



**CHENNAI METROPOLITAN WATER
SUPPLY & SEWERAGE BOARD**



TENDER NO: CMWSSB/CNT/WSS/ICB/JICA/DESAL/CP01/018/2020-21

**LOAN AGREEMENT NO. ID-P267
JICA FUNDED PROJECT**

BIDDING DOCUMENT

FOR

**PROJECT FOR CONSTRUCTION OF CHENNAI
SEAWATER DESALINATION PLANT (I)**

PART-III

(CONDITIONS OF CONTRACT AND CONTRACT FORMS)

**PROCUREMENT OF DESIGN/ENGINEERING, CONSTRUCTION,
COMMISSIONING OF 400 MLD SEAWATER REVERSE OSMOSIS (SWRO)
DESALINATION PLANT AT PERUR, CHENNAI WITH 20 YEARS OF
OPERATION AND MAINTENANCE (DBO BASIS)**

INTERNATIONAL COMPETITIVE BIDDING

PROJECT MANAGEMENT CONSULTANTS

SMEC International Pty Ltd.
NJS Engineers India Pvt. Ltd.
Tata Consulting Engineers Ltd.
SMEC India Pvt. Ltd.

**SUPERINTENDING ENGINEER
(CONTRACTS & MONITORING)
CHENNAI METROPOLITAN
WATER SUPPLY & SEWERAGE
BOARD**

Date of Issue of Request for Proposal: xx/xx/2021

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PART 3 – CONDITIONS OF CONTRACT AND CONTRACT FORMS

Section VII. General Conditions (GC)

The Conditions of Contract comprise two parts, this Section VII - General Conditions of Contract (GC) and the following Section VIII- Particular Conditions of Contract.

The GC for the contract shall be the **Conditions of Contract for Design, Build and Operate Projects (First Edition 2008), (FIDIC Gold Book)** prepared by the Fédération Internationale des Ingénieurs- Conseils (FIDIC). A copy of these General Conditions is not attached to these bidding documents / contract and the General Conditions of Contract are available at:

<http://fidic.org/bookshop>

The GC in this Section, read in conjunction with the Particular Conditions in Section VIII and other documents listed therein, should be a complete document expressing all the rights and obligations of the contracting Parties.

Any amendments and additions to the General Conditions, specific to the Contract in hand, has been introduced in the Particular Conditions (PC). A number of such Particular Conditions, applicable to the above Conditions of Contract, are included in Section VIII.

The Particular Conditions take precedence over the General Conditions - see Sub-Clause 1.5, Priority of Documents, in the General Conditions. The PC has Part A and Part B defined below.

Part A, the Contract Data of the PC, includes data to complement GC in a manner similar to the way in which the Bid Data Sheet complements the Instructions to Bidders. Clause numbers in the PC correspond to those in the GC.

Part B, the Specific Provisions of the PC specifies country- or project-specific provisions for PC in each case.

Section VIII. Particular Conditions

Particular Conditions (PC) Part A - Contract Data

The following Particular Conditions of Contract (PC) shall supplement the GC. Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

Sub-Clause	Data to be given	Data
1.1.24	Where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost:	0% (Zero percent)
1.1.26	Cut-Off Date (number of days after the Time for Completion of Design-Build):	As per Sub-Clause 15.2 (h): 182 days after the Time for Completion of Design-Build.
1.1.32	Employer's name and address	Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) Urban Administrative Building, 3 rd Floor, No.75, Santhome High Road, Raja Annamalaipuram, Chennai 600 028 Telephone: 044 28451300 Extn: 209, Facsimile: 044 28458181
1.1.35	Employer's Representative's name and address:	Project Director, Desalination Plant, PIU, CMWSSB, Urban Administrative Building, 3 rd Floor, No.75, Santhome High Road, Raja Annamalaipuram, Chennai 600 028 Telephone: 044 28451300 Extn: 209, Facsimile: 044 28458181 e-mail: desalperur400mld@gmail.com Assisted by: Team Leader Project Management Consultant SMEC International Pty Ltd, NJS Engineers India Pvt. Ltd., TCE Ltd. & SMEC (India) Pvt. Ltd. Consortium Purva Primus, No 236 Okkiyampettai, Old Mahabalipuram Road, Okkiyam Thuraipakkam, Chennai – 600097 Ph: +91 44 6697 3300
1.1.70	Parts of the Works that shall be designated a Section for the purposes of the Contract:	<u>Section A - “Design Build Contract” or “Works Contract”:</u> Design, submittals, procurement, Construction, fabrication, installation, testing, trial run and commissioning and

Sub-Clause	Data to be given	Data
		<p>process proving of the Plants / Works or components of the Plants / Works, demolition of existing structures (as required), for a period of 42 Months (36 months of construction work, 3 months of trial run and commissioning period and 3 months for process proving) from Commencement Date as specified in GC Clause no. 8.1</p> <p>Section B - "O&M Contract": Operation and Maintenance of the Plants / Works for the Operation Service Period, for a period of 20 Years including one year (365 days) of Defect Liability Period (DLP) from the date of issue of Commissioning Certificate by the Employer's Representative as per provisions of GC Clause No.11.7</p>
1.1.76	Tests on Completion of Design-Build	Test on completion on design-build includes initial performance test of the plant for 15 days (as part of the plant commissioning) followed by process proving test of the plant for 3 consecutive months.
1.1.78	Total Time for Completion of Design-Build including commissioning stage	42 Months
1.3	Agreed methods of electronic transmission	E-mail from the authorised representatives will be an acceptable form of electronic transmission system.
1.3	Address of Employer for communications	Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) Urban Administrative Building, 3 rd Floor, No.75, Santhome High Road, Raja Annamalaipuram, Chennai 600 028 Telephone: 044 28451300 Extn: 209, Facsimile: 044 28458181 e-mail: desalperur400mld@gmail.com
1.3	Address of Employer's Representative for communications	Project Director, Desalination Plant, PIU, CMWSSB, Urban Administrative Building, 3 rd Floor, No.75, Santhome High Road, Raja Annamalaipuram, Chennai 600 028 Telephone: 044 28451300 Extn: 209, Facsimile: 044 28458181 e-mail: desalperur400mld@gmail.com

Sub-Clause	Data to be given	Data
1.3	Address of Contractor for communications	To be determined later
1.4	Contract shall be governed by the law of	The Republic of India and/or Tamil Nadu State
1.4	Ruling language:	English
1.4	Language for communications:	English
2.1	After receiving the Letter of Acceptance, the Contractor shall be given right of access to all or part of the Site within:	14 days from the Commencement Date
4.2	Performance Security (as percentages of the Accepted Contract Amount in Currencies):	<p>The Performance Security shall be furnished as follows:</p> <ul style="list-style-type: none"> • Section A - Design Build Contract, the same shall be furnished within 28 days of the issue of Letter of Acceptance, in the amount (s) of Ten (10) percent of the Accepted Contract Amount for the Design-Build component excluding the Provisional Sums. • Section B - O&M Contract for 20 years, the same shall be furnished within 28 days from the commencement of Process Proving period in the amount (s) of Five (5) percent of the Accepted Contract Amount for the Operation Service period. <p><u>Performance Security:</u></p> <p>a) It shall be denominated in the types and proportions of the currencies in which the Contract Price is payable.</p> <p>b) The Performance Security shall be in the form of an absolute, unconditional and irrevocable guarantee from a scheduled bank as per RBI latest guidelines, preferably having branch</p>

Sub-Clause	Data to be given	Data
		<p>in Chennai in favour of the Managing Director, Chennai Metropolitan Water Supply and Sewerage Board, which may include Scheduled Banks in India, and if the Bank issuing the Performance Security is located outside India, it shall have a corresponding, Scheduled Banks, in the territory of India to make it enforceable.</p> <p><u>Return of Performance security:</u></p> <ul style="list-style-type: none"> • Section A (Design Build Contract): The 50% of the Performance Security shall be released to the Contractor after the issue of Commissioning Certificate as per sub-clause 11.7 of GC, but not before the receipt of a separate Performance Security for O&M Contract. The remaining 50% shall be released upon the successful completion of the DLP period of 1 year. • Section B (O & M): Performance Security shall be reduced annually on pro-rata basis after adjusting the cost of accepted O&M Contract Amount for previous year.
5.1	Period for notification of errors, faults and other defects is:	Zero (0) days from the Commencement Date.
6.5	Normal working hours on the Site:	<ul style="list-style-type: none"> • Section A (Design Build): All days of the week as deemed fit by the Contractor and approved by the Employer. The normal working hours will be 8 hours from 9:00AM to 6:00PM with 1 hr break for lunch. • Section B (O & M): As required to fulfil the contractual obligations - operation and maintenance shall be carried out 24

Sub-Clause	Data to be given	Data
		hours a day, 7 days a week, for all days of the year including national holidays
8.2	Period of the Operation Service	20 Years from the date of issue of Commissioning Certificate.
9.2	Total Time for Completion of Design-Build including commissioning stage	<p>42 Months from Commencement Date as specified in GC Clause No. 8.1</p> <ul style="list-style-type: none"> • 36 months of construction work, • 3 months of trial run and commissioning period including 15 days of initial performance test for the designed capacity, and • 3 months for process proving.
9.2	Time for Completion of each Section:	<p>Section A - “Design Build Contract” or “Works Contract”: Design, submittals, procurement, Construction, fabrication, installation, testing, trial run and commissioning and process proving of the Plants / Works or components of the Plants / Works, demolition of existing structures (as required), for a period of 42 Months (36 months of construction work, 3 months of trial run and commissioning period and 3 months for process proving) from Commencement Date as specified in GC Clause No. 8.1.</p> <p>Section B - “O&M Contract”: Operation and Maintenance of the Plants / Works for the Operation Service Period, for a period of 20 Years including one year (365 days) of Defect Liability Period (DLP) from the date of issue of Commissioning Certificate by the Employer’s Representative as per provisions of GC Clause No.11.7</p>
9.6	Delay Damages	As specified in Delay Damages relating to Design-Build, Clause no.9.6 of Part-III of Particular Condition (Part B- Specific Provisions).
9.6	Maximum amount of Delay	10% of Works Contract Price for the Design- Build Period.

