immediately.

The Employer's election to terminate the Contract shall not prejudice any other rights of the Employer, under the Contract or otherwise.

The Contractor shall then leave the Site and deliver any required Goods, all Contractor's Documents, and other design documents made by or for him, to the Engineer. However, the Contractor shall use his best efforts to comply immediately with any

reasonable instructions included in the notice (i) for the assignment of any subcontract, and (ii) for the protection of life or property or for the safety of the Works.

After termination, the Employer may complete the Works and/or arrange for any other entities to do so. The Employer and these entities may then use any Goods, Contractor's Documents and other design documents made by or on behalf of the Contractor.

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

**15.3 Valuation at Date of Termination**

As soon as practicable after a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine the value of the Works, Goods and Contractor's Documents, and any other sums due to the Contractor for work executed in accordance with the Contract.

**15.4 Payment after Termination**

After a notice of termination under Sub-Clause 15.2 [Termination by Employer] has taken effect, the Employer may:

- (a) proceed in accordance with Sub-Clause 2.5 [Employer's Claims],
- (b) withhold further payments to the Contractor until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Employer, have been established, and/or
- (c) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the Works, after allowing for any sum due to the Contractor under Sub-Clause 15.3 [Valuation at Date of Termination]. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

**15.5 Employer's Entitlement to Termination for**

The Employer shall be entitled to terminate the Contract, at any time for the Employer's convenience, by giving notice of such termination to the Contractor. The termination shall take effect

**Convenience**

28 days after the later of the dates on which the Contractor receives this notice or the Employer returns the Performance Security. The Employer shall not terminate the Contract under this Sub-Clause in order to execute the Works himself or to arrange for the Works to be executed by another contractor or to avoid a termination of the Contract by the Contractor under Sub-Clause 16.2 [Termination by Contractor].

After this termination, the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's equipment] and shall be paid in accordance with Sub-Clause 16.4 [Payment on Termination].

**15.6 Corrupt or Fraudulent Practices**

If the Employer determines that the Contractor and/or any of its personnel, or its agents, or its Subcontractors, sub-consultants, services providers, suppliers and/or their employees has engaged in corrupt, fraudulent, collusive coercive, or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such expulsion had been made under Sub-Clause 15.2 [Termination by Employer].

Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Sub-Clause 6.9 [Contractor's Personnel].

For the purposes of this Sub-Clause:

- (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party<sup>7</sup>;
- (ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation<sup>8</sup>;

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<sup>7</sup> "Another party" refers to a public official acting in relation to the procurement process or contract execution]. In this context, "public official" includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

<sup>8</sup> "Party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

- (iii) “collusive practice” is an arrangement between two or more parties<sup>9</sup> designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party<sup>10</sup> or the property of the party to influence improperly the actions of a party;
- (v) “obstructive practice” is
  - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
  - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under Sub-Clause 1.15 [Inspections and Audits by the Bank].

## 16. Suspension and Termination by Contractor

### 16.1 Contractor’s Entitlement to Suspend Work

If the Engineer fails to certify in accordance with Sub-Clause 14.6 [Issue of Interim Payment Certificates] or the Employer fails to comply with Sub-Clause 2.4 [Employer’s Financial Arrangements] or Sub-Clause 14.7 [Payment], the Contractor may, after giving not less than 21 days’ notice to the Employer, suspend work (or reduce the rate of work) unless and until the Contractor has received the Payment Certificate, reasonable evidence or payment, as the case may be and as described in the notice.

Notwithstanding the above, if the Bank has suspended disbursements under the loan or credit from which payments to the Contractor are being made, in whole or in part, for the execution of the Works, and no alternative funds are available as provided for in Sub-Clause 2.4 [Employer’s Financial Arrangements], the Contractor may by notice suspend work or reduce the rate of work at any time, but not less than 7 days after

<sup>9</sup> “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

<sup>10</sup> “Party” refers to a participant in the procurement process or contract execution.

the Borrower having received the suspension notification from the Bank.

The Contractor's action shall not prejudice his entitlements to financing charges under Sub-Clause 14.8 [Delayed Payment] and to termination under Sub-Clause 16.2 [Termination by Contractor].

If the Contractor subsequently receives such Payment Certificate, evidence or payment (as described in the relevant Sub-Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.

If the Contractor suffers delay and/or incurs Cost as a result of suspending work (or reducing the rate of work) in accordance with this Sub-Clause, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) payment of any such Cost plus profit, which shall be included in the Contract Price.

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

## **16.2 Termination by Contractor**

The Contractor shall be entitled to terminate the Contract if:

- (a) the Contractor does not receive the reasonable evidence within 42 days after giving notice under Sub-Clause 16.1 [Contractor's Entitlement to Suspend Work] in respect of a failure to comply with Sub-Clause 2.4 [Employer's Financial Arrangements],
- (b) the Engineer fails, within 56 days after receiving a Statement and supporting documents, to issue the relevant Payment Certificate,
- (c) the Contractor does not receive the amount due under an Interim Payment Certificate within 42 days after the expiry of the time stated in Sub-Clause 14.7 [Payment] within which payment is to be made (except for deductions in accordance with Sub-Clause 2.5

- [Employer's Claims]),
- (d) the Employer substantially fails to perform his obligations under the Contract in such manner as to materially and adversely affect the economic balance of the Contract and/or the ability of the Contractor to perform the Contract,
  - (e) the Employer fails to comply with Sub-Clause 1.6 [Contract Agreement] or Sub-Clause 1.7 [Assignment],
  - (f) a prolonged suspension affects the whole of the Works as described in Sub-Clause 8.11 [Prolonged Suspension], or
  - (g) the Employer becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the benefit of his creditors, or if any act is done or event occurs which (under applicable Laws) has a similar effect to any of these acts or events.
  - (h) In the event the Bank suspends the loan or credit from which part of the payments to the Contractor are being made, if the Contractor has not received the sums due to him upon expiration of the 14 days referred to in Sub-Clause 14.7 [Payment] for payments under Interim Payment certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under Sub-Clause 14.8 [Delayed Payment], take one of the following actions, namely (i) suspend work or reduce the rate of work, or (ii) terminate his employment under the Contract by giving notice to the Employer, with a copy to the Engineer, such termination to take effect 14 days after the giving of the notice.
  - (i) the Contractor does not receive the Engineer's instruction recording the agreement of both Parties on the fulfilment of the conditions for the Commencement of Works under Sub-Clause 8.1 [Commencement of Works].

In any of these events or circumstances, the Contractor may, upon giving 14 days' notice to the Employer, terminate the Contract. However, in the case of sub-paragraph (f) or (g), the Contractor may by notice terminate the Contract immediately.

The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract

or otherwise.

