

TINDIVANAM PHARMA PARK ASSOCIATION

Block - D1, Baid Metha Complex, No.16, Anna Salai, Little Mount, Saidapet,
Chennai- 600 015

TENDER DOCUMENT

Tender Notice No. TPPA/CF Development/CETP/2023-24/01

Design, Engineering, Fabrication, Supply, Construction, Erection & Commissioning, and Testing of 500 KLD Zero Liquid Discharge (ZLD) based Common Effluent Treatment Plant (CETP) on Turn-key basis along with Comprehensive Operation and Maintenance of CETP for five years at TANSIDCO Pharma Industrial Park, Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District, Tamil Nadu.

Date of Release of Bid Document	03.12.2023
Pre-bid Meeting	19.12.2023
Last Date for Submission of Bid	04.01.2024
Date of Opening of Bid	04.01.2024

CONTENTS

Clause	Topic	Page No.
1.	Preamble	6
2.	Scope of Work	7
3.	Qualification Criteria	8
4.	Person Signing the Bid	10
5.	Language of the Tender	10
6.	Purchase / Downloading of Tender Documents	10
7.	Pre-bid meeting	11
8.	Site Visit	11
9.	Clarification on the Tender Document	12
10.	Amendment of Tender Document	12
11.	Earnest Money Deposit	12
12.	Submission of Tender under Two Cover System	13
13.	Validity	14
14.	Bid Due Date	14
15.	Late Bids	15
16.	Modification / Substitution / Withdrawal of Bids	15
17.	Rejection of Bids	15
18.	Opening and Evaluation of Technical Bid	15
19.	Evaluation of the Price Bid	18
20.	Clarification on the Price Bid	19
21.	Award of Contract	20
22.	Performance Security	20
23.	Signing of Contract	21
24.	Retention Money	21
25.	Issue of Work Order	22
26.	Defect Liability Period and its Rectifications	22
27.	Timeline	22
28.	Force Majeure	23
29.	Mobilization Advance	23
30.	Payment Terms	23
31.	Price Escalation	25
32.	Penalty for Delay in Completion	25
33.	Termination of Contract	26
34.	General Conditions	26
35.	Fraud and Corrupt Practices	27
36.	Arbitration	28
37.	Jurisdiction of the Court	29
	ANNEXURE	
ANNEXURE - I	Technical Specifications	30

Clause	Topic	Page No.
Section - 1	Basis of Design	30
Section - 2	Technical Specifications and Proposed Scheme	34
	• Process	34
	• Civil Works	36
	• Mechanical	37
	• Electrical & Instrumentation	40
	• General Scope of Services	41
	• Additional Technical Requirements	42
	• Exclusions	44
Section - 3	Drawing / Documents Submission Schedule	45
Section - 4	Suggested Makes of Bought-out Items	47
Section - 5	Painting Specifications	57
Section - 6	Reference Drawings	61
Section - 7	Comprehensive Operation & Maintenance	62
ANNEXURE		
II	Covering Letter for Submission of Part - 1	70
III	Structure and Organisation of Bidder	72
IV	Details of Similar Projects carried out in the last Five years	74
IV - A	Details of Current Work and Immediate Work	75
V	Financial Capacity	76
VI	Net worth Certificate	77
VII	Declaration for Not Blacklisted	78
VIII	Declaration for Not Tampering the Tender Document	79
IX	Clarification on the Tender Document	80
X	Cover - II (Price Bid) format	81
XI	Checklist	83
EXHIBIT		
1	Overall layout of the Pharma Park showing the location of all plots and area earmarked for CETP	
2	Proposed Process Flow diagram for treatment scheme	
3	Suggested layout for CETP and other infrastructure	

TENDER NOTICE

M/s Tindivanam Pharma Park Association (TPPA)

Block – D1, Baid Metha Complex, No.16, Anna Salai, Little Mount, Saidapet,
Chennai – 600 015

TENDER NOTICE

Reference No: TPPA/CF Development/CETP/2023-24/01

M/s Tindivanam Pharma Park Association invites bids from prospective bidders for the following work.

- Design, Engineering, Fabrication, Supply, Construction, Erection & Commissioning, and Testing of 500 KLD Zero Discharge (ZLD) based Common Effluent Treatment Plant (CETP) on Turn-key basis along with Comprehensive Operation and Maintenance of CETP for five years

at TANSIDCO Pharma Industrial Park, Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District, Tamil Nadu. Tender documents can be obtained at the TPPA address in Chennai from 03.12.2023 to 03.01.2024 on payment of Rs.17,700/- or can be downloaded free of cost from the website www.tppa.in, www.tansidco.tn.gov.in & www.itcot.com. Contact details: R.Pradeep, Ph:+91 9003030898 E-mail – officetppa@gmail.com

Managing Director, TPPA

IMPORTANT NOTICE

The Tamil Nadu Transparency in Tenders Act, 1998 and The Tamil Nadu Transparency in Tender Rules, 2000 as amended, govern this tender procedure from time to time. In case of any conflict between the terms and conditions in the tender document and the Tamil Nadu Transparency in Tenders Act, 1998 and The Tamil Nadu Transparency in Tender Rules, 2000 the Act and Rules shall prevail.

Design, Engineering, Fabrication, Supply, Construction, Erection & Commissioning, and Testing of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process on Turn-key basis and Comprehensive Operation and Maintenance of CETP for five years at TANSIDCO Pharma Industrial Park in Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District, T.N.

1.	PREAMBLE
-----------	-----------------

Micro, Small and Medium Enterprises (MSME) Department, Government of Tamil Nadu, under the Mega Cluster Development Scheme, through Tamil Nadu Small Industries Development Corporation (TANSIDCO), has established a Pharma Park with 42 industrial plots exclusively for Orange Category pharmaceutical formulation companies at TANSIDCO Pharma Industrial Park in Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District. 35 individual companies have been allotted plots in the Pharma Park to set up their formulation units.

The allottees of the Pharma Park have set up a Special Purpose Vehicle (SPV) in the name and style of **“Tindivanam Pharma Park Association (TPPA)”** which has all the member units as part of the SPV that would install, manage and administer the common facilities in the Pharma Park.

One of the important common facilities to be set up in the Pharma Park is the “Common Effluent Treatment Plant (CETP)”, hereinafter referred to as “CETP” in this tender document.

The CETP has to be designed in a modular way and shall have a total installed capacity of 500 KLD (input basis). Being an Orange Category Pharma Park, the influent characteristics are not expected to be hard, and the treatment system has to be designed appropriately.

All member units of the park will have independent collection tanks at their premises from which the CETP will collect the influent/input water through a piped network. **This collection and pumping of the influent from member units and the associated infrastructure is NOT part of this tender.**

The CETP shall be installed within the Pharma Park in a designated area (refer Annexure-I, Section - 6) and shall be self-contained with its own utilities not limited to Electrical power, Steam, Cooling water and necessary civil infrastructure including buildings, civil structures, internal roads, etc.

The detailed specifications for each of the disciplines are provided in Annexure - I of this document.

Note: The specifications provided in Annexure - I of the Tender Document are only a tentative scheme detail, not an Engineering Design. Bidders are encouraged to provide their own best design options for the CETP on the lines proposed in the Process Flow Diagram with suitable optimum modifications and development as may be required to meet the desired output parameters.

2.	SCOPE OF WORK
2.1	DESIGN, ENGINEERING, FABRICATION, SUPPLY, CONSTRUCTION, ERECTION, TESTING AND COMMISSIONING OF 500 KLD COMMON EFFLUENT TREATMENT PLANT (CETP) BASED ON ZERO LIQUID DISCHARGE (ZLD) PROCESS ON A TURN-KEY BASIS

The scope of work would inter-alia involve the following:

Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on Zero Liquid Discharge (ZLD) process on a Turn-key basis at Pharma Park, TANSICO Pharma Industrial Park, Tindivanam Taluk, Villupuram District.

- a. Brief Technical Specification of the CETP including design parameters, guarantee parameters, process flow diagram, plant sizing, details of mechanical components & civil structures required along with limiting parameters, piping & electrical works required are enclosed in Annexure - I of this Tender Document.
- b. The Bidder undertakes the construction/erection of the Common Effluent Treatment Plant with reference to the drawings and the Technical Specifications provided in Annexure - I of this Tender Document.

2.2	COMPREHENSIVE OPERATION AND MAINTENANCE
-----	---

The Bidder shall also quote for the Comprehensive Operation and Maintenance of the CETP for five years from the date of commissioning (COD). Detailed Comprehensive Operation and Maintenance requirements are provided in Annexure - I, Section - 7 of this Tender Document.

3. QUALIFICATION CRITERIA

Clause	Qualification Criteria	Documentary proof to be uploaded
3(a)	The Bidder should be a Registered Legal Entity in India and should have been in existence for the past five years as on the last date of submission of the Bid.	i. In case of Private/Public Limited Companies <ul style="list-style-type: none"> • Copy of Incorporation certificate issued by Registrar of Companies • Copy of Memorandum and Articles of Association ii. In case of Partnership, <ul style="list-style-type: none"> • Registered Partnership deed iii. In case of Proprietorship, <ul style="list-style-type: none"> • Copy of GST Registration certificate
3(b)	The Bidder should have undertaken and successfully completed similar works: <ul style="list-style-type: none"> a) One similar project of 400 KLD (or above capacity) common effluent treatment plant/ effluent treatment plant with successful Operation and Maintenance for at least one year during the last 5 years as on last date of tender submission or b) Two similar projects of 200 KLD (or above capacity) each 	List of projects carried out in execution of common effluent treatment plant/effluent treatment plant in the last five years as on last date of tender submission supported by Letter of Award / Work Orders, Work completion certificates or handing over certificates (As per Annexure-IV) duly certified by the principal employer.

	<p>common effluent treatment plant/effluent treatment plant with successful Operation and Maintenance for at least one year during the last five years as on last date of tender submission</p> <p>or</p> <p>c) Three similar projects of 150 KLD (or above capacity) each common effluent treatment plant/effluent treatment plant with successful Operation and Maintenance for at least one year during the last five years as on last date of tender submission</p> <p>‘Similar Works’ means completion of the project of Design and Construction of Common Effluent Treatment Plant / Effluent Treatment Plant along with Operation and Maintenance for at least one year during the last five years as on last date of tender submission.</p>	
3(c)	<p>The Bidder should have an average annual turnover of at least Rs. 50.00 Crores (excluding GST) in the last five financial years i.e., FY2018-19, FY2019-20, FY2020-21, FY2021-22 and FY2022-23.</p>	<ul style="list-style-type: none"> • Audited Balance Sheet/ / certified copies of Balance Sheet, Profit & Loss statement along with schedules for the FY2018-19, FY2019-20, FY2020-21, FY2021-22 and FY2022-23 duly certified by the practicing Chartered

		Accountant. • Details of the Annual Turnover as per Annexure- V.
3(d)	The Bidder should have a positive net worth as on March 31, 2023.	Net worth duly certified by Chartered Accountant along with UDIN as per Annexure - VI.
3(e)	The Bidder should not have been blacklisted by SIDCO or any other Government agency / Central and State Public Sector Organizations.	i. Declaration for not having been blacklisted either by any other Govt. agencies as per Annexure-VII. ii. Further, if the Bidder is found to be blacklisted in India before award of the contract by any Government Agency, the bid will be rejected.

4. PERSON SIGNING THE BID

The person signing the Tender document should be the duly authorized representative of the firm/ company, for which a certificate of authority should be submitted. The Power of Attorney /authority to the authorized signatory must be enclosed in detail.

5. LANGUAGE OF THE TENDER

The Tender preparation as well as all correspondences and documents relating to the Tender, shall be in English language only. If the supporting documents are in a language other than English/Tamil, the notarized translated English version of the documents should also be enclosed. Bids received without such translation copy will be rejected.

6. PURCHASE / DOWNLOADING OF TENDER DOCUMENTS

Tender Documents can be purchased on payment of Rs.17,700/- (Rupees Seventeen Thousand Seven Hundred only) including GST by Demand Draft in favour of Tindivanam Pharma Park Association payable at Chennai at Tindivanam Pharma Park Association, Block

- D1, Baid Metha Complex, No.16, Anna Salai, Little Mount, Saidapet, Chennai from 03.12.2023 To 03.01.2024 between 10:00 AM to 05:00 PM.

Alternatively, the Tender Documents can be downloaded from either www.tppa.in, www.tansidco.tn.gov.in or www.itcot.com free of cost. For the downloaded Tender Document, the Bidder need not enclose the Tender Document cost but should give a declaration for not having tampered the Tender Document downloaded (as per Annexure - VIII)

Purchased Tender documents are not transferable and will be accepted only by the parties who have purchased the documents from TPPA. The TENDER document submissions without duly signed documents/ drawings are considered as invalid submissions.

7. PREBID MEETING

- a. There will be a pre-bid meeting on 19.12.2023 at 11.00 A.M in the office of Tindivanam Pharma Park Association at Block - D1, Baid Metha Complex, No.16, Anna Salai, Little Mount, Saidapet, Chennai during which the prospective Bidders can get clarifications about the tender.
- b. The Bidders interested in attending the Pre-Bid meeting may send an email, indicating their willingness along with their representative details i.e., Name, Designation, Phone Number & Email ID to officetppa@gmail.com atleast one day prior to the Pre-Bid meeting date. The link for the video conferencing will be sent to the designated representative by E-mail.

8. SITE VISIT

The site of the proposed development is located at TANSIDCO Pharma Industrial Park at Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District, Tamil Nadu and may be inspected by the Bidder or his / her representative at his / her own cost, with prior intimation to the authorized representative of TPPA through an email to officetppa@gmail.com. In case of any queries related to the site inspection, Bidders may contact Mr R Pradeep, Mobile No: +91 9003030898. The Bidder should refer to the Site Plan and Location Map enclosed with the Tender document. (Annexure - I, Section - 6).

9. CLARIFICATION ON THE TENDER DOCUMENT

Any discrepancies, omissions, ambiguities or conflicts in the tender document or any doubts as to their meaning and any request for clarification may be sent in writing to “The Chairman, Tindivanam Pharma Park Association, Block-D1, Baid Metha Complex, No-16, Anna Salai, Little Mount, Saidapet, Chennai” or through e-mail to officetppa@gmail.com as per Annexure-IX. The Managing Director (MD), TPPA, will review the same and where the information sought is not clearly indicated or specified in the tender documents, will issue a clarifying bulletin to all those who have purchased the tender documents and will also upload such clarification on www.tppa.in, www.tansidco.tn.gov.in & www.itcot.com. The MD, TPPA will neither make nor be responsible for any oral instructions. Request for clarification should be brought to the notice of the MD, TPPA, in mail, before 48 hours of the opening of the tender.

10. AMENDMENT OF TENDER DOCUMENT

TPPA, whether on its own initiative or because of a query, suggestion or comment of an Applicant or a Respondent, may modify the tender document by issuing an addendum or a corrigendum at any time before the opening of the tender. Any such addendum or corrigendum will be communicated through mail to all the Bidders who had purchased the tender documents and will be uploaded in www.tppa.in, www.tansidco.tn.gov.in & www.itcot.com and the same will be binding on all Applicants or Bidders, as the case may be.

11. EARNEST MONEY DEPOSIT

The Tender should be accompanied by an Earnest Money Deposit (EMD) to the value of Rs.22,50,000/- (Rupees Twenty-Two Lakh and Fifty Thousand only), including GST, in the form of Demand Draft (DD) in favour of Tindivanam Pharma Park Association payable at Chennai. EMD should be in the name of the Bidder/ Firm. Bidders are to provide their GST Registration details.

- a. EMD in any other form will not be accepted.

- b. EMD will be retained in the case of the successful Bidder and will not earn any interest. It will be dealt with, as provided in the terms and conditions of the tender. The EMD will be returned to the unsuccessful Bidders.
- c. Any request of the Bidder, under any circumstances, claiming exemption from payment of EMD will be rejected and their Cover II price offer will not be opened.