Sub-Clause	Data to be given	Data
	Damages (percent of final Contract Price):	
10.6 a	Maximum compensation payable by Contractor:	10% of the O&M Contract Price for the Operation Service of the respective year.
10.7	Performance damages:	As specified in Penalties during Operation & Maintenance Period , as per Clause no.9.14 of Part-III of Particular Condition (Part B – Specific Provisions)
10.7	Rights of Employer if failure continues for more than 84 days:	As per Sub-Clause 10.7 (b) (i) and (ii) only
10.7	Minimum production outputs required (give details):	As per Employer's Requirement
13.5 (b) (ii)	Percentage rate:	0% (Zero percent)
14.2	Amount of Advance Payment (percent of Accepted Contract Amount):	<p>Ten Percent (10%) of the Accepted Contract Amount for Design-Build Works payable in the currencies and proportions in which the Accepted Contract Amount is payable.</p> <ul style="list-style-type: none"> • The 10% advance is payable in two equal instalments. • The 1st instalment 5% Mobilization Advance to be released after signing of Contract Agreement. • The 2nd instalment of 5% Mobilization advance will be released after meeting all the requirements as specified below: <p>(a) Mobilized the approved Construction Project Manager for the Contract.</p> <p>(b) Established and staffed an approved functional design office at Chennai.</p> <p>(c) Mobilized the approved survey and subsoil investigation crews to the Site and commenced the surveys and subsoil investigations.</p>

Sub-Clause	Data to be given	Data
		<p>(d) Submitted a list of subcontractors (if any) and their respective agreements for approval of the Employer's Representative.</p> <p>(e) Submitted the proposed "Submission and Anticipated Approval Program" for construction documents for approval of the Employer's Representative.</p> <p>(f) Submitted the proposed construction programme for approval of the Employer's Representative.</p> <p>(g) Submitted, for approval by the Employer's Representative, mobilization/ deployment schedules for:</p> <ul style="list-style-type: none"> i) Contractor's key personnel required for managing, executing and supervising the Works, ii) Contractor's Plant, Machinery and Equipment required for executing the Works; and iii) Procurement Schedule for major materials and equipment to be incorporated into the Permanent Works. <p>(h) Submitted a Cash Flow Forecast for approval of the Employer's Representative.</p> <p>(i) Submitted details of funds mobilized by himself as per the Cash Flow Forecasts.</p> <p>(j) Submitted a list of proposed quarries, suppliers and manufacturers, along with their</p>

Sub-Clause	Data to be given	Data
		<p>credentials, for approval of the Employer's Representative.</p> <p>(k) Actual deployment of: (i) such Personnel, (ii) Machinery and Equipment, as per the approved deployment schedules.</p> <p>(l) Established the fully furnished Site office(s).</p> <p>(m) Established and staffed, with qualified personnel a completely equipped testing laboratory at site for quality control purpose.</p> <p>(n) Commenced construction work at the Site in accordance with the approved Construction Program</p>
14.2	Currencies of payment if different to the currencies quoted in the Contract	<p>Local Currency: INR</p> <p>Foreign Currency: USD and JPY</p>
14.2 (a)	Percentage deductions shall commence in the Interim Payment Certificate in which the total of all certified interim payments exceeds	10% (ten percent)
14.2 (b)	Percentage deductions for the repayment of the Advance Payment from each Interim Payment Certificate:	25% (Twenty five percent)
14.3	Percentage of Retention:	5 (Five) % of Interim Payment Certificate
14.3	Limit of Retention Money:	5 (Five) % of Accepted Contract Amount for Design Build Works.
14.7(b)	Minimum Amount of Interim Payment Certificate:	<p>1% (one percent) of the Accepted Contract Amount for Design-Build.</p> <p>The Contractor may raise monthly invoice during Operation Service period.</p>
14.9	Financing charges for delayed payment (percent points above	0% (zero percent)

Sub-Clause	Data to be given	Data
	discount rate)	
14.17	Currencies for payment of Contract Price:	Local Currency: INR Foreign Currency: USD and JPY
14.17	Proportions of Local and Foreign Currencies are:	Not Applicable
14.17	Rate of Exchange	As per RBI notification
14.17	Payment of damages shall be:	Local Currency: INR Foreign Currency: USD and JPY
14.19	Amount of Maintenance Retention Fund:	5% of the Accepted Contract Amount for the Operation Service for each Interim Payment Certificate and will be fully returned along with the 1 st payment of the subsequent year.
17.1(b)(ii) & 17.3(b)(ii)	Fault, error, defect or omission in any element of the design of the Works by the Employer:	All the technical designs of the plant given by the Employer are indicative. The Contractor is required to review the design and make changes as needed before implementing the design.
17.1(b)(iii) & 17.3(b)(iii)	Operation of forces of nature allocated to the Contractor:	None
17.8	Total liability of the Contractor shall not exceed:	The total Accepted Contract Amount i.e., Sum of Accepted Contract Amount for Section A (Design Build Contract) and Accepted Contract Amount for Section B (O&M Contract).
19.2(a)(i)	Permitted deductible limits:	Nil
19.2(a)	Amount of Insurance of the Works	100% of the Works Contract Price.
19.2(a)4	Employer's Risks to be insured if different to Sub-Clause 17.1:	0.75% of the Works Contract Price.
19.2(a)5	Exceptional Risks to be insured if different to Sub-Clause 18.1:	0.1% of the Works Contract Price.
19.2(b)	Insurance of Contractor's Equipment (amount required):	The Contractor shall insure all the machineries, equipment, vehicles, unmanned aerial vehicles, vessels, ships, boats, diving equipment etc. used for construction.

Sub-Clause	Data to be given	Data
19.2(c)	Amount of professional liability insurance required:	The Contractor has to provide a complete protection for professional liability.
19.2(c)	Period for which professional liability insurance required:	Up to 365 days from the issue of Contract Completion Certificate.
19.2(d)	Amount of insurance required for injury to persons and damage to property:	As per applicable laws and regulations.
19.3 (e)	Plant Insurance to be inserted.	100% of the O&M Contract Price.
19.2(f)	Other insurances required from the Contractor (give details):	None
19.3(a)	Amount of fire extended cover insurance required:	Above ground assets: INR500 Million Underground assets: INR50 Million
19.3(d)	Other insurances required by law from the Contractor (give details):	None
19.3(e)	Other optional operational insurances required from the Contractor (give details):	None
20.3	Date for appointment of DAB:	28 days from the Commencement Date.
20.3	The DAB shall comprise:	3 (Three) Members
20.4	Appointment (if not agreed) to be made by	The President of FIDIC or a person appointed by him.
20.8	Language of arbitration:	English
20.8 (a), (b) & (c)	Arbitration	The dispute between the Employer and the Contractor shall be settled by arbitration in accordance with the Arbitration and Conciliation Act, (1996) and amendment thereof.

Particular Conditions (PC) Part B- Specific Provisions

CLAUSE 1 GENERAL PROVISIONS

Sub Clause 1.1 Definitions

Replace with the following the definition of Sub-Clause 1.1.10 as follows:

1.1.10(a) "Contract" means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Employer's Requirements, the Schedules, the Contractor's Proposal, the Operating Licence, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance. For the purposes of defining the different activities and obligations under the Contract, the Contract will be comprised of a "**Section A - Design-Build Contract or Works Contract**" and an "**Section B - O&M Contract**", as defined in the following Sub-paragraphs 1.1.10(b) and (c), respectively; such definitions are for convenience only and shall not affect the rights or obligations of the Employer or the Contractor under the Contract.

1.1.10(b) "**Design-Build Contract or Works Contract**" means that portion of the Contract that relates to the **design, submittals, procurement, construction, fabrication, installation, testing, trial run, commissioning and process proving of the Works or components of the Works, and the remedying of any defects of the Plants/Works or components of the Plants/Works, demolition of existing structures (as required)**, but excluding operation and maintenance, in accordance with the provisions of the Contract.

1.1.10(c) "**O & M Contract**" means that portion of the Contract that relates to the **operation and maintenance of the Works for the Operation Service Period**, as defined in the Contract Data, but excluding the Works Contract, in accordance with the provisions of the Contract.

Replace with the following the definition of Sub-Clause 1.1.15 as follows:

1.1.15 "Contract Period" means the **Design-Build Period or Works Period** plus the **Operation Service Period or O&M Period**.

Replace with the following the definition of Sub-Clause 1.1.16 as follows:

1.1.16(a) "**Contract Price**" means the price as defined in Sub Clause 14.1 [*The Contract Price*] and includes the adjustments in accordance with the Contract.

For the purposes of determining payments under the Contract and, where applicable, other obligations, the Contract Price shall be

subdivided into a “**Works Contract Price**” and “**O&M Contract Price**”, as defined in the following Sub paragraphs 1.1.16 (b) and 1.1.16 (c), respectively.

The total “**Contract Price**” will be the sum of the Works Contract Price and the O&M Contract Price.

1.1.16(b) “**Works Contract Price**” means that portion of the Contract Price payable to the Contractor for performance of the Design-Build Contract or Works Contract in accordance with the provisions of the Contract. The **Works Contract Price** will be the total of the amounts for carrying out the Works, as set out in Part 1 Price Schedules.

1.1.16(c) “**O&M Contract Price**” means that portion of the Contract Price payable to the Contractor for performance of the O&M Contract in accordance with the provisions of the Contract. The **O&M Contract Price** will be the total amount for operation and maintenance during the O&M period, as set out in Part 1 Price Schedules, under Schedule for Operation and Maintenance.

Replace with the following the definition of Sub-Clause 1.1.57 as follows:

1.1.57 “**Operation Service or O&M**” means the performance of any and all tasks and provision of any and all things necessary for the safe and efficient functioning of the Works in compliance with all applicable regulations and the O&M Contract. This includes but is not limited to supply of all labour, equipment, materials, fuel and other consumables, and all other necessary things.

Replace with the following the definition of Sub-Clause 1.1.58 as follows:

1.1.58 “**Operation Service Period or O&M Period**” means the period from the date stated in the Commissioning Certificate as provided for under Sub-Clause 10.2 [Commencement of Operation Service] to the date stated in the Contract Completion Certificate.

Replace with the following the definition of Sub-Clause 1.1.61 as follows:

1.1.61 “**Permanent Works**” means all Civil, Mechanical, Electrical, Instrumentation and Control, and all other allied components necessary for fully functional and operational installations and facilities capable of meeting all performance and other requirements specified in the Part -2 Employer’s Requirement.

Replace with the following the definition of Sub-Clause 1.1.75 as follows:

- 1.1.75 **"Tender"** means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as incorporated in the Contract. The word tender is synonymous with Bid and their derivatives, Bidder/Tenderer, Bid/Tender, Bidding/Tendering as well as the words Tender Documents and Bid Documents are synonymous.

Add the following definitions to Sub-Clause 1.1:

- 1.1.84 **"Facilities"** means the Works executed and completed by the Contractor.
- 1.1.85 **"JICA"** means Japan International Cooperation Agency, the institution financing the project.

Sub-Clause 1.6 Contract Agreement

Replace the Sub-Clause 1.6 as follows:

A Performance Security in the form annexed, shall be submitted by the successful bidder (single bidder or joint venture) within 28 days after the Contractor receives the Letter of Acceptance, unless the Parties agree otherwise. The Contract Agreement shall be executed between the Employer and the successful bidder only.