**16.3 Cessation of Work and Removal of Contractor's Equipment**

After a notice of termination under Sub-Clause 15.5 [Employer's Entitlement to Termination for Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 19.6 [Optional Termination, Payment and Release] has taken effect, the Contractor shall promptly:

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

**16.4 Payment on Termination**

After a notice of termination under Sub-Clause 16.2 [Termination by Contractor] has taken effect, the Employer shall promptly:

- (a) return the Performance Security to the Contractor,
- (b) pay the Contractor in accordance with Sub-Clause 19.6 [Optional Termination, Payment and Release], and
- (c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

**17. Risk and Responsibility**

**17.1 Indemnities**

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

- (a) bodily injury, sickness, disease or death, of any person whatsoever arising out of or in the course of or by reason of the Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and
- (b) damage to or loss of any property, real or personal (other than the Works), to the extent that such damage or loss arises out of or in the course of or by reason of the

Contractor's design (if any), the execution and completion of the Works and the remedying of any defects, unless and to the extent that any such damage or loss is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, their respective agents, or anyone directly or indirectly employed by any of them.

The Employer shall indemnify and hold harmless the Contractor, the Contractor's Personnel, and their respective agents, against and from all claims, damages, losses and expenses (including legal fees and expenses) in respect of (1) bodily injury, sickness, disease or death, which is attributable to any negligence, wilful act or breach of the Contract by the Employer, the Employer's Personnel, or any of their respective agents, and (2) the matters for which liability may be excluded from insurance cover, as described in sub-paragraphs (d)(i), (ii) and (iii) of Sub-Clause 18.3 [Insurance Against Injury to Persons and Damage to Property].

## **17.2 Contractor's Care of the Works**

The Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Taking-Over Certificate is issued (or is deemed to be issued under Sub-Clause 10.1 [Taking Over of the Works and Sections]) for the Works, when responsibility for the care of the Works shall pass to the Employer. If a Taking-Over Certificate is issued (or is so deemed to be issued) for any Section or part of the Works, responsibility for the care of the Section or part shall then pass to the Employer.

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

If any loss or damage happens to the Works, Goods or Contractor's Documents during the period when the Contractor is responsible for their care, from any cause not listed in Sub-Clause 17.3 [Employer's Risks], the Contractor shall rectify the loss or damage at the Contractor's risk and cost, so that the Works, Goods and Contractor's Documents conform with the Contract.

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

event for which the Contractor was liable.

**17.3 Employer's Risks** The risks referred to in Sub-Clause 17.4 [Consequences of Employer's Risks] below, insofar as they directly affect the execution of the Works in the Country, are:

- (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (b) rebellion, terrorism, sabotage by persons other than the Contractor's Personnel, revolution, insurrection, military or usurped power, or civil war, within the Country,
- (c) riot, commotion or disorder within the Country by persons other than the Contractor's Personnel,
- (d) munitions of war, explosive materials, ionising radiation or contamination by radio-activity, within the Country, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity,
- (e) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
- (f) use or occupation by the Employer of any part of the Permanent Works, except as may be specified in the Contract,
- (g) design of any part of the Works by the Employer's Personnel or by others for whom the Employer is responsible, and
- (h) any operation of the forces of nature which is Unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate preventative precautions.

**17.4 Consequences of Employer's Risks** If and to the extent that any of the risks listed in Sub-Clause 17.3 above results in loss or damage to the Works, Goods or Contractor's Documents, the Contractor shall promptly give notice to the Engineer and shall rectify this loss or damage to the extent required by the Engineer.

If the Contractor suffers delay and/or incurs Cost from rectifying this loss or damage, the Contractor shall give a further notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of

Time for Completion], and

- (b) payment of any such Cost, which shall be included in the Contract Price. In the case of sub-paragraphs (f) and (g) of Sub-Clause 17.3 [Employer's Risks], Cost plus profit shall be payable.

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

**17.5 Intellectual and Industrial Property Rights**

In this Sub-Clause, “infringement” means an infringement (or alleged infringement) of any patent, registered design, copyright, trade mark, trade name, trade secret or other intellectual or industrial property right relating to the Works; and “claim” means a claim (or proceedings pursuing a claim) alleging an infringement.

Whenever a Party does not give notice to the other Party of any claim within 28 days of receiving the claim, the first Party shall be deemed to have waived any right to indemnity under this Sub-Clause.

The Employer shall indemnify and hold the Contractor harmless against and from any claim alleging an infringement which is or was:

- (a) an unavoidable result of the Contractor’s compliance with the Contract, or
- (b) a result of any Works being used by the Employer:
  - (i) for a purpose other than that indicated by, or reasonably to be inferred from, the Contract, or
  - (ii) in conjunction with anything not supplied by the Contractor, unless such use was disclosed to the Contractor prior to the Base Date or is stated in the Contract.

The Contractor shall indemnify and hold the Employer harmless against and from any other claim which arises out of or in relation to (i) the manufacture, use, sale or import of any Goods, or (ii) any design for which the Contractor is responsible.

If a Party is entitled to be indemnified under this Sub-Clause, the indemnifying Party may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may

arise from it. The other Party shall, at the request and cost of the indemnifying Party, assist in contesting the claim. This other Party (and its Personnel) shall not make any admission which might be prejudicial to the indemnifying Party, unless the indemnifying Party failed to take over the conduct of any negotiations, litigation or arbitration upon being requested to do so by such other Party.

### **17.6 Limitation of Liability**

Neither Party shall be liable to the other Party for loss of use of any Works, loss of profit, loss of any contract or for any indirect or consequential loss or damage which may be suffered by the other Party in connection with the Contract, other than as specifically provided in Sub-Clause 8.7 [Delay Damages]; Sub-Clause 11.2 [Cost of Remedying Defects]; Sub-Clause 15.4 [Payment after Termination]; Sub-Clause 16.4 [Payment on Termination]; Sub-Clause 17.1 [Indemnities]; Sub-Clause 17.4 (b) [Consequences of Employer's Risks] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights].

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 [Electricity, Water and Gas], Sub-Clause 4.20 [Employer's Equipment and Free-Issue Material], Sub-Clause 17.1 [Indemnities] and Sub-Clause 17.5 [Intellectual and Industrial Property Rights], shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Contract Data, or (if such multiplier or other sum is not so stated), the Accepted Contract Amount.

This Sub-Clause shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

### **17.7 Use of Employer's Accommodation/Facilities**

The Contractor shall take full responsibility for the care of the Employer providing accommodation and, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works).

If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at his own cost, rectify the loss or damage to the satisfaction of the Engineer.

## **18. Insurance**

### **18.1 General**

In this Clause, "insuring Party" means, for each type of insurance,

**Requirements for Insurances**

the Party responsible for effecting and maintaining the insurance specified in the relevant Sub-Clause.

Wherever the Contractor is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Employer. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

Wherever the Employer is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause.

If a policy is required to indemnify joint insured, the cover shall apply separately to each insured as though a separate policy had been issued for each of the joint insured. If a policy indemnifies additional joint insured, namely in addition to the insured specified in this Clause, (i) the Contractor shall act under the policy on behalf of these additional joint insured except that the Employer shall act for Employer's Personnel, (ii) additional joint insured shall not be entitled to receive payments directly from the insurer or to have any other direct dealings with the insurer, and (iii) the insuring Party shall require all additional joint insured to comply with the conditions stipulated in the policy.

Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify the loss or damage. Payments received from insurers shall be used for the rectification of the loss or damage.

The relevant insuring Party shall, within the respective periods stated in the Contract Data (calculated from the Commencement Date), submit to the other Party:

- (a) evidence that the insurances described in this Clause have been effected, and
- (b) copies of the policies for the insurances described in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment] and Sub-Clause 18.3 [Insurance against Injury to Persons and Damage to Property].

When each premium is paid, the insuring Party shall submit

evidence of payment to the other Party. Whenever evidence or policies are submitted, the insuring Party shall also give notice to the Engineer.

Each Party shall comply with the conditions stipulated in each of the insurance policies. The insuring Party shall keep the insurers informed of any relevant changes to the execution of the Works and ensure that insurance is maintained in accordance with this Clause.

Neither Party shall make any material alteration to the terms of any insurance without the prior approval of the other Party. If an insurer makes (or attempts to make) any alteration, the Party first notified by the insurer shall promptly give notice to the other Party.

If the insuring Party fails to effect and keep in force any of the insurances it is required to effect and maintain under the Contract, or fails to provide satisfactory evidence and copies of policies in accordance with this Sub-Clause, the other Party may (at its option and without prejudice to any other right or remedy) effect insurance for the relevant coverage and pay the premiums due. The insuring Party shall pay the amount of these premiums to the other Party, and the Contract Price shall be adjusted accordingly.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Employer, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Employer in accordance with these obligations, liabilities or responsibilities. However, if the insuring Party fails to effect and keep in force an insurance which is available and which it is required to effect and maintain under the Contract, and the other Party neither approves the omission nor effects insurance for the coverage relevant to this default, any moneys which should have been recoverable under this insurance shall be paid by the insuring Party.

Payments by one Party to the other Party shall be subject to Sub-Clause 2.5 [Employer's Claims] or Sub-Clause 20.1 [Contractor's Claims], as applicable.

The Contractor shall be entitled to place all insurance relating to the Contract (including, but not limited to the insurance referred to Clause 18) with insurers from any eligible source country.

## **18.2 Insurance for**

The insuring Party shall insure the Works, Plant, Materials and

**Works and  
Contractor's  
Equipment**

Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the date by which the evidence is to be submitted under sub-paragraph (a) of Sub-Clause 18.1 [General Requirements for Insurances], until the date of issue of the Taking-Over Certificate for the Works.

The insuring Party shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations (including those under Clause 11 [Defects Liability]).

The insuring Party shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

Unless otherwise stated in the Particular Conditions, insurances under this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated to the Party actually bearing the costs of rectifying the loss or damage,
- (c) shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [Employer's Risks],
- (d) shall also cover, to the extent specifically required in the bidding documents of the Contract, loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the risks listed in sub-paragraphs (c), (g) and (h) of Sub-Clause 17.3 [Employer's Risks], excluding (in each case) risks which are not insurable at commercially reasonable terms, with deductibles per occurrence of not more than the amount stated in the Contract Data (if an amount is not so stated, this sub-paragraph (d) shall not apply), and

- (e) may however exclude loss of, damage to, and reinstatement of:
  - (i) a part of the Works which is in a defective condition due to a defect in its design, materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
  - (ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, materials or workmanship,
  - (iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage, and
  - (iv) Goods while they are not in the Country, subject to Sub-Clause 14.5 [Plant and Materials intended for the Works].

If, more than one year after the Base Date, the cover described in sub-paragraph (d) above ceases to be available at commercially reasonable terms, the Contractor shall (as insuring Party) give notice to the Employer, with supporting particulars. The Employer shall then (i) be entitled subject to Sub-Clause 2.5 [Employer's Claims] to payment of an amount equivalent to such commercially reasonable terms as the Contractor should have expected to have paid for such cover, and (ii) be deemed, unless he obtains the cover at commercially reasonable terms, to have approved the omission under Sub-Clause 18.1 [General Requirements for Insurances].

### **18.3 Insurance against Injury to Persons and Damage to Property**

The insuring Party shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment]) or to any person (except persons insured under Sub-Clause 18.4 [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the amount stated in the Contract Data, with no limit on the number of occurrences. If an amount is not stated in the

Contract Data, this Sub-Clause shall not apply.

Unless otherwise stated in the Particular Conditions, the insurances specified in this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties,
- (c) shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 18.2) arising out of the Contractor's performance of the Contract, and
- (d) may however exclude liability to the extent that it arises from:
  - (i) the Employer's right to have the Permanent Works executed on, over, under, in or through any land, and to occupy this land for the Permanent Works,
  - (ii) damage which is an unavoidable result of the Contractor's obligations to execute the Works and remedy any defects, and
  - (iii) a cause listed in Sub-Clause 17.3 [Employer's Risks], except to the extent that cover is available at commercially reasonable terms.

#### **18.4 Insurance for Contractor's Personnel**

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The insurance shall cover the Employer and the Engineer against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the

insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

## **19. Force Majeure**

### **19.1 Definition of Force Majeure**

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

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

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

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

### **19.2 Notice of Force Majeure**

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

The Party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it

from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

**19.3 Duty to Minimize Delay**

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

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

**19.4 Consequences of Force Majeure**

If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 19.2 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

- (a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
- (b) if the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 19.1 [Definition of Force Majeure] and, in the case of sub-paragraphs (ii) to (iv), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 18.2 [Insurance for Works and Contractor's Equipment].

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

**19.5 Force Majeure Affecting Subcontractor**

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

**19.6 Optional Termination, Payment and**

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 19.2

**Release**

[Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [Cessation of Work and Removal of Contractor's Equipment].

Upon such termination, the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include:

- (a) the amounts payable for any work carried out for which a price is stated in the Contract;
- (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;
- (d) the Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- (e) the Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.

**19.7 Release from Performance**

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of

any previous breach of the Contract, and

- (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 19.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 19.6.

## **20. Claims, Disputes and Arbitration**

### **20.1 Contractor's Claims**

If the Contractor considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract, the Contractor shall give notice to the Engineer, describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.

If the Contractor fails to give notice of a claim within such period of 28 days, the Time for Completion shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged from all liability in connection with the claim. Otherwise, the following provisions of this Sub-Clause shall apply.

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

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

Within 42 days after the Contractor became aware (or should have become aware) of the event or circumstance giving rise to the claim, or within such other period as may be proposed by the Contractor and approved by the Engineer, the Contractor shall send to the Engineer a fully detailed claim which includes full supporting particulars of the basis of the claim and of the extension of time and/or additional payment claimed. If the event or circumstance giving rise to the claim has a continuing

effect:

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

Within 42 days after receiving a claim or any further particulars supporting a previous claim, or within such other period as may be proposed by the Engineer and approved by the Contractor, the Engineer shall respond with approval, or with disapproval and detailed comments. He may also request any necessary further particulars, but shall nevertheless give his response on the principles of the claim within the above defined time period.

