

**GOVERNMENT OF UTTARAKHAND**

**Office of Superintending Engineer,**

**Research Circle**

**Irrigation Research Institute Roorkee-247667**

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**e-Tender Notice No. : 03/SE(R)/NHP/e-Tender/2021-22, Dated 03.07.2021**

Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee on behalf of "Governor of Uttarakhand" invites item wise rates for the following works through e-tenders in "Two Bid System" as given below.

S. No.	Name of work	Earnest Money (Rs.)	Cost of tender form (Rs.)	Validity of Tender	Period of completion
1	2	3	4	5	6
1	Supply, Installation, Testing, Commissioning and Maintenance of Digital Water Level Recorder (DWLRs) (Non-vented Pressure sensors) with Telemetry System in Piezometers for Ground Water Monitoring and Integrate with State Water Informatics Centre located at Roorkee under National Hydrology Project (NHP) in Uttarakhand State	2.40 Lacs	4,000.00+ GST @ 18%	120 Days	12 months plus 04 years of Operation and maintenance period and Comprehensive Warranty

**Key Dates**

1	Date of calling	03.07.2021	-
2	Date of online publication	05.07.2021	03.30 PM
3	Documents downloads start date	05.07.2021	05.00 PM
4	Pre-bid meeting date	13.07.2021	01.30 PM
5	Bid submission start date	27.07.2021	03.30 PM
6	Bid submission end date	05.08.2021	03.00 PM
7	Physical Submission of bid security and cost of bidding document	05.08.2021	03.00 PM
8	Date of opening of Technical bid	05.08.2021	03.30 PM
9	Date of opening of financial bid	To be declared later	

For further details please log on to [www.uktenders.gov.in](http://www.uktenders.gov.in)



**Superintending Engineer  
Research Circle**

**Irrigation Research Institute, Roorkee**



**NATIONAL COMPETITIVE BIDDING FOR**

**Supply, Installation, Testing, Commissioning and Maintenance of Digital Water Level Recorder (DWLRs) (Non-vented Pressure sensors) with Telemetry System in Piezometers for Ground Water Monitoring and Integrate with State Water Informatics Centre located at Roorkee under National Hydrology Project (NHP)**

**(Two-Envelope Bidding Process with e-Procurement)**

**INVITATION FOR BIDS (IFB)**

**E-Procurement Notice**

Date : 03.07.2021

IBRD Loan No. : 8725IN

IFB No. : 03/SE(R)/NHP/e-Tender/2021-22, Dated 03.07.2021

1. This Invitation for Bid follows the General Procurement Notice for this Project that appeared in Development Business on 21/09/2016
2. The Government of India has received financing from World Bank towards the cost of National Hydrology project and it is intended that part of the proceeds will be applied to eligible payments under the contract for “The Supply, Installation, Testing, Commissioning and Maintenance of Digital Water Level Recorder (DWLRs) (Non-vented Pressure sensors) with Telemetry System in Piezometers for Ground Water Monitoring and Integrate with State Water Informatics Centre located at Roorkee under National Hydrology Project (NHP)”.
3. The Superintending Engineer (Research Circle), Irrigation Research Institute, Roorkee now invites online bids from eligible bidders for “The Supply, Installation, Testing, Commissioning and Maintenance of Digital Water Level Recorder (DWLRs) (Non-vented Pressure sensors) with Telemetry System in Piezometers for Ground Water Monitoring and Integrate with State Water Informatics Centre located at Roorkee under National Hydrology Project (NHP)”.
4. Bidding will be conducted through the National Competitive Bidding (NCB) procedures agreed with World Bank. The bidding is open to all eligible bidders as defined in the Bank’s Procurement Guidelines. In addition, please refer to paragraphs 1.6 and 1.7 of the Guidelines setting forth the World Bank’s policy on conflict of interest.
5. Bidding documents are available online on Government e-procurement website, <https://uktenders.gov.in> for a non-refundable fee as indicated below, in the form of Demand Draft on any Scheduled/Nationalized bank payable at Roorkee in favour of “Executive Engineer, Design Division, IDO, Roorkee” (Demand Draft to be submitted subsequently as per the procedure described in paragraph 7 below). Bidders will be required to register in the website, which is free of cost. The bidder would be responsible for ensuring that any addenda available on the website is also downloaded and incorporated.
  - (a) Price of bidding document(non-refundable) : 4000 + GST @18%
  - (b) Date of commencement of sale of bidding document : 05.07.2021, 5.00 PM
  - (c) Date of Pre-bid meeting : 13.07.2021, 1.30 PM
  - (d) Last date and time for receipt of bids : 05.08.2021, 3:00 PM
  - (e) Time and date of opening of bids-technical part : 05.08.2021, 3:30 PM
6. For submission of the bids, the bidder is required to have Digital Signature Certificate (DSC) from one of the authorized Certifying Authorities, authorised by Government of India for issuing DSC.

7. All bids must be accompanied by a Bid Security of the amount specified in the bidding document, drawn in favour of “Executive Engineer, Design Division, IDO, Roorkee”. The Bid security shall have to be valid and will have to be in any one of the forms as specified in the bidding document.
8. Bids must be submitted online on <https://uktenders.gov.in> (website) on or before the date and time for receipt of bids, and the ‘Technical Part’ of bids will be opened on the specified time and date for opening of bids, as given above. The financial bid of technically qualified bidder will be opened later. The date of opening of financial bid will be declared later. Any bid or modifications to bid (including discount) received outside e-procurement system will not be considered. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time. The electronic bidding system would not allow any late submission of bids.
9. The bidders are required to submit (a) Original demand drafts towards the cost of bid document (Rs. 4000.00) and for GST (applicable @18% of tender cost); (b) original bid security in approved form; (c) original affidavit regarding correctness of information furnished with bid document and (d) original affidavit regarding validity of rates for 120 days from the date of opening of Financial bid, either by registered post/speed post/courier or by hand, failing which the bids will be declared non-responsive. Due to valid unavoidable circumstances, if bidder(s) fails to submit the hard copies of aforesaid original documents before the opening of technical bid, the bidder must submit these original documents within the stipulated time as intimated by the Purchaser. If bidder(s) will not provide these original documents within prescribed time as given by the Purchaser, his/their bid(s) will be declared as non-responsive and in such situation, Purchaser may take any action against such bidder(s).
10. A pre-bid meeting will be held on 13.07.2021 at 1.30 PM through video conferencing to clarify the issues and to answer questions on any matter that may be raised at the stage as stated in ITB clause 7.1 of “Instructions to Bidders” of the bidding documents. All prospective bidder(s) are requested to submit his query, if any, through email before 13.07.2021.
11. Other details can be seen in the bidding document. The Purchaser shall not be held liable for any delays due to system failure beyond its control. Even though the system will attempt to notify the bidders of any bid updates, the Purchaser shall not be liable for any information not received by the bidder. It is the bidder’s responsibility to verify the website for the latest information related to this bid.

Superintending Engineer,  
Research Circle,  
SPMU, NHP,  
Irrigation Research Institute, Roorkee,  
District – Haridwar, Uttarakhand

## **PART 1 – BIDDING PROCEDURES**

**SECTION I - INSTRUCTIONS TO BIDDERS [ITB]**

## Section I. Instructions to Bidders

1. **Scope of Bid**
  - 1.1 The Purchaser **indicated in the Bidding Data Sheet (BDS)**, issues these Bidding Documents for the supply of Goods and Related Services incidental there to as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this National Competitive Bidding (NCB) procurement are **specified in the BDS**.
  - 1.2 Throughout these Bidding Documents:
    - (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex, including if **specified in the BDS**, distributed or received through the electronic-procurement system used by the Employer) with proof of receipt;
    - (b) if the context so requires, “singular” means “plural” and vice versa; and
    - (c) “day” means calendar day.
2. **Source of Funds**
  - 2.1 The Government of India (hereinafter called “Borrower”) **specified 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”) in an amount **specified in BDS** toward the project **named in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
  - 2.2 Payment 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 Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the funds.
3. **Corrupt & Fraudulent Practices**
  - 3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.
  - 3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents (whether declared or not), subcontractors, sub-consultants, service providers or suppliers and to permit the

Bank to inspect all accounts, records and other documents relating to the submission of the application, bid submission (in case prequalified), and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

- 4. Eligible Bidders**
- 4.1 A Bidder may be a firm that is a private entity, or a government owned entity subject to ITB 4.5.
- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:
- a. directly or indirectly controls, is controlled by or is under common control with another Bidder; or
  - b. receives or has received any direct or indirect subsidy from another Bidder; or
  - c. has the same legal representative as another Bidder; or
  - d. has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
  - e. 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. any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods/equipment that are the subject of the bid; or
  - g. any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or
  - h. would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any of its affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
  - i. has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid

evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.

- 4.3 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.7. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-contractors or sub-consultants for any part of the Contract including related Services.
- 4.4 A Bidder that has been sanctioned by the Bank in accordance with the above ITB 3.1, including in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption Guidelines"), shall be ineligible to be prequalified for, bid for, or 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 have determined. The list of debarred firms and individuals is available at the 16 electronic address **specified in the BDS**.
- 4.5 Bidders that are Government-owned enterprises or institutions in the Purchaser's Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Purchaser. To be eligible, a government-owned enterprise or institution shall establish to the Bank's satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.



- 4.6 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the operation of a Bid–Securing Declaration.
- 4.7 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, 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 goods or the contracting of works or services 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 any country, person, or entity in that country.
- 4.8 A bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

**5. Eligible Goods and Related Services**

- 5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.
- 5.2 For purposes of this Clause, the term “goods” includes commodities, raw material, machinery, equipment, and industrial plants; and “related services” include services such as insurance, installation, training, and initial maintenance.
- 5.3 The term “origin” means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

**B. Contents of Bidding Document**

**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 Addendum issued in accordance with ITB Clause 8.

**PART 1 Bidding Procedures**

- Section I. Instructions to Bidders (ITB)
- Section II. Bidding Data Sheet (BDS)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries
- Section VI Bank Policy-Corrupt and Fraudulent Practices

**PART 2 Supply Requirements**

- Section VII. Schedule of Requirements

**PART 3 Contract**

- Section VIII. General Conditions of Contract (GCC)
- Section IX. Special Conditions of Contract (SCC)
- Section X. Contract Forms

6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.

6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, minutes of pre-bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

**7. Clarification of Bidding Documents**

7.1 The electronic bidding system **specified in the BDS** provides for online clarifications. A prospective Bidder requiring any clarification on the Bidding Documents may notify the Purchaser online. Clarifications requested through any other mode shall not be considered by the Purchaser. The Purchaser will respond to any request for clarification, provided that such request is received no later than fifteen (15) days prior to the deadline for submission of bids. Description of clarification sought and the response of the Purchaser shall be uploaded for information of all Bidders without identifying the source of request for clarification. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2. It is the bidder's responsibility to check on the e-procurement system, for any addendum/ amendment/ corrigendum to the bidding document.

**8. Amendment of Bidding Documents**

8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. The addendum will appear on the e-procurement system under "Latest Corrigendum".

8.2 Any addendum thus issued shall be part of the Bidding Documents and shall be deemed to have been communicated to all the bidders.

8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids,

pursuant to ITB Sub-Clause 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 Purchaser 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 Purchaser, shall be written in English language. 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 into English language, 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 two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously.
- 11.2 **The Technical Part** shall contain the following:
- (a) Letter of Bid – Technical Part, in accordance with ITB Clause 12;
  - (b) Bid Security, in accordance with ITB Clause 19.1, if required;
  - (c) Alternative bids– Technical Part, if permissible, in accordance with ITB 13, the Technical Part of any Alternative Bid;
  - (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 20.2;
  - (e) documentary evidence in accordance with ITB Clause 17 establishing the Bidder’s qualifications to perform the contract if its bid is accepted;
  - (f) documentary evidence in accordance with ITB 17 establishing the Bidder’s eligibility to bid;
  - (g) documentary evidence in accordance with ITB Clause 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
  - (h) documentary evidence in accordance with ITB Clauses 16, that the Goods and Related Services conform to the Bidding Documents;
  - (i) Manufacturer’s authorization form; and
  - (j) Any other document **required in the BDS.**



- 11.3 The Financial Part shall contain the following:
- (a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14;
  - (b) Price Schedules: completed prepared in accordance with ITB 12 and ITB 14;
  - (c) Alternative Bid - Financial Part; if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and
  - (d) Any other document **required in the BDS**.
- 11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part, the Bid shall be declared non-responsive.
- 11.5 The Bidder shall furnish in the Letter of Bid, information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

## 12. Process of Bid Submission

- 12.1 The Letter of Bid – Technical Part, Letter of Bid – Financial Part and Price Schedules 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.
- 12.2 Entire Bid including the Letter of Bid and filled-up Price Schedules shall be submitted online on e-procurement system specified in ITB 7.1. Details and process of online submission of the tender and relevant documents are given in the website mentioned above. Scanned copies of documents listed in clauses 11 and 12.3 should also be uploaded on this website.
- 12.3 **Submission of Original Documents:** The bidders are required to submit (i) Original demand drafts towards the cost of bid document and GST amount; (ii) original bid security in approved form (iii) original affidavit regarding correctness of information furnished with bid document and (iv) Original affidavit regarding validity of rates with the office specified in the BDS, before the opening of the technical part of the Bid, either by registered/speed post/courier or by hand, failing which the bids will be declared non-responsive and will not be opened. Hard copy of rest of the bid is not to be submitted. Due to valid unavoidable circumstances, if bidder(s) fails to submit the hard copies of aforesaid original documents before the opening of technical bid, the bidder must submit these original documents within the stipulated time as intimated by the Purchaser. If bidder(s) will not provide these original documents within prescribed time as given by the Purchaser, his/their bid(s)

will be declared as non-responsive and in such situation, Purchaser may take any action against such bidder(s).

- 13. Alternative Bids** 13.1 Unless otherwise **specified in the BDS**, alternative bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid – Financial Part and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Letter of Bid – Financial Part, in accordance with ITB 12.1, shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid – Financial Part in accordance with ITB 12.1.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder’s performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise specified in the BDS, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts 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. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are submitted and opened at the same time.
- 14.7 The terms EXW and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, **as specified in the BDS**.
- 14.8 Prices shall be quoted as specified in the Price Schedule included in Section IV, Bidding Forms. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser’s right to contract on any of the terms offered.

In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V Eligible Countries. Prices shall be entered in the following manner:

**(a) For Goods:**

- (i) The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable), including all duties, and GST and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
  - (ii) Any GST and other taxes which will be payable in India on the Goods, if the contract is awarded to the Bidder; and
  - (iii) The price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) **specified in the BDS.**
- (b) for the Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements:
- (i) the price of each item comprising the Related Services (inclusive of any applicable taxes).

**14.9 Deemed Export Benefits**

Bidders may like to ascertain availability of tax/duty exemption benefits, available for contracts financed under World Bank Credits/ Loans. They are solely responsible for obtaining such benefits, which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Purchaser will not compensate the bidder.

Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of the Government of India's relevant Notification along with its bid as per form stipulated in Section IV Bidding Forms. Where the Purchaser issues such Certificates, such taxes and duties will not be reimbursed separately.

If the Bidder has considered the Deemed Export Benefits in its bid, the Bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the deemed export scheme or the benefits available during contract execution except



issuing the required certificates. Bids which do not conform to this provision or any condition by the Bidder which makes the bid subject to availability of deemed export benefits or compensation on withdrawal of or any variations in the deemed export benefits scheme will make the bid non responsive and hence liable to rejection.

- 15. Currencies of Bid** 15.1 The Bidder shall quote the Price in Indian Rupees only.
- 16. Documents Establishing the Eligibility and conformity of the Goods and Related Services**
- 16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB Clause 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
- 16.2 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.
- 16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII Schedule of Requirements.
- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the **period specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII Schedule of Requirements.
- 17. Documents Establishing the Eligibility & Qualifications of**
- 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.
- 17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the

**the Bidder**

Purchaser's satisfaction:

- (a) that the Bidder meets each of the qualification criterion Criteria specified in Section III, Evaluation and Qualification;
- (b) (i) that, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;
- (ii) Supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturers for the same item of the schedule in the bid will be treated as non-responsive.
- (iii) that, if **required in the BDS**, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications;

**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 Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser 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 Clause 19, it shall also be extended for a corresponding 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 Sub-Clause 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** for each week or part of the week that has elapsed from the expiration of the initial bid validity to the date of notification of award to the successful bidder.

- (b) In the case of adjustable price contracts, no adjustment shall be made.
- (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 the Technical Part of its bid, a Bid Security, if required, as **specified in the BDS**.
- 19.2 Not used.
- 19.3 The Bid Security shall be in the amount **specified in the BDS** and denominated in Indian Rupees or a freely convertible currency, and shall:
  - (a) be in the form of FDR/CDR of any Nationalised Bank/Scheduled Bank/Indian Post Office Passbook or National Saving Certificate pledged in favour Executive Engineer, Design Division, IDO, Roorkee;
  - (b) be substantially in accordance with one of the forms of Bid Security included in Section IV, Bidding Forms, or other form approved by the Purchaser prior to bid submission;
  - (c) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 19.7 are invoked;
  - (d) be submitted in its original form; copies will not be accepted;
  - (e) remain valid for a period of 45 days beyond the original validity period of the bids, or beyond any period of extension of bid validity, if so requested under ITB Clause 18.2.
- 19.4 If a Bid Security is required in accordance with ITB Sub-Clause 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.
- 19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Clause 44.
- 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 :
  - (a) if a Bidder
    - (i) withdraws its bid during the period of bid validity specified by the Bidder in the Letter of Bid (Technical Part and/or Financial Part), except as provided in ITB



Sub-Clause 18.2;

or

(ii) does not accept the correction of errors in pursuant to ITB 35

or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB Clause 43;

or

(ii) furnish a Performance Security in accordance with ITB Clause 44.

19.8 Not used.

19.9 If a bid security is **not required in the BDS**, 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 does not accept the correction of errors pursuant to ITB 35; or

(b) if the successful Bidder fails to sign the Contract in accordance with ITB 43; or furnish a performance security in accordance with ITB 44;

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

## 20. Format and Signing of Bid

20.1 The Bidder shall prepare the Bid as per details given in ITB 21.

20.2 The bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The authorization shall consist of a written confirmation as **specified in the BDS** and shall be uploaded along with the bid.

20.3 Not used.

20.4 Corrections if any in the bid can be carried out by editing the information before electronic submission on e-procurement portal.

## D. Online Submission of Bids

## 21. Preparation of Bids

21.1 Bids, both Technical and Financial Parts, shall be submitted online on the e-procurement system specified in BDS 7.1. Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids under this Project is published on this website. Any citizen or prospective bidder can

logon to this website and view the Invitation for Bids and can view the details of goods for which bids are invited. A prospective bidder can submit its bid online; however, the bidder is required to have enrolment/registration in the website, and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token obtained from any authorised certifying agency of Government of India (for class of DSC **specified in BDS**). The bidder should register in the website using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the website. The bidder can then login the website through the secured login by entering the password of the e-token & the user id/ password chosen during registration. After getting the bid schedules, the Bidder should go through them carefully and submit the specified documents, alongwith the bid, otherwise the bid will be rejected.

- 21.2 The completed bid comprising of documents indicated in ITB 11, should be uploaded on the e-procurement portal along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copy of the bid security.
- 21.3 All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped as per server time. This shall be treated as acknowledgement of bid submission.
- 21.4 Physical, Email, Telex, Cable or Facsimile bids will be rejected as non-responsive.
- 22. **Deadline for Submission of Bids**
  - 22.1 Bids must be uploaded online no later than the date and time **specified in the BDS**.
  - 22.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 23. **Late Bids**
  - 23.1 The electronic bidding system would not allow any late submission of bids after due date & time as per server time.
- 24. **Withdrawal, Substitution, and Modification of Bids**
  - 24.1 Bidders may modify their bids by using appropriate option for bid modification on the e-procurement portal, before the deadline for submission of bids. For this the bidder need not make any additional payment towards the cost of bid document. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. The last modified

bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times. A bidder may withdraw his bid by using appropriate option for bid withdrawal, before the deadline for submission of bids, however, if the bid is withdrawn, re-submission of the bid is not allowed (or allowed if **specified in BDS**).

- 24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall not be opened
- 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 (Technical Part and/or Financial Part) or any extension thereof.