The Time period for signing the Contract agreement shall be within 14 days after receipt of Performance Security under Sub-Clause 4.2 from the successful bidder. The costs of stamp duties and similar charges imposed by the law in connection with entry into the Contract Agreement shall be borne by the Employer.

Sub-Clause 1.8 Assignments

Insert at the end of the Sub-Clause 1.8:

Any assignment in terms of Sub-paragraph (b) above shall be subject to the condition that the bank or financial institution will not have any rights under or in relation to the Contract, except to direct that all or any payments that are offered to be made by the Party liable to make such payments be made to the person or to the account designated by the bank or financial institution.

Sub-Clause 1.9 Care and Supply of Documents

Insert at the end of the Sub-Clause 1.9:

Failure to issue such Notice by the Employer or the Employer's Representative to the Contractor in respect of any error in the Contractor's Documents shall not in any manner relieve the Contractor of its obligation to ensure the correctness

and accuracy of the Contractor's Documents, and their compliance with the requirements of the Contract.

Sub-Clause 1.10: Errors in the Employer's Requirements

Replace the line item (ii) of the Sub-Clause 1.10:

However, there will be no payment to the Contractor of any such Cost incurred as a result of the errors in the Employer's Requirements.

CLAUSE 3 THE EMPLOYER'S REPRESENTATIVE

Sub-Clause 3.4 Replacement of Employer's Representative

Insert at the end of Sub-Clause 3.4:

The Employer's representative shall serve as an agent or a representative of the Employer. Mere change of the position of the incumbent by reason of transfer, retirement or otherwise shall not be construed as replacement of the Employer's Representative for the purpose of this Contract.

Sub-Clause 3.6 Management Meetings

Insert additional Sub-Clause 3.6:

The Employer's Representative or the Contractor's Representative may require the other to attend a management meeting in order to review the arrangements for future work. The Employer's Representative shall record the business of management meetings and supply copies of the record to those attending the meeting and to the Employer. In the record, responsibilities of any actions to be taken shall be in accordance with the Contract.

Sub-Clause 4.1 Contractor's General Obligations

Replace the first paragraph of Sub-Clause 4.1 with:

The Contractor shall design, execute, complete, test and also operate and maintain the Works in accordance with the Contract, and shall remedy any defects in the Works. When completed the works shall be fit for the purpose for which the works are intended as defined in the Contract. The Works shall be operated and maintained as per terms and conditions of the Contract throughout the period from commissioning of Section A-Design-Build Contracts until the end of Operation Service Period as specified in the Contract Data for Section B- O&M Contract.

Sub-Clause 4.2 Performance Security

Replace the Sub-Clause 4.2 as follows:

The Contractor shall obtain (at his/their cost) a Performance Security for proper performance, in the amount stated in the Contract Data and denominated in the currency (ies) of the Contract or in a freely convertible currency acceptable to the Employer.

The Contractor shall submit an absolute, irrevocable and unconditional Performance Security applicable to Section A (Design-Build Contract) as specified in the “Contract Data” for his proper performance of Section A of the Contract (Design-Build Contract), (not withstanding and/or without prejudice to any other provisions in the Contract), in the amount and within the time period stated in the “Contract Data”.

The Contractor shall submit an absolute, irrevocable and unconditional Performance Security applicable to Section B (Operation and Maintenance Contract) as specified in “Contract Data” for his proper performance of Section B of the Contract (Operation and Maintenance Contract), (not withstanding and/or without prejudice to any other provisions in the Contract), in the amount and at the time stated in the “Contract Data”.

The Performance Securities shall be in the form of an absolute, irrevocable and unconditional bank guarantees from a bank approved by Reserve Bank of India, preferably having branch in Chennai as per the format provided in Sample Forms.

A Letter of Acceptance shall be issued in the first instance informing the Contractor of the decision of the Employer to accept his Bid. In case of failure by the Contractor to furnish Performance Security within the specified period, the Employer shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the Bid Security absolutely.

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

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

If the terms of a Performance Security specify its expiry date, and the Contractor have not become entitled to receive the Contract Completion Certificate following completion of Section B, as applicable, by the date 28-days prior to the expiry date, the Contractor shall extend the validity of the Performance Security

until the relevant Section of the Works has been completed and any defects remedied. Prior to making a claim under a Performance Security, the Employer shall, in every case, notify the Contractor stating the nature of the default for which the claim is to be made.”

The Employer shall return the 50 % of the Performance Security for Section A - Design-Build Contract to the Contractor after the issue of Commissioning Certificate as per Sub-Clause 11.7 and the subsequent receipt of the Performance Security for the O&M Contract, and the remaining 50 % after the successful completion of the DLP period of 1 year, as stated in Contract Data.

The Performance Security for the O & M Contract shall be reduced annually after adjusting the cost of O&M Works for previous year, as stated in Contract Data.

Sub-Clause 4.4 Subcontractors

Replace with the following the Sub-Clause 4.4 as:

The Contractor shall not subcontract more than 25% (twenty five percent) of the Works Contract Price to a single subcontractor, and any proposed subcontracts shall be subject to the following conditions:

- for all subcontracts, whether proposed in the tender or at a later date, the Contractor shall, in the format provided in Section 4, Bidding Forms (Form - SUB), submit a list of proposed Subcontractors along with their credentials including technical capability, financial capability, and experience in works similar to those which are proposed to be subcontracted.
- the Employer’s Representative will scrutinize the proposals submitted by the Contractor and approval of the Subcontractors will be based on their overall capacity to execute the works proposed to be sub-contracted.
- the prior approval of the Employer’s Representative shall be obtained for all proposed Subcontractors, as well as for the proposed agreement(s) between the Contractor and such proposed Subcontractors; the Contractor shall submit a copy of the proposed agreement between the Contractor and the proposed Subcontractor.

The Contractor shall be responsible for ensuring that no unauthorized subcontractors are permitted to work on any part of the Site. If, at any stage during execution, a subcontractor is found working at the Site without prior approval of the Employer’s Representative, then the work being done by that subcontractor shall be stopped, the subcontractor shall be expelled from the Site, and the Employer’s Representative will determine what components of the subcontractor’s work are acceptable, what components shall be reworked or remedied by the Contractor, and what payment, if any, is payable for the

subcontractor's work.

The act of subcontracting any part or component of the Works shall not relieve the Contractor of his overall responsibilities under the Contract. The Contractor shall be responsible for compliance by all Subcontractors with all the provisions of the Contract. The Contractor shall be responsible for the acts or defaults of any Subcontractor, his agents, or employees, as fully as if they were the acts or defaults of the Contractor, his agents, or employees.

In the event that the Employer's Representative determines that any Subcontractor's performance with respect to progress, quality, or Contract compliance is unsatisfactory, then the Contractor will be required to remove such subcontractor from the Site and either undertake the works itself or provide a suitably qualified replacement. If any delays occur as a result, the Contractor will be responsible for taking any necessary actions to make up the lost time, for which no additional payments or extension of time will be granted.

The Contractor shall carry out all Operation and Maintenance of the Works solely by itself or through the JV/Consortium member having expertise and qualification of O&M as called in the Contract Agreement.

The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.13 [Confidential Details] apply equally to each Subcontractor. Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Sub-Contractors.

Sub-Clause 4.8 Safety Procedures

Insert the following paragraph at the end of Sub-Clause 4.8:

The Contractor shall submit, within 15 days of signing of the Contract Agreement, the required Safety Plan developed in accordance with the requirements set out in PART-II, Employer's Requirements for approval of the Employer's Representative. The Employer's Representative will either approve the submittal or provide comments thereon to the Contractor within 14 days of submission by the Contractor. The Employer's Representative's, approval, disapproval, comments, or failure to provide any of these to the Contractor, shall in no way relieve the Contractor of any of its obligations or responsibilities under the Contract.

The plant shall be connected to the national Tsunami warning system directly. In case of a Tsunami warning, an alert shall be issued. The Contractor shall introduce a programme so that the Instrumentation and Control System (INC) /DCS of the plant shall set the plant into a safe mode (including backflushing/cleaning of membranes with desalinated water, closing all interconnected valves to the membranes and shutting down all electrical devices) with a view to

minimizing the damage to the plant. The evacuation of the staff shall be planned and executed according to an occupational health and safety system. A yearly mock drill shall be conducted in the presence of CMWSSB officials to secure the operation of the Tsunami Response System. The result of this mock drill shall be reported to CMWSSB. The SCADA system shall give the possibility for remote control of the plant from CMWSSB's main control room.

The noise level produced by any equipment like pump sets, compressor sets and blower sets etc. shall not exceed 65 dBA measured at a distance of 1.0 m from the outer surface of the equipment. The enclosures shall be so designed as to emitting a signal to the control room in the event the enclosure is left open. The doors will be designed to be shut automatically. The specific train cannot operate with the doors open.

Sub-Clause 4.9 Quality Assurance

Insert the following paragraphs at the end of Sub-Clause 4.9:

The Contractor shall, prior to commencement of Permanent Works on Site, establish his own laboratory on the Site, with prior notification to the Employer's Representative. Calibration of the laboratory equipment and instruments shall be certified by agencies approved by the Employer's Representative. Laboratory equipment shall be properly maintained and calibrated throughout the period of the Contract by the Contractor at his own expense. The Contractor shall give the Employer's Representative at least 24-hours' advance notice prior to conducting any tests on Materials and work. The Employer's Representative shall also inspect the laboratory, if deemed necessary and the Contractor shall provide adequate facilities to the Employer's Representative for his independent verification of the accuracy and adequacy of the facilities. The list of mandatory laboratory equipment to be provided at Site by the Contractor shall be as indicated in the Employer's Requirements.

The Contractor shall submit, within 15 days of signing of the Contract Agreement, the required Quality Assurance and Quality Control (QA/QC) Program for approval by the Employer's Representative. The Employer's Representative will either approve the submittal or provide comments thereon to the Contractor within 14 days of submission by the Contractor. The Employer's Representative's, approval, disapproval, comments, or failure to provide any of these to the Contractor, shall in no way relieve the Contractor of any of its obligations or responsibilities under the Contract.

Sub-Clause 4.17 Contractor's Equipment

Insert the following paragraph at the end of Sub-Clause 4.17:

The Contractor shall submit, within 15 days of signing the Contract Agreement,

the proposed Deployment Program for all necessary Equipment, Plant, and Machinery to be used for construction, for approval by the Employer's Representative. Such Deployment Program shall be developed using normally available commercial project management software and shall show equipment, plant, and machinery at micro level detail, along with Bar charts, essential for systematic and professional management of all construction works. The Employer's Representative will either approve the submittal or provide comments thereon to the Contractor within 14 days of submission by the Contractor. The Employer's Representative's, approval, disapproval, comments, or failure to provide any of these to the Contractor, shall in no way relieve the Contractor of any of its obligations or responsibilities under the Contract.