Within the above defined period of 42 days, the Engineer shall proceed in accordance with Sub-Clause 3.5 [Determinations] to agree or determine (i) the extension (if any) of the Time for Completion (before or after its expiry) in accordance with Sub-Clause 8.4 [Extension of Time for Completion], and/or (ii) the additional payment (if any) to which the Contractor is entitled under the Contract.

Each Payment Certificate shall include such additional payment for any claim as have been reasonably substantiated as due under the relevant provision of the Contract. Unless and until the particulars supplied are sufficient to substantiate the whole of the claim, the Contractor shall only be entitled to payment for such part of the claim as he has been able to substantiate.

If the Engineer does not respond within the timeframe defined in this Clause, either Party may consider that the claim is rejected by the Engineer and any of the Parties may refer it to the Dispute Board in accordance with Sub-Clause 20.4 [Obtaining Dispute Board's Decision].

The requirements of this Sub-Clause are in addition to those of any other Sub-Clause which may apply to a claim. If the Contractor fails to comply with this or another Sub-Clause in relation to any claim, any extension of time and/or additional payment shall take account of the extent (if any) to which the

failure has prevented or prejudiced proper investigation of the claim, unless the claim is excluded under the second paragraph of this Sub-Clause.

## **20.2 Appointment of the Dispute Board**

Disputes shall be referred to a DB for decision in accordance with Sub-Clause 20.4 [Obtaining Dispute Board's Decision]. The Parties shall appoint a DB by the date stated in the Contract Data.

The DB shall comprise, as stated in the Contract Data, either one or three suitably qualified persons ("the members"), each of whom shall be fluent in the language for communication defined in the Contract and shall be a professional experienced in the type of construction involved in the Works and with the interpretation of contractual documents. If the number is not so stated and the Parties do not agree otherwise, the DB shall comprise three persons.

If the Parties have not jointly appointed the DB 21 days before the date stated in the Contract Data and the DB is to comprise three persons, each Party shall nominate one member for the approval of the other Party. The first two members shall recommend and the Parties shall agree upon the third member, who shall act as chairman.

However, if a list of potential members has been agreed by the Parties and is included in the Contract, the members shall be selected from those on the list, other than anyone who is unable or unwilling to accept appointment to the DB.

The agreement between the Parties and either the sole member or each of the three members shall incorporate by reference the General Conditions of Dispute Board Agreement contained in the Appendix to these General Conditions, with such amendments as are agreed between them.

The terms of the remuneration of either the sole member or each of the three members, including the remuneration of any expert whom the DB consults, shall be mutually agreed upon by the Parties when agreeing the terms of appointment. Each Party shall be responsible for paying one-half of this remuneration.

If at any time the Parties so agree, they may jointly refer a matter to the DB for it to give its opinion. Neither Party shall consult the DB on any matter without the agreement of the other Party.

If a member declines to act or is unable to act as a result of

death, disability, resignation or termination of appointment, a replacement shall be appointed in the same manner as the replaced person was required to have been nominated or agreed upon, as described in this Sub-Clause.

The appointment of any member may be terminated by mutual agreement of both Parties, but not by the Employer or the Contractor acting alone. Unless otherwise agreed by both Parties, the appointment of the DB (including each member) shall expire when the discharge referred to in Sub-Clause 14.12 [Discharge] shall have become effective.

**20.3 Failure to Agree on the Composition of the Dispute Board**

If any of the following conditions apply, namely:

- (a) the Parties fail to agree upon the appointment of the sole member of the DB by the date stated in the first paragraph of Sub-Clause 20.2, [Appointment of the Dispute Board],
- (b) either Party fails to nominate a member (for approval by the other Party), or fails to approve a member nominated by the other Party, of a DB of three persons by such date,
- (c) the Parties fail to agree upon the appointment of the third member (to act as chairman) of the DB by such date, or
- (d) the Parties fail to agree upon the appointment of a replacement person within 42 days after the date on which the sole member or one of the three members declines to act or is unable to act as a result of death, disability, resignation or termination of appointment,

then the appointing entity or official named in the Contract Data shall, upon the request of either or both of the Parties and after due consultation with both Parties, appoint this member of the DB. This appointment shall be final and conclusive. Each Party shall be responsible for paying one-half of the remuneration of the appointing entity or official.

**20.4 Obtaining Dispute Board's Decision**

If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any dispute as to any certificate, determination, instruction, opinion or valuation of the Engineer, either Party may refer the dispute in writing to the DB for its decision, with copies to the other Party and the Engineer. Such reference shall state that it is given under this Sub-Clause.

For a DB of three persons, the DB shall be deemed to have received such reference on the date when it is received by the

chairman of the DB.

Both Parties shall promptly make available to the DB all such additional information, further access to the Site, and appropriate facilities, as the DB may require for the purposes of making a decision on such dispute. The DB shall be deemed to be not acting as arbitrator(s).

Within 84 days after receiving such reference, or within such other period as may be proposed by the DB and approved by both Parties, the DB shall give its decision, which shall be reasoned and shall state that it is given under this Sub-Clause. The decision shall be binding on both Parties, who shall promptly give effect to it unless and until it shall be revised in an amicable settlement or an arbitral award as described below. Unless the Contract has already been abandoned, repudiated or terminated, the Contractor shall continue to proceed with the Works in accordance with the Contract.

If either Party is dissatisfied with the DB's decision, then either Party may, within 28 days after receiving the decision, give notice to the other Party of its dissatisfaction and intention to commence arbitration. If the DB fails to give its decision within the period of 84 days (or as otherwise approved) after receiving such reference, then either Party may, within 28 days after this period has expired, give notice to the other Party of its dissatisfaction and intention to commence arbitration.

In either event, this notice of dissatisfaction shall state that it is given under this Sub-Clause, and shall set out the matter in dispute and the reason(s) for dissatisfaction. Except as stated in Sub-Clause 20.7 [Failure to Comply with Dispute Board's Decision] and Sub-Clause 20.8 [Expiry of Dispute Board's Appointment], neither Party shall be entitled to commence arbitration of a dispute unless a notice of dissatisfaction has been given in accordance with this Sub-Clause.

If the DB has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within 28 days after it received the DB's decision, then the decision shall become final and binding upon both Parties.

## **20.5 Amicable Settlement**

Where notice of dissatisfaction has been given under Sub-Clause 20.4 above, both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the fifty-sixth day after the day on which a notice of dissatisfaction and intention to commence arbitration was given, even if no attempt at amicable settlement

has been made.

## **20.6 Arbitration**

Unless indicated otherwise in the Particular Conditions, any dispute not settled amicably and in respect of which the DB's decision (if any) has not become final and binding shall be finally settled by arbitration. Unless otherwise agreed by both Parties:

- (a) For contracts with foreign contractors, international arbitration with proceedings administered by the institution appointed in the Contract Data, conducted in accordance with the rules of arbitration of the appointed institution, if any, or in accordance with UNCITRAL arbitration rules, at the choice of the appointed institution,
- (b) the place of arbitration shall be the city where the headquarters of the appointed arbitration institution is located,
- (c) the arbitration shall be conducted in the language for communications defined in Sub-Clause 1.4 [Law and Language], and
- (d) For contracts with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country.

The arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, and any decision of the DB, relevant to the dispute. Nothing shall disqualify representatives of the Parties and the Engineer from being called as a witness and giving evidence before the arbitrators on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrators to the evidence or arguments previously put before the DB to obtain its decision, or to the reasons for dissatisfaction given in its notice of dissatisfaction. Any decision of the DB shall be admissible in evidence in the arbitration.

Arbitration may be commenced prior to or after completion of the Works. The obligations of the Parties, the Engineer and the DB shall not be altered by reason of any arbitration being conducted during the progress of the Works.

## **20.7 Failure to Comply with**

In the event that a Party fails to comply with a final and binding DB decision, then the other Party may, without prejudice to any

**Dispute Board's Decision** other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [Arbitration]. Sub-Clause 20.4 [Obtaining Dispute Board's Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply to this reference.

**20.8 Expiry of Dispute Board's Appointment** If a dispute arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works and there is no DB in place, whether by reason of the expiry of the DB's appointment or otherwise:

- (a) Sub-Clause 20.4 [Obtaining Dispute Board's Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply, and
- (b) the dispute may be referred directly to arbitration under Sub-Clause 20.6 [Arbitration].

## APPENDIX

### A General Conditions of Dispute Board Agreement

- 1. Definitions** Each “Dispute Board Agreement” is a tripartite agreement by and between:
- (a) the “Employer”;
  - (b) the “Contractor”; and
  - (c) the “Member” who is defined in the Dispute Board Agreement as being:
    - (i) the sole member of the "DB" and, where this is the case, all references to the “Other Members” do not apply, or
    - (ii) one of the three persons who are jointly called the “DB” (or “Dispute Board”) and, where this is the case, the other two persons are called the “Other Members.”

The Employer and the Contractor have entered (or intend to enter) into a contract, which is called the "Contract" and is defined in the Dispute Board Agreement, which incorporates this Appendix. In the Dispute Board Agreement, words and expressions which are not otherwise defined shall have the meanings assigned to them in the Contract.

- 2. General Provisions** Unless otherwise stated in the Dispute Board Agreement, it shall take effect on the latest of the following dates:
- (a) the Commencement Date defined in the Contract,
  - (b) when the Employer, the Contractor and the Member have each signed the Dispute Board Agreement, or
  - (c) when the Employer, the Contractor and each of the Other Members (if any) have respectively each signed a dispute board agreement.

This employment of the Member is a personal appointment. At any time, the Member may give not less than 70 days’ notice of resignation to the Employer and to the Contractor, and the Dispute Agreement shall terminate upon the expiry of this period.

- 3. Warranties** The Member warrants and agrees that he/she is and shall be impartial and independent of the Employer, the Contractor and the Engineer. The Member shall promptly disclose, to each of them and to the Other Members (if any), any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

When appointing the Member, the Employer and the Contractor relied upon the Member’s representations that he/she is:

- (a) experienced in the work which the Contractor is to carry out

under the Contract,

- (b) experienced in the interpretation of contract documentation, and
- (c) fluent in the language for communications defined in the Contract.

**4. General  
Obligations of the  
Member**

The Member shall:

- (a) have no interest financial or otherwise in the Employer, the Contractor or Engineer, nor any financial interest in the Contract except for payment under the Dispute Board Agreement;
- (b) not previously have been employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except in such circumstances as were disclosed in writing to the Employer and the Contractor before they signed the Dispute Board Agreement;
- (c) have disclosed in writing to the Employer, the Contractor and the Other Members (if any), before entering into the Dispute Board Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Employer, the Contractor or the Engineer, and any previous involvement in the overall project of which the Contract forms part;
- (d) not, for the duration of the Dispute Board Agreement, be employed as a consultant or otherwise by the Employer, the Contractor or the Engineer, except as may be agreed in writing by the Employer, the Contractor and the Other Members (if any);
- (e) comply with the annexed procedural rules and with Sub-Clause 20.4 of the Conditions of Contract;
- (f) not give advice to the Employer, the Contractor, the Employer's Personnel or the Contractor's Personnel concerning the conduct of the Contract, other than in accordance with the annexed procedural rules;
- (g) not while a Member enter into discussions or make any agreement with the Employer, the Contractor or the Engineer regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Board Agreement;
- (h) ensure his/her availability for all site visits and hearings as are necessary;

- (i) become conversant with the Contract and with the progress of the Works (and of any other parts of the project of which the Contract forms part) by studying all documents received which shall be maintained in a current working file;
- (j) treat the details of the Contract and all the DB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Employer, the Contractor and the Other Members (if any); and
- (k) be available to give advice and opinions, on any matter relevant to the Contract when requested by both the Employer and the Contractor, subject to the agreement of the Other Members (if any).

**5. General  
Obligations of the  
Employer and the  
Contractor**

The Employer, the Contractor, the Employer's Personnel and the Contractor's Personnel shall not request advice from or consultation with the Member regarding the Contract, otherwise than in the normal course of the DB's activities under the Contract and the Dispute Board Agreement. The Employer and the Contractor shall be responsible for compliance with this provision, by the Employer's Personnel and the Contractor's Personnel respectively.

The Employer and the Contractor undertake to each other and to the Member that the Member shall not, except as otherwise agreed in writing by the Employer, the Contractor, the Member and the Other Members (if any):

- (a) be appointed as an arbitrator in any arbitration under the Contract;
- (b) be called as a witness to give evidence concerning any dispute before arbitrator(s) appointed for any arbitration under the Contract; or
- (c) be liable for any claims for anything done or omitted in the discharge or purported discharge of the Member's functions, unless the act or omission is shown to have been in bad faith.

The Employer and the Contractor hereby jointly and severally indemnify and hold the Member harmless against and from claims from which he is relieved from liability under the preceding paragraph.

Whenever the Employer or the Contractor refers a dispute to the DB under Sub-Clause 20.4 of the Conditions of Contract, which will require the Member to make a site visit and attend a hearing, the Employer or the Contractor shall provide appropriate security for a sum equivalent to the reasonable expenses to be incurred by the Member. No account shall be taken of any other payments due or paid to the Member.

**6. Payment**

The Member shall be paid as follows, in the currency named in the Dispute Board Agreement:

- (a) a retainer fee per calendar month, which shall be considered as payment in full for:
  - (i) being available on 28 days' notice for all site visits and hearings;
  - (ii) becoming and remaining conversant with all project developments and maintaining relevant files;
  - (iii) all office and overhead expenses including secretarial services, photocopying and office supplies incurred in connection with his duties; and
  - (iv) all services performed hereunder except those referred to in sub-paragraphs (b) and (c) of this Clause.

The retainer fee shall be paid with effect from the last day of the calendar month in which the Dispute Board Agreement becomes effective; until the last day of the calendar month in which the Taking-Over Certificate is issued for the whole of the Works.

With effect from the first day of the calendar month following the month in which the Taking-Over Certificate is issued for the whole of the Works, the retainer fee shall be reduced by one third. This reduced fee shall be paid until the first day of the calendar month in which the Member resigns or the Dispute Board Agreement is otherwise terminated.