### **E. Public Opening of Technical Parts of Bids**

#### **25. Public Opening of Technical Parts of Bids**

- 25.1 The Purchaser shall publicly open Technical Parts of all bids received by the deadline, at the date, time and place **specified in the BDS**, in the presence of Bidder's designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The Financial Parts of the bids shall remain unopened in the e-procurement system, until the subsequent public opening, following the evaluation of the Technical Parts of the Bids. In all cases, original documents submitted as specified in ITB 12.3 shall be first scrutinized, and Bids that do not comply with the provisions of ITB 12.3 will be declared non-responsive and will not be opened. Thereafter, bidder's names, and such other details as the Purchaser may consider appropriate will be notified online as Technical Part bid opening summary.

In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.

- 25.2 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Technical Parts of Bids, alternative bids - Technical Parts if permitted in ITB 13 that are opened at Bid opening shall be considered further for evaluation.



## F. Evaluation of Bids – General Provisions

- 26. Confidentiality**
- 26.1 Information relating to the examination, evaluation, comparison, and post-qualification 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 in accordance with ITB 42.
- 26.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 27. Clarification of Bids**
- 27.1 To assist in the examination, evaluation, comparison of the bids and post-qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid, that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, 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 Purchaser in the Evaluation of the bids, in accordance with ITB Clause 35.
- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.
- 28. Deviations, Reservations, Omissions**
- 28.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
  - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
  - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.
- 29. Nonconformities, Errors and**
- 29.1 Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid which do not

**Omissions**

constitute a material deviation, reservation or omission.

29.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price or substance of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

29.3 Provided that a Bid is substantially responsive, the Purchaser 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 **in the manner specified in the BDS.**

**G. Evaluation of Technical Parts of Bids**

**30. Evaluation of Technical Parts**

30.1 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.

**31. Determination of Responsiveness**

31.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself as defined in ITB 11.

31.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents 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 Goods and Related Services specified in the Contract; or

(ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or

(b) if rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

31.2.1 Bids from Agents, without proper authorization from the manufacturer as per Section IV, shall be treated as non-responsive.

31.3.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been

provided, and to determine the completeness of each document submitted.

- 31.3.2 The Purchaser shall examine the bid to confirm that the Bidder has accepted all terms and conditions specified in GCC and the SCC without material deviations or reservations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 18), Warranty (GCC Clause 28), Force Majeure (Clause 32), Limitation of liability (GCC Clause 30), Governing law (GCC Clause 9) and Taxes & Duties (GCC Clause 17) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 31.4 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

**32. Qualification of the Bidders**

- 32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.
- 32.2 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. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm(s) different from the Bidder.
- 32.3 If a Bidder does not meet the qualifying criteria specified in Section III, Evaluation and Qualification Criteria, its Bid shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 32.4 Only Bids that are both substantially responsive to the bidding document, and meet all Qualification Criteria shall have the Financial Parts of their Bids opened at the second public opening

**H. Public Opening of Financial Parts of Bids**

**33. Public Opening of Financial Parts**

- 33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were

considered non-responsive to the requirements in the bidding document, advising them of the following information:

- (a) their Technical Part of Bid failed to meet the requirements of the bidding document;
- (b) their Financial Part of the Bid shall not be opened; and
- (c) notify them of the date and time for public opening of the Financial Parts of the Bids. Financial Parts of the bids shall not be opened earlier than seven (7) days from the communication of technical evaluation results to the bidders.

33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:

- (a) their Bid has been evaluated as substantially responsive to the bidding document and met the Qualification Criteria;
- (b) their Financial Part of Bid will be opened at the public opening of Financial Parts;
- (c) notify them of the date and time of the second public opening of the Financial Parts of the Bids, as **specified in the BDS**.

33.3 The opening date should allow Bidders sufficient time to make arrangements for attending the opening. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend, and this could also be viewed by the bidders online. The bidder's names, the Bid prices, the total amount of each bid, including any discounts and Alternative Bid – Financial Part, and such other details as the Purchaser may consider appropriate will be notified online by the Purchaser at the time of bid opening.

In the event of the specified date of bid opening being declared a holiday for the Purchaser, the bids will be opened at the appointed time and location on the next working day.

33.4 The electronic summary of the bid opening will be generated and uploaded online. The Purchaser will also prepare minutes of the Bid opening, including the information disclosed and upload the same for viewing online. Only Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation.

## **I. Evaluation of Financial Parts of Bids**

### **34. Evaluation of**

34.1 To evaluate the financial part of each Bid, the purchaser shall

**Financial Parts**

consider the following:

- (a) evaluation will be done for Items or Lots (contracts), as specified in the BDS; and the Bid Price as quoted in accordance with ITB 14;
- (b) Not used;
- (c) price adjustment due to discounts offered in accordance with ITB 14.4;
- (d) Not used;
- (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 29.3; and
- (f) the additional evaluation factors specified in Section III, Evaluation and Qualification Criteria.

34.2 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.

34.3 If this bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the lot (contract) combinations, including any discounts offered in the Letter of Bid - Financial Part, is specified in Section III, Evaluation and Qualification Criteria.

34.4 The Purchaser's evaluation of a Bid shall include (i) price quoted EXW including GST as applicable on the finished goods; (ii) other taxes, if any, payable on finished goods; (iii) price for inland transportation, insurance, and other local services required to convey the Goods to their Final Destination; and (iv) price for Related Services, if any

34.5 The Purchaser's evaluation of a Bid may require the consideration of other factors, in addition to the Bid price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise **specified in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in ITB 34.1 (f).

**35. Correction of  
Arithmetical  
Errors**

35.1 The e-procurement system automatically calculates the total amount from unit rates and quantities and the system also automatically populates the amount in words from the amount in figures and therefore there is no scope of discrepancy and need for arithmetic correction.

- |   |      |  |
|---|------|--|
| <b>36. Conversion to Single Currency</b>                                      | 36.1 | Not applicable.  |
| <b>37. Margin of Domestic Preference</b>                                      | 37.1 | Not applicable.  |
| <b>38. Comparison of Financial Parts</b>                                      | 38.1 | Financial bid of technically qualified bidder will be opened and e-procurement system automatically generates a comparative chart from the rates quoted by the technically qualified bidders.  |
| <b>39. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids</b> | 39.1 | The Purchaser 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 documents submitted and specifically, bid securities, shall be promptly returned to the Bidders. |

### **J. Award of Contract**

- |  |      |   |
|--|------|---|
| <b>40. Award Criteria</b>  | 40.1 | Subject to ITB 39.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.   |
| <b>41. Purchaser's Right to Vary Quantities at Time of Award</b> | 41.1 | At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages <b>specified in the BDS</b> , and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.   |
| <b>42. Notification of Award</b>                                 | 42.1 | Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter called "Letter of Acceptance") shall specify the sum that the purchaser will pay in consideration of the supply of Goods (hereinafter called "the Contract Price").   |
| <b>Publication of Award</b>                                      | 42.2 | At the same time the Purchaser shall publish on the Uttarakhand Government procurement portal <a href="http://www.uktenders.gov.in">www.uktenders.gov.in</a> , 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. |
| <b>Recourse to</b>   | 42.3 | The Purchaser shall promptly respond in writing to any  |



- Unsuccessful Bidders** unsuccessful Bidder who, after Publication of contract award, requests in writing the grounds on which its bid was not selected.
- 42.4 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 42.5 Upon the successful Bidder's furnishing of the performance security and signing the Contract Form pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 19.5
- 43. Signing of Contract**
- 43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.
- 43.2 Within twenty-one (21) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 44. Performance Security**
- 44.1 Within twenty-one (21) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security @ 10% of tendered cost in accordance with the GCC, using for that purpose the Performance Security Form included in Section X Contract forms, or another Form acceptable to the Purchaser. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

## SECTION II - BIDDING DATA SHEET

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	The Purchaser is:  <b>The Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, Haridwar.</b>
ITB 1.1	The name and identification number of the NCB is:  <b>The Supply, Installation, Testing, Commissioning and Maintenance of Digital Water Level Recorder (DWLRs) (Non-vented Pressure sensors) with Telemetry System in Piezometers for Ground Water Monitoring and Integrate with State Water Informatics Centre located at Roorkee under National Hydrology Project (NHP) in Uttarakhand</b>  IFB No. 03/SE(R)/NHP/e-tender/2021-22, dated 03.07.2021
ITB 1.2(a)	The Purchaser shall use the electronic-procurement system specified in BDS 7.1 to manage this Bidding process.
ITB 2.1	The Borrower is Government of India  Loan or Financing Agreement Amount: US \$ 175 million
ITB 2.1	The name of the Project is: National Hydrology Project
ITB 4.1	A Bidder may be a firm that is a private entity, a government-owned entity—subject to ITB 4.5—or any combination of such entities in the form of a joint venture (JV) 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, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.  Numbers of members/firms in a joint venture shall not be more than two including the lead partner.
ITB 4.4	A list of firms debarred from participating in World Bank projects is

	available at <a href="http://www.worldbank.org/debarr">http://www.worldbank.org/debarr</a>
	<b>B. Contents of Bidding Documents</b>
<b>ITB 7.1</b>	<p>Electronic –Procurement System</p> <p>The Purchaser shall use the following electronic-procurement system to manage this Bidding process: <a href="http://www.uktenders.gov.in">www.uktenders.gov.in</a></p> <p>Requests for clarification should be received by the Employer no later than <i>1 day prior before Pre – Bid Meeting date i.e. 13.07.2021.</i></p>
<b>ITB 7.1 (a)</b> <b>Additional clause.</b>	<p>A pre-bid meeting will be held on 13.07.2021 at 1.30 PM through video conference to clarify the issues and to answer questions on any matter that may be raised at the stage as stated in ITB clause 7.1 of “Instructions to Bidders” of the bidding documents. All prospective bidder(s) is requested to submit his query, if any, through email before 13.07.2021.</p> <p><b>Contact Persons:</b></p> <p><b>Sh. Shankar Kumar Saha</b> (Mobile: 8826758368)</p> <p><b>Sh. Damodar Singh</b> (Mobile: 9455128929)</p>
<b>ITB 8.1</b>	The addendum will appear on the e-procurement system under latest corrigendum in <a href="http://www.uktender.gov.in">www.uktender.gov.in</a> .
	<b>C. Preparation of Bids</b>
<b>ITB 11.2 (c)</b>	Bid security, in accordance with ITB 19.1
<b>ITB 11.2(j)</b>	<p>The Bidder shall submit the following additional documents in its bid:</p> <ol style="list-style-type: none"> <li>1. Certification of incorporation of the bidder.</li> <li>2. As e-procurement system is being used, there is no hard copy submission of bid.</li> <li>3. Only the hard copy of the power of attorney, DD of Bid Document fee, bid security, affidavit for correctness of information and affidavit in respect of validity of rates, requested to be submitted.</li> <li>4. The bidder shall clearly confirm that all facilities exist with him (or manufacturer, as applicable) in his factory for inspection and testing and these can be accessed by the Purchaser or his representative for inspection.</li> <li>5. Technical schedules of goods as required by technical specifications.</li> <li>6. Descriptive Documents, drawings, notes and references of operating and assembly of mechanical parts</li> <li>7. A detailed description of the Goods essential technical and</li> </ol>

	<p>performance characteristics:</p> <ol style="list-style-type: none"> <li>8. A clause-by-clause commentary on the Purchaser's technical specifications demonstrating substantial responsiveness of the Goods and Services to those specifications in the format provided as “Technical Responsiveness Form” in Section VII Technical Specifications.</li> <li>9. For purposes of the commentary to be furnished pursuant to Paragraph 6 above, the Bidder shall note that standards for workmanship, material and goods, and references to brand names and model no and catalogue designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.</li> <li>10. The documentary evidence of the goods and services eligibility shall consist of a statement in the Price Schedule on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment</li> <li>11. Non-manufacturer bidders will submit the manufacturer’s authorization Form as per Proforma in Section IV.</li> <li>12. The following details shall also be provided by Indian Bidders: <ol style="list-style-type: none"> <li>a) Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company.</li> <li>b) Company’s PAN and Income Tax clearance certificate and ward/circle where it is being assessed,</li> <li>c) Registration details of the company under GST and other law(s) as may be applicable.</li> </ol> </li> <li>13. The bidders from outside India shall provide the corresponding details of Income Tax registration, Social Security Number, details regarding Registration under GST or sale of goods (as may be applicable) etc.</li> <li>14. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years.</li> <li>15. All documentation required under Section-3 Evaluation and Qualification Criteria</li> </ol>
<p><b>ITB 11.2(k)</b></p>	<p>In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members</p>

	and submitted with the bid, together with a copy of the proposed Agreement.
<b>ITB 11.3(d)</b>	The Bidder shall submit the following additional documents in its bid – financial part: No additional document required.
<b>ITB 12</b>	<b>Note for Bidders:</b> Bidders have to submit the bids on the e-procurement portal along with the relevant required documents. For this purpose, the bidders shall fill up online, the forms that are available for online filling on the e-portal. The rest of the forms shall be downloaded by the bidders and filled up. The filled-up pages shall then be scanned and uploaded on the e-procurement portal along with the scanned copies of the supporting documents.
<b>ITB 12.3</b>	<p>The bidders are required to separately submit hard copies of (i) original demand drafts towards the cost of bid document and registration on e-procurement website (if not previously registered) (as per IFB);and (ii) original bid security in approved form; However scanned copy of original affidavit regarding correctness of information and power of attorney shall be uploaded along with the Technical Part of the bid</p> <p><b>For submission of original documents, the Purchaser’s address is:</b></p> <p>Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee P.O. Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Telephone: 91-1332-265174 Facsimile number: 01332-262792, 01332-262487 E-mail: <a href="mailto:uttarkhandwrd@gmail.com">uttarkhandwrd@gmail.com</a></p>
<b>ITB 13.1</b>	Alternative Bids shall not be considered.
<b>ITB 14.5</b>	The prices quoted by the Bidder “shall not” be subject to adjustment during the performance of the Contract.
<b>ITB 14.7</b>	The Incoterms edition is Incoterms 2010.
<b>ITB 14.8 (a) (i)</b>	<p>Replace 14.8 (a) (i) with the following:</p> <p>(a) <b>For Goods:</b></p> <p>(i) the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex-showroom, or off-the-shelf, as applicable), excluding</p>

	GST as applicable payable on the finished Goods;
<b>ITB 14.8 (a) (iii)</b>	“Final destination (Project Site)”: All Uttarakhand (detailed list given as Appendix A under schedule of requirements)
<b>ITB 14.9</b>	As per latest instructions from Government of India.
<b>ITB 16.4</b>	Period of time the Goods are expected to be functioning (for the purpose of spare parts): <i>10 years after commissioning.</i>
<b>ITB 17.2 (b) (i)</b>	Manufacturer’s authorization is <i>required as per proforma in Section IV.</i>
<b>ITB 17.2 (b)iii</b>	After Sales service is required which shall be provided by the Supplier or alternatively by its Agent in case of a foreign bidder.
<b>ITB 18.1</b>	The bid validity period shall be 120 days.
<b>ITB 18.3(a)</b>	The factor will be 1.007692 (multiplicative) per week
<b>ITB 19.1</b>	Bid shall include a Bid Security (issued by bank) included in Section IV Bidding Forms. Bid Security shall be valid for 165 days from the date of opening of financial bid.
<b>ITB 19.3</b>	The amount of the Bid Security shall be: Rs. 2,40,000/- (Rs. Two Lakh Forty Thousand only)
<b>ITB 19.3 (a)</b>	Other types of acceptable securities are:  Fixed Deposit/Time Deposit certificate issued by a Nationalized or Scheduled Bank located in India for equivalent or higher values are acceptable provided it is pledged in favour of The <b>Executive Engineer, Design Division, Irrigation Design Organisation, Roorkee</b> and such pledging has been noted and suitably endorsed by the bank issuing the certificate.
<b>ITB 19.8</b>	The bid security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the bid security shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.
<b>ITB 19.9</b>	Omitted
<b>ITB 20.2</b>	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: <b><i>Legally valid Power of Attorney is required to demonstrate the authority of the signatory to sign the Bid.</i></b> (Scanned copy



	to be submitted alongwith the bid)
<b>ITB 20.3</b>	<i>If the Bidder is an intended or an existing joint venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the joint venture to sign on behalf of, and legally binding, the intended or existing joint venture. If the joint venture has not yet been formed, also include evidence from all proposed joint venture partners of their intent to enter into a joint venture in the event of a contract award in accordance with ITB 4.1</i>
	<b>D. Online Submission and Opening of Bids</b>
<b>ITB 21.1</b>	Class of DSC required is: Refer <a href="https://uktenders.gov.in">https://uktenders.gov.in</a>
<b>ITB 21.2</b>	The inner and outer envelopes shall bear the following additional identification marks: <i>Not applicable because e-tendering system will take place</i>
<b>ITB 22.1</b>	For bid submission purposes, the Purchaser’s address is: <a href="https://uktenders.gov.in">https://uktenders.gov.in</a> The deadline for uploading of bids is: Date: 05.07.2021: 15:00 hours for online submission Date: 05.07.2021-: 15:00 hours for original Submission Time: 15:00 hours (3:00 PM)
<b>ITB 24.1</b>	<i>Re-submission of the bid is allowed, if withdrawn within the period of submission.</i>
	<b>E. Public Opening of Technical Parts of Bids</b>
<b>ITB 25.1</b>	The online opening of the Technical Parts of Bids shall take place at: Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Date: 05.07.2021 Time: 3:30 PM
	<b>F. Evaluation of Bids – General Provisions</b>

<b>ITB 29.3</b>	The adjustment shall be based on the highest price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.
<b>H. Public Opening of Financial Parts of Bids</b>	
<b>ITB 33.2 (c)</b>	<p>Following the completion of the evaluation of the Technical Parts of the Bids, the Purchaser will notify all Bidders of the date and time of the public opening of Financial Parts.</p> <p><b>The online opening of the Financial Parts of bids (for technically qualified bidders) shall take place at:</b></p> <p>Office of the Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667, INDIA Telephone: 91-1332-265174 email: <a href="mailto:uttarkhandwrd@gmail.com">uttarkhandwrd@gmail.com</a> Date &amp; Time: Will be declare later</p>
<b>I. Evaluation and Comparison of Bids</b>	
<b>ITB 34.1(a)</b>	Evaluation will be done for whole lot i.e. complete items as a whole in one package.
<b>ITB 34.3</b>	Bidders “shall not” be allowed to quote separate prices for one or more lots.
<b>ITB 34.4</b>	<p>Replace with following:</p> <p>The Purchaser’s evaluation of a bid will exclude and not take into account:</p> <ul style="list-style-type: none"> <li>(a) In the case of Goods manufactured in India or goods of foreign origin already located in India, GST and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;</li> <li>(b) Not Used.</li> <li>(c) any allowance for price adjustment during the period of execution of the contract, if provided in the bid.</li> </ul> <p>But, the purchaser’s evaluation of a bid will include i) price for inland transportation, insurance, and other local services required to convey the Goods to their Final Destination; and (ii) price for Related Services, if any.</p>
<b>ITB 34.5</b>	The adjustments shall be determined using the following criteria, from

	<p>amongst those set out in Section III, Evaluation and Qualification Criteria:</p> <ul style="list-style-type: none"> <li>(a) Deviation in Delivery Schedule: Not Applicable</li> <li>(b) Deviation in Payment Schedule: Not Applicable</li> <li>(c) The cost of major replacement components, mandatory spare parts and service: Not Applicable</li> <li>(d) The availability in the Purchaser’s Country of spare parts and after-sales services for equipment offered in the Bid: Not Applicable</li> <li>(e) The project operating and maintenance cost during the life of the equipment: Not Applicable</li> <li>(f) The performance and productivity of the equipment offered: Not Applicable.</li> </ul>
	<b>J. Award of Contract</b>
<b>ITB 41.1</b>	<p>The maximum percentage by which quantities may be increased is: 15%</p> <p>The maximum percentage by which quantities may be decreased is: 15%</p>

## **SECTION III- EVALUATION AND QUALIFICATION CRITERIA**

**Section III – Evaluation and Qualification Criteria**

*This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser shall use to evaluate a bid and determine whether a Bidder qualifies in accordance with ITB 32 & 34. No other criteria shall be used.*

## TECHNICAL PART

### 1 Qualification (ITB 32)

#### 1.1 Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

#### I- Financial Capability

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

##### A) In case of Individual Bidder

- i) Capacity to have a cash flow - The Bidder must provide a letter from a reputed bank stating the availability of liquid assets and/or credit facilities exclusively for this Contract only, of not less than INR 30 Lakh or its equivalent amount in a freely convertible currency. (The availability of liquid assets and/or credit facilities should be clearly certified by Bank (Nationalized or Scheduled Bank In India)in Form-9provided in Section IV- Bidding forms )

Or

In case the bidder does not prefer to have support from a Bank and does not require credit facilities from the Bank exclusively for the contract, the bidder shall have to submit the cash resources certificate amounting to INR 30 Lakh taking into consideration existing projects being executed by him from its Statutory Chartered Accountant

- ii) The Minimum required annual turnover in respect of business operations for the successful Bidder in any two of the last five (5) years shall be of INR 120 Lakhs or its equivalent amount in a freely convertible currency. Period of 5 years shall be reckoned from 31<sup>st</sup> march of financial year preceding the year in which bid is published.
- iii) Further, bidder should be in continuous business of supplying and/or after sale services of real-time telemetry hydro-met & systems for surface and/or ground water during the last 3 years prior to date of bid submission.
- iv) Bidder shall furnish the legal status, place of registration and principal place of business of the company or firm or partnership, etc.;
- v) Details of experience and past performance on equipment offered and on those of similar nature within the past seven years (Prior to the date of bid submission) and details of current contracts in hand and other commitments (suggested Proforma given in Section IV).
- vi) The bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the supply of the required equipment within the specified time of completion after the meeting all their current commitments.
- vii) Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report for the past three years, banker's certificate, etc.