The amount remitted towards EMD is liable to be forfeited in case the Bidder fails to execute the contract or after acceptance of the offer by TPPA or fails to sign the contract or to remit the Performance Security within the stipulated time.

12.	SUBMISSION OF TENDER UNDER TWO COVER SYSTEM
------------	--

Sealed Tenders should be addressed to The Managing Director, Tindivanam Pharma Park Association, Block - D1, Baid Mehta Complex, No.16, Anna Salai, Little Mount, Saidapet, Chennai, and superscribing the **Name of the Tender** on the top left-hand corner of the cover and the name of the Bidder on the bottom left-hand corner of the cover and should be submitted in physical form till 04.01.2024, 3.00 PM. **Tenders should be submitted in person only.**

The Tender will be Two Cover System,

A. Cover - I (Technical Bid)

Should consist of the Pre-qualification criteria, conditions of contract and technical specifications along with EMD. Technical bid should be submitted in the original.

The Cover - 1 should contain the above in sub-covers as listed below.

- **Sub Cover - 1** - EMD (Demand Draft in Original)
- **Sub Cover - 2** - Signed copy of the Tender Document with all annexures and supporting documents
 - a. All Tender drawings obtained from TPPA should be duly signed in original and affixed with the seal of the Bidder along with the submission of the Tender Documents.
 - b. Bidder should submit the required EMD in separate sealed envelopes duly

superscribed on the Sub Cover - 1 of the Envelope viz. “EMD” along with Cover - 1. The Tenders received without EMD will be summarily rejected.

- c. If the Technical bid shows any indication of the quoted price directly or indirectly, the bid will be rejected summarily.
- d. If due to any exigency, the due date for submission and opening of tender is declared a closed holiday, in such a case, the tenders will be opened on the next working day at the same time or any other day/time as intimated by TPPA.

B. Cover - II (Price Bid)

Should consist of **Price Bid as per Part - 2 of the Tender Document**. Price bid should be submitted in the original. In case of any discrepancy between the price quoted in words and in figures, lowest of the two will be considered. The quoted price will be corrected for arithmetic errors.

The Cover - I and Cover - II should be kept together in a separate sealed cover superscribed as “**Tender for Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Zero Liquid Discharge (ZLD) based Common Effluent Treatment Plant (CETP) on Turn-key basis along with Comprehensive Operation and Maintenance of CETP for five years at TANSIDCO Pharma Industrial Park, Pellakuppam, Kollar & Venmaniyathur Villages, Tindivanam Taluk, Villupuram District**” and addressed to **The Managing Director, Tindivanam Pharma Park Association, Block - D1, Baid Mehta Complex, No.16, Anna Salai, Little Mount, Saidapet, Chennai** with the name and address of the Bidder at the left side corner of the cover. Tender submitted with unsealed cover would be summarily rejected.

13.	VALIDITY
------------	-----------------

The prices quoted in the Tender should be valid for acceptance by TPPA for a minimum period of 120 days from the date of opening of the Tender. Escalation in the rates will not be entertained under any circumstances.

14.	BID DUE DATE
------------	---------------------

- a. Bid and Enclosures of Bid should be submitted on or before the Bid Due Date i.e.,

04.01.2024 till 3.00 PM in the manner and form as detailed in this Tender Document.

- b. TPPA may, in its sole discretion, extend the Bid Due Date by issuing an addendum in accordance with Clause 10.
- c. If due to any exigency, the due date for submission and opening of tender is declared a closed holiday, in such case the tenders will be opened on the next working day at the same time or any other day / time as intimated by TPPA.

15. LATE BIDS

Bid received physically by TPPA after the specified time on the Bid Due Date will not be opened and will be summarily rejected.

16. MODIFICATION / SUBSTITUTION / WITHDRAWAL OF BIDS

- a. No Bid should be modified, substituted or withdrawn by the Bidder on or after the Bid Due Date & Time.
- b. Any alteration / modification in the Bid or additional information supplied subsequent to the Bid Due Date, unless the same has been expressly sought for by TPPA, will be disregarded.

17. REJECTION OF BIDS

- a. Notwithstanding anything contained in this Tender Document, TPPA reserves the right to reject any Bid and to annul the Bidding Process and reject all Bids at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons, therefore. In the event that TPPA rejects or annuls all the Bids, it may, in its discretion, invite all eligible Bidders to submit fresh Bids hereunder.
- b. TPPA reserves the right not to proceed with the Bidding Process at any time, without notice or liability, and to reject any Bid without assigning any reasons.

18. OPENING AND EVALUATION OF THE TECHNICAL BID

The Tenders will be opened by the Managing Director, TPPA or by the persons/ committee authorized by him on 04.01.2024 at 3:30 PM.

The method of evaluation (Technical) consists of three stages as below.

i. First Stage:

- a. The Sub Cover - 1 containing the EMD. If EMD is not submitted or is deficient, TPPA will reject the Tender.

ii. Second Stage:

- a. Evaluation will be done on the Technical Bid to assess whether the bid meets the qualification criteria stipulated in Clause - 3.
- b. The committee reserves the right to disqualify any of the tender in case the Committee is not satisfied with the documents furnished, including the past performances.
- c. Any adverse / not satisfactory remarks on the performance from the clients of previous suppliers will entertain disqualification of the tender and price bids will not be opened.

iii. Third Stage

- a. The Bidders who meet the pre-qualification criteria will be called for a technical presentation before the technical committee appointed by TPPA. Date and time of the technical presentation (PowerPoint presentation) shall be intimated to the qualified Bidders through registered email and mobile number given in the tender document.
- b. The Technical Proposal will be evaluated based on the Bidder's technical expertise as per clause 18, III (c), presentation of the Overall design scheme, technology adopted, strategy for execution, erection, testing, commissioning, implementation and plans for Operation and Maintenance which will be evaluated by the committee appointed by TPPA.
- c. The criteria for evaluation of technical bid are as under:

Part	Parameter	Score Details	Maximum Total Score
------	-----------	---------------	---------------------

1.	The Bidders satisfying Qualification criteria as per the Clause 3(c) of the Tender document	<table><tr><th>Capacity In KLD</th><th>No of projects</th><th>Score</th></tr><tr><td>400</td><td>1</td><td rowspan="3">40</td></tr><tr><td>200</td><td>2</td></tr><tr><td>150</td><td>3</td></tr></table>	Capacity In KLD	No of projects	Score	400	1	40	200	2	150	3	40
Capacity In KLD	No of projects	Score											
400	1	40											
200	2												
150	3												
2.	Additional Experience, Apart from satisfying the Qualification Criteria as per Clause 3(c), additional experience in undertaking and successfully completing common effluent treatment plant/ effluent treatment projects with a minimum capacity of 150 KLD with Operation and Maintenance for at least one (1) year during the last five years	<table><tr><th>No of Projects</th><th>Score</th></tr><tr><td>1</td><td>7.50</td></tr><tr><td>2 and above</td><td>15</td></tr></table>	No of Projects	Score	1	7.50	2 and above	15	15				
No of Projects	Score												
1	7.50												
2 and above	15												
3.	Experience in Supply, installation, and commissioning of at least one(1) 2 TPH Steam generation boiler along with required Indian Boiler Regulation (IBR) steam piping & approvals in said CETP/ ETP projects	<table><tr><th>No of Projects</th><th>Score</th></tr><tr><td>1</td><td>5</td></tr><tr><td>2 and above</td><td>10</td></tr></table>	No of Projects	Score	1	5	2 and above	10	10				
No of Projects	Score												
1	5												
2 and above	10												
4.	Experience in Supply, installation and commissioning of 500 to 1000 kVA-11 kV/415V Transformer, HT Yard, MV panels, DG Set with CEIG approvals in said CETP/ETP projects	<table><tr><th>No of Projects</th><th>Score</th></tr><tr><td>1 and above</td><td>5</td></tr></table>	No of Projects	Score	1 and above	5	5						
No of Projects	Score												
1 and above	5												

5.	Technical Presentation to Assess the Technical Expertise, similar past project references through reference calls.	Overall design scheme, technology adopted, strategy for execution, erection, testing, commissioning, implementation and plans for Operation and Maintenance	30
	GRAND TOTAL		100

- d. Only Bidders whose Technical Proposals get an overall score of 70 (Seventy Only) and above shall be technically qualified.
- e. The Bidders declared as technically qualified by the Committee, will be informed the date of opening of the Price bid through E-mail.

19. EVALUATION OF THE PRICE BID

- a. The Bidders declared technically qualified by the committee will be intimated with the date of opening of the price bid through E-mail.
- b. The price bid will be evaluated in accordance with the Tamil Nadu Transparency in Tenders Act, 1998 read with the Tamil Nadu Transparency in Tenders Rules, 2000.
- c. The evaluation of the price bid will be carried out as shown below.

Rate quoted for Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process (Part - A)

(+)

Rate quoted for comprehensive Operation and Maintenance (O&M) for five years (5 years) (Part - B)

- d. The Bidder who has quoted the lowest price as clause 19 (c) will be adjudged L1.
- e. In the price bid front loading of O&M cost will not be permitted, The O&M cost for 5 years should be minimum 35% of the total cost (i.e., Part - A + Part - B). In case any Bidder quotes less than 35% of total cost (i.e. Part - A + Part - B) as Part-B cost, then 35% of the total cost (i.e. Part - A + Part - B) will be treated as O&M cost and Part - A cost shall be readjusted to the tune of 65% of total cost (i.e. Part - A + Part - B) and

payments will be released accordingly.

20. CLARIFICATION ON THE PRICE BID

- a. Information relating to the evaluation of bids and recommendation of Contract award, will not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award is communicated to the successful Bidder.
- b. Any attempt by a Bidder to influence TPPA in the evaluation of the bid or contract award decisions may result in the rejection of the Bid.
- c. To assist in the examination, evaluation, and comparison of the Technical and Price bid, and qualification of the Bidders, TPPA may, as its discretion, ask any Bidder for a clarification of the bid, giving a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by TPPA will not be considered. TPPA's request for clarification and the response should be in writing. No change in the substance of the Technical bid or prices in the Price bid, including any voluntary increase or decrease in the prices, shall be sought, offered, or permitted.
- d. If the Bidder does not provide clarifications of the bid by the date and time set in the TPPA's request for clarification, the bid may be rejected.
- e. If a Technical bid is not substantially responsive to the requirements of the Tender Documents, it will be rejected by TPPA and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

21. AWARD OF CONTRACT

- a. The Bidder (L1) will be invited for price negotiations for further reduction of the rate.
- b. Upon finalization of the negotiated rate, TPPA will issue the Letter of Award (LoA) to the successful Bidder.

22. PERFORMANCE SECURITY**i. Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on the ZLD process and five (5) years of comprehensive Operation & Maintenance**

- a. At the time of signing of the Contract, the successful Bidder should furnish the Performance Security in accordance with the Conditions of the Contract, to ensure due performance of the contract, Performance Security is to be given in the form of Demand Draft/ Bank Guarantee from any Nationalized Bank /Scheduled Bank in favour of TPPA by the successful Bidder.
- b. Performance Security shall be 10% of the work order value (inclusive of GST) minus EMD already remitted along with the Tender, in the form of a Demand Draft/ Bank Guarantee with a valid period mentioned below in favour of TPPA payable at Chennai in the name of the Bidder/ Firm from any Nationalized Bank / Scheduled Bank to be given within 15 days from the date of issue of work order before execution of the contract.
 1. Bank Guarantee (BG) No.1 for the 50% value of performance security with the validity period of project completion period and defect liability period i.e. 2 years.
 2. Bank Guarantee (BG) No.2 for the balance 50% value of performance security with the validity period of project completion period plus a Comprehensive Operation & Maintenance period of five years.
- c. 50% of Performance Security i.e. BG No.1 will be released upon the expiry of the defect liability period as per Clause 26 and the balance 50% i.e. BG No.2 after the successful completion of five years of O&M period.
- d. TPPA will en-cash the Performance Security as compensation for any loss resulting from the Contractor's failure to complete his / her obligations under the Contract.

23. SIGNING OF CONTRACT

- a. The successful Bidder should execute the contract as may be drawn up to suit the conditions on a non-judicial stamp paper of value, as prescribed in law, and shall pay for all stamps and legal expenses incidental thereto. In the event of failure to execute the contract, within the time prescribed, the Performance Security/EMD amount remitted by the Bidder will be forfeited besides cancellation of the Tender.
- b. If the contract is not executed as per the agreed terms and conditions, TPPA will hold full authority to cancel the tender or take any such action that will be deemed fit to the occasion at the risk and cost of the successful Bidder. Such cancellation will entail the forfeiture of Performance Security/EMD.
- c. In the event of non-performance of the contractual provisions and if the selected Bidder has not fulfilled the contractual obligation with TPPA in any manner during the currency of the contract or also found on a later date, TPPA reserves the right to disqualify such Bidder from participating in future tenders or blacklist the Bidder up to a maximum period of 3 years.

24. RETENTION MONEY

Retention Money will be 5% against each bill in Part -A of the tender. The same will be released upon completion & handing over of all the Part-A works certified by TPPA / Consultants appointed by TPPA.

25. ISSUE OF WORK ORDER

After payment of the Performance Security and successful execution of the contract, the work order will be issued by TPPA. The Bidder should complete the works as per the schedule given in Clause 27.

26. DEFECT LIABILITY PERIOD AND ITS RECTIFICATIONS

- a. Defect Liability period will be twelve months from the date of the completion and

handing over of works. Any defect arising in the work during the set period due to faulty workmanship and faulty materials should be rectified by the contractor at his / her own cost.

- b. If the contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer-in-charge of TPPA, within the time specified by the Engineer-in-charge, the Engineer-in-charge will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

27. TIMELINE

- a. The Design, Engineering, Fabrication, Supply, Construction, Erection & Commissioning, and Testing of 500 KLD Zero Liquid Discharge (ZLD) based Common Effluent Treatment Plant (CETP) should be completed and handed over to TPPA in 12 months and the schedule is given below:

S. No	Description	Timeline
1.	Commencement of work	T
2.	Completion of 15% of the Contract Value	T + 2 months
3.	Completion of 30% of the Contract Value	T + 4 months
4.	Completion of 50% of the Contract Value	T + 6 months
5.	Completion of 65% of the Contract Value	T+ 8 months
6.	Completion of 80% of the Contract Value	T+10 months
7.	Completion of 100% of the Contract Value and COD	T+12 months

- b. If the contract is not completed within the stipulated time or extended time, TPPA will hold full authority to cancel the tender or take any such action that will be deemed fit to the occasion at the risk and cost of the successful Bidder. Such cancellation will entail forfeiture of Performance Security.

28. FORCE MAJEURE

- a. The Bidder shall not be liable for penalty or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- b. For purposes of this clause, "Force Majeure" means an event beyond the control of

the Bidder and not involving the Bidder/ fault or negligence, and not foreseeable. Such events may include, but are not restricted to, acts of the TPPA in its capacity as a buyer, wars or revolutions, terrorist attacks, fires, floods, epidemics, quarantine restrictions and freight embargoes.

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

29. MOBILIZATION ADVANCE

TPPA will make an advance payment ("Mobilization Advance") on request from the successful Bidder, equal to 10% of the contract value (including GST) against the Bank Guarantee for mobilization expenses.

The mobilization advance will be recovered in equal installments against the payments made to the contractor before the payment reaches 80% of the total Contract Value.

30. PAYMENT TERMS

- i. Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process.

TPPA will make an advance payment ("Mobilization Advance") on request from the successful Bidder, equal to 10% of the contract value (including GST) against the Bank Guarantee for mobilization expenses. The mobilization advance will be recovered in equal instalments against the payments made to the contractor before the payment reaches 80% of the Contract value.

The payment will be made only after receipt of approval from the TPPA / Consultant appointed by TPPA and the following terms shall prevail.