Sub-Clause 4.19 Electricity, Water and Gas

Rename this Sub-Clause as "Electricity and Water"

Replace the entire text of Sub-Clause 4.19 with the following:

For Performance of the Design-Build Contract:

The Contractor shall be responsible for provision of all power, water, and other services that he may require for performance of the Design-Build Contract. The cost of power shall be borne by the Contractor during Design-Build Contract Period.

For Operation and Maintenance period.

For O&M period, the cost of power shall be borne by the Employer. However, if the power consumption is more than the average specific energy consumption as stated in the Technical Schedule, the Contractor shall be liable for penalties as per SP Clause 9.14 for excess power consumption.

Sub-Clause 4.20 Employer's Equipment and Free-Issue Material: Not Applicable

Sub-Clause 4.23 Contractor's Operations on Site

Insert the following to the end of Sub-Clause 4.23:

The Contractor may retain on Site, throughout the period of Operation and Maintenance, only such Contractor's Equipment, Temporary Works and material as are required for Operation and Maintenance and the rectification of defects by obtaining prior permission from the Employer.

CLAUSE 5 DESIGN

Sub-Clause 5.1 General Design Obligations

Replace the first sentence of Sub-Clause 5.1 with the following sentence:

The Contractor shall carry out, and be responsible for, the complete design of the Works, including any site surveys, subsoil investigations, materials testing, shore surveys, offshore geotechnical investigations, soil investigations and all other things necessary for proper planning, design, construction, operation and maintenance.

RO Plant concept

The following documents shall also be submitted by the bidders as part of the proposal: -

- Total area required for installation of the Plant;
- Process and instrumentation diagram;
- Flow sheets and mass balances;
- Layout and arrangement drawings;
- Assumptions in the Plant design if any;
- Interfaces Tie-in list;
- Technical description of the Plant for the major equipment and system including their auxiliaries:
 - Mechanical equipment;
 - Electrical equipment and system;
 - Instrumentation & Control systems;
 - list of consumables and quantities
 - Civil works.
- O&M proposal;
- List of exclusions;
- List of services/ assistance required;
- Process Description of main features of the design concept;
- Detailed Time schedule showing information on the scheduling of the following activities:
 - Design and engineering work;
- Plant shall be designed for full range;
- Data given in Clause 1.3.1, Chapter-1, Part-II, Raw seawater design parameters for the design of the Facility are tentative only.

- The bidders are requested to perform their own water analysis in order to find best suitable design for his proposal. Further the bidders are expected to perform their own software calculations and design of the Plant as baseline for their DBO offer. Recent specific sea water quality data are annexed to the tender for bidder's reference. However, the bidder takes the full responsibility for any water analysis and plant design within his proposal.
- CMWSSB shall not be liable for the accuracy or otherwise of the data and takes no liability for any water analysis and plant design;
 - Dates and time of delivery of major Plant equipment and system;
 - Site preparation;
 - Factory tests for major Plant equipment;
 - Civil/structural works;
 - Erection and installation;
 - Commissioning;
 - Site tests.
- Plant operational/control philosophy (start up and shutdown of individuals units) along with defined time required;
- Comprehensive quality monitoring concept for the Seawater and drinking water and discharge water including Brine as per TNPCB requirements;
 - Comprehensive information about RO membrane cleaning procedures;
 - Detailed Process Design calculations:
 - SWRO Membrane Projections in the temperature range of 28 - 32 C;
 - Membrane Scaling Programme in the temperature range of 28- 32C;
 - Number of membrane replaced per year (in average)
 - Chemical rate in mg/l and consumption per day with dosing concentration;
 - Specific energy consumption including intake and pre-treatment for the complete Plant in kWh/m³;
 - Correction curves for part loads and deviating ambient conditions (Seawater temperature, TDS and Boron concentration);
 - List of Skilled and unskilled manpower required for operation of RO Plant.
 - Fabrication purposes, vehicles, mobile equipment etc.
 - The Plant shall be designed and constructed with minimal leakages. Leakage, if any, shall be disposed via head work or the plant outfall as feasible. Leakages have to be monitored, counted in m³/day and be part of the reporting. Maximum % of leakages has to be stated by EPC and to be

part of the O&M contract. Stormwater has to be collected on the plant site and to be used for rainwater harvesting.

- A minimum of 5 Metro Water Engineers/ personnel will be trained every year on site for at least two months in every function of the regular O&M personnel. Necessary staff of CMWSSB shall be deployed to the site of the plant for supervision / participation during construction and operation

Add the following paragraphs at the end of this Sub-Clause 5.1:

The Contractor shall establish a design liaison office headed by a Senior Design Manager and supported by a team of Mechanical, Electrical, Civil, Process, Engineer/s and reasonable numbers of CAD draughtsman etc at Chennai within 60 days from the Commencement Date to facilitate preparation and submission of designs, drawings, construction documents, etc., for review and approval by the Employer's Representative. The design liaison office shall preferably be located near the Employer's office to facilitate communications and frequent interactions with the Employer's Representative and the Employer. The Contractor shall maintain the design liaison office until such time as all necessary designs and construction documents have been completed, reviewed, and approved by the Employer's Representative.

The Contractor will be fully responsible for ensuring that its designs, drawings, and construction documents satisfy all requirements for constructing Works that are complete and fully functional in all respects and meet the Performance Guarantee requirements as well as Environmental requirements.

The warranty for the expected lifetime of the RO membrane shall be 7 years (+/- 0.5 year) which shall be provided by the Contractor in the bid submission.

The used RO membranes shall be sustainable reuse/ recycle/disposal compliant with Indian laws and regulations. The way of reusing/recycling/disposal will be reported regularly to CMWSSB.

Sub-Clause 5.2 Contractor's Documents

Replace the first sentence of the third paragraph of Sub-Clause 5.2 with the following:

Contractor's Documents shall be submitted to the Employer's Representative as per the Employer's Requirement for review prior to the procurement, installation and/or commencement of construction of the works. These Contractor's Documents shall be submitted accordingly, together with a Notice as described below.

Add the following sentence at the end of Sub-Clause 5.2:

The Contractor is responsible for the correctness of the Contractor's Documents. Any delay in the project progress due to more than one submission of the revised

incorrect or inapt documents to the Employer's Representative for review will subject to Employer's Claim as per Sub-Clause 20.2 and Sub-Clause 8.5.

CLAUSE 6 STAFF AND LABOUR

Sub-Clause 6.5 Working Hours

Insert the following to the end of Sub-Clause 6.5:

The above applies to the Works Contract. For the O&M Contract, working hours shall be 24 hours per day, every day of every year during the O&M Period.

Sub-Clause 6.7 Health and Safety

Insert the following after the first paragraph to the Sub-Clause 6.7:

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and/or carry out all such regulations, orders, and/or requirements as may be applicable, including those imposed by various governments and the local medical or sanitary authorities. All expenditure related with the epidemic shall be covered under the Contract Price. The Contractor shall ensure to allocate sufficient resources to the project to avoid any project delay due to such epidemic situation.

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

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

The Contractor shall include in the program to be submitted for the execution of the Works under Sub-Clause 8.3 an alleviation programme for Site staff and labor

and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation programme shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related Employer's Requirements. For each component, the programme shall detail the resources to be provided or utilized and any related sub-contracting proposed. The programme shall also include provision of a detailed cost estimate with supporting documentation.

Sub-Clause 6.8 Contractor's Superintendence

Insert the following to the end of Sub-Clause 6.8:

The Contractor shall submit, within 15 days of signing the Contract Agreement, the proposed Deployment Program for all key personnel for superintendence of Works under Section-A for approval by the Employer's Representative. Such Deployment Program shall show details of qualifications and experiences of the key personnel which are essential for the proper superintendence and systematic and professional management and implementation of the Works under Section A. The Employer's Representative will either approve the submittal or provide comments thereon to the Contractor within 14 days of the submission by the Contractor.

None of the Contractor's key personnel shall be withdrawn from the Works without due notice being given to the Employer's Representative. Further, no such withdrawals shall be made if in the sole opinion of Employer's Representative, such withdrawals will jeopardize the progress and timely, successful completion of the Works.

Sub-Clause 6.10 Records of Contractor's Personnel and Equipment

Add the following to the end of Sub-Clause 6.10:

Submission of Fortnightly Record of Labour: The Contractor shall submit by the 4th and 19th of every month, to the Employer's Representative a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively:

- i. The number and types of staffs/labourers employed by him on different work units,
- ii. Their working hours,

Insert the following as Sub-Clause 6.12 Foreign Personnel

The Contractor may bring in to the Country any foreign personnel who are

necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use his best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, and national or government permission required for bringing in the Contractor's personnel.

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

Insert the following as Sub-Clause 6.13 Measures against Insect & Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect and pest nuisance, and to reduce the dangers to public health and the general nuisance occasioned by the same. The Contractor shall provide its staff and labour with suitable prophylactics for the prevention of malaria and dengue fever and take steps to prevent the formation of stagnant pools of water. The Contractor shall comply with all the regulations of the local health authorities and shall arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as needed and instructed by such authorities.

Insert the following as Sub-Clause 6.14 Festivals and Religious Customs

The Contractor shall in all dealings with his staff and labor show due regard for all recognized festivals, days of rest, and religious or other customs.

Insert the following as Sub-Clause 6.15 Funeral Arrangements

The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of his local employees who may die while engaged upon the Works.

Insert the following as Sub-Clause 6.16 Forced Labourer

The Contractor shall not employ forced labourer, which consists of any work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labourer, such as involuntary prison labourer, indentured labourer, bonded labourer or similar labourer contracting arrangements.

Insert the following as Sub-Clause 6.17 Child Labourer

The Contractor shall not employ any child to perform any work, including work that is economically exploitative, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. "Child" means a child below the statutory minimum age specified under applicable national laws. The contractor shall put in place a procedure to verify the ages of young workers. Children below the age of 18 years shall not be employed in dangerous work.

Insert the following as Sub-Clause 6.18 Non-Discrimination and Equal Opportunity

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

Insert the following as Sub-Clause 6.19 Compliance with JICA's Safety Policy

The Contractor shall, during the entire Contract Period comply with the Safety Policy for Construction Works as prescribed by JICA. The Policy is available at

https://www.jica.go.jp/english/our_work/types_of_assistance/oda.html

CLAUSE 7 PLANT, MATERIALS, AND WORKMANSHIP

Sub-Clause 7.1 Manner of Execution

Add the following to the end of Sub-Clause 7.1

The Contractor shall submit, within 30 (thirty) days of signing the Contract Agreement, the proposed Procurement Program for all necessary Equipment, Plant, and Materials (including but not limited to Pumps, Motors, Compressor, Surge Vessels, Piping, Electrical Equipment, Structural Steel, Cement, Reinforcement Steel, Fuels, Lubricants, Spare Parts, etc.) to be incorporated into the Works for approval by the Employer's Representative. Such Procurement Program shall be developed using a normally available commercial project management software and shall show detailed planning and scheduling for placing of orders, inspections by the Contractor, Employer's Representative,

Employer, and/or Third Party Agencies, as applicable, and transportation plans and delivery schedules for all Equipment, Plant, and Materials to be incorporated into the Works as essential for systematic and professional management of all construction works. The Employer's Representative will either approve the submittal or provide comments thereon to the Contractor within 14 days of submission by the Contractor. The Employer's Representative's, approval, disapproval, comments, or failure to provide any of these to the Contractor, shall in no way relieve the Contractor of any of its obligations or responsibilities under the Contract.