- (b) a daily fee which shall be considered as payment in full for:
  - (i) each day or part of a day up to a maximum of two days' travel time in each direction for the journey between the Member's home and the site, or another location of a meeting with the Other Members (if any);
  - (ii) each working day on Site visits, hearings or preparing decisions; and
  - (iii) each day spent reading submissions in preparation for a hearing.
- (c) all reasonable expenses including necessary travel expenses (air fare in less than first class, hotel and subsistence and other direct travel expenses) incurred in connection with the Member's duties, as well as the cost of telephone calls, courier charges, faxes and telexes: a receipt shall be required for each item in excess of five percent of the daily fee referred to in sub-paragraph (b) of this Clause;
- (d) any taxes properly levied in the Country on payments made to the Member (unless a national or permanent resident of the Country) under this Clause 6.

The retainer and daily fees shall be as specified in the Dispute Board

Agreement. Unless it specifies otherwise, these fees shall remain fixed for the first 24 calendar months, and shall thereafter be adjusted by agreement between the Employer, the Contractor and the Member, at each anniversary of the date on which the Dispute Board Agreement became effective.

If the parties fail to agree on the retainer fee or the daily fee, the appointing entity or official named in the Contract Data shall determine the amount of the fees to be used.

The Member shall submit invoices for payment of the monthly retainer and air fares quarterly in advance. Invoices for other expenses and for daily fees shall be submitted following the conclusion of a site visit or hearing. All invoices shall be accompanied by a brief description of activities performed during the relevant period and shall be addressed to the Contractor.

The Contractor shall pay each of the Member's invoices in full within 56 calendar days after receiving each invoice and shall apply to the Employer (in the Statements under the Contract) for reimbursement of one-half of the amounts of these invoices. The Employer shall then pay the Contractor in accordance with the Contract.

If the Contractor fails to pay to the Member the amount to which he/she is entitled under the Dispute Board Agreement, the Employer shall pay the amount due to the Member and any other amount which may be required to maintain the operation of the DB; and without prejudice to the Employer's rights or remedies. In addition to all other rights arising from this default, the Employer shall be entitled to reimbursement of all sums paid in excess of one-half of these payments, plus all costs of recovering these sums and financing charges calculated at the rate specified in Sub-Clause 14.8 of the Conditions of Contract.

If the Member does not receive payment of the amount due within 70 days after submitting a valid invoice, the Member may (i) suspend his/her services (without notice) until the payment is received, and/or (ii) resign his/her appointment by giving notice under Clause 7.

## **7. Termination**

At any time: (i) the Employer and the Contractor may jointly terminate the Dispute Board Agreement by giving 42 days' notice to the Member; or (ii) the Member may resign as provided for in Clause 2.

If the Member fails to comply with the Dispute Board Agreement, the Employer and the Contractor may, without prejudice to their other rights, terminate it by notice to the Member. The notice shall take effect when received by the Member.

If the Employer or the Contractor fails to comply with the Dispute Board Agreement, the Member may, without prejudice to his other rights, terminate it by notice to the Employer and the Contractor. The notice shall take effect when received by them both.

Any such notice, resignation and termination shall be final and binding on

the Employer, the Contractor and the Member. However, a notice by the Employer or the Contractor, but not by both, shall be of no effect.

**8. Default of the Member**

If the Member fails to comply with any of his obligations under Clause 4 (a) - (d) above, he shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses received by the Member and the Other Members (if any), for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

If the Member fails to comply with any of his obligations under Clause 4 (e) - (k) above, he shall not be entitled to any fees or expenses hereunder from the date and to the extent of the non-compliance and shall, without prejudice to their other rights, reimburse each of the Employer and the Contractor for any fees and expenses already received by the Member, for proceedings or decisions (if any) of the DB which are rendered void or ineffective by the said failure to comply.

**9. Disputes (DB)**

Any dispute or claim arising out of or in connection with this Dispute Board Agreement, or the breach, termination or invalidity thereof, shall be finally settled by institutional arbitration. If no other arbitration institute is agreed, the arbitration shall be conducted under the Rules of Arbitration of the International Chamber of Commerce by one arbitrator appointed in accordance with these Rules of Arbitration.

## PROCEDURAL RULES

Unless otherwise agreed by the Employer and the Contractor, the DB shall visit the site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.

The timing of and agenda for each site visit shall be as agreed jointly by the DB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DB. The purpose of site visits is to enable the DB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to Endeavour to prevent potential problems or claims from becoming disputes.

Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be co-ordinate by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each site visit and before leaving the site, the DB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.

The Employer and the Contractor shall furnish to the DB one copy of all documents which the DB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DB and the Employer or the Contractor shall be copied to the other Party. If the DB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.

If any dispute is referred to the DB in accordance with Sub-Clause 20.4 of the Conditions of Contract, the DB shall proceed in accordance with Sub-Clause 20.4 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DB shall:

- (a) act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case, and
- (b) Adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.

The DB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.

Except as otherwise agreed in writing by the Employer and the Contractor, the DB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

The Employer and the Contractor empower the DB, among other things, to:

- (a) establish the procedure to be applied in deciding a dispute,
- (b) decide upon the DB's own jurisdiction, and as to the scope of any dispute referred to it,

- (c) conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules,
- (d) take the initiative in ascertaining the facts and matters required for a decision,
- (e) make use of its own specialist knowledge, if any,
- (f) decide upon the payment of financing charges in accordance with the Contract,
- (g) decide upon any provisional relief such as interim or conservatory measures, and
- (h) open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.

The DB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DB comprises three persons:

- (a) it shall convene in private after a hearing, in order to have discussions and prepare its decision;
- (b) it shall endeavor to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and
- (c) if a Member fails to attend a meeting or hearing, or to fulfill any required function, the other two Members may nevertheless proceed to make a decision, unless:
  - (i) either the Employer or the Contractor does not agree that they do so, or
  - (ii) the absent Member is the chairman and he/she instructs the other Members not to make a decision.

## **Section VIII. Particular Conditions (PC)**

The following Particular Conditions shall supplement the GC. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

### Part A - Contract Data

Conditions	Sub-Clause	Data
<b>1. General Provision</b>		
Employer's name and address	1.1.2.2 & 1.3	ThimphuThromde Ministry of Works and Human Settlement Thimphu, Bhutan
Engineer's name and address	1.1.2.4 & 1.3	Project Coordinator World Bank Project ThimphuThromde
Bank's name	1.1.2.11	World Bank (IDA)
Borrower's name	1.1.2.12	Royal Government of Bhutan
Time for Completion	1.1.3.3	Fifteen (15) months. The contract period includes one month mobilization period
Defects Notification Period	1.1.3.7	Three ( 3) years
Sections	1.1.5.6	N/A
Electronic transmission systems	1.3	N/A
Governing Law	1.4	Royal Government of Bhutan
Ruling language	1.4	English
Language for communications	1.4	English
Time for the Parties entering into a Contract Agreement	1.6	Within 28 days after the Contractor receives the Letter of Acceptance
<b>2. The Employer</b>		
Time for access to the Site	2.1	Date of Commencement
<b>3. The Engineer</b>		
Engineer's Duties and Authority	3.1(b)(ii)	As mentioned in the Specific Provisions for GCC clause 3.1 (b) (ii).
<b>4. The Contractor</b>		
Contractor's general obligation	4.1	Any damage to the public properties and utilities (overhead and underground) during the project execution up till project completion period shall be fully compensated, reinstated or rebuild by the contractor at his own cost.