Sl No	Milestone / Item Description	Percentage of Total contract value
1	Submission of all Basic Engineering drawings and documents and site mobilization	5%
2	30% completion of civil works related to all civil tanks in the CETP project	5%
3	Supply of all major mechanical items like evaporators, strippers, RO plant, ATFD	20%
4	Supply of other mechanical items like pumps, filters, tanks, agitators, aerators	5%
5	Supply of all mechanical bulk items like pipes, fittings, valves and control panel	5%
6	60% completion of civil works pertaining to Item 2 above	5%
7	Supply of Utility items like, Boiler, Chimney, Boiler BOP, Cooling tower, pumps etc	10%
8	Supply of Electrical major items like Transformer, DG set, MV Panel	10%
9	Supply of Utility related piping bulk items and electrical-related bulk items like cables, cable trays, lighting etc	5%
10	90% completion of civil works pertaining to Item 2 above	5%
11	Completion of piping works pertaining to CETP including utilities	5%
12	Completion of electrical, instrumentation works in CETP and main Electrical works	5%
13	Transformer chagrining from TNEB after getting CEIG approval	2.5%
14	Startup of Boiler after IBR approvals	2.5%
15	Successful commissioning of CETP plant with guarantee runs	5%
16	Submission of As-built documentation including O&M manual	5%
<i>A retention amount equivalent to 5% of the running account (RA) bill value shall be deducted from all RA bills submitted. The retention money shall be released as per the Clause 24 of this tender document.</i>		

- a. The payment will be made by means of RTGS / NEFT in favor of the Contractor.
- b. TPPA reserves the right to recover any dues from the Contractor, which are found later during audit/excess payment after the final settlement is made to them. The Contractor is liable to pay such dues to the TPPA immediately on demand without raising any dispute/protest.

ii. Payment for Five (5) years of Comprehensive Operation and Maintenance (O&M)

- a. Payment for Operation and Maintenance (O&M) will be made proportionately

every quarter after satisfactory completion of maintenance for respective quarters certified by the agency identified by TPPA.

- b. Payment for Operation and Maintenance shall commence from the successful completion and handing over of the project as per Clause 27.
- c. The contractor shall raise quarterly bills for Operation & Maintenance and TPPA shall pay 95% of each part bill raised.
- d. The total retention amount on the bills of Operation & Maintenance shall be cleared in the first quarter bill of the next year of operations. For example, in year 1, the total retention amount is equal to 5% of the Operation & Maintenance charges for Year 1. This amount shall be paid with the first quarter bill of the Year 2 of the operations.
- e. Upon successful completion of the O&M period of 5 years, 50% of the Performance security collected as per Clause 19 (i) will be released.

31.**PRICE ESCALATION**

Price Escalation is not applicable.

32.**PENALTY FOR DELAY IN COMPLETION**

Failure to complete the contract within the stipulated period attracts a penalty at a rate of 0.5% of the contract value per week or part thereof subject to a maximum of 5% on the full contract value. Delay on the part of TPPA should be intimated and sorted out immediately without affecting the progress of works by all means. The penalty levied on the Contractor is however subject to modification at the discretion of TPPA for valid reasons, which are to be recorded.

33.**TERMINATION OF CONTRACT**

TPPA reserves the right to terminate the contract at any time during the validity period on account of non-fulfillment of the contract or any of the reasons.

In the case of O&M, TPPA reserves the right to terminate the contract at any time during the O&M period upon the non-fulfillment of the O&M contract or any other reasons.

34. GENERAL CONDITIONS

- a. TPPA reserves the right to relax or waive or amend any of the tender conditions.
- b. Any notice regarding any problems to the Bidder should be deemed to be sufficiently served, if given in writing at his / her usual or last known place of business.
- c. During discussion and instruction, TPPA may disclose information of confidential and proprietary nature relating to its know-how, operations, etc. to the Bidder. Such information will be considered confidential.
- d. After acceptance of the tender by TPPA, the Bidder will have no right to withdraw his / her tender.
- e. The contractor, who is engaging labourers for the work, is solely responsible for any untoward occurrences to the labourers while carrying out the work and any payment of compensation to such labourers. The contractor should abide by all Government Orders issued from time to time in respect of labour regulations.
- f. The site will be handed over to the contractor after the signing of the Contract. **All approvals related to the work, i.e. pollution control board approvals towards the CTO and other relevant approvals are under the scope of the contractor.**
- g. The Contractor should make its own arrangements for the labour accommodation.
- h. Any notice regarding any problems, to the Bidder shall be deemed to be sufficiently served, if given in writing at his usual or last known place of business.

35. FRAUD AND CORRUPT PRACTICES

The Bidders and their respective officers, employees, agents and advisers should observe the highest standard of ethics during the Bidding Process and after the issue of the LoA and during the subsistence of the Contract. Notwithstanding anything to the contrary contained herein, or in the LoA or the Contract, TPPA may reject a Bid, withdraw the LoA, or terminate the Contract, as the case may be, without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder, directly or

indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, TPPA shall be entitled to forfeit and appropriate the Performance Security, as the case may be, as Damages, without prejudice to any other right or remedy that may be available to TPPA under the Bidding Documents and/ or the Contract, or otherwise.

Without prejudice to the rights of TPPA under Clause (32) hereinabove and the rights and remedies which TPPA may have under the LoA or the Contract, or otherwise if a Bidder or Contractor, as the case may be, is found by TPPA to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the LoA or the execution of the Contract, such Bidder shall not be eligible to participate in any tender or RFP called for by TPPA for a period of 2 (two) years from the date such Bidder, or Contractor, as the case may be, is found by TPPA to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.

For the purposes of this Clause (31), the following terms shall have the meaning hereinafter respectively assigned to them:

- a. **“corrupt practice”** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of TPPA who is or has been associated in any manner, directly or indirectly, with the Bidding Process or the LoA or has dealt with matters concerning the Contract or arising therefore, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of TPPA, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process), engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LoA or after the execution of the Contract, as the case may be, any person in respect of any matter relating to the

work or the LoA or the Contract, who at any time has been or is a legal, financial or technical adviser of TPPA in relation to any matter concerning the work;

- b. **“Fraudulent practice”** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process.
- c. **“Coercive practice”** means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Bidding Process.
- d. **“Undesirable practice”** means (i) establishing contact with any person connected with or employed or engaged by TPPA with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and
- e. **“Restrictive practice”** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

36. ARBITRATION

- a. In case of any dispute in the bid, including interpretation if any on the clauses of the bid or the contract to be executed, the matter, if not resolved through amicable settlement, shall be referred to arbitration by an arbitral tribunal constituted in accordance with Clause 32(b). Such arbitration shall be proceeded as per the provisions of the Arbitration and Conciliation Act, 1996 or under any statute in force at that point of time.
- b. There shall be an arbitral tribunal comprising three arbitrators, of whom each Party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules.
- c. The venue of the Arbitration shall be at the registered office of TPPA in Chennai. The decision of the Arbitrator shall be final and binding on both the parties to the Arbitration.
- d. The Arbitrator may with the mutual consent of the parties, extend the time for

making the award. The award to be passed by the Arbitrator is enforceable in the court at Chennai city only.

37. JURISDICTION OF THE COURT

Any dispute arising out of non-fulfilment of any of the terms and conditions of this Tender / Contract or any other dispute arising out of the arbitration award will be subject to the jurisdiction of the Courts in the City of Chennai only.

We agree to the above terms and conditions.

**SIGNATURE OF THE BIDDER:
(WITH SEAL)**

DATE:

NAME IN BLOCK LETTERS:

DESIGNATION:

ADDRESS:

ANNEXURE - I

TECHNICAL SPECIFICATIONS**SECTION - 1****Basis of Design**

1. Proposed CETP shall be designed as a ZLDF (Zero Liquid Discharge Facility) and equipped to handle 500KL per day on a 100% capacity utilization basis.
2. Since the member units are essentially Finished dosage manufacturing companies (orange category), the effluent from these units is not proposed to be segregated as Lean and strong waste and will be taken as a single stream through a common pipe line to the CETP.
3. Based on general experience, the following parameters are proposed as the limiting specifications for member units for discharging into the common CETP pipe network. In case some parameters are to be treated (like pH), the member units shall install the required facility within their premises.

S.No	Description	UOM	Limit
1	pH		6 to 8
2	TDS	PPM	NMT 5000
3	COD	PPM	NMT 5000
4	BOD	PPM	NMT 100
5	TSS	PPM	NMT 1000
6	Oil & Grease	PPM	Traces
7	Ammonia	PPM	50

4. Proposed system capacity as follows:
 - i. Effluent to be handled - 500 KLD.
 - ii. Biological treatment - 2000 KL (Approximate 04 days storage)
 - iii. MEE - 150 to 200 KLD
 - iv. ATFD - to be decided by the vendor
5. Pre-treatment and Biological treatment:
 - a. Neutralisation (pH Correction)
 - b. Skimmer (Removal of oil & grease)
 - c. Polymer addition for flocculation
 - d. Aeration (For reduction of COD & BOD)
 - e. Sludge separation - Primary and secondary Clarifiers.

- f. Separation by Decanter or Filter press.
- g. Secondary aeration - Reduction in COD and BOD
- h. TDS reduction by Wastewater RO system in two to three stages.
- i. Permeate recovery from the RO system.
- j. Activated carbon and PSA treatment for the Permeate water.

High TDS treatment:

- a. RO reject feed to MEE (Multiple effect evaporator)
- b. MEE effluent concentrate to ATFD
- c. Salt disposal from ATFD
- d. Condensate recovery from MEE
- e. Permeate water from RO and MEE condensate shall be recycled for Units Utility and CETP cooling tower.

6. Proposed Utility Support for the Operation of CETP:

- i. Steam Boiler - 4MT/hr 02 Nos. Dual fired (F Oil and CNG/LPG)
- ii. Diffused aerators or Air Blowers
- iii. Cooling towers
- iv. Air compressors for Instruments
- v. Decanters or Filter press.
- vi. Transformer Yard and Power distribution panels for CETP
- vii. Associated Pumps and piping.

7. Proposed stage-wise storage tanks:

- a. Oil skimming and Equalisation tanks
- b. Neutralisation tank
- c. Clarification tank
- d. Aeration tank 1
- e. Primary clarifier
- f. Aeration tank 2
- g. Secondary clarifier
- h. Treated effluent tank.
- i. RO Permeate tank.
- j. RO rejection tank

8. Each member unit in the proposed layout shall adhere to the following inputs:

- a. Effluent to be collected and pumped to a designated tank within the premises.
- b. Effluent parameters shall adhere to the given CETP guidelines prior to discharge.
- c. Each unit shall be equipped with Online sensors with digital display for pH, TDS, and COD and the same can be connected with CETP system for unit wise monitoring and traceability.
- d. Each unit can discharge effluent to CETP maximum of 10 to 12KLD.
- e. Each Unit can accommodate 10KLD of recovery water for their Utilities. (Cooling tower and Hot water systems)(To discuss feasibility of this ?)
- f. Each Unit shall have designated tanks for Effluent and sewage.

9. Recovered water for recycling : (Proposed Guarantee parameters of CETP Bidder)

S.No	Description	UOM	Parameter
1	pH		6 to 7
2	TDS	PPM	NMT 300
3	TSS	PPM	NMT 50
4	COD	ppm	Less than 100
5	BOD	ppm	Less than 10

10. The CETP shall have its own Boiler house, Fuel storage, Electrical PCC and MCC rooms and substation (if required) and a small office to manage the infrastructure.

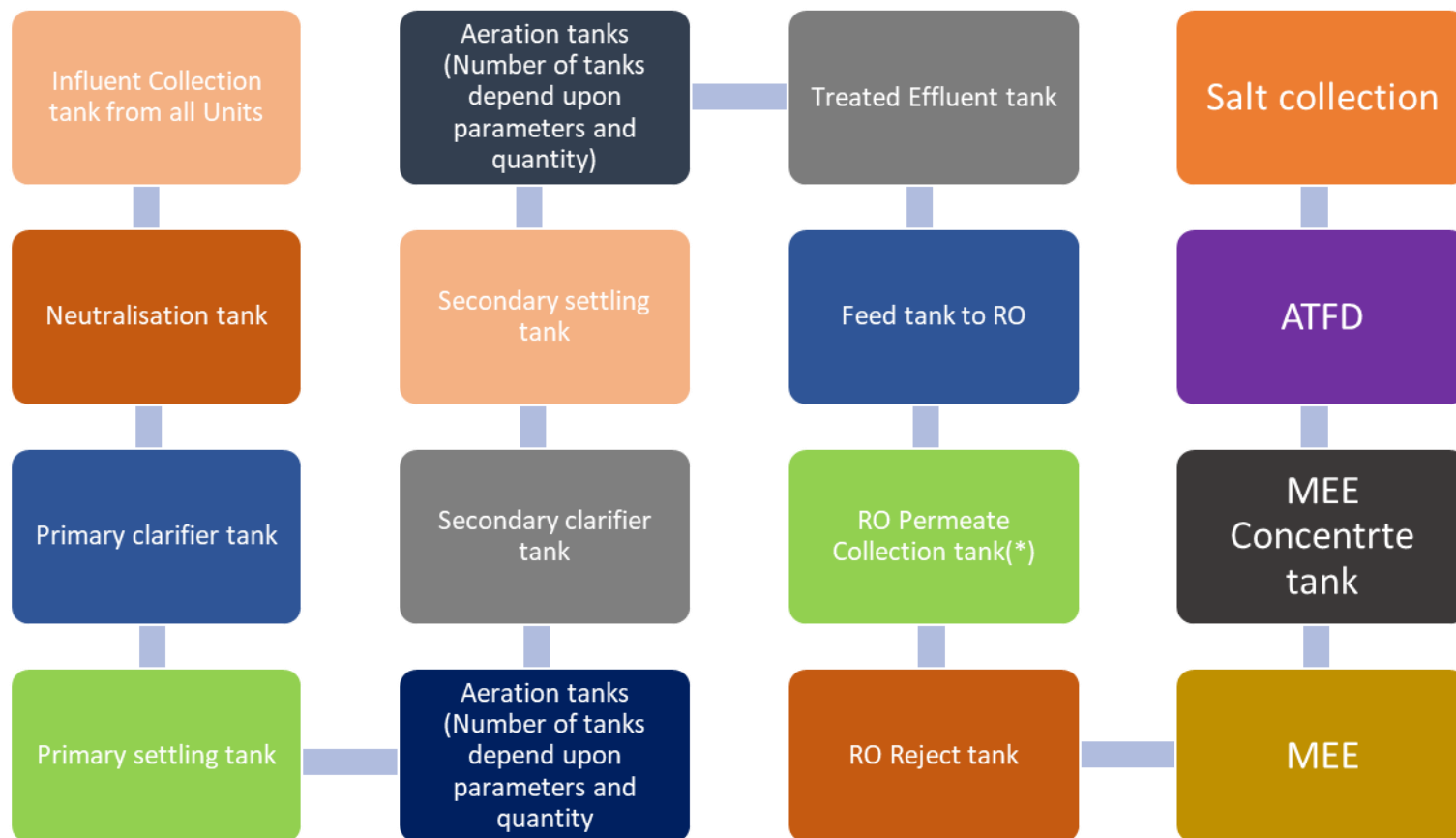
11. Bidder shall include all civil, mechanical, electrical, instrumentation and associated piping, cabling, panel works as part of this tender.

12. The Wastewater Treatment System shall fully comply with all requirements and limits specified in Environmental (Protection) Rules, 1986, along with all latest amendments to it, requirements and stipulations of the Central Pollution Control Board (CPCB), Ministry of Environment and Forests (MOEF); Government of India and Tamil Nadu Pollution Control Board (TNPCB) for the project, and any other central or local statutory requirements regarding environmental pollution and its abatement.