Sub-Clause 7.3 Inspection

Add the following as item (d) after item (c) of Sub-clause 7.3:

(d) During the O&M Period, be entitled to examine, inspect, measure, and test the quality, and to check the progress of Operation and Maintenance Works.

Sub-Clause 7.4 Testing

Replace the first paragraph of Sub-clause 7.4 as follows:

This Sub-Clause shall apply to all tests specified in the Contract including the Process Proving test of 3 months period.

CLAUSE 8 COMMENCEMENT DATE, COMPLETION AND PROGRAMME

Sub-Clause 8.1 Commencement Date

Replace the first paragraph of Sub-clause 8.1 as follows:

Except as otherwise specified in the Contract, the Commencement Date shall be the date at which the following precedent conditions have all been fulfilled and the Employer's Representative notification recording the agreement of both Parties on such fulfilment and instructing to commence the Work is received by the Contractor:

- (a) signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of the Country;
- (b) delivery to the Contractor of reasonable evidence of the Employer's financial arrangements (under Sub-Clause 2.4 [Employer's Financial Arrangements]);
- (c) except if otherwise specified in the Contract Data, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.14 [Compliance with Laws] as required for the commencement of the Works;

If the said Employer's Representative instruction is not received by the Contractor within 180 days from his receipt of the Letter of Acceptance, the Contractor shall be entitled to terminate the Contract under Sub-Clause 16.2 [Termination by Contractor].

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

Sub-Clause 8.3 Programme

Replace the 1st paragraph of Sub-Clause 8.3 with the following:

The Contractor shall submit a detailed time programme indicating all sections of works as per the Milestones given in the Employer's Requirements to the Employer's Representative within 15 days of signing the Contract Agreement. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual progress or with the Contractor's obligations. Each programme shall include:

Add the following to the end of Sub-Clause 8.3

The Contractor shall ensure to revise the programme or section of the programme every time it fails to comply with the agreed Milestone, to accelerate the work progress in order to complete each section of works as per the Milestone schedule.

Sub-Clause 8.5 Delay Damages

Add the following before the 1st paragraph of Sub-Clause 8.5:

Delay damages will be linked to the Milestone given in the Employer's Requirements and the first Project Schedule prepared by the Contractor based on the Milestone and mutually agreed by both parties, the Employer & the Contractor.

CLAUSE 9 DESIGN-BUILD

CLAUSE 9.6 DELAY DAMAGES RELATING TO DESIGN BUILD

Add the following at the end of paragraph

a) Delay Damages due to delay in Completion

The Delay Damage for not achieving the milestone is as under:

For milestone 1 Rs. 7,000 per day

For milestone 2 Rs. 1,23,000 per day

For milestone 3 Rs. 2,36,000 per day

For milestone 4 Rs. 9,75,000 per day

For milestone 5 Rs. 9,80,000 per day

The interim milestone penalties shall be charged and withheld for not meeting the completion target of the entire intended milestone. However, if the Contractor completes the work within the intended completion period of 36 months, then the withheld penalty will be released. If the activities are not completed within the intended Completion period of 36 months, the withheld penalties shall not be returned.

In case of the actual Completion exceeding the intended Completion period of 36 months, then a penalty of INR 50 Lakhs per day will be levied.

(b) Delay Damages due to delay in commissioning and Process Proving:

In the event the Contractor is unable to obtain the Commissioning Certificate for the plant within the stipulated period of 6 months (3 months of commissioning & 3 months Process Proving) from the completion of the construction, then Delay Damages INR 5 lakh per day of delay shall be levied.

Add the following new Sub-clause 9.14

SUB-CLAUSE 9.14 PENALTIES DURING OPERATION AND MAINTENANCE PERIOD:

1. Penalty due to increase in plant power consumption during O&M Period

In the event it is found that the average specific energy consumption (SEC) per m³ of water during the year is more than the guaranteed average SEC confirmed by the Contractor in that year, the penalty shall be applicable @ 1.25 times the unit power cost at actuals of electricity multiplied by the excess power consumed during the O&M period.

2. Penalty due to reduced quantity of net output water – The quantity of product water produced as measured on the water meter installed on the product water main within the premises of plant shall be calculated on monthly basis.

In the event Contractor is unable to deliver stipulated quantity of product water which is measured @ 400,000 m³ per day or the reduced capacity as per the advice of Employer's Representative, penalty shall be levied as follows:

Penalty = [200%] x CQ x Total O&M Costpr per m³ of the product water

where

“CQ” is the reduced quantity in m³ from the Contracted capacity/reduced capacity as per the advice of Employer's Representative.

3. Quality of water produced - In the event Contractor is unable to deliver quality of product water as specified, no payment for O&M shall be made by the Employer to the Contractor. However, if the Employer due to urgency of demand is willing to accept the water quality for a short duration (to be defined by the Employer) the Contractor shall operate the plant. In such a scenario, the payment

made by the Employer to the Contractor shall be @ 50% of the stipulated value of O&M fee as defined by the Contractor in its bid.

However, in such an event penalty @ INR 5,00,000 per day shall be levied, irrespective of Employer offtake (use of water).

4. Residual Handling & Disposal

The Plant Residuals shall conform to the following specifications:

Excess sludge wastewater & solids

The Sludge produced shall contain minimum 25% w/w of Solid Content Concentration for “spade able” or “open body truck able” consistency for easy transportation and disposal.

Dewatered Solids shall be handled and transported by the Contractor in a nuisance free manner following environmental guidelines. If the performance of the Contractor is not found satisfactory in respect of processing, handling and transportation of the sludge, the Employer shall have the liberty to recover from Contractor two (2) times the cost incurred for handling and transportation of the residuals.

5. Absent Staff

A penalty will be levied in the event that any of the Management, operation and maintenance Personnel listed in the specification are absent from specified shifts during the Operation Service Period as follows:

Sl. No.	Designation	Penalty per person per shift in INR
1	Plant Manager	10,000
2	Plant Supervisor/ Superintendent	5,000
3	Shift-in-charge	5,000
4	Operators for WTP	3,000
5	Plant Chemist	3,000
6	Electrician	3,000
7	Instrumentation and Control Technician	3,000
8	Fitter/Mechanic	3,000
9	Peon	400
10	Gardener	400
11	Helpers for Sludge Handling	500

The penalty shall be increased during each year of operation in accordance with the relevant indices for salaries as provided by the RBI.

Reduced quantity offtake by Employer:

In the event, the Employer instructs the Contractor for reduced capacity, the following shall be applicable:

- If the quantity to be produced and off take is less than the contracted quantity i.e., 400 MLD, the Contractor shall be paid fixed fee on the total contracted value on m³ and variable fee as per actual m³ produced.

CLAUSE 11 TESTS**Sub-Clause 11.1 Testing of the Works**

Add the following items (d) & (e) to the end of third paragraph of Sub-Clause 11.1:

- (d) Initial Performance Test, which shall demonstrate the performance of the complete Design-Build Works in accordance with the Contract producing the required quality and quantity of the product water consistent for 15 consecutive days.
- (e) Process Proving Test, which shall demonstrate the consistent performance of the complete plant including the intake system, pre-treatment system, RO system and post treatment system along with allied units/processes in accordance with the Contract for 3 consecutive months. All tests including consumption of chemicals, power, spare parts and the events of any operational issue and CIP cleaning and restoration of the RO membrane performance shall be checked as per the Contract during this test. The aforesaid costs shall be borne by the Contractor.

Replace with the following the 6th Paragraph of Sub-Clause 11.1:

Trial operation shall not constitute a commencement of the Operation Service under Sub-Clause 10.2 [Commencement of Operation Service]. All costs for executing the Tests (including Commissioning and Process Proving test) including power and chemicals shall be borne by the Contractor.

Sub-Clause 11.7 Commissioning Certificate

Insert the following to the last paragraph of Sub-Clause 11.7:

Commissioning Certificate shall be issued after the successful completion of the Process Proving test to be conducted by the Contractor for consecutive 3 months as stated in Part-2 – Particular Process Requirements.

Sub-Clause 11.8 Joint Inspection Prior to Contract Completion

Replace with the following the first paragraph of Sub-Clause 11.8:

The Employer's Representative and the Contractor shall carry out a joint inspection of the Works on the 10th year, 15th year, 18th year and 20th year and, within 28 days of the completion of the joint inspection, the Contractor shall

submit a report on the condition of the Works identifying maintenance works (excluding routine maintenance works and the correction of defects), replacements and other works required to be carried out to satisfy the requirements of the Operation and Maintenance Plan after the Contract Completion Date.

CLAUSE 12 DEFECTS

Sub-Clause 12.7 Completion of Operation Service

Add the following as new Sub-Clause 12.7:

In order that the Works shall be as per the condition required by the Contract at the end of the Operation Service Period and be handed over to the Employer in good operating condition (fair wear and tear excepted), the Contractor shall:

- a) ensure that all components of the Works are fully functional and in good operating condition, suitable for the purposes for which they are intended.
- b) ensure that all defects or damages which may have arisen from the design, workmanship, materials, or Operation and Maintenance, have been identified and remedied.
- c) Provide replacements for all spare parts that were used/consumed during the Operations and Maintenance Period; all such replacements shall be new and manufacturer's original equipment only for the period as in the contract.
- d) Execute all required work of amendment, reconstruction, repair, and remedying of defects and damage per instructions of the Employer or Employer's Representative.
- e) Ensure that all mechanical and electrical equipment and items are cleaned and painted as per the provision of the contract.
- f) Ensure that all civil works are cleaned, leak proofed and whitewashed and all road and pathways are freshly repaired and are brought to new condition.
- g) Ensure that all machines, equipment, testing devices and items in the workshops are in excellent working condition as per the contract, and
- h) Ensure that all site preparation, mulching, planting, grassing, irrigation and landscaping are well maintained.

All such work shall be executed by the Contractor at his own cost before handing over the entire Plant and Works to the Employer. In the event that the Contractor fails to carry out the necessary remedial works, the Employer's Representative shall notify the Contractor, and proceed in accordance with the provisions of Sub-

Clause 11.4 (a) and (b). Any costs incurred by the Employer in so doing shall be recoverable from the Contractor and will become a debt due and payable by the Contractor to the Employer and the Employer may, at his sole discretion, recover such amount by invoking the Contractor's bank guarantee provided as Performance Security.