Performance Security	4.2	The performance security will be in the form of a Unconditional Bank Guarantee in the amount(s) of five percent (5%) of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount and should be delivered to the Employer within 28 days after receiving the letter of Acceptance.
Sub-Contractor	4.4	Sub-Contracting shall not exceed 2% of the Accepted Contract Amount.
Safety Procedures	4.8(b)	The contractor shall provide all the basic safety equipment to the workers for the Employer and contractor involved at the construction site.
<b>6. The Staff and Labor</b>		
Normal working hours	6.5	08.00HRS -17.00 HRS
<b>7. Plant, Materials and Workmanship</b>		
Inspection	7.3 a & b	The Employer's personnel shall at all reasonable times have full access to all part of site and to all the places from which the materials are being supplied/manufactured and delivered to the site.
<b>8. Commencement, Delays and Suspensions</b>		
Extension of time for completion	8.4(c)	Any obstruction due to heavy snowfall and rainfall which will affect the execution of the work at site shall only be considered as project hindrance. However, these hindrances should be supported by data from the Department of Hydro-met services, Ministry of Economic affairs, Thimphu for hindrance consideration.
Delay damages for the Works	8.7 & 14.15(b)	0.05 % of the Final Contract Price per day.
Maximum amount of delay damages	8.7	10% of the Final Contract Price.
Operation and maintenance period	10.5	Extendable
Taking Over	10.6	Water quality for whole operation and maintenance should be within given parameter All the facilities should be in the very good condition
<b>13. Variations and Adjustment</b>		
Provisional Sums	13.5.(b) (ii)	NA
Adjustments for Changes in Cost	13.8	I. Design-Build Price (applicable for Design, Construction, Installation,

		Commissioning, and Operation & Maintenance for (3) Three years of Water Treatment Plant) as shall remain firm and fixed and will not be subject to price adjustment.
<b>14. Contract Price and Payment</b>		
The Contract Price	14.1	Considering the specialized work involved in the contract implementation the payment under this contract will be distributed according to the mile stones and completed items of the major works, Refer the Table No 121 at the end of contract data of particular condition
Total advance payment	14.2	<b>Not Applicable</b>
Repayment amortization rate of advance payment	14.2 (b)	<b>Not Applicable</b>
Limit of Retention Money	14.3	Ten percent (10%) of the Accepted Contract Amount
Schedule of Payments	14.4	All the payment shall be made only after completion of the corresponding miles stone details in table 121.
Plant and Materials	14.5(b) (i)	Nil
	14.5(c) (i)	Plant and Materials for payment when delivered Not applicable
Minimum Amount of Interim Payment Certificates	14.6	As per the payment schedule.
Payment	14.7	All the payment shall be made only after completion of the corresponding work detailed in table 121.
Percentage of Retention	14.9	Ten percent (10%)
Payment of Retention money	14.9	1. Retention money retained during design and construction shall be released after 1 (one) year from date of issuance of “certificate of commissioning” by the Employer. 2.Retention money retained from the operation and maintenance phase shall be released after a period of one (1) year following expiry of the operation and maintenance period which is (3) Three years.
<b>17. Risk and Responsibility</b>		
Maximum total liability of the	17.6	The Accepted Contract Amount

Contractor to the Employer		
Use of Employer accommodation/facilities	17.7	The contractor should construct/hire a site office within the project area to accommodate staffs of both the contractor and the Employer. It should have basic facilities such as piped water supply, electricity, tele fax, heavy duty printer (A3), internet/broad band with downloading limit of at least 16.0 GB. The monthly payment for the above services shall be fully borne by the contractor till the completion of the project. The office shall be equipped with basic furniture for daily office administration and general meetings & discussions.
<b>18. Insurance</b>		
Periods for submission of insurance:	18.1 (a) & (b)	Within 28 days of the commencement of works
Maximum amount of deductibles for insurance of the Employer's risks	18.2 (d)	<p>Nu. 20,000,000.00/- (Twenty Million) only</p> <p>The Employer shall process the Insurance on behalf of the Bidder and claim the amount from the Contract Amount as per the relevant Insurance policies:</p> <p>The minimum insurance amounts and deductibles shall be:</p> <ol style="list-style-type: none"> <li>a. For the Works, Plants and Materials</li> <li>b. For loss or damage to Equipment.</li> <li>c. For loss or damage to property.</li> <li>d. For personal injury or death: <ol style="list-style-type: none"> <li>i. Of the Contractor's employee: provide from the key staff and minimum for ten (10) laborers as per the prevailing rules of RICB or BIL.</li> <li>ii. Of other people provide as per the prevailing rules of RICB or BIL.</li> </ol> </li> </ol> <p>The Bidders are requested to verify the Rates and Rules from the concerned Insurance Companies.</p> <p>RICBL : <a href="http://www.ricb.com.bt">www.ricb.com.bt</a></p> <p>BIL : <a href="http://www.bhutaninsurance.com.bt">www.bhutaninsurance.com.bt</a></p> <p>It will be based on the Labor &amp; Employment Act of Bhutan -2007</p>
Minimum amount of third party Insurance	18.3	NU. 10,000,000.00/- (Ten million) only.
<b>20. Claims, Disputes and Arbitration</b>		
Date by which the DB shall be	20.2	28 days after the Commencement date

appointed		
The DB shall be comprised of	20.2	National Arbitration Committee of Bhutan
List of potential DB sole members	20.2	None
Appointment (if not agreed) to be made by	20.3	Hon'ble Minister, Ministry of Works and Human Settlement, Royal Government of Bhutan
Rules of arbitration	20.6 (d)	As per the Construction Development Board guidelines.