13. Latest versions of all Codes and standards shall be used.

14. A proposed Block Flow Diagram is attached for reference.

Flow Chart



(*) RO permeate shall be good quality water that can be recycled. MEE distillate water can also be considered for recycling.

SECTION - 2

Technical Specifications and Proposed Scheme

General

This specification intends to cover design, engineering, manufacture, fabrication, assembly, inspection & testing at vendor's & sub-vendors works, painting, forwarding, supply and delivery at the site including start-up and commissioning spares, mandatory spares, properly packed for transportation, loading/unloading/handling and storage at site, in site transportation, assembly, erection and commissioning, trial run, preparation and submission of drawing/documents including "As Built" drawings, site testing, carrying out performance guarantee tests at site and handover in flawless operating condition to end customer the entire **COMMON CETP** as per the details in different sections/ volumes of this specification for 500 KLD PLANT.

Process

As explained in the design basis chapter, the influents to the CETP will be coming through a piped network and will conform to the following specifications.

S.No	Description	UOM	Limit
1	pH		6 to 8
2	TDS	PPM	NMT 5000
3	COD	PPM	NMT 5000
4	BOD	PPM	NMT 100
5	TSS	PPM	NMT 1000
6	Oil & Grease	PPM	Traces
7	Ammonia	PPM	50

A typical Process Flow Diagram is attached as Exhibit - 2 as a proposed scheme for treatment. Bidders are encouraged to provide their scheme which would be an optimum design to treat the above influent. The treated effluent shall conform to the following specifications. The usage of this treated water is proposed currently within the CETP premises in the cooling tower and for gardening purposes. A plan to supply this back to member units will be evaluated at a later stage.

S.No	Description	UOM	Parameter
1	pH		6 to 7
2	TDS	PPM	NMT 300
3	TSS	PPM	NMT 50
4	COD	ppm	Less than 100
5	BOD	ppm	Less than 10

Plant sizing

The nominal installed capacity of the plant shall be 500 KLD. However, we would like to have a modular approach to this as we do not expect all the member units to become functional at once and the capacity could be much smaller in the first year and then gradually increase to higher loads.

Due to this, we would like the plant to be designed for various sections as follows:

- Civil collection tanks and accessories : 125 KLD x 4 modules (equivalent)
- Biological treatment section : To match accordingly.
- RO Treatment plant : 2 equal sized modules based on design material.
balance to be developed by Bidder.
- Evaporation section : 2 equal sized modules based on design
requirements
- ATFD : Same as evaporation section
- Boiler : 2 equal sized boilers (FO/Gas based)
- Electrical Power : One single installation to meet the entire
plant requirements

Civil Works

All civil works pertaining to the CETP project shall be in the scope of the Bidder. A brief list of civil/structural works is provided below. Bidder to verify the list and provide a final list of buildings and civil works which will form part of the commercial tender. The civil works shall include design and detailed engineering and also getting necessary statutory approvals for the construction and providing a completion certificate from the competent authority for records.

List of Civil Works

Direct CETP related

1. Equalisation Tank (4 Nos.)
2. Neutralisation Tank
3. Aeration Tanks
4. Clarifier Tanks(if provided in civil)
5. Pump foundations
6. Civil foundation for the evaporator, ATFD structure
7. Structural works for the evaporator, ATFD and others
8. Civil building for housing the RO plant and Control room
9. Pipe rack foundations and structures
10. All structural supports for interconnecting piping
11. All civil foundations for any other plant and machinery not listed above

Other Civil works

12. Boiler House, Boiler foundation, Boiler fuel oil storage tank foundation, Chimney foundation
13. Cooling tower basin, foundation for cooling tower pumps and pipe supports
14. Foundation and covered structure for air compressor, air dryer, etc
15. Foundation for air receiver tank
16. Piping structure foundations
17. HT and Transformer yard
18. Transformer foundation and plinth
19. MV Panel room (with cable cellar room as per CEIG norms)
20. DG set plinth
21. Cable tray support structures and foundations
22. Development of roads and pathways within the CETP plant, Utility area and Electrical yard
23. Toilet building (can be made part of Item 8)

Mechanical

The broad scope of supply (Mechanical) for this package is detailed below. This is an indicative list; the Bidder shall prepare a detailed list with brief specifications and submit it along with the bid.

- ✓ Oil skimmer system
- ✓ Chemical dosing system (Acid/Alkali/Flocculant etc)
- ✓ Agitators (for neutralisation tank)
- ✓ All transfer pumps with drive (with installed stand-by)
- ✓ Clarifiers
- ✓ Air diffusers
- ✓ Multiple effect evaporator (Either TVR or MVR) (Vendor to justify selection)
- ✓ ATFD
- ✓ RO Plant
- ✓ Storage tanks for various streams with suitable MOC
- ✓ Manual Hoist for lifting motors etc

Further, the below points shall be considered to be part of the scope of work.

- All necessary drains, vents, and sampling points, with valves, as specified and as required.
- Hangers and supports as per the requirement.
- All the interconnecting piping between different sumps and equipment as per your design PID
- During detailed engineering, the Bidder is to furnish a complete and detailed scheme in all respects including all valves, equipment etc. for smooth, safe, efficient and trouble-free operation of the plant meeting the specification requirement and also considering the applicable statutory requirement.
- Necessary piping, fitting, valves, drains, vents, sampling etc. required for the complete CETP including pipe racks, U-Clamps, nuts, bolts, gaskets etc shall be in the Bidder's scope.
- All insert plates, rung ladder, nuts and bolts, and flanges and matching counter flanges wherever applicable.
- All handrails for all the sumps, Clarifiers, Other open tanks, stairs, ladders, open balconies etc shall be in the scope of the Bidder
- Embedment plates with lugs shall also be provided by the Bidder as per system requirements.

- All channels & brackets, mounting plates as required for mounting of motors, pumps, stirrers, tank etc shall be in the Bidder's scope.
- Start-up and commissioning spares as required to be supplied as part of the main plant.
- Mandatory spares and 2-year operational spares are to be indicated by the Bidder and provided with a separate price.
- All special tools necessary for proper maintenance or adjustment of the equipment are packed in permanent boxes. Operating platforms, permanent ladders (not rugs), supports and other structural works for each tank, valves etc. to facilitate accessibility for operation and maintenance.
- All necessary structural steel for pipe supporting structure, platforms, walkways/pathways and access stairs, mechanical plant and equipment, mechanical services and pipework associated with CETP.
- Finish paints for touch-up painting of equipment after erection at site. Bidder shall also provide one final coat of the same DFT as specified in the tender specification at the site after completion of the erection of each equipment/item.
- All pipes, fittings etc required for hand railing, platforms, and ladders shall be in the scope of the Bidder.
- All handrails shall be of 32 mm nominal bore MS pipes (medium class) as per IS: 1161 galvanised using 750 gm/sq. m of zinc. Hand railing shall be a two-rail system with the top rail 1000 mm above the walkway surface and the intermediate rail 450 mm below the top rail. Handrail post spacing shall be limited to 1500 mm as far as possible but can be proportioned to the length of the opening. In such a case spacing shall not exceed 1850 mm center to center of posts. Hand railing shall be shop fabricated for specific locations and field welded or bolted to the erected structural steel. Railings shall be provided with 100 mm wide and 8 mm thick MS strip at the bottom as toe guard all along the length of the railing in the horizontal plane. For RCC stairs, hand railing with 20 mm square MS bar balustrade with suitable MS flat and Aluminium / Teakwood handrail shall be provided, unless specifically mentioned otherwise.
- Monitoring gadgets, instruments and equipment required for commissioning & maintenance (till PG test and plant handover).
- Permanent ladder (not rungs) for approaching the top of tanks, valves, all steel inserts with lugs, plates, bolts, nuts, sleeves, edge angles and all other embedding components etc as required to grout in civil works and to support/hold the equipment being supplied under this specification for opening/maintenance purpose.

- Wrapping, coating and protection of the entire buried pipe shall be as per IS 10221 or AWWA C 203-93.
- Any item/work either supply of equipment or erection material which has not been specifically mentioned but is necessary to complete the works for trouble-free and efficient operation of the plant shall be deemed to be included within the scope of this specification and shall be in Bidder's scope without any commercial, technical and delivery implication to TPPA.
- All elbow, tee, pipe fittings etc. required for the erection of the complete system including piping shall be in the Bidder's scope. Bidder to provide the detailed BOQ during detail engineering.
- Bidder shall perform the guarantee parameters as per specification requirement to the satisfaction of TPPA. The exact modalities of verifying the guarantee for the parameters indicated in the specification shall be finally agreed with TPPA during detailed engineering & mutually agreed upon.
- All the first fill and one Year's topping requirements of consumables such as greases, oil, lubricants, servo fluids/control fluids etc. which will be required to put the equipment covered under the scope of specifications, into successful commissioning / initial operation and to establish completion of facilities shall be in Bidder's scope. Suitable standard lubricants as available in India are desired.
- All blank flanges/counter flanges, isolations valves, tees etc. to interconnect the pipes at all terminal points.
- One set of all special tools & tackles of reputed make necessary for proper maintenance or adjustment of the equipment being supplied by the Bidder, packed in the permanent box.
- One (1) Number weighing scale (Digital Platform scale 0 - 500 kg)

Piping

All the piping as listed below shall be in the Bidder's scope. The below-indicated pipes shall be designed, supplied, erected, laid and tested by the Bidder. Elbows, tees, flanges, hangers and supports, embedment plates with lugs etc. required for the below given piping shall also be provided by the Bidder. All pipes shall be above ground on a pipe rack and there will be no underground piping unless necessary to accommodate site constraints.

All piping within the CETP area and between each sump and equipment/ terminal points etc.

Inlet and outlet pipes for each sump, pit, pump, other equipment, etc. with pipe connections to the respective sumps, pits and equipment as indicated in the PFD

Steam piping (IBR and Non-IBR), Cooling water piping, Air and Service water piping as applicable as per the Terminal Points.

In addition, any additional piping and associated accessories required to complete the system shall be in the Bidder's scope.

IBR approval for Steam piping shall be in the Bidder's scope.

Bidder to estimate pipe quantities based on his proposed layout for the CETP

Electrical & Instrumentation Works :

The broad scope of supply (Electrical) for this package is detailed below. This is an indicative list; the Bidder shall prepare a detailed list with brief specifications and submit it along with the bid. The scope shall include getting necessary approvals and Bidder shall employ a suitable A-grade contractor for the works. The Tentative Electrical Load is estimated as 500 KVA. Bidder shall reverify based on his design of equipment and reconfirm during pre-bid meeting.

- ✓ HT Yard and breakers
- ✓ Transformer (11 KV/ 415 V)(3 Phase system)
- ✓ PCC Panel
- ✓ DG set
- ✓ Bus ducts
- ✓ APFC panel
- ✓ Lighting panel
- ✓ MCC panel for the plant
- ✓ Cables, cable trays, supports
- ✓ Push button stations
- ✓ Entire area lighting
- ✓ Earthing and Lightning protection
- ✓ Power wiring (single phase) for building lighting and AC loads

Instrumentation & Controls

The Bidder shall propose a completely automated plant and shall design, supply and erect a complete instrumentation system for the remote operation of the plant from the control room. The minimum scope shall include :

- ✓ Field manual instruments like pressure, level and temperature gauges
- ✓ Control valves and On-off valves
- ✓ Transmitters
- ✓ Switches (pressure, flow, level etc)
- ✓ Flow meters
- ✓ PLC/SCADA

- ✓ Cables, cable trays, supports
- ✓ Software
- ✓ UPS
- ✓ Junction boxes
- ✓ Pneumatic stations
- ✓ Pneumatic tubing

The Bidder shall provide a detailed Control philosophy, control system architecture and instrument index along with the bid.

General Scope of Services

The Bidder's scope also includes the following services for scope under this specification:

- Design, basic and detailed engineering of the entire CETP.
- Unloading, Storage, handling and transportation at the site.
- All civil works as listed above and as per plant requirements.
- Pre- Commissioning work such as flushing, hydraulic testing etc. Necessary consumables and instrumentation as required for inspection and testing at works as well as at the site including pre-commissioning activities shall be arranged by the successful Bidder at their own cost.
- Erection and Commissioning of the entire CETP.
- Arrangement of all lubricants, instruments, reagents for carrying out trial run, commissioning and PG test.
- Monitoring gadgets, instruments and equipment required for maintenance (till PG test & Plant Handover).
- All personnel required during commissioning, trial run and PG Test.
- Trial run for the requisite period.
- Performance testing.
- Painting of all equipment within the scope of supply and final touch-up painting at the site.
- Preparation & submission of all drawings as per the list enclosed in Annexure I in Section 3, and Drawing/Document submission schedule enclosed in Annexure I in Section 3.

- Training of plant Owner's personnel, O&M operators' personnel on plant operation and maintenance.
- All other facilities/ services as described in sections/volumes on-site services in the specification and related to CETP scope of work.
- Any other service required for making the installation complete in all respects within battery limits and for satisfactory erection & commissioning of the system as well as to meet any statutory requirement relevant to the package, unless specifically EXCLUDED from the scope of services.
- Start-up and Commissioning spares are those which would be required during plant or equipment testing, start-up and commissioning. All spares used until the plant is finally handed over by the Contractor to the Owner come under this category. All start-up and commissioning spares as required shall be in Bidder's scope.
- Bidder shall be responsible for the ready and timely availability of all the start-up and commissioning spares as required during various stages of erection, testing, cleaning and commissioning up to handing over of plant.
- One set of all special tools shall be furnished and shipped with each piece of equipment for dismantling, maintenance, adjustment, and calibration of the equipment. The tools shall be shipped in separate heavily constructed wooden boxes provided with hinged covers and padlock hasps.
- The Contractor shall supply under this contract all maintenance tools for each piece of equipment/system and it shall be boxed separately and the boxes shall be appropriately marked for shipment and identification of contents.
- A weather-proof itemised list of the contents shall also be attached to the outside of each container.
- The maintenance tools shall include all special handling rigs, bars, slings, cables and all specialised equipment for control system maintenance such as extender boards, scopes, and all software and hardware. Further, Bidder shall also include a full set of regular maintenance tools and tackles required. Bidder shall also include all maintenance tools and tackles in their scope. The total price of all the maintenance tools and tackles shall be included in the quoted lump sum price.

Additional Technical Requirements

- For the selection of pump head during detailed engineering, Bidder will consider 15 m static head + 10% margin in addition to the losses in straight length and bend in pipes and valves etc.
 - Document approval by the customer under the Approval category or information
- Signature of the Bidder with Seal

category shall not absolve the vendor of their contractual obligations of completing the work as per specification requirement. Any deviation from specified requirements shall be reported by the vendor in writing and require written approval. Unless any change in specified requirement has been brought out by the vendor during detail engineering in writing while submitting the document to the customer for approval, the approved document (with implicit deviation) will not be cited as a reason for not following the specification requirement.

- In case the vendor submits a revised drawing after approval of the corresponding drawing, any delay in approval of the revised drawing shall be to the vendor's account and shall not be used as a reason for extension in contract completion.
- Bidders shall make a Site visit to familiarize themselves with the existing condition of site before submitting the bid to make their offer complete. During detail engineering also, the successful Bidder shall be responsible for the correctness of details w.r.t. existing facility at site. Customer approval on any drawing having details of the existing facility shall not be cited by the successful Bidder as a valid reason for any shortcoming in the work by. TPPA shall also not entertain any cost implication for any lack of input data with regard to site during detail engineering.
- Final Electrical Load list will be submitted by the successful Bidder as per the agreed drawing/ doc submission schedule. Thereafter any change in the electrical load list shall be entertained only subject to its feasibility.
- The complete system shall be proven and necessary design documentation in support of proveness shall be submitted by the successful Bidder in support of the systems, if asked by the customer without any price and delivery implication to TPPA and the customer.
- Vendor to attend regular engineering meetings with TPPA and customer fortnightly in TPPA or customer office as decided during detail engineering. Vendor will depute all his concerned engineering representatives along with the project manager for discussion and approval. Meeting can be held at the site also.
- The total space available for the complete CETP Area has been indicated in the Key plan attached elsewhere in the Technical specification. Bidder to accommodate all the equipment within the allocated space.
- Bidder to submit MTO during detailed engineering after approval of Basic documents. MTO shall be equal to BOQ for the package and there shall be no price and delivery implication applied to TPPA for the same.
- TAG numbering as per TPPA/Customer requirement shall be provided by the Bidder during the detailed engineering stage without any commercial/delivery implication to TPPA.