The Contract shall not be considered to be completed until the Contract Completion Certificate has been signed by the Employer's Representative and delivered to the Contractor, stating the date upon which the Contractor has completed his operation and maintenance obligations to the satisfaction of the Employer's Representative and the Employer. The Contract Completion Certificate shall be given by the Employer's Representative within 28 days after the end of the Operation Service Period, or as soon after such date as the Contractor has completed his obligations.

Only the Contract Completion Certificate shall be deemed to constitute final certification that the Contractor has satisfactorily fulfilled all of his obligations under the Contract.

CLAUSE 13 VARIATIONS AND ADJUSTMENTS

Sub-Clause 13.5 Provisional Sums

Add the following to the end of Sub-Clause 13.5 with the following:

As an exception to the above, the Provisional Sum for the cost of the DAB shall be used, in accordance with Sub-Clause 20.3 [Appointment of the Dispute Adjudication Board], for payments to the Contractor of the invoices of the DAB for its Regular Cost and one-half of its Non-Regular Cost.

No prior instruction of the Employer's Representative shall be required with respect to the services of the DAB.

The following shall apply to payments under the Provisional Sum of the cost of the DAB:

- (A) Requests for any payment under the Provisional Sum shall be included in those Statements submitted under Sub-Clause 14.3 [Application for Advance and Interim Payment Certificates] together with all necessary substantiations including:
 - (i) invoices prepared by the DAB members and provided to the Contractor for payment/ reimbursement of their fees and/or expenses; and
 - (ii) evidence of payment of such invoiced amounts in full.
- (B) The Contractor's overhead, profit, etc., shall not be included in the Provisional

Sums for the cost of the DAB.

- (C) The Employer's Representative's certification of such Statements under Sub-Clause 14.7 [Issue of Advance and Interim Payment Certificates] shall be based upon the invoices of the DAB and evidence of payment of such invoiced amounts in full by the Contractor.

Sub-Clause 13.8 Adjustment for Changes in Cost

Replace the Sub-Clause 13.8 with the following:

Work which is carried out during First Year (365 days) of the Works Contract Period will be carried out at the base rates and prices in accordance with the payment Schedule, and will not be subject to any adjustment for rises or falls in the cost of labour, equipment, plant, materials or other inputs to the Works. Increases or decreases in the cost of such inputs shall be adjusted on a quarterly basis thereafter for the remaining works.

Price Adjustment shall be applicable for Works (Design-Build) Contract and Operation and Maintenance Contract. This clause is operative both ways, i.e. if the Price Adjustment as calculated is on the plus side, payments on account of the Price Adjustments shall be allowed to the Contractor and if it is on the negative side, the Employer shall be entitled to recover the same from the Contractor and the amount shall be deductible from any amounts due and payable under the Contract.

In this Sub-Clause, "Table of Adjustment Data" means the completed table of Changes in adjustment data included in the Schedules.

The Price Adjustment shall be calculated based on the date of the measurement of work.

If the date of completion is after the intended date of completion, then the escalation will be calculated as on the actual completion date and intended completion date and the lower of the two will be paid. Also, if the completion is after the intended date of completion, the escalation will be calculated for actual completion date and intended completion date and the lower of the two will be paid. The Price Adjustment will be paid on quarterly basis.

A) Price Adjustment Formula for Works Contract

Adjustment Formula: The amount to be added to or deducted from the Interim Payment Certificates for changes in cost shall be determined from the formulae. The formulae will be of the following general type:

Adjustment for labour component

- i. Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$V_L = 0.85 \times P_1/100 \times R \times (L_i - L_0)/L_0$$

V_L = increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour.

L_0 = the consumer price index for industrial workers at the town nearest to the site or work as published by Labour Bureau, Ministry of Labour, Govt. of India. on the date of submission of tender.

L_i = The consumer price index for industrial workers at the town nearest to the site of work for the month under consideration as published by Labour Bureau, Ministry of Labour, Government of India.

R = Amount of Local Currency (INR) of Interim payment for DB Contract.

P_1 = Weighting of labour component of the work.

Adjustment for Cement Component

- ii. Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula:

$$V_c = 0.85 \times P_c/100 \times R \times (C_1 - C_0)/C_0$$

V_c = Increase or Decrease in the cost of work during the quarter under consideration due to changes in the rates for cement

C_0 = The all India average wholesale price index for grey cement for the quarter in which the bids are submitted as published by Ministry of Commerce & Industry, New Delhi

C_1 = The all India average wholesale price index for grey cement for the quarter under consideration as published by Ministry of Commerce & Industry, New Delhi

R = Amount of Local Currency (INR) of Interim payment for DB Contract.

P_c = Weighting of cement component of the work

Adjustment for Steel Component

- iii. Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula:

$$V_s = 0.85 \times P_s/100 \times R \times (S_1 - S_0)/S_0$$

V_s = Increase or Decrease in the cost of work during the quarter under consideration due to changes in the rates for steel

S_0 = The all India average wholesale price index for Rebars for the quarter in which the bids are submitted as published by Ministry of Commerce & Industry, New Delhi

S_1 = The all India average wholesale price index for Rebars for the quarter under consideration as published by Ministry of Commerce & Industry, New Delhi

R = Amount in Local Currency (INR) of Interim payment for DB Contract.

P_s = Weighting of steel component of the work

Adjustment for Fuel Component

- iv. Price Variation will be paid on pass through basis with payment of actual rates/ price at the rates charged by Indian Oil Corporation Dept. at Chennai

Range of weightages of any other items shall be adjusted with the consent of the Employer's Representative.

B Price Adjustment Formula for O&M Contract

The amount payable to the Contractor and valued at base prices in accordance with the payment Schedule shall be adjusted for rises or falls in the cost of Labor, Chemicals, Fuels and other inputs to the Operation and Maintenance of the Plant, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in costs to the Contractor during Operation and Maintenance is not covered by the provisions of this or any other clause in the Contract, the O & M Contract Price shall be determined to include amounts to cover the contingency of such other rise or fall in costs.

Adjustment Formula: The amount to be added to or deducted from the Interim Payment Certificates for changes in cost and legislation shall be determined from the formulae. The formulae will be of the following general type:

Adjustment for Chemicals Component

- i. Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the contractor shall be paid in accordance with the following formula:

$$C_p = 0.85 \times C_p / 100 \times R \times (C_1 - C_0) / C_0$$

C_p = Increase or Decrease in the cost of work during the quarter under consideration due to changes in the rates for plant and machinery spares

C_0 = The all-India average wholesale price index for Manufacture of Chemicals and Chemical Products for the quarter in the bids are submitted as published by Ministry of Commerce & Industry, New Delhi

C_1 = The all India average wholesale price index for Manufacture of Chemicals and Chemical Products for the quarter under consideration as published by Ministry of Commerce & Industry, New Delhi

R = Value of variable cost of Annual O&M Contract

C_p = Percentage of Manufacture of Chemicals and Chemical Products component of the work

Adjustment for Fuel Component

- ii. Price Variation will be paid on pass through basis with payment of actual rates/ price at the rates charged by Indian Oil Corporation Dept. at Chennai

Range of weightages of any other items shall be adjusted with the

consent of the Employer's Representative.

Weighting and Adjustment Factors: The weightings (coefficients) for each of the factors of cost, shall be as follows:

For Design Build: Refer Schedule of Adjustment Data (Table-A) at Part-1, Section-IV.

For O&M Contract: Refer Schedule of Adjustment Data (Table-B) at Part-1, Section-IV.

The weightings shall be adjusted if, in the opinion of the Employer's Representative, the weightings are rendered unreasonable, unbalanced, or inapplicable as the result of changes in the methods of performance of Operation and Maintenance of the plant and or for any other reason.

CLAUSE 14 CONTRACT PRICE AND PAYMENT

Sub-Clause 14.1 The Contract Price

Insert the following paragraphs at the end of Sub-Clause 14.1:

- a) Payment for the Works shall be made on a lump sum basis according to the following major work categories as set out in the Schedule of Prices and/or as proposed by the Contractor and approved by the Employer's Representative:
 - i. Design and documentation, including all necessary designs and documentation required for the Works;
 - ii. Civil works, installation, testing, commissioning and other services required for the different plant components in accordance with the payment units as set out in the Schedule of Prices and/or as proposed by the Contractor and approved by the Employer's Representative;
 - iii. Mechanical Plant and equipment, whether manufactured or fabricated outside or within the Employer's country, including supply, installation and commissioning/testing of all electro-mechanical works, for different plant components according to the payment units;
 - iv. Electrical Plant and equipment including Instrumentation, Control and Automation, whether manufactured or fabricated outside or within the Employer's country, including supply, installation and commissioning/testing of all electrical and ICA works, for different plant components according to the payment units;
 - v. Process Proving Test after commissioning and initial performance test.

- vi. Laboratory Equipment and items
 - vii. Operation Service of the constructed facilities after completion and acceptance of Section A of the Works.
- b) The Contract Price shall be adjusted for changes in the cost of labour, equipment materials, chemicals and fuels & lubricants in accordance with the provisions of Sub-Clauses 13.6[*Adjustments for Changes in Legislation*] and 13.8 [Adjustments for Changes in Cost];
 - c) The Contract Price shall be deemed to include all duties, levies, cess, royalty to Government, GST and other charges imposed on the production, manufacture, sale and transport of the Contractor's Equipment, Plant, Materials and supplies to the construction site to be used on or furnished under the Contract and on the services performed under the Contract. Unless explicitly mentioned in the Contract, Employer doesn't ensure any tax benefits (reduced tax rate/ tax waivers) under Custom Duty, GST, any Cess, etc. during the time of submission of bids. Bidders are advised to consider the actual tax rates (without considering any waiver) while estimating the Contract Price. Any lawful exemption obtained during the Contract Period the benefit need to be passed on to the Employer.
 - d) any quantities, which may be set out in a Schedule are estimated quantities and are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfilment of his obligations under the Contract;
 - e) Bidders are required to submit detailed price break-ups including quantities, unit rates, all applicable taxes (direct or indirect) and other pricing information which may be useful for the assessment and subsequent detailing for interim payments.

The Employer shall be authorized to inspect the statements of account as and when it so desires. It may be noted that the project has first right to the funds released by the Employer.