- viii) A firm can submit only one bid in the same bidding process. A bidder who submits or participates in more than one bid will cause all the bids in which the bidder has participated to be disqualified.
- ix) Should possess GST Registration. In case of foreign bidder, if presently bidder is not having any office(s) in India, he has to provide the GST registration certificate within one month of award of contract.

**B) In case of Joint Venture (JV)**

- i) Capacity to have a cash flow: The Bidders must provide a letter from a reputed bank stating the availability of liquid assets and/or credit facilities exclusively for this Contract only, of no less than INR 30 Lakhs or equivalent amount in a freely convertible currency collectively. (The availability of liquid assets and/or credit facilities should be clearly certified by Bank (Nationalized or Scheduled Bank In India) in Form-9 provided in Section IV- Bidding forms)

Or

In case the JV /bidder does not prefer to have support from a Bank and does not require credit facilities from the Bank exclusively for the contract, the bidder shall have to submit the cash resources certificate amounting to INR 30 Lakhs taking into consideration existing projects being executed by him from its Statutory Chartered Accountant.

- ii) In case of JV, the Minimum required annual turnover in respect of business operations for the successful Bidder in any two of the last five (5) years shall be of INR 120 Lakhs or its equivalent amount in a freely convertible currency collectively. Period of 5 years shall be reckoned from 31st march of financial year preceding the year in which bid is published. The lead partner must have minimum annual turnover of INR 84 Lakhs or its equivalent amount in a freely convertible currency in any two of the last five (5) years while other partner must have minimum annual turnover of INR 36 Lakhs or its equivalent amount in a freely convertible currency in any two of the last five (5) years.
- iii) Further, one member of Joint Venture should be in continuous business of supplying and/or after sale services of real-time telemetry hydro-met & systems for surface and/or ground water during the last 3 years prior to date of bid submission while other member should be in continuous business of supplying and/or after sale services of real-time telemetry hydro-met & systems for surface and/or ground water at least 1 year prior to date of bid submission.
- iv) All members of Joint Venture shall furnish the legal status, place of registration and principal place of business of the company or firm or partnership, etc.;
- v) Details of experience and past performance of all members of Joint Venture on equipment offered and on those of similar nature within the past seven years (Prior to the date of bid submission) and details of current contracts in hand and other commitments (suggested Proforma given in Section IV).
- vi) The lead member of Joint Venture should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the supply of the required equipment within the specified time of completion after the meeting all their current commitments.
- vii) Responsibilities in respect of lead firm as well as each of the Joint Venture members shall be clearly indicated in the JV agreement;

- viii) The Joint Venture agreement shall not be cancelled or amended unilaterally without consent of the Purchaser and a statement to this effect should appear in the JV agreement;
- ix) Reports on financial standing of the each JV members such as profit and loss statements, balance sheets and auditor's report for the past three years, banker's certificate, etc.
- x) At least one member of Joint Venture should possess GST Registration. In case of foreign bidder, if presently bidder is not having any office(s) in India, he has to provide the GST registration certificate within one month of award of contract.

## **II- Experience and Technical Capacity of Bidder**

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

### **A) In case of individual Bidder**

#### **i) Technical experience**

The bidder must have supplied, tested, and commissioned the Digital/ Automatic Water Level Recorder stations with GSM / GPRS based telemetry to the extent of at least 18 Nos. (comprising of minimum 1 data logger and sensor at each station) total in any two year during a period of last 7 years from the last date of submission of bid document and should be in use satisfactorily with no adverse report for at least one year preceding the date of bid opening.

### **B) In case of Joint Venture (JV)**

The JV partners must have supplied, tested and commissioned the Digital/Automatic Water Level Recorder stations with GSM / GPRS based telemetry to the extent of at least 18 Nos. (comprising of minimum 1 data logger and sensor at each station) collectively total in any two year during a period of last 7 years from the last date of submission of bid document. Out of which the one partner should have supplied, installed, commissioned and provided after sales service satisfactorily to the extent of at least 12 Nos. (comprising of minimum 1 data logger and sensor at each station) total in any two year during a period of last 7 years from the last date of submission of bid document and other partner should have operated and maintained after sales service satisfactorily to the extent of at least 6 Nos. (comprising of minimum 1 data logger and sensor at each station) total in any two year during a period of last 7 years from the last date of submission of bid document and should be in use satisfactorily with no adverse report for at least one year preceding the date of bid opening.

#### **ii) Manufacturer Authorization for DWLR station equipment**

If the bidder/JV partners is/are not the manufacturer of the Digital Water Level Recorder (DWLR) station equipment (i.e. listed in table-1), the bidder / JV partner shall furnish a legally enforceable authorization from manufacturer in the prescribed Form [Section-IV] assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered.

If the bidder/JV partner, himself is a manufacturer of the DWLR station equipment (listed in Table-1), then a self-authorization suffices.

Further, bidder/JV partner should furnish the documentary evidence from the manufacturer of the equipment proposed for this bid (listed in Table-1) to establish

that the manufacturer has manufactured and supplied the quantity of the DWLR station equipment as per Table-1 below total in any two year during a period of last 7 years from the last date of submission of bid document.

**Table-1 Compliance for equipment manufacturer**

S. No.	Item	Total quantity to be supplied as per schedule of requirement	Minimum number of required total quantities in any two of last seven years
1	Digital Water Level Recorders (DWLR) with Non-vented Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to 120 m and sensor cable and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications	66	33

- III- The bidder should have after sales support in the region (within a radius of 500 km from the State Capital). If bidder does not have any after sales support office within 500 km from state Capital at the time of bidding, he shall require to be establish the same within one month after successful award of contract.
- IV- Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or record of poor performance such as, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

## **FINANCIAL PART**

### **2. Margin of Preference (ITB 37) – Not Applicable**

### **3. Evaluation (ITB 30, 31, and 34)**

#### **3.1. Evaluation Criteria (ITB 34.5)**

The Purchaser shall use the criteria and methodologies listed in this Section to evaluate Bids. By applying the criteria and methodologies, the Purchaser shall determine the substantially responsive lowest-evaluated bid.

The Purchaser’s evaluation of a bid may take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.8, one or more of the following factors as specified in ITB Sub-Clause 34.1 (f) and in BDS referring to ITB 34.5, using the following criteria and methodologies. :

(a) **The Purchaser’s evaluation of a bid will take into account the Bid Price quoted in accordance with ITB Clause 14.8 including 4 years warranty & Operation and Maintenance period.**

#### **3.2. Multiple Contracts (ITB 34.3)**

Not applicable as bid consists of a single schedule.

**SECTION IV – BIDDING FORMS**

**1A. LETTER OF BID– TECHNICAL PART**

*The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.*

***Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.***

*No alterations to the text except as provided in ITB20.2 shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

NCB No.: *[insert number of bidding process]*

Invitation for Bid No.: *[insert No of IFB]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To:

The Superintending Engineer,  
Research Circle,  
Irrigation Research Institute, Roorkee  
Email: [uttarkhandwr@gmail.com](mailto:uttarkhandwr@gmail.com)

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No. issued in accordance with ITB 8: *[insert the number and issuing date of each Addenda]*;
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser's country in accordance with ITB 4.6;
- (d) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services *[insert a brief description of the Goods and Related Services]*;
- (e) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, 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 Documents;
- (g) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;
- (h) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment

imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Purchaser’s Country laws or official regulations or pursuant to a decision of the United Nations Security Council;

- (i) We are not a government owned entity/ We are a government owned entity but meet the requirements of ITB 4.5;<sup>1</sup>
- (j) 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;
- (k) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- (l) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and
- (m) We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely, “Prevention of Corruption Act 1988.”

Name of the Bidder [*insert complete name of person signing the Bid*]

Name of the person duly authorized to sign the Bid on behalf of the Bidder\*\* [*insert complete name of person duly authorized to sign the Bid*]

Title of the person signing the Bid [*insert complete title of the person signing the Bid*]

Signature of the person named above [*insert signature of person whose name and capacity are shown above*]

Date signed [*insert date of signing*] day of [*insert month*], [*insert year*]

\*\*Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

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<sup>1</sup>*Bidder to use as appropriate*



## 1B. LETTER OF BID- FINANCIAL PART

*The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.*

**Note:** *All italicized text is for use in preparing these forms and shall be deleted from the final products.*

*No alterations to the text except as provided in ITB 20.2, shall be permitted and no substitutions shall be accepted except as provided in ITB 12.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

NCB No.: *[insert number of bidding process]*

Invitation for Bid No.: *[insert No of IFB]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To:

The Superintending Engineer,  
Research Circle,  
Irrigation Research Institute, Roorkee  
email: [uttarkhandwr@gmail.com](mailto:uttarkhandwr@gmail.com)

We, the undersigned Bidder, hereby submit the second part of our Bid, the Financial Part. In submitting our Financial Part, we make the following additional declarations:

- (a) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 22, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (b) The total price of our Bid, excluding any discounts offered in item (c) below, is:  
  
In case of only one lot, total price of the Bid *[insert the total price of the bid in words and figures]*;  
  
In case of multiple lots, total price of each lot *[insert the total price of each lot in words and figures]*;  
  
In case of multiple lots, total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures]*;
- (c) The discounts offered and the methodologies for their application are:
  - (i) The discounts offered are: *[Specify in detail each discount offered.]*
  - (ii) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts]; Discounts.*
- (d) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

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

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

(e) 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.

Name of the Bidder *[insert complete name of person signing the Bid]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder\*\* *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid *[insert complete title of the person signing the Bid]*

Signature of the person named above *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* day of *[insert month]*, *[insert year]*

\*\*:  
Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

## 2. BIDDER INFORMATION FORM

*[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]*

*Date: [insert date (as day, month and year) of Bid Submission]*

*NCB No.: [insert number of bidding process]*

*Page \_\_\_\_\_ of \_\_\_\_\_ pages*

- 1 Bidder's Legal Name *[insert Bidder's legal name]*
- 2 Bidder's actual or intended Country of Registration: *[insert actual or intended Country of Registration]*
- 3 Bidder's Year of Registration: *[insert Bidder's year of registration]*
- 4 Bidder's Legal Address in Country of Registration: *[insert Bidder's legal address in country of registration]*
- 5 Bidder's Authorized Representative Information  
Name: *[insert Authorized Representative's name]*  
Address: *[insert Authorized Representative's Address]*  
Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*  
Email Address: *[insert Authorized Representative's email address]*
- 6 Attached are copies of original documents of: [check the box(es) of the attached original documents]
  - Articles of Incorporation or Registration of firm named in 1, above, in accordance with ITB Sub-Clauses 4.3.
  - In case of government owned entity from the Purchaser's country, documents establishing legal and financial autonomy and compliance with commercial law and not dependent agency of borrower or sub-borrower or purchaser, in accordance with ITB Sub-Clause 4.5.
  - Included are the organizational chart, a list of Board of Directors, and the beneficial ownership

### 3. JOINT VENTURE PARTNER INFORMATION FORM

*[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]*

*Date: [insert date (as day, month and year) of Bid Submission]*

*NCB No.: [insert number of bidding process]*

*Page \_\_\_\_\_ of \_\_\_\_\_ pages*

- 1 Bidder's Legal Name *[insert Bidder's legal name]*
- 2 Bidder's JV Member's Legal Name: *[insert JV's Party legal name]*
- 3 Bidder's JV Member's country of registration: *[insert JV's Member country of registration]*
- 4 Bidder's JV Member's year of registration: *[insert Bidder's year of registration]*
- 5 Bidder's JV Member's legal address in country of registration: *[insert Bidder's legal address in country of registration]*
- 6 JV's Party Authorized Representative Information  
Name: *[insert name of JV's Member authorized representative]*  
Address: *[insert address of JV's Member authorized representative]*  
Telephone/Fax numbers: *[insert telephone/fax numbers of JV's Member authorized representative]*  
Email Address: *[insert email address of JV's Member authorized representative]*
- 7 Attached are copies of original documents of: *[check the box(es) of the attached original documents]*
  - Articles of Incorporation or Registration of firm named in 2, above, in accordance with ITB Sub- Clauses 4.1 and 4.2.
  - In case of government owned entity from the Purchaser's country, documents establishing legal and financial autonomy and compliance with commercial law and not dependent agency of borrower or sub-borrower or purchaser, in accordance with ITB Sub-Clause 4.5.

**Price Schedule Forms**  
**(Not to be submitted with Technical Bid)**

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

**A. PRICE SCHEDULE FOR SUPPLY OF GOODS AS PER SCHEDULE OF REQUIREMENT**

							Date: _____		
							NCB No: _____		
							Alternative No: _____		
							Page No _____ of _____		
1	2	3	4	5	6	7	8	9	10
Item No	Description of Goods	Country of Origin	Delivery Date	Unit	Qty.	BASIC RATE In Figures To be entered by the Bidder in Rs. P	GST Amount in INR Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes in Rs. P
<b>1</b>	<b>Digital Water Level Recorders (DWLR)</b>								
1a	Supply of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>90 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications		6 months from Signing of Contract	Nos	29				
1b	Supply of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for		6 months from Signing	Nos	37				

	individual station with water level measurement range up to <b>120 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications		of Contract						
	<b>Total Price</b>								

\*GST to be quoted item-wise as per HSN Code

Name of Bidder *[insert complete name of Bidder]*

Signature of Bidder *[signature of person signing the Bid]*

Date *[insert date]*

**B. PRICE AND COMPLETION SCHEDULE - RELATED SERVICES**

							Date: _____ NCB No: _____ Alternative No: _____ Page No _____ of _____		
1	2	3	4	5	6	7	8	9	10
Service No	Description of Services (excludes inland transportation and other services required in India to convey the goods to their final destination)	Country of Origin	Delivery Date	Unit	Qty.	BASIC RATE In Figures To be entered by the Bidder in Rs. P	GST Amount in INR Rs. P	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes in Rs. P
<b>S-1</b>	<b>Digital Water Level Recorders (DWLR)</b>								
S-1a	Installation, Testing and Commissioning of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>90 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications		6 months from Signing of Contract	Nos	29				
S-1b	Installation, Testing and Commissioning of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>120 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS,			Nos	37				

	Complete as per the technical specifications								
S-2	Integration of GSM & GPRS data received from DWLR stations with the existing State Water Informatics Center (SWIC) at Roorkee with all ancillary equipment as per technical specifications								
S-3	Four Years Operation & Maintenance and Comprehensive Warranty for DWLRs with Telemetry system along with accessories, installed at designated locations and Data Center equipment as specified in schedule of requirement after final acceptance and upgradation of all software associated with DWLR systems. This includes replacement of batteries as & when required at bidders cost. The cost of Communication using GSM &GPRS sim and other related charges.								
S-4	Training of the purchaser's personnel at the supplier's plant and/or on site in assembly, startup, operation, maintenance and/or repair of the supplied goods. Course topics will include sensor calibration, data logger configuration, data downloading, data retrieval, collection, Trouble shooting, processing maintenance requirements and procedure for equipment configuration, installation, site testing and commissioning including training kit containing course material in soft and hard copies as per technical specification.								
								<b>Total Price</b>	

\*GST to be quoted item-wise as per HSN Code

Name of Bidder *[insert complete name of Bidder]*

Signature of Bidder *[signature of person signing the Bid]*

Date *[insert date]*



**Form of Bid Security - Bank Guarantee**

*[Guarantor letterhead or SWIFT identifier code]*

Bank Guarantee No..... *[Insert guarantee reference number]*

Date..... *[Insert date of issue of the guarantee]*

WHEREAS, \_\_\_\_\_ *[name of Bidder]*<sup>2</sup> (hereinafter called "the Applicant") has submitted his Bid dated \_\_\_\_\_ *[date]* or will submit his Bid for the supply of \_\_\_\_\_ *[name of Contract]* (hereinafter called "the Bid") under Invitation for Bids No.....*[insert number]* (hereinafter called "the IFB")

KNOW ALL PEOPLE by these presents that We \_\_\_\_\_ *[name of bank]* of \_\_\_\_\_ *[name of country]* having our registered office at \_\_\_\_\_ (hereinafter called "the Bank") are bound unto \_\_\_\_\_ *[name of Purchaser]* (hereinafter called "the Purchaser ") in the sum of \_\_\_\_\_<sup>3</sup> for which payment well and truly to be made to the said Purchaser the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

THE CONDITIONS of this obligation are:

- (1) If after Bid opening the Applicant (a) withdraws his bid during the period of Bid validity specified in the Letter of Bid; or (b) does not accept the correction of the Bid Price pursuant to ITB 35;
- or
- (2) If the Applicant having been notified of the acceptance of his bid by the Purchaser during the period of Bid validity:
    - (a) fails or refuses to execute the Contract Agreement in accordance with the Instructions to Bidders, if required; or
    - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders.

we undertake to pay to the Purchaser up to the above amount upon receipt of his first written demand, without the Purchaser having to substantiate his demand, provided that in his demand the Purchaser will note that the amount claimed by him is due to him owing to the

<sup>2</sup>In the case of a JV, the bidder should be stated as "a Joint Venture consisting of ....., and .....".

<sup>3</sup>The Applicant should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 19.1 of the Instructions to Bidders.

occurrence of one or any of the four conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date \_\_\_\_\_<sup>4</sup> days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Purchaser, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE: \_\_\_\_\_

SIGNATURE OF THE BANK

\_\_\_\_\_

WITNESS \_\_\_\_\_

SEAL \_\_\_\_\_

\_\_\_\_\_

[Signature, Name, and Address]

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

<sup>4</sup>45 days after the end of the validity period of the Bid

## 6. MANUFACTURER’S AUTHORIZATION

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are legally binding on the Manufacturer. The Bidder shall include it in its bid, if so, indicated in the BDS.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

NCB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To:

*[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer’s factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract against the above IFB.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm against this IFB.

We as a manufacturer of *[insert type of goods manufactured]* confirm to provide the spare & service support for a minimum period of 10 years after commissioning.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ *[insert date of signing]*

*Note: Modify this format suitably in cases where manufacturer’s warranty and guarantee are not applicable for the items for which bids are invited. If the supply consists of number of items, indicate the specific item (s) for which alone the above authorization is required.*

**7. DECLARATION FOR CLAIMING TAX/DUTY EXEMPTION<sup>5</sup>**

**(Name of the Project)**

Bid No. ....

Description of item to be supplied .....

.....

(Information for issue of certificate for claiming exemption of Tax/ Duty in terms of Government of India’s relevant notification)

**(Bidder’s Name and Address):**

**To**

**(Name of Purchaser)**

.....

Dear Sir:

1. We confirm that we are solely responsible for obtaining deemed export benefits which we have considered in our bid and in case of failure to receive such benefits for reasons whatsoever, Purchaser will not compensate us.
2. We are furnishing below the information required by the Purchaser for issue of necessary certificate in terms of Government of India’s relevant notification.
  - (i) Ex-factory price per unit on which the tax/duty is payable:\*Rs. \_\_\_\_\_
  - (ii) No of Units to be supplied: \_\_\_\_\_  
\_\_\_\_\_
  - (iii) Total cost on which the tax/duty is payable (Rs.) \_\_\_\_\_

*(The requirements listed above are as per Current notifications. These may be modified, as necessary, in terms of the rules in force)*

(Signature) \_\_\_\_\_

(Printed Name) \_\_\_\_\_

(Designation) \_\_\_\_\_

(Common Seal) \_\_\_\_\_

*\* Please attach details item-wise with cost, if there is more than one item. The figures indicated should tally with what is given in the price schedule.*

<sup>5</sup> This declaration refers to ITB 14.9 and shall be retained only if ITB 14.9 is retained. The format may be modified as per the latest instructions of Government of India.