- Any statutory requirement/clearance required for the packages from the government / local body shall be in the Bidder's scope.
- In case of any conflict and repetition of clauses in the specification, the more stringent requirements among them are to be complied with.
- Any item/work either the supply of equipment or erection material which has not been specifically mentioned but is necessary to complete the works for trouble-free and efficient operation of the plant shall be deemed to be included within the scope of this specification. The Bidder without any extra charge shall provide the same.
- All drawings/documents shall be approved by TPPA during the detailed engineering stage. Successful vendors shall comply with the comment of the TPPA without price & delivery implications.
- Site facility as available or as extended by Customer shall only be provided.
- Complete CETP shall be designed to run continuously.
- All the equipment of CETP shall be designed for outdoor duty.
- The treated water shall also be used for gardening purposes. Bidder to check all the regulations for the water used for gardening purposes. The system shall be designed in such a way that the water can be used for gardening purposes as per the norms of the Central Pollution Control Board, Tamil Nadu Pollution Control board, WHO etc. All the arrangements to meet the norms are in the Bidder's scope though not indicated in the technical specification. Taking clearance from respective agencies is also in the Bidder's scope.

Exclusions

The Bidder shall clearly mention in a separate document titled Exclusions of any specific deviations and exclusions that he has considered while preparing the technical bid.

SECTION - 3**DRAWING/DOCUMENT SUBMISSION SCHEDULE**

After the award of LOI/LOA, the following minimum drawing/documents shall be submitted by the Bidder for TPPA Customer approval. However any additional drawing/document if found necessary for completion of the engineering, the same shall be submitted by the Bidder without any commercial & delivery implication to TPPA.

Bidder has to submit the revised drawing/document along with the compliance sheet indicating an enumerated reply to all TPPA and customer comments or observations. Without a compliance sheet, the submission of the drawings/documents will not be considered and the delay on this account will be solely on the Bidder's side only.

Every revised submission incorporating comments shall be resubmitted within 7 days. TPPA shall provide observation/approval within 7 days from the date of document submission by the Bidder. Bidder to note that drawings submitted shall be complete in all respects with revised drawings submitted incorporating all comments. Any incomplete drawing submitted shall be treated as non-submission with delays attributable to the Bidder's account. Engineering meetings shall be held fort nightly, for which the Bidder shall depute his concerned engineers along with the project manager to TPPA/Consultant office without fail.

Minimum drawing list is provided below; Bidder to confirm the list and provide a list of any additional drawings that they deem fit are required for this project.

SI No	DRAWING/ DOCUMENT TITLE	APPROVAL CATEGORY
1	P&I DIAGRAM FOR CETP	A
2	LAYOUT PLAN FOR CETP INCLUDING UTILITY AREA AND ELECTRICAL INSTALLATION (MASTER PLAN)	A
3	PROCESS & UNIT SIZING & HYDRAULIC CALCULATIONS FOR CETP	A
4	SUB VENDOR LIST FOR CETP	A
5	EQUIPMENT LAYOUT FOR CETP (MAIN PLANT)	
6	CONTROL PHILOSOPHY FOR OPERATING THE CETP	A
7	QUALITY ASSURANCE PLAN FOR CETP EQUIPMENT	A
8	ELECTRICAL LOAD LIST & SINGLE LINE DIAGRAM FOR CETP	A
9	GA DRAWINGS FOR TANKS FOR CETP	A

10	TECHNICAL DATASHEET OF VALVES FOR CETP	A
11	TECHNICAL DATASHEET FOR INSTRUMENTS FOR CETP	A
12	TECHNICAL DATA SHEET OF HORIZONTAL / VERTICAL CENTRIFUGAL/SCREW/METERING PUMPS	A
13	TECHNICAL DATASHEET FOR STRAINERS, AGITATORS, ISOLATION GATES ETC	A
14	MECH. GA OF ALL MECHANICAL EQUIPMENT INCLUDING CLARIFIERS, AERATORS, AGITATORS, EVAPORATORS, DRYERS ETC	A
15	PIPING LAYOUT FOR CETP	A
16	YARD PIPING LAYOUT	A
17	INSTRUMENT SCHEDULE FOR CETP	I
18	CIVIL CONSTRUCTION DRAWINGS (IFC)	I
19	INSTRUMENT INSTALLATION/HOOK-UP DIAGRAMS	A
20	FIELD JB TERMINATIONS /GROUPING DOCUMENT	A
21	LCP PANEL DATASHEET, GA (INTERNAL & EXTERNAL) DRAWING	A
22	QAP FOR LOCAL CONTROL PANEL	A
23	CABLE SCHEDULE (EXCEL FORMAT) & CABLE INTERCONNECTION DETAILS	A
24	CABLE TRAY/TRENCH & CONDUIT ROUTING DIAGRAM AND EARTHING LAYOUT OF CETP	A
25	CABLE INTERCONNECTION DRAWING FOR SETUP	A
26	PG TEST PROCEDURE FOR CETP	A
27	O&M MANUAL FOR CETP	A

Notes:

1. A= APPROVAL. I = INFORMATION.
2. Any additional drawings-documents required during detailed engineering stage shall be provided by bidder without any commercial, technical and delivery implication to TPPA
3. Bidder to note that the successful bidder, during detail engineering, will submit the drg/doc through web based Document Management System in addition to hard copies to be submitted for final As-built documentation

SECTION - 4**SUGGESTED MAKES OF BOUGHT-OUT COMPONENTS**

The following table provides suggested makes of standard components to be used in the CETP. Bidders shall confirm their compliance to these makes or suggest suitable equivalent makes with prior approval of the Client engineer during erection.

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
1.	CHAIN PULLEY BLOCK	BRADY & MORRIS ENGINEERING CO. LTD.	AHMEDABAD	
		CENTURY CRANE ENGINEERS PVT. LTD.	FARIDABAD	
		HERCULES HOISTS LTD.	RAIGAD	
		TUOBRO FURGUSON (INDIA) PVT LTD	KOLKATA	UPTO 10 TONNE.
		TRACTEL TIRFOR INDIA PVT. LTD.	FARIDABAD	
		TECHNO INDUSTRIES	AHMEDABAD	
		UNIVERSAL HOIST-O-FABRIK	THANE	
2.	ELECTRIC HOISTS	ALPHA SERVICES	BHIWADI	
		BRADY & MORRIS ENGINEERING CO. LTD.	AHMEDABAD	
		CONSOLIDATED HOISTS PVT LTD	PUNE	
		CENTURY CRANE ENGINEERS PVT. LTD.	FARIDABAD	
		EDDY CRANES PVT. LTD.	MUMBAI	
		ROCKWELL HOISTO CRANES PVT. LTD.	BAHADURGAR	
		SAFEX ENERGY PVT. LTD.	AHMEDABAD	
		TUOBRO FURGUSON (INDIA) PVT LTD	KOLKATA	UPTO 15 TONNES.
		TRACTEL TIRFOR INDIA PVT. LTD.	FARIDABAD	
		TECHNO INDUSTRIES	AHMEDABAD	
3.	BALL VALVES	A.V. VALVES LTD	AGRA	
		DELVAL FLOW CONTROLS PVT. LTD.	NOIDA	MOC STEEL ONLY
		GM ENGINEERING PVT. LTD.	RAJKOT	
		HAWA VALVES (INDIA) PVT. LTD.	THANE	SIZE UP TO 2" & #800 WITH MOC AS FCS & FSS AND FOR SIZE FROM 65 NB TO 150 NB & #150 WITH MOC AS CCS AND CSS.
		HAWA ENGINEERS LTD.	GUJARAT	MOC:CAST STEEL AND STAINLESS STEEL, CLASS 150#, SIZE UPTO 600 NB
		INTERVALVE POONAWALLA LTD.	PUNE	STEEL BALL VALVES UPTO 50NB, #800 AND 65NB TO 150NB. #150

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		LEADER VALVES LTD.	JALANDHAR	CAST STEEL UPTO 200 MM, CLASS 150/300.
		MICROFINISH VALVES PVT LTD.	KARNATAKA	
		MEVADA ENGINEERING WORKS PVT LTD.	MUMBAI	SIZE UPTO 300 NB, CL#300 WITH MOC AS CCS AND CSS ONLY;
		NILON VALVES PRIVATE LIMITED	AHMEDABAD	
		UNIFLOW	CHENNAI	
		VALTECH INDUSTRIES	MUMBAI	FORGED CARBON & ALLOY STEEL BALL VALVES ,SCREWED TYPE BALL VALVES RATING 800 , SIZES UPTO 50 & CC& ALLOY STEEL BALL VALVES RATING 150 , SIZES 65 TO 200 FLANGED TYPE.
		VAAS AUTOMATION PVT. LTD.	NEW DELHI	
		WEIR BDK VALVES- A UNIT OF WEIR INDIA PVT. LTD.	NEW DELHI	
4.	STEEL GATE /GLOBE/NRV VALVES	A.V. VALVES LTD	AGRA	
		ATAM VALVES PVT. LTD.	JALANDHAR	(1) CARBON STEEL GATE VALVES & NON-RETURN VALVES: 15 NB TO 50 NB (#800) & 65 NB TO 300 NB (#150) (2) CARBON STEEL GLOBE VALVES: 15 NB TO 50 NB (#800) & 65 NB TO 200 NB (#150)
		FOURESS ENGG. INDIA LTD.	MUMBAI	
		FLUIDLINE VALVES COMPANY PVT.LTD.	GHAZIABAD	
		GM ENGINEERING PVT. LTD.	RAJKOT	
		HAWA VALVES (INDIA) PVT. LTD.	THANE	SIZE UP TO 2" & #800 WITH MOC AS FCS & FSS AND FOR SIZE FROM 65 NB TO 150 NB & #150 WITH MOC AS CCS AND CSS.
		INTERVALVE POONAWALLA LTD.	PUNE	A) STEEL GATE VALVES: UPTO 50NB, #800 AND 65NB TO 150NB, #150 B) STEEL

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
				GLOBE VALVES: UPTO 50NB, #800 AND 65NB TO 100NB, #150 C)SUPPLIER NOT REGISTERED FOR NR VALVES
		LEADER VALVES LTD.	JALANDHAR	
		NITON VALVE INDUSTRIES PVT LTD	MUMBAI	
		NSSL PRIVATE LIMITED	NAGPUR	
		OSWAL INDUSTRIES LTD	AHMEDABAD	CCS CL-150,300- GT/GL/NR VALVES 600/250/600,400 RESP.BS/ASME STDs.CSS CL-150- GT/GL/NR VALVES 250/250/300,400 RESP.BS/ASME STDs.
		STEEL STRONG VALVES (I) PVT.LTD.,	MUMBAI	FOR GATE/GLOBE/NRV,C LASS(UPTO)#800, 15NB TO 50NB, MATERIAL- FCS/FSS/DUPLEX SS; FOR GATE VALVES, #150, 65NB TO 750NB, CCS/CSS/DUPLEX SS; FOR NRV,#150,65NB TO 400NB,CCS/CSS/DUP LEX SS,FOR GLOBE #150,65NB TO 300NB,CCS/CSS/DUP LEX SS
		VALTECH INDUSTRIES	MUMBAI	CAST CARBON & ALLOY STEEL - VALVE/RATING/SIZE -
		V.K. VALVES PVT. LTD.,	JALANDHAR	
		WEIR BDK VALVES- A UNIT OF WEIR INDIA PVT. LTD.	NEW DELHI	
5.	CAST IRON/ GATE/GLOBE/NRV/SAFETY RELIEF VALVES	A.V. VALVES LTD		
		H.SARKER & COMPANY		
		G.M. DALUI & SONS PVT. LTD.		

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		KIRLOSKAR BROS. LTD.		
		LEADER VALVES LTD.		
		MICON VALVES (INDIA) PVT. LTD		
		FLUIDLINE VALVES COMPANY PRIVATE		
		FEDERAL HARDWARE ENGINEERING CO PTE LTD., SINGAPORE		
		CRESCENT VALVES MFG. CO. PVT. LTD.		
		SURYA VALVES AND INSTRUMENTS MANUFACTURING COMPANY, CHENNAI		
6.	BF VALVES (WATER SERVICE)	ADVANCE VALVES PVT. LTD		
		B.D.K. ENGINEERING INDUSTRIES LTD.		
		INTER VALVE (INDIA) LTD.		
		FOURESS ENGG. INDIA LTD.		
		INSTRUMENTATION LTD.		
		LARSEN & TOUBRO LTD.		
		KIRLOSKAR BROS. LTD.		
		MICON VALVES (INDIA) PVT. LTD		
		R&D MULTIPLES (METAL CAST) PVT. LTD.		
		SURYA VALVES AND INSTRUMENTS MANUFACTURING COMPANY, CHENNAI		
		STAFFORD CONTROLS LIMITED, PUNE		
		FLUIDLINE VALVES COMPANY PRIVATE LTD., MUMBAI		
		TYCO VALVES & CONTROLS INDIA PVT.LTD., HALOL		
7.	FLOW ELEMENT - NOZZLE	DYNAFLUID VALVES AND FLOW CONTROLS (P) LTD.	BELGAUM-KARNATAKA	
		INSTRUMENTATION LTD	KERALA	
		MICRO PRECISION PRODUCTS PVT. LTD.	FARIDABAD	
		MINCO (INDIA) FLOW ELEMENTS PVT. LTD.,	GOA	
8.	FLOW ELEMENT - ORIFICE	MICRO PRECISION PRODUCTS PVT. LTD.	FARIDABAD	
		INSTRUMENTATION ENGINEERS PVT LTD,	HYDERABAD	
		DYNAFLUID VALVES AND FLOW CONTROLS (P) LTD.,	BELGAUM-KARNATAKA	
		INSTRUMENTATION LTD	KERALA	
9.	MISC. PUMPS (HORIZONTAL)	CHENNAI PROCESS PUMPS PVT LTD	CHENNAI	
		BHARAT PUMPS & COMPRESSORS LTD	ALLAHABAD	

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		FLOWMORE LTD.	GURGAON	
		KIRLOSKAR BROTHERS LTD.	PUNE	
		WILO MATHER & PLATT PUMPS PVT. LTD.	PUNE	
		MAXFLOW PUMPS INDIA PVT. LTD.	HARYANA	
		V-FLO PUMPS & SYSTEMS CO. LTD.	BEIJING	
		VARAT PUMP AND MACHINERY PVT. LTD.	KOLKATA	
		WPIL LIMITED	KOLKATA	
		JYOTI LTD.		
		FLOW SERVE INDIA CONTROLS PVT. LTD.		
10.	MISC. PUMPS (VERTICAL)	BHARAT PUMPS & COMPRESSORS LTD	ALLAHABAD	
		FLOWMORE LTD.	GURGAON	
		WILO MATHER & PLATT PUMPS PVT. LTD.	PUNE	
		VARAT PUMP AND MACHINERY PVT. LTD.	KOLKATA	
		WPIL LIMITED	KOLKATA	
		CHENNAI PROCESS PUMPS PVT LTD	CHENNAI	
		JYOTI LTD.		
		SULZER PUMPS INDIA LTD.		
11.	LOCAL CONTROL PANEL	C & S ELECTRIC LTD.		
		PROCON INSTRUMENTATION PVT LTD.		
		INDUSTRIAL CONTROLS & APPLIANCES PVT LTD.		
12.	ROTAMETER	FLOW STAR ENGINEERING PVT. LTD.,	FARIDABAD	
		EUREKA INDUSTRIAL EQUIPMENTS PVT.LTD.	PUNE	
		INSTRUMENTATION ENGINEERS PVT LTD,	HYDERABAD	
		SCIENTIFIC DEVICES (BOMBAY) PVT LTD,	MUMBAI	
		FLOW TECH INSTRUMENTS SERVICES		
13.	DIAPHRAGM VALVE	BDK VALVES -HUBLI		
		CRANE FLOW PROCESS-SATARA		
14.	CHECK VALVES (FLAT TYPE SIZE UP TO 50 NB)	B BDK VALVES -HUBLI		
		H SARKAR-HOWRAH		
		LEADER-JALANDHAR		
		MAJESTIC WORKS, MUMBAI		
15.	DUAL PLATE NON-RETURN VALVES (SS & CI UPTO 100 NB CLASS 150)	ADVANCE VALVES-NOIDA		
		R&D MULTIPLES-VALSAD		
		B BDK VALVES -HUBLI		