**TABLE 121**

**Payment provision as per the clause 14.7 for Design-Build and Operate project  
Design, Construction, Installation, Testing & Commissioning of Water Treatment Plant**

Particular		Amount allocation
<b>1A</b>	<b>55% for Physical structures (civil electrical, and mechanicals)</b>	
a	Completion of Design and detailed engineering drawings	5%
b	Completion of foundation works	5%
c	All prefabricated structural arrived at site	10%
d	Completion of construction /erection of all physical structures	20%
e	Completion of all assembling or connection of all units	15%
<b>1B</b>	<b>15% Finishing, testing &amp; commissioning, of plant completed</b>	
a	After successful trail run of all units	5%
b	After successful commission of the system	10%
<b>1C</b>	<b>20% Operation and Maintenance</b>	
a	Submission of operation manual and as built drawing , including the training of local staff	5%
b	Operation and maintenance for three (3) five years <ul style="list-style-type: none"> <li>• After completion of 1<sup>st</sup> years 5%</li> <li>• After completion of 2<sup>nd</sup> year 3% each</li> <li>• After completion of 3<sup>rd</sup> (final) year 7 %</li> </ul>	15%
<b>1D</b>	<b>10% After completion of all ancillary works like laboratory, store, office and facilities for sanitations/safety/lighting including compound wall with gates, internal landscape, area grading etc.</b>	<b>10%</b>

**Table: Summary of Sections**

<b>Section Name/Description (Sub-Clause 1.1.5.6)</b>	<b>Time for Completion (Sub-Clause 1.1.3.3)</b>	<b>Damages for Delay (Sub-Clause 8.7)</b>

## Part B - Specific Provisions

<p><b>Sub-Clause 14.1</b> <b>The Contract Price</b></p>	<p><i>(Alternative paragraph)</i></p> <p>(e) Notwithstanding the provisions of subparagraph (b), Contractor's Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor's Equipment and spare parts, and callable in the event the Contractor's Equipment is not exported from the Country on completion of the Contract. A copy of the bond or bank guarantee endorsed by the customs authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, the Contractor shall prepare, for approval by the customs authorities, an assessment of the residual value of the Contractor's Equipment and spare part to be exported, based on the depreciation scale(s and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the Contractor's Equipment and spare parts to be exported; and (b) on the initial imported value that Contractor's Equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise the security shall</p>
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	be called in the full amount remaining.
Sub-Clause 6.23 Workers' Organizations	<p><i>(additional sub-clause to be added after Sub-Clause 6.22)</i></p> <p>In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the Contractor shall comply with national law. Where national law substantially restricts workers' organizations, the Contractor shall enable alternative means for Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where national law is silent, the Contractor shall not discourage Contractor's Personnel from forming or joining workers' organizations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against Contractor's Personnel who participate, or seek to participate, in such organizations and bargain collectively. The Contractor shall engage with such workers representatives. Worker organizations are expected to fairly represent the workers in the workforce.</p>
Sub-Clause 6.24 Non-Discrimination and Equal Opportunity	<p><i>(additional sub-clause to be added after Sub-Clause 6.23 above)</i></p> <p>The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where national law provides for non-discrimination in employment, the Contractor shall comply with national law. When national laws are silent on non-discrimination in employment, the Contractor shall meet this Sub-Clause's requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on inherent requirements of the job shall not be deemed discrimination.</p>

3.1 Engineer's Duties and Authority	Amend Sub-Clause 3.1 (b)(ii) as under: (ii) if such a Variation is in respect of only items specified in Bill of Quantities and variation in the individual item is less than 25% of that individual item or 1% of Accepted Contract Amount whichever is less at a time subject to a maximum of 10% of Accepted Contract Amount.
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## **Section IX. Annex to the Particular Conditions - Contract Forms**

### **Table of Forms**

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## Notification of Award

### LETTER OF ACCEPTANCE

*[letterhead paper of the Employer]*

*[date]*

To: *[name and address of the Contractor]*

This is to notify you that your Bid dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount of the equivalent of *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section IX, Annex to the Particular Conditions - Contract Forms, of the Bidding Document

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Agency: \_\_\_\_\_

**Attachment: Contract Agreement**

## Contract Agreement

THIS AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, between \_\_\_\_\_ of \_\_\_\_\_ (hereinafter "the Employer"), of the one part, and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter "the Contractor"), of the other part:

WHEREAS the Employer desires that the Works known as \_\_\_\_\_ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
  - (i) The Letter of Acceptance
  - (ii) The Letter of Bid
  - (iii) the addenda Nos \_\_\_\_\_ (if any)
  - (iv) the Particular Conditions
  - (v) the General Conditions;
  - (vi) the Specification
  - (vii) the Drawings; and
  - (viii) the completed Schedules,
3. In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of \_\_\_\_\_ on the day, month and year indicated above.

Signed by \_\_\_\_\_ (for the Employer)

Signed by \_\_\_\_\_ (for the Contractor)

# Performance Security

## Option 1: (Demand Guarantee)

\_\_\_\_\_ [Bank's Name, and Address of Issuing Branch or Office]

**Beneficiary:** \_\_\_\_\_ [Name and Address of Employer]

**Date:** \_\_\_\_\_

**PERFORMANCE GUARANTEE No.:** \_\_\_\_\_

We have been informed that \_\_\_\_\_ [name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ [reference number of the contract] dated \_\_\_\_\_ with you, for the execution of \_\_\_\_\_ [name of contract and brief description of Works](hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we \_\_\_\_\_ [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of \_\_\_\_\_ [amount in figures]()[amount in words],<sup>1</sup> such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the .... Day of ....., 2...<sup>2</sup>, and any demand for payment under it must be received by us at this office on or before that date.

<sup>1</sup> The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Employer.

<sup>2</sup> Insert the date twenty-eight days after the expected completion date. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

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*[signature(s)]*

***Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.***

NOT APPLICABLE

## Advance Payment Security

### Demand Guarantee

\_\_\_\_\_ [Bank's Name, and Address of Issuing Branch or Office]

**Beneficiary:** \_\_\_\_\_ [Name and Address of Employer]

**Date:** \_\_\_\_\_

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_

We have been informed that \_\_\_\_\_ [name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ [reference number of the contract] dated \_\_\_\_\_ with you, for the execution of \_\_\_\_\_ [name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum \_\_\_\_\_ [amount in figures]()[amount in words] is to be made against an advance payment guarantee.

At the request of the Contractor, we \_\_\_\_\_ [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of \_\_\_\_\_ [amount in figures]()[amount in words]<sup>1</sup> upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_ [name and address of Bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the \_\_\_ day of \_\_\_\_\_,

<sup>1</sup> The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

2\_\_\_\_,<sup>2</sup> whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date..

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

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*[signature(s)]*

***Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.***

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<sup>2</sup> *Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: “The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”*

## Retention Money Security

### Demand Guarantee

\_\_\_\_\_ [Bank's Name, and Address of Issuing Branch or Office]

**Beneficiary:** \_\_\_\_\_ [Name and Address of Employer]

**Date:** \_\_\_\_\_

**RETENTION MONEY GUARANTEE No.:** \_\_\_\_\_

We have been informed that \_\_\_\_\_ [name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. \_\_\_\_\_ [reference number of the contract] dated \_\_\_\_\_ with you, for the execution of \_\_\_\_\_ [name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment, payment of [insert the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security] is to be made against a Retention Money guarantee.

At the request of the Contractor, we \_\_\_\_\_ [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of \_\_\_\_\_ [amount in figures]()[amount in words]<sup>1</sup> upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

It is a condition for any claim and payment under this guarantee to be made that the payment of the second half of the Retention Money referred to above must have been received by the

<sup>1</sup> The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

Contractor on its account number \_\_\_\_\_ at \_\_\_\_\_ *[name and address of Bank]*.

This guarantee shall expire, at the latest, 21 days after the date when the Employer has received a copy of the Performance Certificate issued by the Engineer. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

\_\_\_\_\_  
*[signature(s)]*

***Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.***