**8. PERFORMA FOR PERFORMANCE STATEMENT**

[Please see ITB Clause 36.2 and Section III-  
Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last three/five years)

Bid No. \_\_\_\_\_ Date of opening \_\_\_\_\_ Time \_\_\_\_\_ Hours

Name of the Firm \_\_\_\_\_

Order placed by (full address of Purchaser)	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of completion of delivery		Remarks indicating reasons for late delivery, if any	Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder: \_\_\_\_\_  
\_\_\_\_\_

**9. FORMAT FOR EVIDENCE OF ACCESS TO OR  
AVAILABILITY OF CASH FLOW**

(To be provided on the letter head of the Bank)

**AVAILABILITY OF CASH FLOW (WORKING CAPITAL)**

**(This should be given in this form only by a nationalized or scheduled bank in India. No other substitute will be acceptable)**

This is to certify that M/s. \_\_\_\_\_ is a reputed company with a good financial standing.

If the contract for the works, namely \_\_\_\_\_ [funded by the World Bank] is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of INR \_\_\_\_\_ to meet their capital requirements for executing the above contract.

-- Sd. --

Name of Bank Manager

Senior Bank Manager

Address of the Bank

**\* Change the text as follows for Joint venture:**

This is to certify that M/s. .... who has formed a JV with M/s. .... and M/s. .... for participating in this bid, is a reputed company with a good financial standing.

If the contract for the work, namely ..... [funded by the World Bank] is awarded to the above Joint Venture, we shall be able to provide overdraft/credit facilities to the extent of Rs. .... to meet the working capital requirements for executing the above contract.

*[This should be given by the JV members in proportion to their financial participation.]*

**FORM OF AFFIDAVIT FOR CORRECTNESS OF INFORMATION AND DOCUMENTS SUBMITTED WITH BID**

*[Reference ITB 20.2]*

*[This affidavit should be on a non-judicial stamp paper of Rs.10/- and shall be attested by Magistrate/ Sub-Judge/ Notary Public]*

I, ..... (*name of the authorised representative of the Bidder*) solemnly affirm and state as under:

1. I hereby certify that all the information and documents furnished with the Bid submitted online in response to IFB number ..... date ..... issued by ..... (*authority inviting bids*) for ..... (*name and identification of Goods & Related Services*) are true and correct.
2. \*I hereby certify that I have been authorised by ..... (*the Bidder*) to sign on their behalf, the Bid mentioned in paragraph 1 above.

Deponent

Place: .....

Date: .....

*\* This sub-paragraph is not applicable if the Bidder is an individual and is signing the Bid on his own behalf.*

**SECTION V. – ELIGIBLE COUNTRIES**

**Public Information Centre**

**Eligibility for the Provision of Goods, Works and Non-Consulting Services in  
Bank-Financed Procurement**

In reference to ITB 4.7 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this bidding process:

Under ITB 4.7(a) and 5.1: *None*

Under ITB 4.7(b) and 5.1: *None*



## SECTION VI. BANK POLICY - CORRUPT AND FRAUDULENT PRACTICES

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011.

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts<sup>6</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>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>
  - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;<sup>9</sup>
  - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;<sup>10</sup>
  - (v) "obstructive practice" is:
    - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to

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<sup>6</sup> In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

<sup>7</sup> For the purpose of this sub-paragraph, “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> For the purpose of this sub-paragraph, “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>9</sup> For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

<sup>10</sup> For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution.

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 paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare mis-procurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank’s sanctions procedures,<sup>11</sup> 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;<sup>12</sup>
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

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<sup>11</sup> A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank’s sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

<sup>12</sup> A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

## **PART 2 - SUPPLY REQUIREMENTS**

## **SECTION VII – SCHEDULE OF REQUIREMENTS**

**1. LIST OF GOODS AND DELIVERY SCHEDULE**

Line Item No	Description of Goods	Quantity	Physical unit	Final (Site) Destination as specified in BDS	Delivery (as per Inco terms) Date		
					Earliest Delivery Date	Latest Delivery Date	Bid Security in Indian Rupees
1.	2.	3.	4.	5.	7.	8.	9.
<b>1</b>	<b>Digital Water Level Recorders (DWLR)</b>						
1a	Supply of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>90 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications	29	<b>Nos.</b>	As per list of Installation Sites for DWLR	6 months from the date of signing of contract	6 months from the date of signing of contract	
1b	Supply of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>120 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications	37	<b>Nos.</b>	As per list of Installation Sites for DWLR	6 months from the date of signing of contract	6 months from the date of signing of contract	

*[The Purchaser shall fill in this table, with the exception of the column “Bidder’s offered Delivery date” to be filled by the Bidder]*

**2. List of Related Services [ITB Clause 14.8(b)] and Completion Schedule**

<b>Service</b>	<b>Description of Service</b>	<b>Quantity</b>	<b>Physical Unit</b>	<b>Place where Services shall be performed</b>	<b>Final Completion Date(s) of Services</b>
<b>S-1</b>	<b>Digital Water Level Recorders (DWLR)</b>				
S-1a	Installation, Testing and Commissioning of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>90 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications	<b>29</b>	<b>Nos.</b>	<b>As per list attached in Uttarakhand State</b>	12 months from the date of signing of contract
S-1b	Installation, Testing and Commissioning of Digital Water Level Recorders (DWLR) with Non-vented hydrostatic Pressure type water level sensors & barometric pressure correction for individual station with water level measurement range up to <b>120 m</b> and sensor cable length as specified in Table-1 - List of Installation Sites for DWLR along with junction box and 5 meter signal cable , to be installed at depth as per Table-1 and necessary accessories with battery operated data logger and telemetry system based on GSM & GPRS, Complete as per the technical specifications	<b>37</b>	<b>Nos.</b>	<b>As per list attached in Uttarakhand State</b>	12 months from the date of signing of contract
S-2	Integration of GSM & GPRS data received from DWLR stations with the existing State Water Informatics Center (SWIC) at Roorkee with all ancillary equipment as per technical specifications	01	Nos.	At State Water Data Centre, Roorkee	9 months from the date of signing of contract
S-3	Four Years Operation & Maintenance and Comprehensive Warranty for DWLRs with Telemetry system along with accessories, installed	01	Nos.	<b>As per list attached and At</b>	Continuous activity. for Four years after

	at designated locations and Data Center equipment as specified in schedule of requirement after final acceptance and upgradation of all software associated with DWLR systems. This includes replacement of batteries as & when required at bidders cost. The cost of Communication using GSM &GPRS sim and other related charges.			State Water Data Centre, Roorkee	successful commissioning and final acceptance certificate of DWLR
S-4	Training of the purchaser's personnel at the supplier's plant and/or on site in assembly, startup, operation, maintenance and/or repair of the supplied goods. Course topics will include sensor calibration, data logger configuration, data downloading, data retrieval, collection, Trouble shooting, processing maintenance requirements and procedure for equipment configuration, installation, site testing and commissioning including training kit containing course material in soft and hard copies as per technical specification.	05	Nos.	At State Water Data Centre, Roorkee & other parts of the State	Continuous activity

**Table-1 - List of Installation Sites for DWLR  
Irrigation Department Uttarakhand**

Note: (i) The DWLRs with Telemetry system shall be supplied, installed and commissioned on the Piezometers located at different places within the 5 districts of Uttarakhand covering various river basins under the supervision of the respective Geo-hydrogeologist.

S. No.	Name of District	Name of Location	Lat. (Deg. N)	Long. (Deg. E)	Proposed Depth of Piezometer	DWLR Water level measurement Range
1	Haridwar	Manglaur	29.785	77.857	90	90
2		Iqbalpur	29.872	77.793	90	90
3		Rehmatpur	29.902	77.948	90	90
4		Ibrahimpur Deh	29.895	77.867	90	90
5		Shikarpur	29.804	77.949	90	90
6		Kotwal	29.785	77.790	90	90
7		Mohitpur	29.929	77.774	100	120
8		Banjarewala	30.124	77.883	100	120
9		Fakhreda	29.894	77.735	100	120
10		Rasulpur	29.711	78.115	90	90
11		Kuankheda	29.758	77.978	90	90
12		Prahladpur	29.684	77.989	90	90
13		Roshanabad	29.971	78.073	120	120
14		Bhaldiyana Colony Pathari	29.795	78.077	120	120
15		Pathari	29.832	78.074	120	120
16		Jiyapota	29.878	78.128	120	120
17		Teliwala	29.952	77.968	120	120
18		Aurangabad	29.987	78.007	120	120
19	Nainital	Haldwani	29.216	79.527	120	120
20		Chorgaliya	29.105	79.694	120	120
21		Lamachaur	29.223	79.431	120	120
22		Chakluwa	29.249	79.358	120	120
23		Kaladhungi	29.281	79.349	100	120
24		Bailpadav	29.311	79.204	100	120
25		Chhoi	29.354	79.146	120	120
26		ID Ramnagar	29.395	79.132	120	120
27	US Nagar	Pantnagar	29.031	79.469	90	90
28		Rudrapur	28.994	79.402	90	90
29		Rameshwaram	28.947	79.462	90	90
30		Kichha	28.909	79.513	90	90
31		Sisaiya	28.878	79.676	90	90
32		Sitarganj	28.931	79.702	90	90
33		Wamanpuri	28.955	79.697	90	90



34		Jhankat	28.940	79.901	90	90	
35		Khatima	28.925	79.961	90	90	
36		Tanakpur	28.920	79.965	90	90	
37		Chakarpur	28.957	80.006	90	90	
38		Dhela	29.346	79.007	90	90	
39		ITI Kashipur	29.190	78.993	90	90	
40		Mahuakheraganj	29.136	78.943	90	90	
41		Jaspur	29.278	78.832	90	90	
42		Patrampur	29.334	78.874	90	90	
43		Dineshpur	29.045	79.319	90	90	
44		Gadarpur	29.043	79.245	90	90	
45		Bajpur	29.159	79.154	90	90	
46		Bannakhera	29.246	79.169	90	90	
47	Dehradun	Chhiderwala	30.087	78.186	120	120	
48		Rishikesh	30.101	78.288	120	120	
49		Satya Narayan mandir	30.048	78.215	120	120	
50		Lacchiwala	30.210	78.133	120	120	
51		Jhabrawala	30.142	78.097	120	120	
52		Doiwala	30.179	78.124	120	120	
53		Subhasnagar	30.272	77.991	120	120	
54		Mehuwala	30.312	77.982	120	120	
55		Ganeshpur	30.303	77.911	100	120	
56		Selakui	30.367	77.962	100	120	
57		Jhajhra	30.346	77.918	100	120	
58		Jhibarhedi-2	30.297	77.936	100	120	
59		Dhakrani	30.455	77.733	120	120	
60		Dakpaththar	30.494	77.790	120	120	
61		Bairagiwala	30.430	77.753	120	120	
62		Shekhowala	30.361	77.809	120	120	
63		Redapur	30.409	77.793	120	120	
64		Timli	30.372	77.722	120	120	
65		Pauri	Sigaddi	29.791	78.411	120	120
66			Kotdwar	29.742	78.519	120	120

(ii) The location/numbers of DWLR, as proposed, may vary depending upon the field condition/requirement.

### 3. TECHNICAL SPECIFICATIONS

#### BACKGROUND

Irrigation Research Institute, Roorkee (IRI) is a unit of Irrigation Department, Govt. of Uttarakhand. IRI was established to carry out Research and Development work under the aegis of the U. P. Irrigation Department in the year 1928 as a small research unit in Lucknow. The success of this small unit was duly acknowledged and in 1945 activities were expanded and were shifted to Bahadrabad (Roorkee) in 1946, where facilities in abundance were available for the physical modeling of hydraulic structures.

The research unit at Roorkee rose to a full-fledged Institute in 1954. The Institute gradually developed into a pioneer research station and is now engaged in research and development activities for many hydropower and water resources projects in India. After formation of new State Uttarakhand in Nov., 2000, IRI became a unit of Irrigation Department, Uttarakhand.

Irrigation Research Institute is represented in advisory capacity on several national technical committees of BIS, CBI&P, IRC and MOST. The Institute maintain a close liaison with several technical committees of Water Resources Development Council (WRDC), BIS, Manak Bhawan, New Delhi, Departments of Civil Engineering, Water Resources Development and Management (WRD&M), and Alternate Hydro Energy Centre (AHEC), Indian Institute of Technology, Roorkee, Central Board of Irrigation and Power, New Delhi, National Institute of Hydrology, Roorkee, Central Building Research Institute, Roorkee, State Engineers Academy, Roorkee, etc. in its research activities.

The institute was awarded by several prestigious awards. Recently Irrigation Research Institute Roorkee was chosen for best R&D institute in water resources sector award 2019 by Central Board of Irrigation and Power, New Delhi. (For more details, refer to the website of IRI <http://www.iri.res.in>).

Based on the successful outcome of the past two phases of the Hydrology Project, the Government of India with World Bank assistance initiated a follow up project – National Hydrology Project (NHP)-Approach towards Integrated Water Resources Management ([www.indiawrm.org](http://www.indiawrm.org)). The National Hydrology Project (NHP) will be implemented in eight years (2017-2024) with the funding of USD 350 million.

The project aims to improve the extent, quality, and accessibility of water resources information and strengthen the capacity of targeted water resources management institutions in India. The Project will cover the entire country and will be coordinated by the MoWR, RD & GR. The Project has adopted a four-pronged approach: (a) modernizing monitoring, including establishing comprehensive, nationwide, automated, real-time monitoring and data management systems for surface water and groundwater (both quality and quantity); (b) enhancing analytical tools for water resources assessment, hydrologic and flood inundation forecasting, water infrastructure operations, groundwater modelling, and river basin and investment planning; (c) transforming knowledge access, using cloud computing, Internet, mobile devices, social media and other communication tools to modernize access to and visualization of customized water information by all stakeholders; and (d) modernizing institutions through investments in people and institutional capacity.

In line with the four-pronged strategy described above, the project is divided into four components: (A) Water resources monitoring systems; (B) Water resources information systems; (C) Water resources operations and planning systems; and (D) Institutional capacity enhancement. Essentially the data systems (A) will feed into the information systems (B) to improve planning and operations and to produce water information products (B and C), all of which will provide the basis for improved decision-making related to investment planning, water resources allocation, flood and drought management, and irrigation capacity and efficiency. Technical capacity for systems, planning, operations and policy and decision-making will be built under Component D.

The key outcomes of the project are listed below:

- To establish a National Water Information System with multi-disciplinary data from States and Central agencies and to facilitate data exchange amongst agencies on a real time basis
- To create National information system with generic models for improved water resources assessment
- To enable states to manage floods and dry season operation by using a river basin approach
- To operate reservoirs and irrigation systems more efficiently leading to water savings and improved productivity.

The project will cover all major river basins of India and will require strong collaboration among Central and State levels of government. All States and Union Territories will participate in the Project given their constitutional mandate for water resources management. Central agencies will also participate given significant inter-State aspects of water management (most large river basins and aquifers cross State boundaries) and the need for a consistent National Water Information Base. For the implementation of NHP in Uttarakhand State, Irrigation Department, Govt. of Uttarakhand has been nominated as State Implementing Agency for Uttarakhand State by Department of WR, RD & GR, Ministry of Jal Shakti, Govt. of India. Irrigation Department, Govt. of Uttarakhand has nominated IRI for implementing NHP in the State of Uttarakhand as nodal agency.

Under component C of NHP, one of the major activities is to undertake monitoring of fluctuation of ground water table in plain area of the State. IRI will develop this activity with the assistance from a consortium of International and National Consultants in Uttarakhand. Accordingly, installation of DWLR in Uttarakhand State will be executed to solve the above purposes.

## **1.0 SCOPE OF WORK**

- (i) Complete supply, installation, testing, commissioning of Digital Water Level Recorders (DWLR) and telemetry system in the identified piezometers including associated civil works, sensors, data logger, software, hardware and ancillaries' equipment, etc.
- (ii) Technical design, supply, installation, testing, commissioning of the Digital Water Level Recorder (DWLR) for real time hydrological data collection network and establish data

communications using GPRS & GSM telemetry between the remote stations and existing State Water Informatics Center (SWIC) at Roorkee and later through the e-SWIS/ e-GEMS at New Delhi. Further this DWLR station data shall be accessible through e-SWIS cloud at the office of State Water Informatics Center (SWIC) at Roorkee. This includes, but is not limited to acquiring service, and maintaining all aspects of the service during the warranty period.

- (iii) Testing the data acquisition and data communication system using GSM/GPRS between the remote stations and the existing State Water Informatics Center (SWIC) at Roorkee. The SIM card shall be supplied by the bidder and the availability of network shall be the responsibility of the supplier
- (iv) Establish communication between remote DWLR stations with existing GSM & GPRS receiving system in State Water Informatics Center (SWIC) at Roorkee along with all required arrangement to collect GSM & GPRS data from DWLR station network and required all acquiring hardware and software, installation, configuration. No data processing software has to be provided by the bidder at state data centre.
- (v) Perform on-site assembly, start-up of the supplied goods.
- (vi) Complete commissioning integration, testing & organization of the whole system.
- (vii) Provide operation & maintenance services during comprehensive warranty period to commence immediately after the expiry of warranty period, which shall include all components at the remote stations DWLR Stations as well as all newly acquired equipment's in the data center.
- (viii) Provide installation and maintenance reports as required by the Purchaser and any delay is not acceptable in time schedule provided by supplier.
- (ix) Supply detailed operation and maintenance manual for each component in the system and compile knowledge and working supply type Manual for training purpose (including multimedia training kits).
- (x) Provide classroom and field training to the field staff & State Water Informatics Centre personnel on the DWLR data acquisition system. This includes operation and maintenance procedures. Training will also occur at selected field locations as selected by the Purchaser.
- (x) A guarantee by the manufacturer that all equipment being provided will be supported for a minimum of ten years after the commissioning of the Digital Water Level Recorder (DWLR) system.
- (xi) Calibration and validation of the installed system shall continue during the entire Warranty period on half yearly basis.
- (xii) The remote stations shall store the data for at least one year.
- (xiii) Supply a detailed operation and maintenance manual for each appropriate unit of supplied goods.

- (xiv) Security of installed equipment's against theft and vandalism will be the responsibility of the Bidder till successful installation, commissioning, and site acceptance testing
- (xv) Although all accessories and fixtures required for installation of the equipment & their specifications have been specified in technical specifications however, bidder shall ensure the satisfactory performance & functioning of DWLR system complete, for this if any accessory or items are required that shall be provided by bidder, the cost towards that is deemed to be included in the cost tendered by the bidder, no extra cost shall be paid to the bidder on this account.
- (xvi) Ensure that all software licenses and maintenance agreements are in the name of Purchaser and should seek full support and updates for such software for the duration of the warranty period. All the software licenses should be valid for the design life of the system that is 10 years from date of commissioning.

## **GENERAL FEATURES/SPECIFICATIONS**

- i. It is imperative that all instrumentation, other equipment shall operate effectively. In addition, the input/output protocols of individual items of equipment (DWLR) shall interface accurately. For this purpose, the interfaces between the sensors and the Data logger, and transmission equipment and that between State Data Center (SDC) are ensured to be compatible and trouble free.
- ii. The specific electrical, electronic and mechanical design parameters mentioned in case of individual sensors are indicative of a typical design and variations therein can be considered provided the output, resolution accuracy and ruggedness against environment are not compromised in any manner. In such cases where the supplier proposes to deviate from the specifications a full technical justification shall be provided. The Purchaser is not bound to accept such justification.
- iii. It shall be the Suppliers responsibility to ensure that the installation is robust and shall continue to work in extreme weather conditions.
- iv. Reliability of operation during normal and extreme weather conditions is imperative.
- v. The sensors and all accessories and facilities shall be fully compatible with the data acquisition and transmission system. The sensors and DCPs shall form a complete automated data acquisition storage and transmission system.
- vi. In case of any of the sensors, the equipment is supplied with certain optional features which are required to be ordered separately and are not included as a part of the offer; the same shall be clearly mentioned in the bid along with the functions of such features. The purchaser shall be provided with all necessary information which shall enable him to take an informed decision at the time of entering into the contract as to the ordering any such feature or otherwise.
- vii. The Bidder shall enclose technical literature with photographs in respect of all the sensors, datalogger and other equipment being quoted. The features which are mentioned in the literature but are not being quoted as a part of the current system shall be clearly brought out in the bid. In the event of failure of the Bidder to explicitly

mention any such exclusion, it shall be taken as inclusion of all features mentioned in the bid as a part of the supply and the Bidder shall have to provide all such features/ accessories without claim of extra cost to the purchaser.