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
16.	SOLENOID VALVES	ROTEX AUTOMATION-BARODA ASCO - CHENNAI		
17.	SIMPLEX STRAINER	ACME FLUID SYSTEMS BHATIA ENGINEERING CO. BOMBAY CHEMICAL EQUIPMENT FILTRATION ENGINEERS (I) PVT. LTD. GUJARAT OTOFILT JAYPEE INDUSTRIES PVT. LTD. NISAN SCIENTIFIC PROCESS EQUIPMENT PVT. LTD. OTOKLIN GLOBAL BUSINESS LIMITED SUNGOV ENGINEERING PVT. LTD.	AHMEDABAD DELHI MUMBAI MUMBAI AHMEDABAD DELHI NAVI MUMBAI MUMBAI CHENNAI	
18.	MS PIPES (IS: 1239 & 3589)	SAIL-ROUR KELA JINDAL (UPTO 350 NB)- GHAZIABAD TISCO (UPTO 150 NB)- JAMSHEDPUR MSL (FOR IS 3589-200 NB TO 500 NB)-RAIGAD		
19.	MS PLATES	SAIL		
20.	LEVEL GAUGES	BLISS ANAND PVT. LTD., SIGMA INSTRUMENTS CO., TOSHNIWAL BROTHERS PVT.LTD.	GURGAON MUMBAI AJMER	
21.	LEVEL SWITCH- CAPACITANCE TYPE	V. AUTOMAT & INSTRUMENTS (P) LTD., BAUMER TECHNOLOGIES INDIA PVT. LTD. SIGMA INSTRUMENTS CO. SAPCON INSTRUMENT PVT LTD. SOR INC. LEVCON INSTRUMENTS PVT. LTD. PUNE TECHTROL PVT. LTD. NIVO CONTROLS PVT. LTD. BLISS ANAND PVT. LTD., FLOW STAR ENGINEERING PVT. LTD	NEW DELHI MUMBAI MUMBAI INDORE USA KOLKATA PUNE INDORE GURGAON FARIDABAD	
22.	LEVEL SWITCH- CONDUCTIVITY TYPE	HI-TECH SYSTEMS & SERVICES LTD., BLISS ANAND PVT. LTD. LEVCON INSTRUMENTS PVT. LTD. SOR INC SAPCON INSTRUMENT PVT LTD., SIGMA INSTRUMENTS CO., RAMAN INSTRUMENTS PVT.LTD. V. AUTOMAT & INSTRUMENTS (P) LTD., HI-TECH SYSTEMS & SERVICES LTD., BLISS ANAND PVT. LTD. LEVCON INSTRUMENTS PVT. LTD.	KOLKATA GURGAON KOLKATA USA INDORE MUMBAI MUMBAI NEW DELHI KOLKATA GURGAON KOLKATA	

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		SOR INC	USA	
		SAPCON INSTRUMENT PVT LTD.,	INDORE	
		SIGMA INSTRUMENTS CO.,	MUMBAI	
		RAMAN INSTRUMENTS PVT.LTD.	MUMBAI	
		V. AUTOMAT & INSTRUMENTS (P) LTD.,	NEW DELHI	
23.	LEVEL SWITCH-FLOAT TYPE	V. AUTOMAT & INSTRUMENTS (P) LTD.,	NEW DELHI	
		BAUMER TECHNOLOGIES INDIA PVT. LTD.,	MUMBAI	
		SBEM PVT. LTD.,	PUNE	
		SIGMA INSTRUMENTS CO.	MUMBAI	
		SOR INC	USA	
		LEVCON INSTRUMENTS PVT. LTD.	KOLKATA	
		PUNE TECHTROL PVT. LTD.	PUNE	
		BLISS ANAND PVT. LTD.,	GURGAON	
		D.K. INSTRUMENTS PVT.LTD.,	KOLKATA	
		GENERAL INSTRUMENTS CONSORTIUM	MUMBAI	
24.	LEVEL TRANSMITTER (FOR ULTRA SONIC TYPE)	EMERSON PROCESS MANAGEMENT (I) LTD		
		SIEMENS		
25.	ANALYSERS	POLYTRON	FRANCE	
		HACH ULTRA	FRANCE	
		ABB	UK	
		ORION	USA	
		SWAN	USA	
		EMERSON PROCESS MANAGEMENT	CHENNAI	
26.	TRANSMITTER	HONEYWELL AUTOMATION INDIA LIMITED,	NEW DELHI	
		SBEM PVT. LTD.,	PUNE	
		YOKOGAWA INDIA LIMITED,	BANGALORE	
		TOSHNIWAL INDUSTRIES PVT. LTD.	AJMER	
		V. AUTOMAT & INSTRUMENTS (P) LTD.	NEW DELHI	
		SMART INSTRUMENTS LTD,	BRAZIL	
		SIEMENS LIMITED,	MUMBAI	
		EMERSON PROCESS MANAGEMENT (INDIA) PVT.LTD.	MUMBAI	
		PUNE TECHTROL PVT. LTD.,	PUNE	
		PANAM ENGINEERS,	MUMBAI	
		MOORE INDUSTRIES INTERNATIONAL INC.	USA	
		NIVO CONTROLS PVT. LTD.,	INDORE	
		ENDRESS + HAUSER (INDIA) PVT. LTD.	NEW DELHI,	
		ABB LIMITED,	FARIDABAD	
27.	PRESSURE AND DIFFERENTIAL	FORBES MARSHALL (HYD) LTD.	HYDERABAD	
		H.GURU INSTRUMENTS (SOUTH	BANGALORE	

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
	PRESSURE GAUGE	INDIA) P. LTD,		
		GAUGE BOURDON INDIA PVT. LTD.	MUMBAI	
		H.GURU INDUSTRIES	KOLKATA	
		BOSE PANDA INSTRUMENTS PVT.LTD.	KOLKATA	
		PRECISION MASS PRODUCTS PVT. LTD.	GUJARAT	
		A.N. INSTRUMENTS PVT. LTD.	KOLKATA	
		BAUMER TECHNOLOGIES INDIA PVT. LTD.	MUMBAI	
28.	PRESSURE SWITCH/DIFF. PRESSURE SWITCH	PRECISION MASS PRODUCTS PVT. LTD.	GUJARAT	
		BARKSDALE GMBH	GERMANY	
		DRESSER INDUSTRIES INC.	GUJARAT	
		INDFOS (INDIA) LIMITED,	CHENNAI	
		GENERAL INSTRUMENTS CONSORTIUM	MUMBAI	
		KAUSTUBHA UDYOG	PUNE	
		INDFOS INDUSTRIES LIMITED	GHAZIABAD	
		SOR INC	USA	
29.	TEMPERATURE GAUGE	SWITZER PROCESS INSTRUMENTS PVT. LTD.	CHENNAI	
		BAUMER TECHNOLOGIES INDIA PVT. LTD.	MUMBAI	
		H.GURU INSTRUMENTS (SOUTH INDIA) P. LTD	BANGALORE	
		H.GURU INDUSTRIES	KOLKATA	
		GAUGE BOURDON INDIA PVT. LTD.	MUMBAI	
		GOA THERMOSTATIC INSTRUMENTS PVT.LTD.	GOA	
		GOA INSTRUMENTS INDUSTRIES PVT.LTD.,	GOA	
		FORBES MARSHALL (HYD) LTD.	HYDERABAD	
		PRECISION MASS PRODUCTS PVT. LTD.	GUJARAT	
		BUDENBERG GUAGE CO.LTD.	UK	
30.	TEMPERATURE ELEMENT	A.N. INSTRUMENTS PVT. LTD.	KOLKATA	
		GOA INSTRUMENTS INDUSTRIES PVT.LTD.,	GOA	
		GAUGE BOURDON INDIA PVT. LTD.	MUMBAI	
		DETRIVE INSTRUMENTATION & ELECTRONICS LTD.	MUMBAI	
		PYRO ELECTRIC INSTRUMENTS GOA PVT.LTD.	GOA	
		TECHNO INSTRUMENTS	GUJARAT	
		TEMPSENS INSTRUMENT (I) PVT LTD	UDAIPUR	
		TM TECNOMATIC SPA	ITALY	
		TOSHNIWAL INDUSTRIES PVT. LTD.,	MUMBAI	
		THERMAL INSTRUMENT INDIA PVT. LTD.	MUMBAI	
		BAUMER TECHNOLOGIES INDIA PVT.	RAJASTHAN	

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		LTD.		
31.	TEMPERATURE GAUGE	BAUMER TECHNOLOGIES INDIA PVT. LTD.	MUMBAI	
		H.GURU INSTRUMENTS (SOUTH INDIA) P. LTD	BANGALORE	
		H.GURU INDUSTRIES	KOLKATA	
		GAUGE BOURDON INDIA PVT. LTD.	MUMBAI	
		GOA THERMOSTATIC INSTRUMENTS PVT.LTD.	GOA	
		GOA INSTRUMENTS INDUSTRIES PVT.LTD.,	GOA	
		FORBES MARSHALL (HYD) LTD.	HYDERABAD	
		PRECISION MASS PRODUCTS PVT. LTD.	GUJARAT	
		BUDENBERG GUAGE CO.LTD.	UK	
		A.N. INSTRUMENTS PVT. LTD.	KOLKATA-	
32.	TEMPERATURE SWITCH	INDFOS (INDIA) LIMITED	CHENNAI	
		DRESSER INDUSTRIES INC.	GUJARAT	
		SWITZER PROCESS INSTRUMENTS PVT. LTD.	CHENNAI	
		SOR INC.	USA	
		TOSHNIWAL BROTHERS PVT.LTD.	AJMER-	
33.	TEMPERATURE TRANSMITTER	SOR INC	USA	
		DELTA CONTROLS LIMITED	USA	
		ABB	CHENNAI	
34.	LT MOTORS	BBL	MUMBAI	
		CGL	MUMBAI / AHMEDABAD	
		ALSTOM	KOLKATTA	
		KEC	BANGALORE / HUBLI	
		SEIMENS	MUMBAI	
		ABB	FARIDABAD	
35.	AGITATOR/STIRRER	REMI PROCESS SYTEM MIXION (NOW GMM) SYSTEMS	MUMBAI	
36.	FITTINGS	BHARAT FORGE	PUNE	
		RELIANCE FORGE	PUNE	
37.	FLANGES	BHARAT FORGE	PUNE	
		RELIANCE FORGE	PUNE	
		HBL NIFE POWER SYSTEMS LTD.		
38.	INSTRUMENT FITTINGS	FLUIDFIT ENGINEERS PVT. LTD	MUMBAI	
		HP VALVES & FITTINGS INDIA PVT. LTD.,	CHENNAI	
		FLUID CONTROLS PVT. LTD.	MUMBAI-	
		COMFIT & VALVE PVT. LTD.,	AHMEDABAD	
		ARYA CRAFTS & ENGINEERING PVT.	MUMBAI	

SL NO.	ITEM	SUPPLIERS	PLACE	REMARKS/ TECHNICAL LIMIT
		LTD.,		
		PERFECT INSTRUMENTATION CONTROL (INDIA) PVT. LTD.	MUMBAI	
		PRECISION ENGINEERING INDUSTRIES	MUMBAI	
		PANAM ENGINEERS	MUMBAI	
		VIKAS INDUSTRIAL PRODUCTS,	NOIDA	
		HONEYWELL AUTOMATION INDIA LIMITED,	NEW DELHI	
		YOKOGAWA INDIA LIMITED,	BANGALORE	
		SIEMENS LIMITED,	MUMBAI	
		EMERSON PROCESS MANAGEMENT (INDIA) PVT.LTD.	MUMBAI	
		PUNE TECHTROL PVT. LTD.,	PUNE	
		ENDRESS + HAUSER (INDIA) PVT.	NEW DELHI,	
		ABB LIMITED,	FARIDABAD	
39.	JUNCTION BOX	SUCHITRA INDUSTRIES	BANGALORE	
		K.S.INSTRUMENTS PVT.LTD	BANGALORE	
		SHRENIK & COMPANY,	AHMEDABAD	
		AJMERA INDUSTRIAL & ENGINEERING WORKS	MUMBAI	
		FLEXPRO ELECTRICALS PVT. LTD.,	GUJARAT	
40.	CABLE GLAND	COMET		
		DOWELL		
		CHETNA		
41.	CABLE LUGS	ELECTRO BILLETS		
		COMET		
		DOWELL		
		CHETNA		
42.	PAINT	ASIAN PAINTS (I) LTD.		
		BERGER PAINTS INDIA LTD		
		GOODLASS NEROLAC		
		JENSON & NICHOLSON (I) LTD		
		CDC CARBOLINE (I) LTD.		
		SHALIMAR PAINTS LTD.		
43.	OILSKIMMER	JEET ENGENEERING		
44.	TURBIDITY METER	HACH		
		ROSE MOUNT		
		YOGOKAWA		
45.	TDS ANALYSER	EMERSON/HACH		

SECTION - 5

PAINTING SPECIFICATIONS

Scope

This section covers the painting requirements for the Ozone generation plant as applicable.

Codes and Standards

Painting of equipment shall be carried out as per the specifications indicated below and shall conform to the relevant IS specification for the material and workmanship.

The following Indian Standards may be referred to for carrying out the painting job:

IS:5	:	Colours for ready-mixed paints and enamels
IS:1303	:	Glossary of terms relating to paints
IS:2379	:	Colour code for identification of pipelines
IS:1477	:	Code of practice for painting of ferrous metals in buildings (Parts I & II)
IS:2524	:	Code of practice for painting of non-ferrous metals in buildings (Parts I & II)
IS:2395	:	Code of practice for painting of concrete, masonry and plaster surfaces (Parts I & II)
IS:2338	:	Code of practice for finishing of wood and wood based materials (Parts I & II)
IS:6278	:	Code of practice for whitewashing and colour Washing
IS:3140	:	Code of practice for painting asbestos cement Building products
IS:158	:	Ready mixed paint, brushing, bituminous, black, lead-free, acid, alkali, water and heat-resisting
IS:2074	:	Ready mixed paint, air drying, red Oxide Zinc Chrome, priming
IS:104	:	Ready mixed paint, brushing, Zinc Chrome,
priming IS: 2932	:	Enamel , synthetic, exterior
		(a) undercoating
		(b) finishing

Preparation of Surfaces

All surfaces to be painted shall be thoroughly cleaned of all grease, oil, loose mill scale, dust, rust and any other foreign matter. Mechanical cleaning by power tool and scrapping with steel wire brushes shall be adopted to clear the surfaces.