Sub-Clause 14.3 Application for Advance and Interim Payment Certificates

Replace Sub-Clause 14.3 with the following Sub-Clauses 14.3.1 and 14.3.2:

Sub Clause 14.3.1 Application for Interim Payment Certificates for Design-Build Works

The Contractor shall submit a statement in two copies to the Employer's Representative after the end of each month in a form approved by the Employer's Representative, showing the amounts to which, the Contractor considers himself to be entitled together with supporting documents which shall include the detailed report of progress during the month in accordance with Sub-Clause 4.21

[Progress Reports]. In case of supplied plant and equipment, inspection and testing clearance certificates shall also be enclosed as support documents. The statement shall include the following items, as applicable, which shall be expressed in the various currencies in which the Contract Price is payable, in the sequence listed:

- a) The estimated contract value, at base rates and prices, of the Construction Documents produced and the Works (including variations) executed, and Plants, equipment, Machineries and materials (intended for the works) supplied up to the end of the month.
- b) Any amounts to be added and deducted for changes in legislation and Adjustments in cost in accordance with Sub-Clauses 13.7 [Adjustments for Changes in Legislation] and 13.8 [Adjustments for Changes in Cost];
- c) Any amount to be deducted for retention, calculated by applying the percentage of retention stated in the Contract Data to the total of the above amounts, until the amount so retained by the Employer reaches the limit of Retention Money (if any) stated in the Contract Data;
- d) Retention of 5% shall be made against each bill. However, if the Contractor requires and submit a request, the same can be released against an equivalent amount of Bank Guarantee valid till the issue of Commissioning Certificate. The Bank Guarantee shall be required to be submitted with each bill, in such a case.
- e) Any amounts to be added and deducted for the advance payments and repayments in accordance with Sub-Clause 14.2 [Advance Payment];
- f) Any amounts to be added or deducted for Plant and Materials in accordance with Sub-Clause 14.6 [Payment for Plants and Materials Intended for the Works];
- g) Any other additions or deductions which may have become due in accordance with the Contract (including those under Clause 20 – Claims, Disputes and Arbitration), other than under Sub-Clause 8.7 [Delay Damages]; and
- h) The deduction of the amounts certified in all previous Interim Payment Certificates.

Sub-Clause 14.3.2 “Application for Interim Payment Certificates for Operation and Maintenance”

The Contractor shall submit a statement in two copies to the Employer’s

Representative after the end of each month, in a form approved by the Employer's Representative, showing the amounts to which, the Contractor considers himself to be entitled together with supporting documents. The Statement shall include the following items as applicable:

- a) the estimated contract value of the Operation Services of the facilities up to the end of the month;
- b) any amount to be added or deducted for changes in legislation and cost in accordance with Sub-Clause 13.6 and 13.8;
- c) any other additions or deductions which may have become due in accordance with the Contract (including those under Clause 20—Claims, Disputes and Arbitration), other than under Sub-Clause 8.5 [Delay Damages]; and
- d) the deduction of the amounts certified in all previous Interim Payment Certificates.”

Sub-Clause 14.4 Schedule of Payments

Add the following at the end of Sub-Clause 14.4:

Payment Schedule shall be regulated as per Schedule 18 (Payment Terms) of Part-IV-Price Proposal.

Sub-Clause 14.6 Payment for Plant and Materials Intended for the Works

Replace with the following the 3rd Paragraph of Sub-Clause 14.6:

Interim Payment Certificates shall include amount for Plant and Materials which have been brought to the Site for incorporation in the Permanent Works. The Employer's Representative shall determine eligibility for payment in accordance with the following provisions:

- a) the Plant and Materials are in accordance with the Contract;
- b) the Plant and Materials have been delivered to the Site and are properly stored on Site and protected against loss, damage or deterioration;
- c) the Contractor's records of the requirements, orders, receipts and use of Plant and Materials are kept in a form approved by the Employer's Representative, and such records are available for inspection by the Employer's Representative;
- d) the Contractor has submitted invoice and challans towards delivering the Plant and Materials to the Site, together with such documents as may be required for the purpose of including the payment in the IPC by the Employer's Representative; and
- e) the Plant and Materials are those listed in the Contract Document;
- f) Recognition of invoice against the material and supplies at the time of their

receipt at the project site should not be understood in any case, that the Contractor can procure any quantity of material which is way beyond the quantity to be consumed (estimated using the common business prudence) and the shelf life of the material expires before it being used. Accordingly, material and supplies should be procured based on the progressive use of material and supplies/equipment and the same shall correspond with the approved/ released design & drawing, and contract documents.

- g) Further, Employer shall not be responsible in any manner to recognize the billing for any excess consumption of material and supplies/ equipment's by the Contractor beyond the quantities worked out, subject to permissible variation allowed.

Sub-Clause 14.9 Delayed Payment

Replace with the following the 1st Paragraph of Sub-Clause 14.9:

If the Contractor does not receive payment in accordance with Sub-Clause 14.8 [Payment], the Contractor shall be entitled to receive financing charges monthly calculated on simple interest on the amount unpaid during the period of delay. This period shall be deemed to commence on the date for payment specified in Sub-Clause 14.8 [Payment], irrespective (in the case of its sub-paragraph (b)) of the date on which any Interim Payment Certificate is issued.

Sub-Clause 14.13 Application for Final Payment Certificate- Operation Service

Insert the following as 2nd paragraph to the Sub-Clause 14.13:

If the Employer's Representative disagrees with or cannot verify any part of the Final Statement Operation Service, the Employer's Representative and the Contractor shall attempt to agree such matters, and the Contractor shall re- submit his Final Statement based on the agreement with the Employer's Representative. The Employer's Representative shall then issue a Final Payment Certificate Operation Service under Sub-Clause 14.15 [Issue of Final Payment Certificate Operation Service] for the agreed amount. If the Parties cannot agree on such matters, or if the Contractor has failed to submit his application for payment within the said 28 days, the Employer's Representative shall issue an Interim Payment Certificate under Sub-Clause 14.7 [Issue of Advance and Interim Payment Certificates] for the amount which he considers to be due to the Contractor. If the Contractor is dissatisfied with the amount certified, he may refer the matter to the DAB for a decision in accordance with Clause 20.6 [Obtaining Dispute Adjudication Board's Decision].

Add the Sub-Clause 14.20 JICA Disbursement Procedure

Add the following as a new Sub-Clause 14.20

JICA's disbursement procedure is applied to this Contract for the Local currency

portion of the Contract; For the Foreign currency portion, JICA's commitment procedure to be followed and the Employer shall bear the bank charges (LC charges).

"Local Currency: CMWSSB shall make the payment to the Contractor and then request JICA through Controller of Aid Accounts & Audit (CAAA) to reimburse the fund. In this case, the fund transferred by JICA to the bank account of GoI will pass through GoTN to CMWSSB.

Foreign Currency: L/C shall be opened by the Employer on the Contractor's bank account. After the L/C is issued by the L/C issuing bank in India and L/COM issued by JICA, the supplier can receive the fund from JICA passing through only commercial banks (L/C issuing bank and supplier's bank). Any L/C opening/negotiation charges will be borne by the Employer.

CLAUSE 15 TERMINATION BY EMPLOYER

Add New Sub-Clause 15.8 Fraud and Corruption

If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt or fraudulent practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days-notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such termination had been made under Sub-Clause 15.2 [Termination for Contractor's Default].

Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt or fraudulent practice during the execution of the work then that employee shall be removed in accordance with Sub-Clause 6.9 [Contractor's Personnel].

The Contractor is required to comply with JICA's policy in regard to corrupt and fraudulent practices as declared in the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loans.

CLAUSE 17 RISK ALLOCATION

Sub-Clause 17.2 Contractor's Risks during the Design-Build Period

Rename the Sub-Clause 17.2 as Contractor's Care of the Works

Add the following to the end of Sub-Clause 17.2:

Unless the Contract is terminated in accordance with these conditions, the Contractor shall take full responsibility for the care of the Works and Goods from the Commencement Date until the Commissioning Certificate for the whole of the Works is issued pursuant to Sub-Clause 11.7 [Commissioning Certificate]. If

the Contract is terminated in accordance with these conditions, the Contractor shall cease to be responsible for the care of the Works from the date of expiry of the Notice of termination.

The Contractor shall also be responsible for the care of the Permanent Works during the Operation Service Period in accordance with the requirements of the Operating License pursuant to Sub-Clause 1.7 [*Operating License*].

The Contractor shall also be responsible for the care of any part of the Permanent Works for which a Section Commissioning Certificate has been issued.

The Contractor shall also take full responsibility for any outstanding work which he shall have undertaken to complete during the Operation Service Period until all such outstanding work is completed.

The Contractor shall also be responsible for the care of the Facilities during the Operation Service Period in accordance with the requirement of the License Agreement. Notwithstanding anything to the contrary stated in the Contract, the Contractor shall also be responsible for any part of the Works for which Section Commissioning Certificate is issued.

Sub-Clause 17.13 Occupation and Care of Employer's Facilities

Add the following as a new Sub-Clause 17.13:

The Contractor occupying the Employer's facilities temporarily for the purpose of the Contract shall take full responsibility, from the dates of use or occupation to the dates of handover or cessation of occupation, of the items which are described, if any, in Volume II Technical Specifications/ Works requirements. If any loss or damage happens to any of the occupied facilities while the Contractor is responsible for their care, arising from any cause whatsoever other than the Employer's Risks listed in Sub-Clause 17.3, the Contractor shall, at its own cost, rectify such loss or damage to the satisfaction of the Employer's Representative. All temporarily occupied facilities shall be handed over upon completion of the Works, or on such other date as is mutually agreed, in the same or better condition than when they were given into the Contractor's care, normal wear and tear is accepted.

The Contractor shall be liable for any loss or damage caused by any actions performed by the Contractor after the Commissioning Certificate has been issued. The Contractor shall also be liable for any loss or damage which occurs after a Commissioning certificate has been issued and which arose from a previous event for which the Contractor was liable.

CLAUSE 18 EXCEPTIONAL RISKS OR FORCE MAJEURE

Replace the Clause 18 with the following Sub-Clauses

18.1 Definition of Force Majeure

In this Clause, "Force Majeure" means an exceptional event or circumstance:

- (a) which is beyond a Party's control,
- (b) which such Party could not reasonably have provided against before entering into the Contract,
- (c) which, having arisen, such Party could not reasonably have avoided or overcome, and
- (d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

- (i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies,
- (ii) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war,
- (iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel and other employees of the Contractor and Subcontractors,
- (iv) Munitions of war, explosive materials, ionising radiation or contamination by radio-activity, except as may be attributable to the Contractor's use of such munitions, explosives, radiation or radio-activity,
- (v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity, and

The presence of any of the above events before the issue of Letter of Acceptance to the Contractor shall not be considered as Force Majeure.

NB: Epidemic or Pandemic related to only COVID-19 are excluded from this agreement and already considered in the Contractor's offer.

18.2 Notice of Force Majeure

If a Party is or will be prevented from performing any of its obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations,

the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure.

The Party shall, having given notice, be excused performance of such obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract.