- viii. Although all accessories and fixtures required for installation of the equipment & their specifications have been specified in technical specifications however, bidder shall ensure the satisfactory performance & functioning of DWLR system complete, for this if any accessory or items are required that shall be provided by bidder, the cost towards that is deemed to be included in the cost tendered by the bidder, no extra cost shall be paid to the bidder on this account.
- ix. Bidders shall give general layout of all the installations for types of stations and materials including that for the equipment at the time of bidding. Afterwards, the successful Bidder shall furnish the details of all the mounting arrangements.
- x. Security of installed equipment's including theft and vandalism will be the responsibility of the Bidder till successful installation, commissioning, two stages of site acceptance testing.
- xi. All fixings shall be non-corrodible.
- xii. The Bidder has to specify how the calibration will be carried out and has to use his own calibration equipment during the period of warranty.
- xiii. Ensure that all software licenses and maintenance agreements are in the name of Purchaser and should seek full support and updates for such software for the duration of the **Warranty** Period. Also, all the software licenses should be valid for the design life of the system, that is 10 years from date of commissioning.

## 2.0 TECHNICAL SPECIFICATIONS OF EQUIPMENT

The Goods and Related Services shall comply with following Technical Specifications and Standards:

The DWLR unit complete with accessories to measure water level and temperature data at specified intervals and downloading data from DWLR site to uploading the same to office desktop should work in an integrated manner.

### Specification for the DWLR, non-vented pressure Type (GW) & with 100 m and 150 m sensor Telemetry System

S. No.	Feature	Value
<b>1</b>	<b>Site Conditions</b>	
1.1	Ambient Temperature	From -5 to 60 °C
1.2	Humidity	5-100%
1.3	Altitude	0-2000 m
<b>2</b>	<b>Sensor</b>	
2.1	Sensor Type	Submersible pressure transducer with Non-

		Vented Pressure sensor with Barometric pressure correction for individual station
2.2	Measuring Range	a) 0-100 m of water column b) 0-150 m of water column
2.3	Dimension	Outer diameter of sensor unit: < 80 mm, (for sensor)
2.4	Material	Stainless steel (SS-316) or other better corrosion resistant material
2.5	Ingress Protection	IP68 for sensor
2.6	Accuracy	0.2% Full Scale or better
2.7	Resolution	3 mm
2.8	Reproducibility	0.1% full scale or better
2.9	Long Term Stability	0.1% Full scale and should ensure long term stability without any field calibration requirements except barometric compensation
2.10	Temperature Measuring Range	0 to 50°C
2.11	Temperature Measuring Accuracy	Better than $\pm 0.2^{\circ}\text{C}$
2.12	Burst Pressure	$\geq 3$ Time Full scale
2.14	Overload Pressure	1.5 time full scale without effect on calibration
2.15	Over-voltage Protection on supply & sensor wires	Should include lightening, over-voltage and surge protection
2.16	Output	SDI-12, RS-485, 4-20 mA or compatible with data logger.
2.17	Installation	The system should be provided with a suspension bracket, well enclosure /canopy & junction boxes (if required) allowing secure installation within the Piezometers' headwork, including appropriate cable mounting accessories to allow the sensor to be adjusted to the required depth.
2.18	Direct Read Sensor Cable	The cable shall have following features: <ul style="list-style-type: none"> <li>• Strength members for good longitudinal stability of cable</li> <li>• The cable and contacts should be fixed or quick connect.</li> <li>• Cable screen to be connected to the data logger ground terminal to minimize</li> </ul>

		<p>electrical interference.</p> <ul style="list-style-type: none"> <li>• A cable suspension bracket allowing the DWLR to be adjusted to the required depth, in a stable and reproducible manner.</li> <li>• Corrosion and moisture free as the equipment has to work under water condition.</li> <li>• Cable should have good flexibility.</li> <li>• Should be of Polyurethane Jacket or better</li> <li>• The electrical wires shall have sufficient conductivity to allow for extension of the cable to up to 200m without degrading accuracy, stability and data communication.</li> </ul>
2.19	Data Logger with GSM & GPRS modem	
2.20	Atmospheric Pressure correction	Atmospheric Pressure correction automatically
2.21	Resolution of Measurement	16-bit ADC with +/- 1 LSB accuracy (1 mm or better)
2.22	Measuring interval and measuring modes	Should be programmed to store data from 1 minute one reading to 24 hours one reading.
2.23	Settling up Time	< 30minutes
2.24	Recording Capacity	Shall store data of at least 1 year
2.25	Memory Type	Non-Volatile flash memory of that can store one year of data (with 15 minute logging interval) & expandable upto minimum 1 GB using USB/SD Card
2.26	Power Supply	Should be equipped with lithium or alkaline battery pack, giving at least 5 years operation (with one transmission and four recordings per day). Battery must be replaceable in the field or in local offices of the implementing Agency or supplier. Replacement batteries must be readily available India.
2.27	Battery Voltage Monitoring	Monitoring and transmission of Battery Voltage level
2.28	Display time	1 Second
2.30	Built in clock	Accurate to $\pm 1$ minute per year
2.31	Displayed Time Resolution	1 second



2.32	Protection	IP68 with Impact Resistant for Water level sensor IP65 (for data logger) with impact resistant
2.33	Port for configuration	One serial port for communication with laptop for programming
2.34	Ports for telemetry	Port for communication with GSM & GPRS telemetry
2.35	Operating System	Windows software for system configuration / communication
2.36	Licenses	All required licenses shall be included
2.37	Real time clock	Time synchronization facility shall be provided with IST
2.38	Accessories	Serial cable and adaptor if required along with all accessories and fixing units etc.
<b>3</b>	<b>Communication Interface</b>	
3.1	Computer Interface	The Logger must be capable of connection to a computer via USB 2.0/USB 3.0 and supply should include the necessary interface cables.
3.3	File Format	The format of the data downloaded by communication interface shall be in standard CSV format. (as specified in technical Specifications) which is compatible with e-SWIS software.
<b>4</b>	<b>GSM &amp; GPRS Transmitters:</b>	
4.1	Transmission System	GPRS/edge-based data transmission system
4.2	Frequency range	900 MHz: 824-960 MHz/1800MHz:1710-1880 MHz 4G and better
4.3	Performance	Data Reception availability of 95% or better
4.4	Communication Direction	Utilize GSM / GPRS network for two-way connection with FTP TCP/IP (INTERNET) connection and SMS
4.5	Transmission trigger	Data collection to be triggered by interrogation from Data Center, or by event-based transmission triggered by remote site
4.6	Power Saving	Ability to disable interrogation system in order to save power at remote site
4.7	Communication Protocol	Data transmission to execute FTPS to transmit

		data to the State Water Data Center
4.8	Accessories	All associated equipment, including Antenna all cables and mounting hardware
<b>5</b>	<b>Software for Datalogger</b>	
5.1	Operating System	Windows software for system configuration, transfer and analysis of data to computer
5.2	Version	English language version
5.3	License	All required licenses included
<b>6</b>	<b>General Features:</b>	
6.1	Battery	The battery should be easy to replace, and easily available in the market. The battery shall also provide power supply to the DWLR Sensor.
6.3	Tools	Complete tool kit for installation and routine maintenance
6.4	Manuals	Full documentation and maintenance instructions in English
6.5	Training	As per mutual concern at the time of installation of telemetry system

### 3. Specifications for Data Services (Data Acquisition Software)

Bidder is to acquire, manage, and operate a data collection, storage, processing, and dissemination to support the following activities during warranty period for DWLRs with telemetry system.

Note: A server and storage system for additional backup shall be provided at State Water Informatics Center at Roorkee.

S No.	Parameter	Functionality requirement
1.	Data collection performance	<p>Bidder should ensure seamless data and responsible for</p> <ul style="list-style-type: none"> <li>Real-time data collection at all DWLR stations &amp; shall ensure seamless data transfer.</li> <li>The data from DWLR stations will be transmitted through GSM/GPRS in the standard CSV format (as specified in technical Specifications) to FTP server at the SWIC.</li> <li>From SWIC to e-SWIS software through internet. This data will be processed and disseminated via E-SWIS cloud. The processed data from e-SWIS in the form of reports/bulletins will be transmitted to SWIC, Roorkee.</li> </ul>

2.	Data maintenance	All activities pertaining to installation, data services, Operation & maintenance at the remote DWLR station will be maintained by the bidder during the warranty and maintenance period and will include a log of activities during every station visit.
3.	Reports & Bulletins Storage system	Storage of all data, reports & bulletins in the proper manner and easy to access. This data will be backed up in such a way that it is not possible to lose data that has already been stored with the use of mirrored or replicated storage.
4.	Data maintenance	All activities occurring at the remote station will be recoded and viewed over the web. This data base will be maintained by the bidder during the warranty and maintenance period and will include a log of activities during every station visit.
5.	Help desk	Bidder to operate help desk to respond to queries from the purchaser. Help desk will be able to solve any problems related to data collection, processing, and dissemination to the purchaser. Help desk shall be available from 8am to 6pm, Monday – Sat.

#### 4.0 Specifications for Data Transmission System (Telemetry)

The transmission system should be tightly integrated with the DWLR System (DAS), along with compact remote/field mounted systems consisting of sensor, data logger, modem and antenna.

- (i) The system should be watertight (IP68 for sensor & IP65 for data logger or equivalent) and impact resistant;
- (ii) The system should allow easy access for monitoring measurements without removing complete system
- (iii) System must be power-supplied by standard lithium/alkaline batteries for operation time of at least two years by one set of batteries (one transmission per day, 4 measurements per day) and must be placed in a water resistant (IP65 or equivalent) enclosure. The replacement of batteries during warranty period would be responsibility of the bidder, at bidder's cost.
- (iv) The system must have integrated energy management system using free programmable time slots for measurement and transmission to minimize power consumption;
- (v) The connectors should be water-tight (IP68 or equivalent).
- (vi) An alarm notification must be sent by the system via SMS to user defined mobile phone numbers through suitable means of communication for user defined parameters. This includes battery performance (battery voltage).
- (vii) Standard USB / RS-232 communication interface should be available for set up and configuration and must be easily accessible.
- (viii) Datalogger shall be provided with Atmospheric Pressure sensor at individual station, and Atmospheric Pressure correction shall apply automatically on the raw water level reading from non-vented water level sensor. The details of correction procedure shall be fully

documented in user manual. Provision shall be made to view and store the raw and compensated water level data along with atmospheric pressure and Water Temperature data in datalogger memory

- (ix) All measurement and set up options, data download and programming of data logger shall also be done by online session similar to all functions at site by direct connection to a PC
- (x) Data download / retrieval from remote DWLR station to existing State Data Center Server via GSM & GPRS network shall be provided. The data from remote station should be in standard CSV format (as specified in technical Specifications) which is compatible with e-SWIS software
- (xi) The software should be provided to allow download the data from the DWLR data logger to a Laptop/hand held devices in the field. The downloaded data shall be in standard CSV format (as specified in technical specifications) which is compatible with e-SWIS software.

## **5.0 Specifications for Data Processing Hardware at Data Centre**

Hardware at State Data Center established for RTDAS at SWIC, Roorkee shall also be used for the aforesaid purposes

The purchaser will provide access to the existing State Water Informatics Center (SWIC) at Roorkee. The purchaser will also provide a Local Area Network connecting the server with the other nodes on the network for analysis purposes.

The data collected at site from various DWLR stations will be stored and transmitted through GSM / GPRS telemetry and shall be received by existing GPRS & GSM receiving station at State Water Informatics Center (SWIC) at Roorkee. Thereafter, data shall be transmitted through internet to e-SWIS software for further processing in the form of reports /bulletins. Subsequently, e-SWIS software will send the decoded data along with reports /bulletins to State Data Centre , Mohali through Internet and e-SWIS cloud. Which would be required to be appropriately stored by the bidder in the already available server in state date centre. The necessary automated arrangement is to be made by Bidder

## **6.0 GSM & GPRS TRANSMISSION OF DATA FORMAT TO e-SWIS / e-GEMS:**

The format for GSM & GPRS communication is as specified below

Table below gives the GSM / GPRS data parameters and their identification code format which is required to transmit the data from data logger to FTP server.

### **FORMAT:**

&Station ID, Date and Time,Mobile Number,Battery,Water Temp,Corrected Water Level

Above data string will be ended with New-Line character and a separate data string will be for each measurement cycle.

Example Data Spring:

&738D1E76,07/01/19 00:00,9849556430,13.5, 22.3,26.347

&738D1E76,07/01/19 06:00,9849556430,13.5, 24.5,26.347

&738D1E76,07/01/19 12:00,9849556430,13.5, 26.8,26.347

&738D1E76,07/01/19 18:00,9849556430,13.5, 24.3,26.347

Sl. No.	Channel no.	Parameter
1.	Station ID	Start of String should be '&' and Eight Characters Station ID provider by bidder
2.	Date and Time	Measurement date and Time in DD/MM/YY HH:MM in IST of the measurement cycle
3.	Mobile Number	Mobile no (10 digit) of remote station SIM
4.	Battery	Battery voltage in Volts with 1 right digit at measurement date and time
5.	Water Temp	Water Temperature in °C with 1 right digit at Measurement date and time
6.	Corrected Water Level	Water level after atmospheric pressure compensation in Mts. with 3 right digit at measurement date and time

**Note:**

1. If any sensor is not connected then it should transmit '--' characters in place of the sensor value.
2. Attached format is indicative, recommended for standardised data acquisition for development of unified Water Information System.

## 7.0 TRAINING AND DOCUMENTATION

The Bidder is required to provide an extensive training programme for the system. The training set forth in the following paragraphs is a minimum requirement and the bidder should propose any additional training that he considers critical for long term success of the system operations.

The Bidder is expected to provide an outline or table indicating the contents of each of the required courses. The table shall describe the specific topics to be covered for each day of the training period.

The Bidder is responsible for the salaries of the training instructors and all training materials. The costs of travel, transportation and per diem for the trainees shall be borne by the Purchaser.

Training shall be provided by the bidder in several phases. The training shall include both classroom and field trainings and will be continued during warranty period. The bidder is required to have DWLR equipment specialists.

7.1 The Bidder shall provide mandatory trainings as training modules as part of the Tender given as under:

S. No.	Description	Numbers of training	Number of Participants per session
1	User Training Course for senior management. (one day)	3 (1 before/during commissioning and 2 during warranty)	10-15
2	Operation and Maintenance course (3 days). Course topics will include sensor calibration, data logger configuration, data downloading, data retrieval, collection, compilation, processing, maintenance requirements, and procedures for equipment configuration, installation, site testing and commissioning.	2 (1 before /during commissioning and 1 during warranty)	20-30

All aspects of the electrical, instrumentation and telemetry equipment being supplied shall be covered in the courses and full documentation shall be provided. The documentation and kits shall be got approved from purchaser in advance. The course shall provide detail documentation and shall ensure that the purchaser's personnel shall be able to modify settings/ parameters without reference back to the Supplier. The places / sites for these training will be decided later by the purchaser.

The training course will take place as decided by the Purchaser. In case of formal training, the Purchaser will provide classroom and other logistics. The Bidder will facilitate the professional and the training materiel. On-the-job training will be provided by the Bidder in conjunction with the installation of hydro-meteorological stations and during the course of maintenance as required.

7.2 TA/ DA of the trainees shall be borne by the purchaser.

7.3 Training kit containing course material in soft as well as hard copy shall be provided by the Bidder.

7.4 All logistical arrangement such as projector, training space etc for training is to be made by purchaser.

## 8.0 PREVENTIVE MAINTENANCE

The bidder shall be responsible for operation and maintenance of all stations /components of installations, commissioning, site acceptance and operation tests. All equipment maintenance cost, repairs, replacements and repairs to civil work shall be borne by the bidder during the warranty Period. The scope of O&M support would include all materials and services including replacement of components and consumables (batteries etc.) mandatory spare parts required to

ensure smooth and sustainable operations of the entire system. The bidder shall provide monthly maintenance reports during the course of maintenance. The bidder shall supply a Manual specifying all the faults experienced by the system together with an account of how such faults have been rectified. Bidder shall provide the list of mandatory spare parts & shall ensure the availability of sufficient mandatory spare parts in its go down for fulfilling its service obligations during warranty period and AMC. The same can be inspected by Engineer-in Charge or its authorized representative.

The bidders shall ensure the following visits at remote site for preventive maintenance. The bidder should take time stamped geo tagged photographs of the equipment during each maintenance visit (either scheduled or unscheduled visit). The photographs should show the condition of equipment before maintenance, during maintenance and after maintenance.

The bidders shall ensure the following visits at remote site for preventive maintenance

**SCHEDULE SHOWING FREQUENCY OF SCHEDULED VISITS FOR ROUTINE AND PREVENTIVE MAINTENANCE**

Sl. No.	Station Category	Minimum Preventive Visits	Remarks
1	Data Server maintenance	4	Every Quarter and also on need basis
2	DWLR stations	2	Every Half Yearly and also on need basis

**8.1 Operation & Maintenance**

Bidder shall provide at least one dedicated Service Engineer cum operator at the State Water Informatics Center for Operation of DWLR system and ensure seamless data transfer from remote stations to State Water Informatics Center in data acquisition software as per provisions in technical specifications.

The Service Engineer shall have experience of working on Hydro met stations/ Instrumentation /SCADA system for period of at least 3 years and shall be well versed with Operation and Maintenance aspects of DWLR systems.

Operation and Maintenance shall include free of cost repairs/ replacement of hardware and Software necessary to keep the system functional for the period of five years from Date of Installation

## TECHNICAL RESPONSIVENESS FORM

9. Bidder shall furnish clause by clause commentary against the laid down technical specification and standards as per the format given below:

### **(A) Summary of Instructions**

- (i) Particulars of Manufacturer and local agent cum representative are to be given under rows Model and Address.
- (ii) All entry boxes in column “Specification and Standards as offered in by Bidder” shall be filled-in accurately and comprehensively. Quantitative fields shall be filled in accurately. It is not acceptable to use ‘Yes’, No, Compliant or similar evading words. Following format is designed to help the Bidder to understand the requirements of the equipment being procured. The Bidder must describe in the format how his bid responds to the technical requirements of the equipment. Bidder to note that one or two word responses (e.g. “Yes”, “No” “will comply” or similar evading words) are normally not sufficient to confirm the responsiveness with the technical requirements, hence elaborate responses are sought from the bidders. In case deviation on the following technical requirements of equipment is not as per the minimum criteria mentioned, the bids may be declared “non-responsive” and would not further be considered for evaluation purposes.
- (iii) Requested materials and information shall be enclosed with the bid and be unambiguously associated with instruments as offered in the bid
- (iv) Negligence to comply with the instructions and requirements as stated above makes the bid liable to be rejected.
- (v) Abbreviations: OD-Outer Diameter; ID-Inner Diameter; FS-Full Scale; Pa-Pascal (unit of pressure), DWLR-Digital Water Level Recorder; DRS-Data Retrieval System; HHT-Hand Held Terminal, DCP- Data Collection Platform, AWS- Automatic Weather Station, ARG- Automatic Rain Gauge, AWLR- Automatic Water Level Recorder.
- (vi) Sample interval is the interval at which samples or sensor readings are taken. The recording / measurement interval defines the interval at which the data records are stored in memory. A data record can represent a single sample or the average of a number of samples. In particular the result of the wave suppression filter is a single record representing the average value of a number of samples.

### **(B) Entries requiring special attention:**

- (i) The longitudinal properties of the suspension cable affect the accuracy directly. Bidder to specify all factors affecting the longitudinal properties of the suspension cable: e.g. length creeps due to sensor and cable weight (submerged) longitudinal temperature coefficient, uncoiling after installation, expansion/contraction of jack due to temperature and aging, etc.
- (ii) The proposed maintenance interval and the recommended spares as offered in the bid shall be based on instrument deployment history. The training proposal shall be based on



experience in similar cases. Moreover, it shall consider the educational level and specialization of the trainees.