However, in certain locations where power tool cleaning cannot be carried out sand scrapping may be permitted with steel wire brushes and /or abrasive paper. Cleaning with solvents shall be resorted to only in such areas where other methods specified above have not achieved the desired results. Cleaning with solvents shall be adopted only after written approval of TPPA. The sheet steel of electrical and instrumentation panels shall be pre-treated through a chemical cleaning (7 tanks) process of rinsing, degreasing, rinsing, de-rusting, rinsing, phosphating and rinsing. However, in case mechanical cleaning is also required Bidder shall carry out the same to get a smooth finish.

Primer Paint

After the surface is prepared one coat of Zinc Phosphate primer conforming to IS 2074 shall be applied. After this first coat is dried up completely, a second coat of primer shall be applied. Primer shall be applied by brushing, spray, and roller as per the manufacturer's recommendation to ensure a continuous film. Insulated surfaces will have only primer coating and no finished painting.

Finish Paint

Synthetic enamel paint conforming to IS 2932 shall be used for finish coats. The colour /shade shall be as approved by TPPA/Customer. After cleaning the dust on the dried-up primer, first coat of synthetic enamel shall be applied. After this first coat dries up hard, the surface is wet scrubbed cutting down to a smooth finish and ensuring that at no place the first coat is completely removed. After allowing the water to gets evaporate completely, the second finish coat of synthetic enamel paint shall be applied.

Painting and Corrosion Protection for Pipes & Fittings

All uninsulated piping systems, hangers and supports shall have two coats of Zinc Phosphate Primer (conforming to IS 2074) and finish paint using synthetic enamel paint to give a finish coat. Shades shall be as per IS 5 or as indicated by TPPA/Customer. Service of the pipeline designations shall be painted on all pipes at visible locations.

Before application of paint, the Contractor shall clean the pipes of all mill scale, dirt dust, soot grease, rust etc.

All pipe lines, piping components shall be adequately protected against corrosion during manufacture, fabrication, shipment and storage by appropriate protective paint.

Shop-fabricated equipment/items shall be dispatched with the final paint. Necessary touch-ups shall be done at the site. Site-fabricated equipment/items shall be dispatched with primer painting only and final painting shall be applied at site.

Painting and Corrosion Protection for Valves & Specialties

Two coats of primer of thickness as indicated in shall be applied to all steel and cast iron exposed surfaces as required to prevent corrosion before dispatch. The use of grease or oil, other than light-grade mineral oil, for corrosion protection is prohibited. Bores of all vales shall be covered immediately after testing, draining and drying with suitable plastic end covers to avoid ingress of foreign materials.

Suggested Colour Codes for Painting

Suggested colour codes has been enclosed for adherence. Colour codes for piping shall be as per IS 2379 with necessary modifications. Where band colour is specified for piping, same shall be provided at 30-metre intervals on long uninterrupted lines and also adjacent to valves and junctions.

TABLE No.1- SUGGESTED COLOUR CODES FOR PAINTING

SL. NO.	ITEM/SERVICE	COLOUR	IS-5 Grade	COLOUR (BAND)	IS-5
1.0	Structures, platforms, galleries, ladders and handrails	Dark Admiralty Grey	632	-	-
2.0	Crane				
2.1	Crane structure	Golden Yellow	356	-	-
2.2	Trolley and hook	Crimson	540	-	-
3.0	Fans, pumps, motors, compressors	Light Grey	631	-	-
4.0	Tanks (without insulation and cladding)				
4.1	Outdoor	Aluminium	-	-	-
4.2	Indoor	Light grey	631	-	-
5.0	Vessels & all other proprietary equipment (without insulation & cladding)	Light grey	631	-	-
6.0	Control & relay panels	Light grey	631/7078 of IS 1650	-	-
7.0	Transformers	Aluminium	-	-	-
8.0	Machinery guards	Signal red	537	-	-
9.0	Piping				
9.1	Potable, Service water , Effluent piping	Sea green	217	French blue	166
9.2	Compressed air	Sky blue	101	White	-
9.3	Vacuum pipes	Sky blue	101	Black	-
9.4	Drainage	Black	-	-	-

Notes:

1. This colour code refers to IS:2379 for piping with necessary modifications
2. Where band colour is specified, the same shall be provided at 30-meter intervals on long uninterrupted lines and also adjacent to valves and junctions.
3. The above-mentioned painting requirements are a bare minimum. Any variation as required by TPPA during the detailed engineering stage shall be adhered to by the Bidder without any delivery/commercial implication to TPPA.

TABLE NO.2- PAINT REFERENCE SCHEME

Item to be painted	Surface Preparation Grade / Surface Profile	Primer Coat			Intermediate Coat			Finish Coat			Total DFT in microns
		Premier Paint	No. of Coats	DFT in Microns	Paint	No. of Coats	DFT in Microns	Finish Paint (See Note)	No. of Coats	DFT in Microns	
Various type of equipment /valve, etc. (Temp. upto 90°C)	Degreasing and Mech. Cleaning with wire brushing/hand tool	HB Zinc Phosphate (alkyd Medium) as per IS:2074	2	35-45 per coat	- NA	-	-	Synthetic enamel (alkyd med.) as per IS:2932	2	20 - 25 per coat	110 - 140
LP Piping/structurals/ Vessels, etc. (Temp. upto 90°)	- do -	HB Zinc Phosphate as per IS:2074 (alkyd medium)	2	35 - 45 per coat	- NA	-	-	Synthetic enamel (alkyd med.) as per IS:2932	2	20 - 25 per coat	110-140
Equipment with (Temp. upto 250°)	- do -	Heat resistant Al - paint	2	20 per coat	- NA	-	-	NA	Insulated	NA	40
Equipment in corrosive areas.	Blast clean to Sa 2 1/2	HB Epoxy resin based zinc phosphate primer	1	50 per coat	Epoxy based MIO pigment ed paint	1	50 per coat	Polyamide cured Epoxy finish coat	2	25 - 35 per coat	150 - 170
Elect. / Control Panels, etc.	Seven tank process	HB Zinc phosphate (alkyd Medium) as per IS:2074	2	35 - 45 per coat	-NA	-	-	Synthetic enamel (alkyd med.) as per IS:2932	2	20 - 25 per coat	110 - 140

SECTION - 6

REFERENCE DRAWINGS

Three documents are provided as reference drawings to this tender.

1. Overall layout of the Pharma Park showing the location of all plots and area earmarked for CETP (Exhibit - 1)
2. Proposed Process Flow diagram for treatment scheme. (Exhibit - 2)
3. Suggested layout for CETP and other infrastructure (Exhibit - 3)

SECTION - 7

COMPREHENSIVE OPERATION AND MAINTENANCE REQUIREMENTS

1. Scope of Works for O&M

The Bidder shall also quote for Comprehensive Operation and Maintenance of the CETP for a minimum period of 5 years from the date of commissioning. The general conditions for O&M shall be as follows:

2. General

Major components and works in the comprehensive operation and maintenance shall include the following but not limited to:

(a) Bidder shall operate and maintain the Common Effluent Treatment Plant, Utilities, Boiler and related accessories, Electrical sub-station and its related infrastructure, system proposed for recycled water and provision for transport of Solid waste generated (salt), complete for 5 years on 24 hours x 7 day basis throughout the year.

(b) Bidder shall operate and maintain all Equipment, Civil works, Mechanical items, Electrical and Control automation equipment in accordance with the aim and purpose of CETP and recycled water supply. The plant & equipment will be totally attended by the Bidder including any Troubleshooting to ensure smooth and trouble-free operation.

(c) Bidder has to incur all the operating costs, pay taxes & duties, costs for transportation, cost of labour, cost of repairing & replacing equipment, making good any part or all part of civil works, equipment, consumables, motors, pumps, gear units, evaporators, Dryers, RO packages, Boiler, Cooling tower, Air compressor, Electrical transformers, DG sets, Panels, Capacitors, HT/LT Switchgear, filter media, valves, chemicals and laboratory testing equipment etc. complete including Electricity Charges.

(d) The Bidder shall be responsible for procuring all spares, all tools & tackles, parts or components, Consumable chemicals (acid, alkali, PAC, Polyelectrolyte etc.) and all consumables including grease, lubricating oil, cleaning agents, equipment, laboratory instruments, glassware and chemicals, laboratory reagents, labour transportation and other charges, etc. Further, the Bidder will plan about the requirement well in advance and procure the material from the market.

(e) Bidder shall prepare O&M Manual for the Common Effluent Treatment Plant inclusive of all the related infrastructure. Bidder shall initiate and take adequate actions to ensure smooth and satisfactory performance/ running of the plants on a 24-hour/round-the-clock basis. Operate and maintain all units and equipment of

the Effluent Treatment Plant as per the requirement of the process to meet continuously and consistently desired quality of recycled water (Treated Effluent) as per the contract.

(f) The operation and maintenance service provided by the Bidder for the period specified in the Contract shall ensure the continuous operation of the Plant and that the breakdown or deterioration in performance, under normal operating conditions, of any items of Plant and equipment and component/ parts thereof is kept to a minimum.

(g) The Bidder will determine operating parameters, select Chemical doses etc. and optimize the process, and working of the Effluent Treatment Plant. Excessive chemical dosing i.e. dose more than normal should be avoided.

(h) The Bidder shall prepare and implement an effective plant maintenance program in consultation with the TPPA engineer. It is Bidder's responsibility to look after all sorts of maintenance whether preventive, Minor, Major, or breakdown. The Bidder will be responsible for carrying out day-to-day as well as periodic maintenance necessary to ensure smooth and efficient performance/running of all equipment. Bidder shall attend all the breakdown of civil, mechanical, electrical, piping, automation and instrumentation works and maintain the plant and equipment throughout the Contract Period.

(i) The Bidder shall keep additional spares, Tools and consumables at any time during the O&M period.

(j) No structure of any kind will be allowed to be constructed/ altered within the plant premises, without the approval of TPPA. Nothing is to be paid by TPPA for any addition if allowed. In case of damages to the building/machines and shortcomings to the machines, the same has to be made good as per original shape/good running condition by the Bidder. The decision of TPPA's Engineer/ TPPA in this regard shall be final and binding.

(k) In case, the motor or any other equipment is burnt or damage due to negligence of the Bidder or due to faulty operation it shall be the sole responsibility of the Bidder to rewind/replace/repair it as per standards of the equipment free of cost. In case of any fault in the operation and performance of the plant, Bidder or his staff at duty will immediately report to the TPPA's Engineer about it.

(l) The Bidder will be responsible for keeping up-to-date record of documents including a History Card for equipment and maintaining every everyday logbook relating to various analysis performed. The Bidder shall maintain and update a logbook, in which details of operational parameters are recorded in every shift and at regular intervals say hourly or as decided mutually. Bidder shall take the approval of the format of logbooks and records from TPPA.

(m) The Bidder will prepare and submit daily, fortnightly and monthly reports of

plant performance and will assist the TPPA in preparing the necessary documents for their purpose and records. Carry out regular and frequent sampling, analysis and result recording of industrial effluent and treated effluent as per the procedures laid out by the TPPA / TNPCB and in conformity with standard methods.

(n) The Bidder shall employ appropriate and skilled manpower. The Bidder shall have to issue identity cards with photographs to all the staff employed for Operation and Maintenance. The list of the same shall be submitted to the TPPA mentioning qualification & experience. A suggested minimum list of manpower is as below :

Site In Charge	:	1 No.
Shift Supervisor	:	1 per shift
ETP Operators	:	2 per shift
Utility operator	:	1 per shift
Boiler Operator	:	1 per shift (C certificate holder)
Mechanical Maint	:	2 per shift (Fitter/Helper)
Electrician	:	1 per shift

(o) The scope of works for operation & maintenance includes the calibration of all meters e.g. pressure gauges, temperature gauges, level gauges, flow meters, other field instruments, electrical meters like Ammeter, voltmeters, relays, Energy meters etc. for measurement of accurate readings.

(p) The Bidder shall be responsible for maintaining the lighting and other equipment. The premises of various works shall be provided with LED energy-efficient industrial Indoor fixtures and ceiling fans/exhaust fans inside the various structures. Daily on/off operation and routine cleaning of all types of electric fixtures. Replacement of lamps / Tubes / Fans in case of failure at Bidder's cost.

(q) The Bidder shall be responsible for the maintenance of the Garden, lawn, green belt etc within the CETP premises. The work shall include watering, grass cutting, removal of shrubs, weed cutting of branches of tree/ plant, growth of garden, Plantation etc.

(r) The Bidder shall be responsible for the maintenance of all buildings in the CETP. The Bidder shall be responsible for keeping watch on the overflowing of sumps/ reservoirs/ wet wells for pumping stations etc. If such overflow takes place the Bidder shall have to bear the damages caused to surrounding properties.

(s) The Bidder shall carry out cement paint/ enamel paint/whitewash for exterior finish of civil units twice during the five years of O & M of the plant and shall also carry out painting on mechanical equipment/above-ground pipelines/ hand railing twice in five years of O & M of the plant. On the expiry date of his contract operation and maintenance, the Bidder shall hand over the plant back to TPPA in

fully working condition satisfying the requirement of treated Effluent. All the electrical, mechanical and instrumentation including standby shall be in perfect working condition. An option to extend the O & M shall be mutually discussed and agreed upon if required at the end of the five years.

(t) The Bidder shall be responsible for safety on Site during the O & M of the Works by the Bidder. Health of workers shall be protected against infectious and contagious diseases. Environmental protection shall also be given priority to conserve the environment.

(u) The Bidder shall at his own cost provide and maintain at the Site of Works standard first aid boxes as directed and approved by the TPPA for the use of his own as well as the TPPA's staff on Site as stipulated by local regulations. The Bidder shall arrange to train all their staff in first aid treatment within 3 months.

(v) The Bidder shall provide Notice Boards/Display Boards at appropriate locations detailing precautions to be taken by operation and maintenance personnel in work in conformity with Industries and Labour Regulations and the Department of Explosives.

(w) Periodical monitoring & testing of incoming effluent sample, and controlling the parameters of incoming effluent from user units, so that common CETP can be operated on standard operating conditions & rectify the operational/treatment process disorders, if any occurs.

(x) Maintaining flow/effluent discharges of user units & total effluent coming to common CETP daily.

(y) Collections of effluent from the inlet pit of CETP received from user unit and/or other concerned sampling point and test in-house laboratory for analysis, maintain deviation of inlet design criteria parameters of proposed CETP, if any financial impact occurred.

(z) Maintaining quantity & quality of effluent received from user industries on a day-to-day basis. The record-keeping/formats/log sheets of CETP operation should be maintained & submitted to ITCOT.

(aa) Maintain record of plant performance data, plant maintenance data, Inventory and consumables at the plant in the prescribed log books at CETP.

(bb) There shall be no discharge of effluent outside the industrial area i.e.—Zero Liquid Discharge condition—to be maintained all the time.

(cc) All Equipment/pumps/Motors/pipelines/valves/ flow meters/stirrers installed should always be in working condition.

(dd) Daily cleaning of pumps, motors, Weekly oiling greasing, testing of drain valves. Once in six months cleaning and changing of filter material of the pressure sand filter unit and Changing the filter of Air compressors need to be done.

(ee) Attending Mechanical and electrical breakdowns such as burnt motor winding Replacing damaged bearings, leakage of pipelines, replacement of defective

valves, Gland packing change if leakage is there or worn out.

(ff) Dense plantation is to be done along the periphery of the CETP premises. Plantation done by the Bidder during the construction period shall also be maintained during the operation and maintenance period. Number of plants planted during the construction period will be the same as at the end of the performance guarantee period with sufficient growth. Water, manure, pesticides, labour, civil work etc. required during plantation work and its maintenance work shall be arranged by the Bidder. During 1st to 5th year of maintenance replacement of plant casualties, soil conservation work, weeding of plants and protection of plants safety measures of plants are included in the contract.

(gg) 24 Hrs Security of the facility shall be provided by the Bidder. The Bidder shall designate necessary security personnel to ensure the safety and security of all fittings and fixtures of all components of various items of executed work as per the contract document for the entire period, The Bidder shall be liable for losses due to theft and shall be liable to repair/ replace or refit the concerned item.