18.3 Duty to Minimise Delay

Each Party shall at all times use all reasonable endeavours to minimise any delay in the performance of the Contract as a result of Force Majeure.

A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure.

18.4 Consequences of Force Majeure

If the Contractor is prevented from performing any of his obligations under the Contract by Force Majeure of which notice has been given under Sub-Clause 18.2 [*Notice of Force Majeure*], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to Sub-Clause 20.1 [*Contractor's Claims*] to:

- (a) An extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [*Extension of Time for Completion*], and
- (b) If the event or circumstance is of the kind described in sub-paragraphs (i) to (iv) of Sub-Clause 18.1 [*Definition of Force Majeure*] and, in the case of subparagraphs (ii) to (iv), occurs in the Country, payment of any such Cost.

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

18.5 Force Majeure Affecting Sub-contractor

If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader force majeure events or circumstances shall not excuse the Contractor's non-performance or entitle him to relief under this Clause.

18.6 Optional Termination, Payment and Release

If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under Sub-Clause 18.2 [*Notice of Force Majeure*], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with Sub-Clause 16.3 [*Cessation of Work and Removal of Contractor's Equipment*].

Upon such termination, the Employer's Representative shall determine the value of the work done and issue a Payment Certificate which shall include:

- (a) The amounts payable for any work carried out for which a price is stated in the Contract;
- (b) The Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- (c) Any other Cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;
- (d) The Cost of removal of Temporary Works and Contractor's Equipment from the Site and the return of these items to the Contractor's works in his country (or to any other destination at no greater cost); and
- (e) The Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of termination.
- (f) Any other cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of operating and maintaining the Works as set out in O&M Contract.

18.7 Release from Performance under the Law

Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance:

- (a) The Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract, and
- (b) The sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 18.6 [Optional Termination, Payment and Release] if the Contract had been terminated under Sub-Clause 18.6.

ADD THE FOLLOWING ADDITIONAL CLAUSES AND THEIR RESPECTIVE SUB-CLAUSES

21 Independent Compliance Audit:

At least 182 days prior to the-commencement of the Operation Service Period, the Employer shall appoint the Auditing Body to carry out an independent and impartial audit during the Operation Service Period.

The Guidelines and procedure for the project and finance audit shall be shared with the Contractor on later date, and the purpose will be to assure the Quality of Products, materials, methods of construction and Services provided by the Contractor and the engagement of the engineering team working on the design, assures that project management is meeting the standards by evaluating if it follows the organization's policies, processes and procedure, help identify business risks that may involve budget, time, scope and quality. , monitor and review the business relationship between the Contractor and Subcontractors, the Employer and the Contractor during the Operation Service Period in compliance with the International standards for Desalination projects, and the Operation Management Requirements.

The Auditing Body shall commence its duties on the same date as the Operation Service Period commences.

Payment of the Auditing Body shall be made by the Contractor.

Both Parties shall cooperate with the Auditing Body in order to enhance Project Performance and give due regard, and attention to the matters raised in each report issued by the Auditing Body.

CLAUSE NO 22 SPARE PARTS

The Contractor shall provide list of spare parts required for the operation and maintenance of the facilities for 2 years after the O&M Period. The Employer shall receive this list during the 1st quarter of 19th year of O&M Period and the Contractor shall endeavour to provide all the necessary help needed in this respect for review and confirmation.

CLAUSE NO 23 TRAINING

The Contractor shall carry out the training of Employer's Personnel in the operation and maintenance of the Works to the extent specified in the Employer's Requirements. The programme and scheduling of the training shall be agreed with the Employer, and the Contractor shall provide experienced training staff, and all training materials as stated in the Employer's Requirements. The Employer shall be responsible for providing the training facilities and nominating and selecting suitable personnel for training.

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Section IX. Annex to the Particular Conditions- Contract Forms

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Letter of Acceptance

[Insert letterhead paper of the Employer]

[Insert date]

To: *[Insert name and address of the Contractor]*

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 Contract Data]* for the Accepted Contract Amount of the equivalent of *[insert amount in words and figures]* *[insert name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by us.

This Accepted Contract Amount is made up of the following components:

For the Design-Build of the Works, the amount of: _____ (*currency and amount in words*)

For the Operation Service, the amount of: _____ (*currency and amount in words*)

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section IX, Annex to the Particular Conditions - Contract Forms, of the Bidding Documents

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the *[insert day]* day of *[insert month]*, *[insert year]*, between *[insert name of the Employer]* (hereinafter “the Employer”), of the one part, and *[insert name of the Contractor]* (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as *[name of the Contract]* should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. The Contractor is fully aware of the impact of COVID-19 which is foreseeable and acknowledges that a claim for force majeure may now not be possible once contract is entered into.
2. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
3. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - i. the Contract Agreement (if any),
 - ii. the Letter of Acceptance,
 - iii. the Letter of Tender,
 - iv. the Particular Conditions Part A – Contract Data,
 - v. the Particular Conditions Part B – Special Provisions,
 - vi. these General Conditions,
 - vii. the Employer's Requirements,
 - viii. the Schedules, and
 - ix. the Contractor's Proposal and any other documents forming part of the Contract.
 - x. The Form Acknowledgment of Compliance with Guidelines for Procurement under Japanese ODA Loans.

If an ambiguity or discrepancy is found in the documents, the Employer's Representative shall issue any necessary clarification or instruction.

4. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the laws of the borrowing country]* on the day, month and year specified above.

Signed by _____

Signed by _____

for and on behalf of the Employer
Contractor in the presence of

for and on behalf the
in the presence of

Witness, Name, Signature, Address, Date

Witness, Name, Signature, Address, Date

DRAFT

Schedules

Notes on Schedules

‘Schedule’ means the document(s) entitled schedules, completed by the Contractor and submitted with the letter of tender, as included in the Contract. Such documents may include data, lists, and/or design and/or other technical criteria, for the Works.

(List the items comprising Schedules. Typical Schedules are as followings)

SCHEDULE-1: Schedule of Prices

Note: *Insert Schedule of Prices submitted with the Letter of (Price) Bid and finalized at signing of the Contract*

SCHEDULE-2: Schedule of Payment

Note: *Insert Schedule of included in Bidding Documents and finalized at signing of the Contract (if any).*

SCHEDULE-3: Schedule of Adjustment

Note: *Insert Schedule of Adjustment submitted with the Letter of (Price) Bid.*

SCHEDULE-4: Schedule of Guarantee

Note: *Insert Schedule of Guarantee submitted with the Letter of (Technical) Bid.*

Contractor's Proposal

Notes on Contractor's Proposal

'Contractor's Proposal' means the documents entitled proposal, which the Contractor submitted with the letter of tender, as included in the Contract.

(List the items of Contractor's Proposal comprising Technical Proposal)

Performance Security

(Demand Guarantee)

NOTE: This form is suitable during the Design-Build Period. The form for O&M Period will be finalised before commencement of O&M Period.

Brief description of Contract: _____

Name and address of Beneficiary: _____ (whom the Contract defines as the Employer).

We have been informed that _____ (hereinafter called the "Principal") is your contractor under such Contract, which requires him to obtain a performance security.

At the request of the Principal, we (name of bank) _____ hereby irrevocably unconditionally undertake to pay you, the Beneficiary/Employer, any sum or sums not exceeding in total the amount of _____ (the "guaranteed amount", say: _____) upon receipt by us of your demand in writing and your written statement stating:

- (a) that the Principal is in breach of his obligation(s) under the Contract, and
- (b) the respect in which the Principal is in breach.

Following the receipt by us of an authenticated copy of the taking-over certificate for the whole of the works under clause 11.7 of the conditions of the Contract, such guaranteed amount shall be reduced by 50 % and we shall promptly notify you that we have received such certificate and have reduced the guaranteed amount accordingly.

Any demand for payment must contain your signature(s) which must be authenticated by your bankers or by a notary public. The authenticated demand and statement must be received by us at this office on or before _____ (the date 70 days after the expected expiry of the Defects Liability Period for the Works) _____ (the "expiry date"), when this guarantee shall expire and shall be returned to us.

We have been informed that the Beneficiary may require the Principal to extend this guarantee if the performance certificate under the Contract has not been issued by the date 28 days prior to such expiry date. We undertake to pay you such guaranteed amount upon receipt by us, within such period of 28 days, of your demand in writing and your written statement that the performance certificate has not been issued, for reasons attributable to the Principal, and that this guarantee has not been extended.

This guarantee shall be governed by the laws _____ of and shall be subject to the Uniform Rules for Demand Guarantees, published as number 458 by the International Chamber of Commerce, except as stated above.

Date: _____

Signature(s)_____

DRAFT

Advance Payment Security

Demand Guarantee

[Insert Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and address of the Employer]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date of the contract]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* (*[insert amount in words]*) is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby unconditionally and irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*)¹ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or**
- (b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.**

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or

¹The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety(90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the *[insert day]* day of *[insert month]*, *[insert year]*², whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or *before* that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

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

²*Insert the expected expiration date of the Time for Completion."*

Retention Money Security

Demand Guarantee

Brief description of Contract: _____

Name and address of Beneficiary: _____ (whom the Contract defines as the Employer).

We have been informed that _____ (hereinafter called the "Principal") is your contractor under such Contract and wishes to receive early payment of [part of] the retention money, for which the Contract requires him to obtain a guarantee.

At the request of the Principal, we _____ (*name of bank*) hereby irrevocably unconditionally undertake to pay you, the Beneficiary/Employer, any sum or sums not exceeding in total the amount of _____ (the "guaranteed amount", say: _____) upon receipt by us of your demand in writing and your written statement stating:

- (a) that the Principal has failed to carry out his obligation(s) to rectify certain defect(s) for which he is responsible under the Contract, and
- (b) the nature of such defect(s).

At any time, our liability under this guarantee shall not exceed the total amount of retention money released to the Principal by you, as evidenced by your notices issued under sub-clause 14.7 of the conditions of the Contract with a copy being passed to us.

Any demand for payment must contain your signature(s) which must be authenticated by your bankers or by a notary public. The authenticated demand and statement must be received by us at this office on or before _____ (*the date 70 days after the expected expiry of the Defects Liability Period for the Works*), (the "expiry date"), when this guarantee shall expire and shall be returned to us.

We have been informed that the Beneficiary may require the Principal to extend this guarantee if the performance certificate under the Contract has not been issued by the date 28 days prior to such expiry date. We undertake to pay you such guaranteed amount upon receipt by us, within such period of 28 days, of your demand in writing and your written statement that the performance certificate has not been issued, for reasons attributable to the Principal, and that this guarantee has not been extended.

This guarantee shall be governed by the laws of _____ and shall be subject to the Uniform Rules for Demand Guarantees, published as number 458 by the International Chamber of Commerce, except as stated above.

Date: _____

Signature(s) _____