**(C) Bidder shall provide information in the formats given below:**

**(i) Make/ Model/ Local Agent etc.:**

Bidder	DWLR make/ model	Data Logger make/ model	Local Agent
	Model:		
Name / Complete Address/Website/Email	Model: Manufacturer: Name: Place: Tel: Fax: E-mail: Web:	Model: Manufacturer: Name: Place: Tel: Fax: E-mail: Web	Name: Address: Tel: Fax: E-mail: Web:

**(ii) Clause by Clause Commentary against laid down technical specifications:**

**Specifications of the DWLR, non-vented pressure Type (GW) & with 100 m & 150 m sensor telemetry system**

S. No.	Name of Goods-Its features	Required Specifications and standards as per bidding document	Specification and standard as offered in by Bidder	Remarks
	DWLR -- Water level Sensor with Temperature Sensor		Make: Model No: Manufacturer Name, address, email, phone, website, fax	
	<b>Site Conditions</b>			
	Ambient Temperature	From -5 to 60 °C		
	Humidity	5-100%		
	Altitude	0-		

	Sensor			
	Sensor Type	Submersible pressure transducer with Non-Vented Pressure sensor with Barometric pressure correction for individual station		
	Measuring Range	a) 0-100 m of water column b) 0-150 m of water column		
	Dimension	Outer diameter of sensor unit: <80 mm, (for sensor)		
	Material	Stainless steel (SS-316) or other better corrosion resistant material		
	Ingress Protection	IP68 for sensor		
	Accuracy	0.2% Full Scale or better		
	Resolution	3 mm		
	Reproducibility	0.1% full scale or better		
	Long Term Stability	0.1% Full scale and should ensure long term stability without any field calibration requirements except barometric compensation		
	Temperature Measuring Range	0 to 50°C		
	Temperature Measuring Accuracy	Better than $\pm 0.2^{\circ}\text{C}$		
	Burst Pressure	$\geq 3$ Time Full scale		
	Overload Pressure	1.5 time full scale without effect on calibration		
	Over-voltage Protection on supply & sensor wires	Should include lightning, over-voltage and surge protection		

	Output	SDI-12, RS-485,4-20 mA or compatible with data logger.		
	Installation	The system should be provided with a suspension bracket, well enclosure /canopy & junction boxes (if required) allowing secure installation within the Piezometers' headwork, including appropriate cable mounting accessories to allow the sensor to be adjusted to the required depth.		
	Direct Read Sensor Cable	<p>The cable shall have following features:</p> <ul style="list-style-type: none"> <li>• Strength members for good longitudinal stability of cable</li> <li>• The cable and contacts should be fixed or quick connect.</li> <li>• Cable screen to be connected to the data logger ground terminal to minimize electrical interference.</li> <li>• A cable suspension bracket allowing the DWLR to be adjusted to the required depth, in a stable and reproducible manner.</li> <li>• Corrosion and moisture free as the equipment has to work under water condition.</li> <li>• Cable should have good flexibility.</li> <li>• Should be of Polyurethane Jacket or</li> </ul>		

		<p>better</p> <ul style="list-style-type: none"> <li>The electrical wires shall have sufficient conductivity to allow for extension of the cable to up to 200m without degrading accuracy, stability and data communication.</li> </ul>		
	<b>Data Logger with GSM &amp; GPRS modem</b>		<p>Make: Model No: Manufacturer Name, address, email, phone, website, fax</p>	
	Atmospheric Pressure correction	Atmospheric Pressure correction automatically		
	Resolution of Measurement	16-bit ADC with +/- 1 LSB accuracy (1 mm or better)		
	Measuring interval and measuring modes	Should be programmed to store data from 1 minute one reading to 24 hours one reading.		
	Settling up Time	< 30 minutes		
	Recording Capacity	Shall store data of at least 1 year		
	Memory Type	Non-Volatile flash memory of that can store one year of data (with 15 minute logging interval) & expandable upto minimum 1 GB using USB/SD Card		
	Power Supply	Should be equipped with lithium or alkaline battery pack, giving at least 5 years operation (with one transmission and four recordings per day). Battery must be		

		replaceable in the field or in local offices of the implementing Agency or supplier. Replacement batteries must be readily available in India.		
	Battery Voltage Monitoring	Monitoring and transmission of Battery Voltage level		
	Display time	1 Second		
	Built in clock	Accurate to $\pm 1$ minute per year		
	Displayed Time Resolution	1 second		
	Protection	IP68 with Impact Resistant for Water level sensor IP65 (for data logger) with impact resistant		
	Port for configuration	One serial port for communication with laptop for programming		
	Ports for telemetry	Port for communication with GSM & GPRS telemetry		
	Operating System	Windows software for system configuration / communication		
	Licenses	All required licenses shall be included		
	Real time clock	Time synchronization facility shall be provided with IST		
	Accessories	Serial cable and adaptor if required along with all accessories and fixing units etc.		
	<b>Communication Interface</b>			

	Computer Interface	The Logger must be capable of connection to a computer via USB 2.0/USB 3.0 and supply should include the necessary interface cables.		
	File Format	The format of the data downloaded by communication interface shall be in standard CSV format. (as specified in technical Specifications) which is compatible with e- SWIS software.		
	<b>GSM &amp; GPRS Transmitters:</b>		Make: Model No: Manufacturer Name, address, email, phone, website, fax	
	Transmission System	GPRS/edge-based data transmission system		
	Frequency range	900 MHz: 824-960 MHz/1800MHz:1710-1880 MHz 4G and better		
	Performance	Data Reception availability of 95% or better		
	Communication Direction	Utilize GSM / GPRS network for two-way connection with FTP TCP/IP (INTERNET) connection and SMS		
	Transmission trigger	Data collection to be triggered by interrogation from Data Center, or by event-based transmission triggered by remote site		
	Power Saving	Ability to disable interrogation system in		

		order to save power at remote site		
	Communication Protocol	Data transmission to execute FTPS to transmit data to the State Water Data Center		
	Accessories	All associated equipment, including Antenna all cables and mounting hardware		
	<b>Software for Data logger</b>			
	Operating System	Windows software for system configuration, transfer and analysis of data to computer		
	Version	English language version		
	License	All required licenses included		
	<b>General Features:</b>			
	Battery	The battery should be easy to replace, and easily available in the market. The battery shall also provide power supply to the DWLR Sensor.		
	Tools	Complete tool kit for installation and routine maintenance		
	Manuals	Full documentation and maintenance instructions in English		
	Training	As per mutual concern at the time of installation of telemetry system		

**Specifications for Data Transmission System (Telemetry)**

Sr. No	Required Specifications and standards as per bidding document	Specification and standard as offered in by Bidder	Remarks
	The transmission system should be tightly integrated with the DWLR System, along with compact remote/field mounted systems consisting of Sensor, data logger, modem and antenna.		
1	The system should be watertight (IP68 for sensor & IP65 for data logger or equivalent) and impact resistant.		
2	The system should allow easy access for monitoring measurements without removing complete system.		
3	System must be power-supplied by standard lithium/alkaline batteries for operation time of at least two years by one set of batteries (one transmission per day, 4 measurements per day) and must be placed in a water resistant (IP65 or equivalent) enclosure. The replacement of batteries during warranty period would be responsibility of the bidder, at bidder's cost.		
4	The system must have integrated energy management system using free programmable time slots for measurement and transmission to minimize power consumption;		
5	The connectors should be water-tight (IP68 or equivalent).		
6	An alarm notification must be sent by the system via SMS to user defined phone numbers through suitable means of communication for user defined parameters. This includes battery performance (battery voltage)		
7	Datalogger shall be provided with Atmospheric Pressure sensor at individual station, and Atmospheric Pressure correction shall applied automatically on the raw water level reading from non-vented water level sensor. The details of correction procedure shall be fully documented in user manual. Provision shall be made to view and store the raw and compensated		



	water level data along with atmospheric pressure and Water Temperature data in datalogger memory		
8	A Standard USB/ RS232 communication interface should be available for set up and configuration and must be easily accessible.		
9	All measurement and set up options, data download and programming of data logger shall also be done by online session similar to all functions at site by direct connection to a PC		
11	Data download / retrieval from remote DWLR station to existing State Data Center Server via GSM & GPRS network shall be provided. The data from remote station should be in standard CSV format (as specified in technical Specifications) which is compatible with e-SWIS software		
12	The software should be provided to allow download the data from the DWLR data logger to a Laptop/hand held devices in the field. The downloaded data shall be in standard CSV format (as specified in technical specifications) which is compatible with e-SWIS software.		

## **5. Inspections and Tests**

The following inspections and tests shall be performed:

### **General:**

1. After manufacture, the supplier shall get each equipment/item of Goods inspected in manufacturer/s works as per approved datasheets and QAP and forward to the Purchaser along with his letter seeking inspect the equipment/item of Goods conform to contract specifications.
2. Upon receipt of the test certificate and calibration certificates, the purchaser or its representative shall arrange for inspection and/or test of any or part or all the equipment /Goods prior to issuance of dispatch clearance. In cases where the supplies are received from abroad, the purchaser may waive the pre-dispatch inspection.
3. However, the inspection and dispatch clearance by the Purchaser or the waiver thereof shall not prejudice the right of the Purchaser or its consignee to test the equipment/goods on receipt at destination. Upon receipt of the goods at final destination, the Purchaser shall have the right to inspect and/or test the equipment/Goods to confirm their conformity to contract specifications.
4. If the equipment fails to meet the contract specifications during inspection, whether pre dispatch or upon receipt of at final destination, the supplier shall take immediate steps to remedy the deficiency or replace the defective equipment to ensure that all supplies meet with the specifications specified in the contract

### **Inspection and tests prior to shipment of Goods and at final acceptance are as follows:**

1. The inspection of the Goods shall be carried out to check whether the Goods are in conformity with the approved technical specifications attached to the contract and shall be in line with the inspection/test procedures laid down in the Technical Specifications and the General Conditions of contract. Following broad test procedure will generally be followed for inspection and testing of instruments. The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report and manufacturer's warranty certificate based on the inspection waiver from purchaser. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation.
  - a. Site Preparation and Installation: The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection before the installation of the DWLRs and associated telemetry system. In case there is a delay in handing over the site by the purchaser, appropriate extension of time shall be granted without imposition of liquidated damages in accordance with the provisions of contract.
  - b. For site preparation, the supplier should furnish all details (drawings) to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment.
2. Complete hardware and software as specified in 'List of Goods and Delivery Schedule' Under the Schedule of Requirement should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests.

3. The acceptance test will be conducted by the purchaser/their consultant or any other person nominated by the purchaser, at its option. The acceptance will involve trouble-free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware attached to printers, drivers etc. or bugs in the software should occur. All the software should be complete and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 90% for the duration of test period shall be considered as satisfactory.
4. In the event of the hardware and software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.
5. DWLRs procured would be subject to the Acceptance Protocol given below

## **ACCEPTANCE PROTOCOL**

### **1. General**

- a. The delivery of goods/equipment and software should be in accordance with the contract agreement and the process of delivery will adhere to the following 'Acceptance Protocol'. The Acceptance Protocol shall serve as a formal guidance during delivery of the DWLRs. Its primary goals are twofold.
  - i. Ascertain the delivery and completeness of all ordered products and related documents.
  - ii. Check the functioning of the equipment and software in a formal way against the specifications by application of Acceptance Tests. The tests also verify the accuracy and stability of the equipment.
- b. The Acceptance Protocol shall be executed in close co-operation between the Supplier and the Client.
- c. Products shall be accepted only if they meet the requirements and are functioning in compliance with the technical specifications, and the related documents are complete and correct. Defective products and any other discrepancies shall have to be replaced/resolved, within a pre-defined time frame.

### **2. Documents**

- a. The following documents shall accompany the delivery of the instruments and software:
  - i. Administrative and Quality Assurance (QA) documents
  - ii. Test and calibration documents
  - iii. Manuals and GuidelinesAll documents shall have identification and references to subject or instrument, date, time, location and officer in charge.
- b. The Acceptance Report lays down the findings and observations during the execution of the Acceptance Protocol and is a formal document to record the acceptance or rejection of any item as covered in the Bid document. Any flaws or findings are to be reported. The forms and checklists filled out during the execution of the Acceptance Protocol are to be enclosed with the Acceptance Report. The Supplier receives a signed copy of the

Acceptance Report, which the Supplier can use as proof that the items listed in the report were accepted.

b. The content of the various documents shall be as follows:

### **2.1 Administrative and QA documents: These QA documents shall include:**

- i) Production documents associated with the instruments.
- ii) Type codes, serial numbers and other identification data on, possibly externally procured, sensors and major assemblies, to clearly demarcate the sensors/major assemblies associated with each DWLR.
- iii) Shipping documents indicating instrument/product type, serial number, measuring range, cable length and other similar data.

### **2.2 Test and calibration documents:**

- i) A comprehensive Method Statement on the applied calibration and in-factory test procedures shall accompany the bid. The Method Statement should define the test and calibration methods applied on the instruments and the components thereof. The Method Statement shall also include, for each calibrated product, an audit trail to national standards on all instruments and facilities used for testing and calibration. The Audit Trail Report shall associate the calibration of the reference instruments and test equipment to the national calibration standards.
- ii) If the Supplier or Manufacturer is not in a position to deliver an Audit Trail Report to the national standards, the Manufacturer shall explain what the quality standards are and how they are maintained and monitored.
- iii) Conditions during calibration, such as room and/or instrument temperature, equipment and facilities used, shall be included in the calibration and test documents.
- iv) The test and calibration documents shall contain the data generated during calibration and testing, including:
  - Calibration data supplied by the Manufacturer of pressure sensor
  - Calibration and test data of the data-logger electronics
  - Calibration data on overall DWLR calibration, i.e. comprising both pressure sensor and electronics. A table listing applied reference pressures versus instrument readings is to be delivered for each sensor and instrument. Furthermore, that table shall also show the test conditions during calibration
  - Data on hysteresis test, temperature tests, zero stability test, scale stability test
  - Humidity test, in particular for non-vented gauge pressure sensors
  - Temperature cycling of sensor and electronics
  - Spray test on enclosure(s), connectors and cables

### **2.3 Manuals and Guidelines**

- i) The manuals shall meet the requirements on style and clarity, completeness, preciseness, detail and accessibility. This includes:
  - System manual,
  - Operation, Maintenance and Service manuals,
  - Observation guideline, and
  - Training handouts.

## **3. Acceptance Tests**

## 1. General

- i) Qualified engineers under responsibility of a test manager shall execute the Acceptance Tests. The progress of the Acceptance Tests would be monitored and supervised by the Client and/or his authorised representative. The Client may have any tests redone or additional tests executed as deemed required based on the results of previous tests conducted. The Client's and/or his authorised representative shall have the right of access to any instrument and may request any data or information at any time. The Supplier has the obligation to deliver requested information without delay; i.e. collected test data and documents must be available at the test site.
- ii) It is important that all activities (what, when, where, who, which instrument, etc.) are annotated and uniquely linked to the individual instruments.
- iii) The Acceptance Tests mainly comprise three levels viz.:
  - Functional Tests: The Functional Tests shall verify the proper functioning of the instruments and the associated software. Primary goal is to verify that the instrument performs its functions according to the bid specifications.
  - Accuracy Tests: The Accuracy Tests shall verify that each individual instrument is functional and operates according to the bid specifications. A number of relatively simple accuracy tests are routinely exercised on the instruments.
  - Overall Test: The main purpose of the Overall Test is to verify the common features that are identical to all the instruments in a series. Typical components of the Overall Test are:- in-built software functions, materials of the instrument, cables, connectors, etc.
    - Further tests include battery and memory autonomy, details of sensor specifications like temperature effects, hysteresis, long term stability etc.
- iv) The charges for testing shall be borne by the Manufacturer/Supplier. The Client and/or his authorised representative may at his cost opt to be present during the performances of the tests.
- v) If the tests are executed at the Client's premises, the charge for testing shall be borne by the Client and the Supplier shall be responsible for conducting the tests. The bidder in his bid shall indicate the name of independent organisation and the charges for testing. The Client reserves the right to accept the independent organisation and its charges or get the tests done by any other agencies. However, the Supplier would be permitted to be present at these tests.

(Explanatory Note: Test report from manufacturer would be acceptable. In case purchaser desires to test the system from independent agency (ies), testing charges would be borne by purchaser.)

- vi) The details of these tests are as follows.

### 1.1. Functional Tests: The Functional Tests include: visual inspection, and user tests.

#### 1.1.1 Visual Inspection: Visual inspection includes the following activities.

- i) All items are visually checked for damage, e.g. on cables, sensor and housing.
- ii) Availability of non-removable identification codes and specifications are verified, e.g. serial number, type identification, manufacturer and measuring range.
- iii) Cables have to be marked: each cable is to have an identification code and name.
- iv) Cable connectors shall have their ends marked suitably to indicate the device to which it is to be connected, e.g. PC, HHT, Power Supply etc. Suitable precaution shall be taken so that the connectors are not connected to wrong terminals, i.e. it shall be impossible to connect a power cable to a communication bulkhead socket.

### **1.1.2 User tests**

- i) All instruments have to be identical except for measuring range, cable length, identification code and similar aspects. Consequently, there is no need to check the functionality of all systems. It is assumed that the functional compliance with the specifications is tested under the Overall Tests. The objective of the user test is to detect any malfunction and/or defect. From practical point of view, the user tests can be coupled with other test, e.g. the stability tests.
- ii) Basic functions to be tested are:
  - Pre-deployment preparation, e.g. setting of clock, erasing of memory, setting data logging parameters, entry of identification data
  - Facilities for execution of on-site functional checks
    - Data retrieval and data transfer to PC
    - Battery status and voltage
    - Simple output test by observing pressure reading while the sensor is immersed in a bucket filled with water

## **1.2 Accuracy Tests: The Accuracy tests include:**

- accuracy tests on clock, and
- accuracy tests on pressure measurement

### **1.2.1 Accuracy tests on clock**

- i) The clock of the data logger shall be carefully checked against national time, e.g. taking the radio broadcast time beeps as a reference. The data logger clock is set precisely and checked at the start of the individual tests and upon instrument and/or data retrieval. In between, the clock should not be readjusted.
- ii) The clock test shall cover at least 3 days to get sufficient time resolution. The reference clock, e.g. a watch, must be carefully tuned against national time prior to and during the tests. The clock drift, converted to seconds per month (31 days) shall comply with the defined specifications. This test method makes use of the specified time resolution of 1 s.

## 1.2.2 Accuracy tests on pressure measurement

- i) The accuracy test on the pressure sensor is an overall accuracy test covering both the pressure and electronics systems. The pressure tests are to be executed against accurately known reference pressure(s). Pressure can be generated from compressed air (gas) or by submerging the sensor to known depths in water.
- ii) Reference pressure may be created via a precision pressure reduction valve from a source of compressed air. A high precision sensor like a Digi Quartz pressure sensor or a Dead Weight Tester can be implemented to quantify the applied pressure. Pressure should be measured in kPa (or mbar).
- iii) When applying the immersion method it is much more difficult to check the instruments because water density affects the reading. Moreover, it is not simple to establish the exact depth of sensor immersion. And especially in narrow wells, while immersing a pressure sensor on its cable into a well, the water level will rise due to the additional volume of the immersed pressure sensor and cable. The water level will gradually fall again, when the well level adjusts again to equilibrium with the ground water level. In order to achieve a high accuracy these effects have to be assessed.

The pressure sensor tests include:

- Zero stability test
  - Scale test
  - Scale stability test
- iv) The pressure sensor tests shall focus on temperature effects on zero, scale and cable length, and in addition to that establish quantitative data on drift of zero, scale and creep of cable length.

### 1.2.2.1 Zero stability test

- i) During the zero-test the instruments are in logging mode, say at an interval of 30 minutes, and shall be kept in a separate room where they will not be touched for at least 3 days. The instruments must be dry, i.e. not in a bucket of water, to exclude any water effect on the sensor, and hence, the instrument reading is expected to be 0.0.
- ii) Under this test, each instrument will record its short term zero drift and inherently the effectiveness of the air-pressure compensation method. During the zero-test, the instruments shall be in the same and constant position, vertical or horizontal. The room temperature shall vary over 5 °C or more, e.g. due to daily temperature fluctuation, this to assess temperature effects on the instrument reading. This requirement may affect the choice of venue for the zero-tests. To avoid any adverse temperature strain, no direct sunlight shall fall on the instruments. At the end of the test, the collected data are offloaded from the data logger memory and analysed for zero stability. As the instruments are kept in air

and are not touched, the reading shall be stable and not change over time that is not beyond permissible limits.

- iii) Room temperature is to be logged against time, preferably by digital method. In case the DWLR has a built-in temperature sensor, that sensor may be used for temperature logging. The pressure sensors shall not be tested in an air-conditioned room for several reasons. First, temperature fluctuations may be so rapid that the sensor temperature compensation scheme may not be able to cope with it. Moreover, rapid air-pressure fluctuations may not be handled properly by the air-vent system and/or the pressure measurement method. This is to be understood from the perspective that the instruments are designed to operate in wells where changes occur but not rapidly. One or more fans may be operated continuously to minimise temperature gradient across the test room.
- iv) To test the creep and elongation of the electrical cum suspension cable some vertical open space is required, e.g. a stairwell can be used for this purpose. However, it is important that the cable is protected against touch to avoid interference with the measurements. The cable is loaded with some weight to emulate the weight of cable and sensor. The length of cable under tests shall be as long as possible, i.e. 10 m or more, to get the best accuracy of the tests. The lowest point is suspended to about 0.15 m above the floor. The gap between lowest point and floor is monitored against time. Initially readings are taken every 30 minutes for 12 hours, subsequently the reading interval may be increased to 6 hours. The cable test shall be executed during 7 days. Resolution of measurement should be 1 mm or better. The result is to be presented in mm length change per meter suspended cable length. Only one cable is to be tested.

#### **1.2.2.2 Scale test:**

A precisely known pressure is applied on the instrument and the instrument reading is taken. The instrument reading is converted into level or pressure whatever is applicable. The calculated value is compared with the applied value; the difference is regarded as the FS error. In case the specifications of the applied pressure sensor may give reason to doubt the instrument's linearity, then a mid-scale test is to be executed as well.

#### **1.2.2.3 Scale stability test:**

Scale stability is tested by subjecting the instrument to the full-scale pressure for at least 24 hours. During the test, the applied pressure/level is to be accurately monitored by taking reference readings either by a reference logger of high accuracy or by manual readings. The accuracy and resolution of the reference measurement must be 1 mm water column or 0.01 k Pa (0.1 mbar).

### **1.3 Overall Test:**

Part of the Overall Test is also covered under the Functional Tests and

Accuracy Tests. The Overall Test comprises tests on:



- autonomy
- fitness for environment
- functionality
- calibration
- stability
- reproducibility, and
- main power failure

Details of the various tests are as follows.

### **1.3.1 Autonomy:** Two autonomy tests shall be conducted:

- battery capacity versus the power consumption per measurement, and
- memory capacity
  - Battery autonomy test: To execute the test, the instrument is set to a fast data collection interval and the capacity, i.e. the number of samples, is established by a continuous process of data collection until the batteries are depleted. The test shall be executed on new batteries. In this context, the batteries are deemed depleted when the instrument stops functioning because the battery voltage watch-dog function detects a too low battery voltage or the normal operation of the instrument stops.
  - Memory capacity verification: The memory is filled at the highest data-recording rate and the volume of collected data is verified against the bid specification. This test could be combined with the battery autonomy test and the samples are taken at a high rate to minimize the test duration.

### **1.3.2 Fitness for environment**

- Connectors, cable glands, cables and housing must be suitable for the environment of operation, be it submersed, in a well or above the ground. Water ingress can be assessed by visual inspection and / or by insulation measurement. Visual inspection may only reveal ingress of a significant amount of water. The insulation measurement is more sensitive, especially for cables, connectors and encapsulated electronics, but requires specialised equipment.
- The above-surface components have to be compatible with IP65 standard and shall be tested accordingly by exposing them to a heavy shower for 3 minutes. Subsequently the ingress of water is assessed by opening of the instrument and connectors.
- The submersible components must comply with IP68 standards. To verify this, the instrument shall be suspended in a well for at least one week, to a maximum depth, without affecting the calibration of the pressure sensor and not exceeding 2 times the rated measuring range. Although most pressure sensors can withstand considerably more than 2 times the rated measuring range, there is no need to exceed this. Prior to this test, the zero and scale of the sensor have to be established and verified again upon recovery.

### **1.3.3 Functionality**

- Functionality has to be verified for all requirements for operation of the DWLR with reference to the bid specifications and the instrument specifications as given by the Manufacturer. Missing functionality shall be reported.

- ii) All (software) functions as stated in the instrument manual(s) and the instrument specifications are tested for correct functioning. Any detected flaws are reported which shall be repaired/rectified by the Manufacturer/Supplier within seven days.

#### **1.3.4 Calibration**

- i) The instrument calibration is checked for compliance with the bid specifications. In particular accuracy, stability, linearity, hysteresis and reproducibility are verified.
- ii) The scale or sensitivity of the complete instrument, including sensor and electronics, is to be checked for at least 11 pressures, equally distributed over the full measuring range. Furthermore, the calibration data as delivered with the instrument are verified for accuracy and consistency with data obtained from the calibration tests. The calibration may be executed by application of accurately known air-pressure or by immersion in a well. The temperature effects on the calibration should also be verified at low, mid and maximum range temperatures.
- iii) Note: Prior to execution of immersion tests, the effective position of the sensor membrane relative to the sensor housing is to be assessed and measured, e.g. by execution of a bucket experiment. In this experiment, the sensor is partly immersed in a water filled bucket to a depth where the related reading has changed by several centimetres, relative to the 'in-air' reading. During the test, the position of the water surface on the sensor's body shall be observed and marked accordingly. The 'effective-sensor-zero' lies below the water surface during the test. The position of the effective-sensor-zero is below the above mentioned water-surface mark by the equivalent of the sensor reading expressed in centimetres. The effective-sensor-zero may be close to the sensor membrane but not necessarily coincides with it.

#### **1.3.5 Stability:**

Stability related to the DWLR is defined as a variation over time of the instrument specifications, whereas the circumstances and pressure do not vary. Parameters to be checked are:

- zero: offset stability
- scale: full scale stability
- cable: length (extension/contraction) and creep stability

The methods to assess these stability factors are explained under the section on Accuracy Tests.

#### **1.3.6 Reproducibility:**

The sensor reading in air is annotated, subsequently the sensor is immersed to the rated measuring depth, and a stable reading is collected. Then the sensor is recovered to the surface and again a stable reading is taken. This process is repeated 5 times and results are duly annotated. It is important that during the complete test the instrument is kept in the same, vertical position.

### 1.3.7 Main power failure:

- i) Some instruments operate on replaceable batteries or even external power and have a built-in back-up facility, usually based on a Lithium battery. It is quite possible that on some instruments the external power supply or the replaceable batteries fail because of total depletion, disconnection, defect on the cable or connector etc. In such an event, the instrument must retain its clock, its program setting and most importantly all the collected data.
- ii) The Functional Tests are executed in conjunction with the stability test. Upon finalising these tests and after successful retrieval of all test data the power is disconnected by removing the main power batteries and/or disconnecting the power cable. The instrument is to be left in that state for at least 24 hours. Then the power shall be connected again and clock, program settings and recorded data are checked for availability and correctness.
- iii) Instruments with entirely built-in factory replaceable batteries cannot be tested in this way. In such case, the Manufacturer shall provide a technical description of the method applied to avoid loss of clock, program and collected data.

#### 4. Test Execution: Two test programmes are to be executed:

- All Units Test Programme
- Single Unit Test Programme

Prior to execution of the tests, a detailed test script has to be drafted and agreed upon.

The test script shall define:

- test sequence.
- the test conditions and requirements for each test.
- place of the test.
- person(s) responsible for conducting the tests.
- reporting requirements.
- handling failures and problems.

**4.1 All Units Test Programme:** The All Units Test Programme aims to identify the malfunctioning instruments and those not compliant with the bid specifications. The Functional Tests, the Clock Accuracy Test and the Zero Stability Test must be executed on each instrument. The design of the tests shall be selective and practical and enable execution with simple means, preferably at the Client's premises.

#### 4.2 Single Unit Test Programme

- i) A full system shall be tested, that is: pressure sensor, electronics, cable, power supply, DRS, software and manuals. The Single Unit Test Programme is a combination of the Functional Tests, the Accuracy Tests and the Overall Test. The Client shall randomly select an instrument for testing from the instruments delivered. The Single Unit Test Programme can only be started after verification that all documents related to the order/delivery, including manuals, calibration data, QA data etc., are delivered to the Client. Any other unit, for which doubts

arise on its compliance with the bid specifications, shall also be tested on the client's request.

- ii) Failing to pass the Single Unit Test Programme results in rejection of the entire delivery until the defective units have been repaired to meet the technical specifications, and such to the satisfaction of the Client.

## **5. Evaluation of test results:**

The test results have to be evaluated and results and conclusion shall be reported. Instruments that do not meet the bid specifications shall be replaced by properly functioning and satisfactorily tested instruments.

## **6. Post acceptance performance monitoring**

- i) After installation and field deployment the instrument performance shall be continuously monitored by taking manual observations, initially at a relatively high rate, e.g. every 3 hours, gradually migrating towards the normal monitoring interval. The level comparisons are required for reference and validation purposes. Manual observations and automatic readings shall be taken at short intervals after each other, in practice the time difference shall be kept to less than 15 minutes. The primary criterion though, is that the manual reading shall be taken before the water level changes more than 1 mm.
- ii) Other checks are on functioning of the internal clock, data recording and retrieval, battery discharge, siltation of the sensor, moisture ingress and any development of corrosion.

The tape used for taking the reference readings shall be of high accuracy, considerably better than the accuracy of the DWLR, only then the performance of the high accuracy instruments can be monitored. However, an accuracy of 1 mm over the full measuring range is enough. Only best quality tapes, e.g. the electric types, come close to this requirement. The tapes shall be checked for accuracy against a precise reference, e.g. over 10 or 20 m on a single stretch. Verification by a standard ruler will not reveal to overall accuracy of a tape. The tape verification reference' could be prepared using high accuracy geodetic equipment. A long, straight corridor, or a quiet stretch of road, could accommodate the length reference marks, the accuracy should be 1 mm relative to the reference point (0.000 m).

## **7. Instrument History File**

For each instrument, an individual History File shall be opened and maintained (The Instrument history file shall be suppliers' scope.). In the History File the full instrument history and all documents generated shall be stored. This also includes any changes, adaptations, repairs etc. made to the instruments. The products and results of the execution of the Acceptance Protocol shall be included in the Instrument History File. Some document types and entries are listed below:

**7.1 Instrument identification:** The instrument identification uniquely defines the instrument particulars.

- Make, vendor, service provider, date of manufacturing, date of delivery
- Instrument make, model and serial number
- Instrument configuration
- Measuring range
- Cable type, length
- Manual version
- Instrument status: e.g. working, under calibration, under repair

**7.2 Functional, Accuracy and Over-all tests:** For each of the three test categories, a separate and unambiguous record shall be maintained. The test conditions and results shall be duly recorded. Obviously any failures or irregularities shall be annotated accurately and comprehensively, as well as the actions taken and their results. At least the following data shall be recorded:

- Administrative data: what, when, where, who, which instrument and configuration
- List of tests
- Specifications for each test
- Results of each test
- Failures, actions, conclusions

**8. Acceptance Certificates:**

On successful completion of acceptability test, receipt of deliverables etc., and after the purchaser is satisfied with the working of the DWLR system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

**6. PROFORMA OF CERTIFICATE FOR ISSUE BY THE PURCHASER AFTER  
SUCCESSFUL INSTALLATION AND STARTUP OF THE SUPPLIED GOODS**

[This is to be attached for supply, erection, supervision of erection and startup contracts only]

No.

Date:

M/s.

Sub: Certificate of startup of the supplied Goods

1. This is to certify that the plant/s as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para No. 2) and a set of spares in accordance with the Contract/Specifications. The same has been installed and commissioned.

(a) Contract No. \_\_\_\_\_ dated \_\_\_\_\_

(b) Description of the plant \_\_\_\_\_

(c) Plant Nos. \_\_\_\_\_

(d) Quantity \_\_\_\_\_

(e) Rail/Roadways Receipt No. \_\_\_\_\_ dated \_\_\_\_\_

(f) Name of the consignee \_\_\_\_\_

(g) Date of startup and proving test \_\_\_\_\_

2. Details of accessories/spares not yet supplied and recoveries to be made on that account.

S. No.	Description	Amount to be recovered
--------	-------------	------------------------

3. The proving test has been done to our entire satisfaction and operators have been trained to operate the plant.

4. The supplier has fulfilled his contractual obligations satisfactorily. \*

or

The supplier has failed to fulfil his contractual obligations with regard to the following:

(a)

(b)

(c)

(d)

5. The amount of recovery on account of non-supply of accessories and spares is given under Para No. 2.

6. The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated in endorsement of the letter.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation with Stamp \_\_\_\_\_

\* Explanatory notes for filling up the certificates:

(a) He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to Technical Specifications.

(b) He has supervised the startup of the plant in time i.e., within the period specified in the contract from the date of intimation by the Purchaser in respect of the installation of the plant.

(c) Training of personnel has been done by the supplier as specified in the contract

(d) In the event of documents/drawings having not been supplied or installation and startup of the plant have been delayed on account of the supplier, the extent of delay should always be mentioned.

## **PART 3 – CONTRACT**



**SECTION VIII – GENERAL CONDITIONS OF CONTRACT**

# Section VII. General Conditions of Contract

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## Section VIII. General Conditions of Contract

### 1. Definitions

The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Bank” means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
- (b) “Bidder” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (c) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (d) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
- (e) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (f) “Day” means calendar day.
- (g) “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (h) “GCC” means the General Conditions of Contract.
- (i) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (j) “Incoterms” means International Commercial Terms that are a series of pre-defined commercial terms published by the International Chamber of Commerce (ICC) relating to international commercial law. The Incoterms edition is Incoterms 2010.
- (k) “Purchaser’s Country” is India.
- (l) “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (m) “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, start-up, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (n) “SCC” means the Special Conditions of Contract.
- (o) “Subcontractor” means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is

subcontracted by the Supplier.

(p) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

(q) "The Project Site," where applicable, means the place named in the SCC.

## **2. Contract Documents**

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

## **3. Corrupt & Fraudulent Practices**

3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix to the GCC.

3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

## **4. Interpretation**

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms.

(a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

(b) The terms EXW and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the SCC and published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

(a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the

Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

#### 4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

### 5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be English. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in English language, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

### 6. Joint Venture, Consortium or Association

- 6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

### 7. Eligibility

- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

### 8. Notices

- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in

writing” means communicated in written form with proof of receipt.

8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

**9. Governing Law**

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India.

**10. Settlement of Disputes**

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

**11. Inspections and Audit by the Bank**

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs

11.2 The Supplier shall permit, and shall cause its Subcontractors to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier’s offices 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 Supplier’s and its Subcontractors and consultants’ attention is drawn to Clause 3 [Fraud and Corruption], which provides, inter alia, that acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank’s prevailing sanctions procedures)

**12. Scope of Supply**

12.1 The Goods and Related Services to be supplied shall be as specified in the **Special Conditions of Contract.**

**13. Delivery and Documents**

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be

furnished by the Supplier are specified in the **SCC**.

- 14. Supplier's Responsibilities** 14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.
- 15. Contract Price** 15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the **SCC**.
- 16. Terms of Payment** The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the **SCC**.
- 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
- 16.4 The payments shall be made in Indian Rupees to the Supplier under this Contract.
- 16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the **SCC**, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the **SCC**, for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.
- 17. Taxes and Duties** 17.1 The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 18. Performance Security** 18.1 If required as specified in the **SCC**, the Supplier shall, within twenty-one (21) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC**.
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 As specified in the **SCC**, the Performance Security shall be denominated in the Indian Rupees, and shall be in the format stipulated by the Purchaser in the **SCC**, or in another format acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance

obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.

## **19. Copyright**

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

## **20. Confidential Information**

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

- (a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

## **21. Subcontracting**

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under



the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

## **22. Specifications and Standards**

22.1 Technical Specifications and Drawings

(a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VII, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.

(b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.

Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

## **23. Packing and Documents**

23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

## **24. Insurance**

24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.

## **25. Transportation & Incidental Services**

25.1 Unless otherwise specified in the SCC, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in Schedule**

### **of Requirements and SCC:**

- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods

25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

### **26. Inspections and Tests**

26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **SCC**.

26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply

with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

## **27. Liquidated Damages**

- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

## **28. Warranty**

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of

origin, whichever period concludes earlier.

- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

## **29. Patent Indemnity**

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
  - (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
  - (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available

assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

**30. Limitation of Liability**

30.1 Except in cases of criminal negligence or willful misconduct,

(a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser, and

(b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

**31. Change in Laws and Regulations**

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in India, where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

**32. Force Majeure**

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or

situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**33. Change Orders  
and Contract  
Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

**34. Extensions of  
Time**

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

## **35. Termination**

### 35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
  - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
  - (ii) if the Supplier fails to perform any other obligation under the Contract; or
  - (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

### 35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

### 35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract

terms and prices. For the remaining Goods, the Purchaser may elect:

- (i) to have any portion completed and delivered at the Contract terms and prices; and/or
- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

**36. Assignment**

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party



## APPENDIX TO GENERAL CONDITIONS

### Bank's Policy- Corrupt and Fraudulent Practices

#### **Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:**

##### **“Fraud and Corruption:**

1.16 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.<sup>i</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>ii</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>iii</sup>
  - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;<sup>iv</sup>
  - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;<sup>v</sup>
  - (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 paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged

in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

- (c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,<sup>22</sup> 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<sup>23</sup>;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

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<sup>22</sup> A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

<sup>23</sup> A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

**SECTION IX. SPECIAL CONDITIONS OF CONTRACT**

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The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.	
<b>GCC 1.1 (j)</b>	The Purchaser is: <i>Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee- 247667</i>
<b>GCC 1.1 (o)</b>	The Project Site(s)/Final Destination(s) is/are: The project site for DWLRs DAS is Uttarakhand (detailed list given as Appendix A under schedule of requirements))
<b>GCC 4.2 (a)</b>	The meaning of the trade terms shall be as prescribed by Incoterms.
<b>GCC 4.2 (b)</b>	The version edition of Incoterms shall be 2010.
<b>GCC 8.1</b>	For notices, the Purchaser’s address shall be:  <i>Superintending Engineer, Research Circle, Irrigation Research Institute, Roorkee, District-Haridwar, Uttarakhand-247667 INDIA Telephone: 91-1332-265174 Facsimile number: 01332-262792, 01332-262487 E-mail: uttarkhandwr@gmail.com</i>
<b>GCC 9.1</b>	The governing law shall be law of INDIA
<b>GCC 10.2</b>	<b>Settlement of Disputes</b>  The dispute settlement mechanism to be applied for adhoc arbitration shall be as follows:  (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996 as amended up-to-date. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.  (b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with provisions of UNCITRAL (United nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the

	<p>two Arbitrators so appointed by the parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.</p> <p>(c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Indian Council of Arbitration, both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the Indian Council of Arbitration, making such an appointment shall be furnished to each of the parties.</p> <p>(d) Arbitration proceedings shall be held at Dehradun India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.</p> <p>(e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.</p> <p>(f) Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the Indian Council of Arbitration.</p> <p>(g) Except otherwise agreed to by the Parties, Arbitrators should give a decision in writing within 120 days of receipt of notification of dispute.</p>
<p><b>GCC 12.1 and 25.2</b></p>	<p>The scope of supply for the Goods and Related Services to be supplied shall be as specified <i>in Schedule of Requirements</i>.</p>
<p><b>GCC 13.1</b></p>	<p>Details of Shipping and other Documents to be furnished by the Supplier are given below:</p> <p>Upon delivery of the goods to the transporter/consignee, the supplier shall notify the purchaser and mail the following documents to the Purchaser:</p> <ul style="list-style-type: none"> <li>(i) Three Copies of the Supplier invoice showing contract number, goods description, quantity, unit price, total amount;</li> <li>(ii) Delivery note, Railway receipt, or Road consignment note or equivalent transport document or acknowledgement of receipt of goods from the Consignee;</li> <li>(iii) Three Copies of packing list identifying contents of each package;</li> <li>(iv) Insurance certificate;</li> </ul>

	<p>(v) Manufacturer's/Supplier's warranty certificate;</p> <p>(vi) Inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and</p> <p>(vii) Certificate of origin.</p> <p>The above documents shall be received by the Purchaser before arrival of the Goods (except where it is handed over to the Consignee with all documents) and if not received, the supplier will be responsible for any consequent expenses.</p>
<p><b>GCC 14.1</b></p>	<p>ADD to GCC 14.1;</p> <p>The supplier is responsible for and obliged to conduct all contracted activities in accordance with the contract using state- of- the- art methods and economic principles and exercising all means available to achieve the performance specified in the Contract. The Supplier is obliged to work closely with the Purchaser's staff, act within its own authority and abide by directives issued by the Purchaser and implementation activities. The Supplier will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life the cause of which is the supplier's negligence. The Supplier will pay all indemnities arising from such incidents and will not holding the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misbehavior/ misconduct. The Supplier will treat as confidential all data and information about the purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.</p>
<p><b>GCC 15.1</b></p>	<p>The prices charged for the Goods supplied and the related Services performed <i>shall not</i> be adjustable.</p>
<p><b>GCC 16.1</b></p>	<p><b>Payment shall be made in Indian Rupees in the following manner:</b></p> <p>The Bidder shall be paid 40% (as per clause i) of the Contract Price and the balance 60% (as per clause ii) of the Contract Price for O &amp; M and data communication over the next four years @ 15% per year which include 4 year period of onsite warranty as mentioned below:</p> <p><i>(Note: Contract Price does not include any taxes or levies, as may be applicable and treated separately)</i></p> <p><b>i) Disbursement of Payment shall be as under:</b></p> <ul style="list-style-type: none"> <li>• Advance Payment: Ten (10) % of the total contract price cost shall be paid within thirty (30) days of signing of Contract and upon submission of bank guarantee for the equivalent amount valid until the goods are delivered and in the form provided in the bidding documents.</li> <li>• 20% of Contract Price, plus total GST amount charged in Invoice against Supply of Goods shall be released on pro-rata basis after 30 days of the successful Delivery of the instruments/Equipments as per Schedule of Requirements and upon submission of the documents specified in clause 13 of SCC.</li> </ul>

	<ul style="list-style-type: none"> <li>• 20% of Contract Price will be paid <b>on pro rata basis</b> after 30 days of successful installation, testing, commissioning and final acceptance. Advance payment of 10% paid against Bank Guarantee will be adjusted in 20% payment paid on successful installation, testing, commissioning and final acceptance as stated above i.e. first payment of 40%</li> <li>ii) 60% of the Contract Price but including replacement of parts, if any and seamless data communication, here onwards referred as maintenance charges over the balance 05(five) years (4 years of warranty period) shall be paid as per follows;             <ul style="list-style-type: none"> <li>• 15% per Year to be paid on Half Yearly basis (7.5% at every six month) inclusive of GST payable on Supply of related services. <b>The condition (Applicable for this payment) shall be governed by Annexure I Service level condition.</b></li> </ul> </li> <li>iii) Payment of GST will be against valid Invoice as per GST Act &amp; Rules and submission of GST Registration Certificate along with declaration that GST Registration is valid and all liabilities towards GST have been discharged by the vendor. GST amount will be reimbursed after 30 days of submission of valid Invoice and all required documents and declaration by vendor.</li> <li>iv) For all the payments to be made, against Bank guarantees, the bank guarantee shall be issued by a Scheduled Indian Bank or a foreign bank located in India. The guarantees issued by other banks should be confirmed by a Scheduled Indian Bank or a foreign bank operating in India.</li> <li>v) <b><i>Bank Guarantee for advance payment shall be released not later than 30 days after the adjustment of advance amount against payment due after testing, commissioning and final acceptance. The bank guarantee should be valid for a period of 180 days or till the date of final testing, commissioning and final acceptance whichever is later, from the date of issue of bank guarantee including claim period.</i></b></li> </ul> <p>The bidder shall indicate in the Price Schedules specifying all items prices shown therein including the unit prices and total prices of the goods and related services along with GST or any other duties and taxes applicable against the schedule of requirements. GST if liveable shall be paid as applicable. Any statutory variation shall be paid on submission of documentary evidence. Bidders shall be required to quote HSN code and applicable tax rates.</p> <p>“GST” means all four Acts CGST, SGST, UTGST, IGST and any other regulations by Government in relation to GST and rules thereto.</p>
<p><b>GCC 16.5</b></p>	<p>The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 60 days</p> <p>The interest rate that shall be applied is 2% per annum.</p>
<p><b>GCC 17</b></p>	<p>In the case of tax/ duty waiver, the purchaser will issue only the certificates in terms of the Government of India’s notification as per information given by supplier in form stipulated in Section IV. Supplier is solely responsible for obtaining such benefits and in case of failure to receive such benefits, the</p>

	purchaser will not compensate the supplier separately.
<b>GCC 18.1</b>	<p>Within 21 days of notification of award, the supplier shall furnish the Performance Security to the Purchaser shall be for an amount of 3% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations.</p> <p>In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/ replaced material shall be extended to a further period of 12 months and the Performance Bank guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.</p>
<b>GCC 18.3</b>	The Performance Security shall be in the form of a “Bank Guarantee/FDR” or “a cashier’s cheque or banker’s certified cheque or pay order” drawn in favour of <b>Executive Engineer, Design Division, IDO, Roorkee.</b>
<b>GCC 18.4</b>	Discharge of the performance Security shall take place not later than 60 days following the date of completion of the Supplier’s performance obligations, including the warranty obligation, under the contract.
<b>GCC 18.5</b>	<p>Add as Clause 18.5 to the GCC the following:</p> <p>In the event of any contractual amendment, the Supplier shall, within 28 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty services obligations.</p>
<b>GCC 23.2</b>	<p><u>Packing Instructions:</u> The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink with the following:</p> <p>(i) Project; (ii) Contract No.; (iii) Country of Origin of Goods; (iv) Supplier’s Name; (v) Packing List Reference Number.</p> <p>Suppliers should use recycled materials as much as possible for packing</p>
<b>GCC 24.1</b>	The insurance shall be paid in an amount equal to 110 percent of the EXW value of the Goods from “Warehouse to warehouse (final destination)” on “All Risks” basis including War Risks and Strikes.
<b>GCC 25.1</b>	The Supplier is required under the Contract to transport the Goods duly insured to the specified final destination, and until the commissioning & final acceptance of each equipment, and all related costs shall be included in the Contract Price.
<b>GCC 25.2</b>	Incidental services to be provided are: All services under GCC clause 25.2
<b>GCC 26.1</b>	<p>The inspections and tests shall be as detailed in Para 5 of Section VII-Schedule of Requirement:</p> <p>The supplier shall get each item indicated in the Schedule of requirement inspected in manufacturer’s works or at the premises of supplier and submit a test certificate and also manufacturer’s guarantee</p>



	<p>/warranty certificate that the items are conforms to the laid down specification.</p> <p>The Purchaser or its representative may inspect and /or test any or all the items to confirm their conformity to the contract specification, prior to dispatch from the manufacturer’s premises/ supplier’s premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the items on receipt at destination to verify conformity to technical specification.</p> <p>If the items are fails to meet the laid down specifications the supplier shall take immediate steps to remedy the deficiency or replace the defective parts of the each to the satisfaction of the purchaser/ consignee.</p>
<b>GCC 26.2</b>	The Inspections and tests shall be conducted at: <i>Respective Hydro-met instrument locations in Uttarakhand (detailed list given as Appendix A under schedule of requirements)</i>
<b>GCC 27.1</b>	<p>The liquidated damage shall be 0.5% of contract price of delayed Goods or Services per week or part thereof. This is applicable up to successful installation testing and commissioning.</p> <p>Further, for the performance towards the related services after acceptance of the system, following shall govern-</p> <p>Penalty for faulty stations/data centres;</p> <ol style="list-style-type: none"> <li>1. For remote site in monsoon period Rs 3000 per day.</li> <li>2. For remote site in Non monsoon period Rs 1000 per day.</li> <li>3. For Data centre (both monsoon and non- monsoon period) Rs 4000 per day.</li> </ol> <p>The maximum amount of liquidated damages shall be: 10% of the contract price.</p> <p>The conditions when the penalty as above would be applicable, provision of clause 28.5 to be referred.</p>
<b>GCC 27.2</b>	The maximum amount of liquidated damages shall be: <b>10%</b> of the Contract price.
<b>GCC 28.3</b>	<p>The period of validity of the Warranty shall be four years (forty eight ( 48 ) months) after successful installation, testing, commissioning and acceptance. This includes seamless communication of data through telemetry system to e SWIS platform.</p> <p>For purposes of the Warranty, the place(s) of final destination(s) shall be:</p> <p><i>Respective Hydromet instrument locations in Uttarakhand (Detailed listed at schedule of requirement)</i></p>
<b>GCC 28.5</b>	Bidder shall provide Service Engineer cum operator for Operation of DWLR system and ensure seamless data transfer from remote DWLR stations to to State data Center through GSM/GPRS network & then to E-SWIS software through internet. The processed data from e-SWIS in the form of reports/

	<p>bulletins will be transmitted to State Data Centre as per technical specifications.</p> <p>The period for repair or replacement shall be: 7 days It is the responsibility of the bidder to rectify/replace the equipment without any notice from purchaser and it is the duty of its personnel i.e. dedicated service engineer cum data entry operator to notice that site become non-operational or become faulty.</p> <p>A remote site shall be treated as faulty if it fails to respond or transmits erroneous data equal to or more than 8 data measurement i.e. equal to or more than 2 transmission cycles /2 days. The decision of Engineer-in-Charge about errors in data shall be final and binding. If a remote site continues to remain "fail" for more than 2days in excess of the maintenance time schedule of 7 days. The contractor is liable to pay penalty @ Rs. 500/- per Day/ remote site. The Day for the purpose of penalty shall be taken as failure period of 24 hours or part thereof for a particular remote site. The amount of penalty will be recovered from performance bank guarantee or payment due to bidder during warranty period.</p> <p>The penalty for faulty stations /data centers beyond MRTR would be Rs 1000/ per day.</p>
<b>GCC 28.6</b>	The maximum period shall be 14 days
<b>GCC 31.1</b>	This clause will apply only to variations in GST and other taxes payable in India on the final product which is being supplied and not for variations in tax on the individual components / raw materials which go into the product.
<b>GCC 33.5</b>	<p>(a) Add the following additional sub clauses.</p> <p>During the validity of the contract, the supplier shall supply and replace / reinstall /recommission goods in case of damage /theft or vandalism not attributable to the supplier, as per applicable line item / items listed in Price schedule for supply of goods as per schedule of requirement and Price and completion schedule – related services of this contract and payment shall be accordingly made at the quoted rates in this contract by the supplier for the line item. The procedure adopted shall be in accordance with GCC 33 Change orders and contract amendments.</p>
<b>GCC 37</b>	<p><b>37.1</b> Supplier integrity: The supplier is responsible for and obliged to conduct all contracted activities in accordance with the contract using state- of- the- art methods and economic principles and exercising all means available to achieve the performance specified in the Contract.</p> <p><b>37.2</b> Supplier’s obligations: The Supplier is obliged to work closely with the Purchaser’s staff, act within its own authority and abide by directives issued by the Purchaser and implementation activities.</p> <p>The Supplier will abide by the job safety measures prevalent in India and will free the Purchaser from all demands or responsibilities arising from accidents or loss of life the cause of which is the supplier’s negligence. The Supplier will pay all indemnities arising from such incidents and will not hold the purchaser responsible or obligated.</p> <p>The Supplier is responsible for managing the activities of its personnel</p>

or sub- contracted personnel and will hold itself responsible for any misdemeanors.

The Supplier will treat as confidential all data and information about the purchaser, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Purchaser.

**37.3** Site preparation and installation: The supplier is responsible for associated civil work required for installation and commissioning of the supplies in the Schedule of Requirement under the heading of Relative services

**37.4** Hardware installation: The Supplier is responsible for all unpacking, assemblies, wiring, installations, cabling between hardware units and connecting to power supplies. The Supplier will test all hardware operations and accomplish all adjustments necessary for successful and continuous operation of the hardware at all installation sites.

*Annexure-I of SCC Clause 16.1*

**SERVICE LEVEL CONDITIONS**

1. The bidder is fully responsible to keep the system functional during installation, warranty and AMC period. The bidder should take sue-moto action to repair any faulty instrument and should not wait for a complaint from purchaser to initiate action.

**2. DEFINITIONS**

**i) Remote Site**

Remote site is the site at remote location where Digital water level recorder (DWLR) systems are installed. The Remote site DWLR generally installed within the Piezometers' headwork, dug wells (open wells), Ground / Surface water level monitoring site or any combination of these sites

**ii) Data Centre**

Data center is the respective server where data is expected to be received. In case of GSM & GPRS based telemetry, the data center is the server installed in existing state data centre for receiving GSM & GPRS transmission.

**iii) Invalid Data**

A data would be considered **invalid** if

- a) The value recorded / transmitted is beyond permissible limit for that variable. The valid permissible upper limits and lower limits for each monitoring variable for each site would be provided to bidder by the purchaser.
- b) If the sensor value recorded / transmitted is absurd values or sudden variation in the value (may be within the specified limits) which is not in-line with the actual physical parameter. (e.g. If the Water level sensor recorded / transmitted value is showing absurd sudden variation of 2mts (beyond the limits of rate of change of sensor value) with respective to the previous measurement interval, then this data is invalid data).
- c) If the sensor value recorded / transmitted is having frequent / periodic gapes then the data will be considered as invalid data.
- d) If the sensor value recorded / transmitted is remain constant, even if there is variation in the physical parameters. (e.g. If the Water level recorded / transmitted value is showing constant / fix value even there is varnation in the water level, then this data is invalid data)
- e) If the sensor value recorded / transmitted is not in line with the value of co-located automatic / manual observation of the same sensor parameter.

**iv) Failed Data Transmission**

For each remote station, each scheduled transmission (for all variables including battery voltage) would consist of one data transmission. A data transmission would be considered **failed** if any of the following conditions are true

- There is no transmission of data from **remote site**
- Data is transmitted from **remote site** but not received at **state data centre / e-SWIS**.
- Data is recorded in data logger but not transmitted

- Data is not recorded by data logger
- Battery voltage not transmitted
- Only battery voltage is transmitted without any actual data from sensors
- Data is transmitted but data values are **invalid**.

**v) Faulty Station**

A station would be considered faulty if:

- In case of DWLR data received at State Data Center, if there is  $\geq 8$  data measurement ( $\geq 2$  transmission cycles / 2 days) are failed / invalid data receptions.
- Bidder has failed to pay the communication charges (SIM, internet, GSM/GPRS etc.) & system is not in function due to unpaid communication charges.

**vi) Maximum response time for Repair (MRTR)**

- The MRTR for Remote station would be 7 days
- The MRTR for Data Centre would be 2 days

**vii) Minimum time between repairs per Station**

- The minimum time between repairs is six months. If a station went faulty for reasons attributed to bidder and availed of MRTR once, it would not be eligible to avail the free repair period within payment period (six months)

**2. Payment for Data reception**

- The payment would be released proportion to data received at the Data centre. A table below presents the percentage of data reception and corresponding payment

Percentage of data received	Payment to be made to vendor
90-100%	100% of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
80-89.99 %	90% of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
70-79.99 %	80 % of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
60-69.99 %	70 % of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
50- 59.99%	60% of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
40- 49.99%	40%of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
30-39.99%	25% of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))
Below 30%	NIL of (7.5% of contract price to be paid six monthly as per SCC clause no. 16.1 (ii))

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The calculations for data reception percentage are as below

Data reception percentage for each station =

$$[1 - (\text{No of Failed transmissions} / \text{No of transmissions expected})] * 100$$

Data reception percentage for each station is calculated for payment period (six months)

Number of transmissions expected is calculated based on transmission cycle. For 6-hourly transmission cycle, if there are 182 days in six months period,

The no. of expected transmissions = 182 (days) \* 4 (transmissions per day) for a given station.

If a station went faulty during payment period of six months and availed of free time of MRTR (7 days), the 7 days period would be subtracted from no. of expected transmissions. For example, if a station went faulty and payment period is for 182 days, the number of transmissions expected would be calculated as:

Number of transmissions expected = (182-7) \* 4; here 7 days time to repair. However, this deduction would be allowed only once in six months period for any given station.

$$\text{Total data Reception percentage} = \frac{\sum_{i=1}^n \text{Data reception percentage of } i^{\text{th}} \text{ station}}{n}$$

Where n is number of remote stations

In case the percentage of data reception is below 50% continuously for 3 months, the Engineer-in-charge may initiate termination process as per GCC clause no. 35.

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**Attachment: Price Adjustment Formula**

**Deleted**

## **SECTION X – CONTRACT FORMS**



**1. LETTER OF ACCEPTANCE**

*[letterhead paper of the Purchaser]*

**[date]**

To: *[name and address of the Supplier]*

Subject: Notification of Award Contract No. . . . . .

This is to notify you that your Bid dated . . . . *[insert date]* . . . . for execution of the . . . . .  
. . . . *[insert name of the contract and identification number, as given in the SCC]* . . . . .  
.. for the Accepted Contract Amount of . . . . . *[insert amount in numbers and words  
in Rupees]*, 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 21 days in accordance with  
the Conditions of Contract, using for that purpose the of the Performance Security Form  
included in Section X, Contract Forms, of the Bidding Document.

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Agency: \_\_\_\_\_

Attachment: Contract Agreement

## 2. Contract Agreement

*[The successful Bidder shall fill in this form in accordance with the instructions indicated]*

(i)  
THIS CONTRACT AGREEMENT is made

the *[ insert: **number** ]* day of *[ insert: **month** ]*, *[ insert: **year** ]*.

BETWEEN

- (1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called “the Purchaser”), and
- (2) *[Insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called “the Supplier”).

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in Rs]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract Agreement. This Agreement shall prevail over all other contract documents: In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed below.
  - (a) The letter of Acceptance
  - (b) this Contract Agreement
  - (c) Letter of Bid – Technical Part
  - (d) The Supplier’s letter of Bid – Financial Part and original completed Schedules including Price Schedules
  - (e) Special Conditions of Contract
  - (f) General Conditions of Contract
  - (g) Technical Requirements (including Schedule of Requirements and Technical Specifications)
  - (h) *[Add here any other document(s) listed in GCC/SCC as part of contract]*

3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services 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 *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

**For and on behalf of the Purchaser**

Signed:.....  
*Designation:* .....  
Address: .....  
.....  
.....  
Place: .....  
Date: .....

**For and on behalf of the Supplier**

Signed:.....  
*Designation:* .....  
Address: .....  
.....  
.....  
Place: .....  
Date: .....

**In the presence of**

Signature of Witness: .....  
*Name:* .....  
Address: .....  
.....  
.....

**In the presence of**

Signature of Witness: .....  
*Name:* .....  
Address: .....  
.....  
.....

Place: .....

Place: .....

Date: .....

Date: .....

### 3. Performance Security - Bank Guarantee

*[Guarantor letterhead or SWIFT identifier code]*

Performance Guarantee No.....*[insert guarantee reference number]*

Date.....*[insert date of issue of the guarantee]*

To: \_\_\_\_\_ *[name of Purchaser]*

\_\_\_\_\_ *[address of Purchaser]*

WHEREAS \_\_\_\_\_ *[name and address of Supplier<sup>15</sup>]* (hereinafter called "the Applicant") has undertaken, in pursuance of Contract No. \_\_\_\_\_ dated \_\_\_\_\_ to execute \_\_\_\_\_ *[name of Contract and brief description of Goods and related Services]* (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Applicant shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Applicant such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Applicant, up to a total of \_\_\_\_\_ *[amount of guarantee<sup>16</sup>]* \_\_\_\_\_ *[in words]*, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of \_\_\_\_\_ *[amount of guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Applicant before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Goods and related Services to be supplied thereunder or of any of the Contract documents which may be made between you and the Applicant shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

<sup>15</sup> In the case of a JV, insert the name of the Joint Venture

<sup>16</sup> An amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract and denominated in Indian Rupees.

This guarantee shall be valid until ..... (i.e.) 60 days following the Completion date of the Contract including any warranty obligations<sup>17</sup>, and any demand for payment under it must be received by us at this office on or before that date.

Signature and seal of the guarantor \_\_\_\_\_  
Name of Bank \_\_\_\_\_  
Address \_\_\_\_\_  
Date \_\_\_\_\_

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>17</sup> Completion date as described in GC Clause 18.4

#### 4. Bank Guarantee for Advance Payment

*[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated.]*

Date: *[insert date (as day, month, and year) of Bid Submission]*

NCB No. and title: *[insert number and title of bidding process]*

*[bank's letterhead]*

**Beneficiary:** *[insert legal name and address of Purchaser]*

**ADVANCE PAYMENT GUARANTEE No.:***[insert Advance Payment Guarantee no.]*

We, *[insert legal name and address of bank]*, have been informed that *[insert complete name and address of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert date of Agreement]* with you, for the supply of *[insert types of Goods to be delivered]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance is to be made against an advance payment guarantee.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount(s)]<sup>18</sup> in figures and words* upon receipt by us of your first demand in writing declaring that the Supplier is in breach of its obligation under the Contract because the Supplier used the advance payment for purposes other than toward delivery of the Goods.

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 Supplier on its account *[insert number and domicile of the account]*

This Guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[insert date]<sup>19</sup>*.

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

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*[signature(s) of authorized representative(s) of the bank]*

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<sup>18</sup> The bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC.

<sup>19</sup> Insert the Delivery date stipulated in the Contract Delivery Schedule. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Purchaser might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed *[six months]**[one year]*, in response to the Purchaser's written request for such extension, such request to be presented to us before the expiry of the Guarantee."

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- i In this context, any action to influence the procurement process or contract execution for undue advantage is improper.
  - ii For the purpose of this sub-paragraph, “*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.
  - iii For the purpose of this sub-paragraph, “*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.
  - iv For the purpose of this sub-paragraph, “*parties*” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.
  - v For the purpose of this sub-paragraph, “*party*” refers to a participant in the procurement process or contract execution.