3. Housekeeping

Daily Cleaning of the plant area, control room, lab areas, electrical room etc and open area around, drains removing tree leaves in addition to above the house Keeping of the CETP premises includes cutting and cleaning grass vegetation, landscape etc. daily. The cut grass and vegetation are to be disposed of safely and in direct places.

The Bidder shall provide experienced administrative, managerial and technical personnel, duly approved by the TPPA's Engineer/TPPA including supervisory, non-technical personnel and labour necessary to operate and maintain the plant properly, safely and efficiently on a continuous 24-hour basis for the full term of the O & M Contract Period. During the O & M period, if any expert person, special persons or manpower is needed, the Bidder shall arrange at his own cost.

4. Treated effluent Quality for CETP

The Bidder shall operate the Effluent Treatment Plant in such a way that the recycled water (treated effluent) quality attains the parameters as per PCB norms.

If the Bidder fails to achieve the recycled water (treated Effluent) quality, he will be responsible for all modifications without extra cost. The proposal submitted by the Bidder should be suitable to work round the year and supported by the documents as satisfactorily tested and tried. Documentary proof in this regard from the TPPA engineer needs to be submitted along with the proposal.

No toxic chemical shall be used by the Bidder at any stage of treatment, he will submit the toxicity test report from any govt. recognized laboratory at his own cost before using such chemicals.

The Bidder shall operate the Effluent Treatment Plant such that the sludge produced is of a spade-able consistency and the volume of sludge produced after necessary process, is minimal. The Bidder shall dispose off the sludge cake and SALT from ATFD at his own cost, through proper approved means of transport to the disposal site and necessary clearance, if required for this purpose, from the regulatory authority, is to be obtained by the Bidder. The Bidder has to dispose of solid dry sludge/salt/ screened material/ grit from Treatment plants to a nearby approved landfill site as directed by the TPPA. The Bidder needs to check the quality of the sludge/salt before disposal and get the approval of TPPA's Engineer.

5. Tests to be carried out during O&M Period

The testing of industrial Effluent and treated Effluent at the CETP site shall be as per the O&M manual for Effluent Treatment and TNPCB regulations. The frequency of testing of parameters shall be submitted by the Bidder and approved by the TPPA's Engineer.

The minimum requirement of sampling and testing to be carried out shall be agreed upon and approved by TPPA and the schedule shall also be maintained during the O&M period.

All costs associated with the taking and analysis of samples shall be met by the Bidder.

6. Staffing for the operation of the Effluent Treatment Plant

Staffing shall be as per Clause (n) mentioned above. The Bidder shall give or provide all necessary superintendence during the O&M period and as long thereafter as the TPPA's Engineer may consider necessary. Such superintendence shall be given by a competent person having adequate knowledge of the operation and maintenance to be carried out (including the methods and techniques required), the hazards likely to be encountered and methods of preventing accidents) as may be required for the satisfactory working of the entire plant.

A list of staff is to be given by the Bidder to the TPPA's Engineer and advance intimation is to be given before deputing/removing any staff from the site during the

period of the contract. Not more than one of the Bidder's key staff shall be absent from the project site at any given time. In case it is necessary for more than one of the key personnel to be absent at a given time, the Bidder shall provide a replacement of equivalent or better qualifications. The CVs of such replacements shall be got pre-approved from TPPA/ TPPA's Engineer in advance.

7. Reporting

The Bidder will prepare daily / monthly reports of project performance and submit them to the TPPA's Engineer and will assist in preparing the necessary documents for their purpose and record. The reports shall contain, inter-alia, the following:

- Industrial Effluent quality
- Treated Effluent quality
- A description of the maintenance work carried out in the reporting period.
- A report on major failures, if any, their causes and remedial actions taken.
- Sludge cake and Salt quality and quantity (daily basis) in the reporting period.
- Power and chemicals consumed in the reporting period.
- An inventory of the chemicals and spare parts available at the end of the reporting period.
- O&M staff deployed by the Bidder during the reporting period.
- Record of daily readings of flow meter at inlet point and record of total treatment quantity
- Any major repair works, if any.

The Bidder is required to maintain separate register/computerized records at site regarding the following information:

- Pump register
- CETP performance register
- Working hours register
- Power breakdown register
- Maintenance register
- Staff attendance register
- Equipment breakdown, repair record and extent of repair

8. As-Built Drawings" and "Operation and Maintenance Manual"

On Completion of the Inspection and Tests for the various facilities, the Bidder would be required to make the "As-Built" drawings of the equipment, pipeline, appurtenances and all the components and works involved. The drawings would be on

long-lasting material along with tracings and blueprints. Soft copies of the same are also to be included.

The Bidder shall submit the O & M Manual for approval of TPPA, which may be modified if required by TPPA and this manual shall be approved from TPPA before commissioning. The Bidder shall modify the operation and maintenance manual as per the modification in the Effluent Treatment plant if any.

9. Operation and Maintenance Manual

The Bidder shall provide a draft O&M Manual to TPPA, at the time of the commissioning of the project and on approval of the draft, 4 copies of the operation & maintenance manual shall be provided by the Bidder.

The O&M Manual shall include in elaborate detail, all operating and maintenance procedures and policies which are required, advisable and/or necessary for the Facility to achieve full compliance with the operational guarantees and to achieve maintenance and repair standards for the Facility which will ensure compliance with the maintenance specifications.

Without limiting the generality of the foregoing the O&M Manual shall include descriptions, procedures, and shall comply with the requirements, outlined in the provisions of the Bid Documents.

The draft of the O&M Manual shall be subject to the review and approval of TPPA, which shall have the right to make any changes and revisions to the O&M Manual as it may deem appropriate. The Bidder shall revise such draft O&M Manual before the commencement of the O&M period.

During the term of this Contract, the Bidder shall promptly notify TPPA of any revisions, additions or modifications which he, in his professional opinion, believes should be made to the O&M Manual, whether as a result of additional experience in operating and maintaining the Facility, changes in influent quality or volume, changes or modifications to any equipment, part, component or structure incorporated in the Facility. Such notification shall set forth the reason for the proposed revision. Any proposed revision shall be subject to the approval of the TPPA. In addition, during the term of this Contract, TPPA shall have the right to require relevant changes, revisions, or additions to the O&M Manual as it, shall deem appropriate to ensure full compliance with the O&M Standards.

Annexure - II

Covering letter for submission of Part - I

Date: _____

From,

Name:

Address:

Ph:

Fax:

E-mail:

To,

The Managing Director,
Tindivanam Pharma Park Association,
Block - D1, Baid Metha Complex,
No.16, Anna Salai, Little Mount,
Saidapet, Chennai.

Sir,

Sub : Submission of Tender for Selection of contractor for Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process on Turn-key basis and its Operation and Maintenance for five years at TANSIDCO Pharma Industrial Park in Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District -Part - I - Reg.

Ref: Your Tender Notice

1. I/We having examined the details given in the Invitation to Bidders, we hereby submit the following information and relevant documents.
 - a. I/We hereby certify that all the statements, information and data provided in the enclosed Annexure I to IX and accompanying statements are true and correct to the best of my / our knowledge.
 - b. I/We have read the instructions appended with the Prequalification documents and I/We understand that any contract made between ourselves and TPPA, on the basis

of the information given by me/us is liable to be cancelled if any false information is detected at a later date.

- c. I/We have also no objection if enquiries are made on all the projects and works listed by me/us in the accompanying sheets or any other enquiry on the information furnished herewith in the accompanying sheets.
- d. I/We have furnished all information and details as asked for and have no further pertinent information to provide.
- e. I/We hereby submit the certificates in support of my / our suitability, technical know-how and capability for having successfully completed the works during the last five years.
- f. I/We hereby also agree that the decision of the TPPA in the Qualification and selection of Contractors will be final and binding upon me/us.
- g. I/We hereby agree TPPA reserves the right to qualify any contractor, to cancel the exercise without assigning any reason for doing so, or to incur any liability to any part whatsoever.
- h. I/We hereby agree not to withdraw from the contract after issue of Letter of Award / Work Order and before signing the contract. Incase if, I/We withdraw before signing the contract, I/We hereby agree for the forfeiture of the Earnest Money Deposit as per the Tender condition.
- i. The documents as requested in the Qualification Criteria are enclosed herewith.

I/We hereby agree to as a Bidder to all the terms and conditions of the Tender.

Yours faithfully,

**SIGNATURE OF THE BIDDER
(With Seal and Address)**

ANNEXURE - III

Structure and Organization of Bidder

Sl.No.	Details required	To be filled by the Bidder
1	Name of the Bidder	
1A	Legal Status	Sole Proprietorship / Partnership / Company
2	Nationality of Bidder	
3	Establishment of the Company	
	i) Year	
	ii) Location	
4	The Bidder is a Company	Yes / No
	(Please enclose attested copy of Registration / Incorporation under appropriate laws of the Bidder's Country	Enclosed / Not enclosed
5	Address of the Bidder	
i)	Registered Office Address	
	Telephone Number	
	Fax Number	
	E-mail Address	
	Web site	
ii)	Local office address :	
	Telephone Number	
	Fax Number	
	E-mail Address	
iii)	Office address through which this work will be handled and name of the Officer-in-charge	
	Telephone Number	
	Fax Number	
	E-mail Address	
6	Details of the Board of Directors	
	i) Name of the Director	
	ii) Qualification	
	iii) Organization	
	iv) Office Address	
	v) Telephone Number	
	vi) Fax Number	
	vii) E-mail Address	

Sl.No.	Details required	To be filled by the Bidder
7	Enclose Company's Organization Chart showing the structure of the Organization including the names of the Directors / Chief Executive Officer and position of Officers	Enclosed / Not enclosed
8	Number of years of experience and other Details	
9	Area of business activities other than construction works, if any (If yes please furnish specific information)	Yes / No
10	Whether registered with any Government / Public Sector Undertaking / Local bodies like CPWD / MES / PWD or equivalent applicable in the Bidder's Country. If yes, please furnish details of Class and Type of Registration	Yes / No
11	Please give at least three references of Clients (Engineers, Engineering Consultants or top Officials of Organization) for whom you may have executed construction works of importance and similar nature from whom TPPA, can verify	1. Name : Designation: Company : 2. Name: Designation: Company: 3. Name: Designation: Company:
12	Any special information, which you may like to provide	
		Signature of the Bidder
	Place :	Common Seal of the Company
	Date :	Office Address

ANNEXURE - IV**Details of Similar Projects Carried out in last Five Years**

S No	Project Name	Name of Client	Description of the Work	Project capacity in KLD	Value of Contract in Rs Crores	Completion time as stated in the work Order (Months)	Actual completion time (Months)	Extension of Time (EoT), if any, with/ without fine	Total Payment Received in Rs Crores

SIGNATURE OF THE BIDDER
(With seal and Address)

Note:

1. The Bidder should enclose a copy of the work order and completion certificates in support of the project experience for each of the projects mentioned above.
2. Project Experience without work orders and Completion Certificates will not be considered for evaluation.
3. Completion Certificates issued by the Executive Engineer and above will be considered for evaluation in case of projects executed for Government Entities
4. In the case of projects Executed for the Private Sector, Certificates signed by the Officials representing Senior Management will only be considered.
5. Similar projects will be as per the eligibility criteria mentioned in the Tender Document.

ANNEXURE - IV - A**Details of Current Work and Immediate Work**

Sr. No.	Client with Address	Description of the work	Project capacity in KLD	Value of contract in Rs Crores	Completion time as stated in the Contract	Percentage completion	Remarks
A	Current works in hand						
B	Immediate commitments.						

**SIGNATURE OF THE BIDDER
(With seal and Address)**

Note:

1. The Bidder should enclose the copy of the work order in support of the project experience for each of the projects mentioned above.

ANNEXURE - V**Financial Capacity**

A. Name of the Bidder					
B. Financial Information of the previous 5 years (in Rs Crores)	2018-19	2019-20	2020-21	2021-22	2022-23
C. Turnover					

Note:

1. The above details should be certified by a practicing Chartered Accountant.
2. Copies of the Financial Statement, Audited Balance Sheets should be provided for the last five financial years as above.

For (Name of Accounting Firm)

Name of Partner Chartered Accountant Membership Number

(Rubber Stamp)

ANNEXURE - VI**Networth Certificate**

(on the Letterhead of Registered/ Practicing Chartered Accountant)

This is to certify that the Net worth of M/s. is Rupees only as on _____. It is further certified that the computation of Net worth, based on my/ our scrutiny of the books of accounts, records and documents, is true and correct to the best of my / our knowledge and as per information provided to my / our satisfaction.

Place:

Date:

For (Name of Accounting Firm)

Name of Partner Chartered Accountant Membership Number

(Rubber Stamp)

SIGNATURE OF THE BIDDER
(With seal and Address)

ANNEXURE - VII

Declaration for not Blacklisted.

CERTIFICATE

Date.....

Certified that M/s. / the firm /company or its partners/shareholders had not been blacklisted by TANSIDCO / any Government Agencies.

**SIGNATURE OF THE BIDDER
(With seal and Address)**

ANNEXURE - VIII**Declaration Form**

Date.....

- a) I/We having our office at do declare that I/We have carefully read all the conditions of tender for the Tender floated vide tender Ref. No. for Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process on Turn-key basis and comprehensive Operation and Maintenance for five years at TANSIDCO Pharma Industrial Park in Pellakuppam, Kollar & Venmaniyathur villages, Tindivanam Taluk, Villupuram District and will complete the entire contract within schedule fixed and as per the all tender conditions.
- b) I/We have downloaded the tender form from the internet site www.tppa.in and I /We have not tampered/modified the tender forms in any manner. In case, if the same is found to be tampered/modified, I/ We understand that my/our tender will be summarily rejected, and full Earnest Money Deposit will be forfeited, and I /We am/are liable to be banned from doing business with TPPA or prosecuted.

SIGNATURE OF THE BIDDER
(With seal and Address)

ANNEXURE - IX**Clarifications on Tender Document**

Bidder'S REQUEST FOR CLARIFICATION			
Name and Address of the Organization submitting the request		Name and position of the person submitting the request	Contact Details of the Organization/ Authorized Representative
			Tel:
			Fax:
			Email:
S. No	Reference (s) (Section, Page)	Content of Tender requiring clarification	Points of clarification required
1			
2			
3			

**SIGNATURE OF THE BIDDER
(With seal and Address)**

COVER - II (PRICE BID)

ANNEXURE - X

PART - 2

Price Bid

Tender Ref No: TPPA/CF Development/CETP/2023-24/01

I/We hereby to execute the whole of the works as described in the scope of services indicated in the called works

- a) Name of the Work: “Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process on Turn-key basis and Operation and Maintenance of CETP for five years”
- b) The Bidder should quote the rates and

Sl No	Description of the Item	Total Rate	Total Rate (In words)
1	Part - A Design, Engineering, Fabrication, Supply, Construction, Erection, Testing & Commissioning of 500 KLD Common Effluent Treatment Plant (CETP) based on ZLD process Excluding GST		
2	Part - B Comprehensive Operation and Maintenance for five (5) years		
	Add: GST @ 18%		
	Total Contract Value including GST		
	Total - “A+B”		

The Bid will be evaluated on the basis of amount quoted against “Total” in INR

Total sum of (in Figures as in “Total A+B” Rs. (Including GST) (in Words) Rupees

.....

Incase of any discrepancy between the price quoted in words and figures, lowest of the two shall be considered. The quoted price shall be corrected for arithmetic errors. And should this tender be accepted, I/We do hereby agree and

bind myself / ourselves to abide by and fulfill all the conditions of this Tender Document, in default thereof to forfeit and pay to the Managing Director, TPPA the penalties of sums of money mentioned in the said condition

Dated:

Bidder's Signature

Address.....

Witness.....

Seal

Address.....

ANNEXURE - XI

CHECKLIST

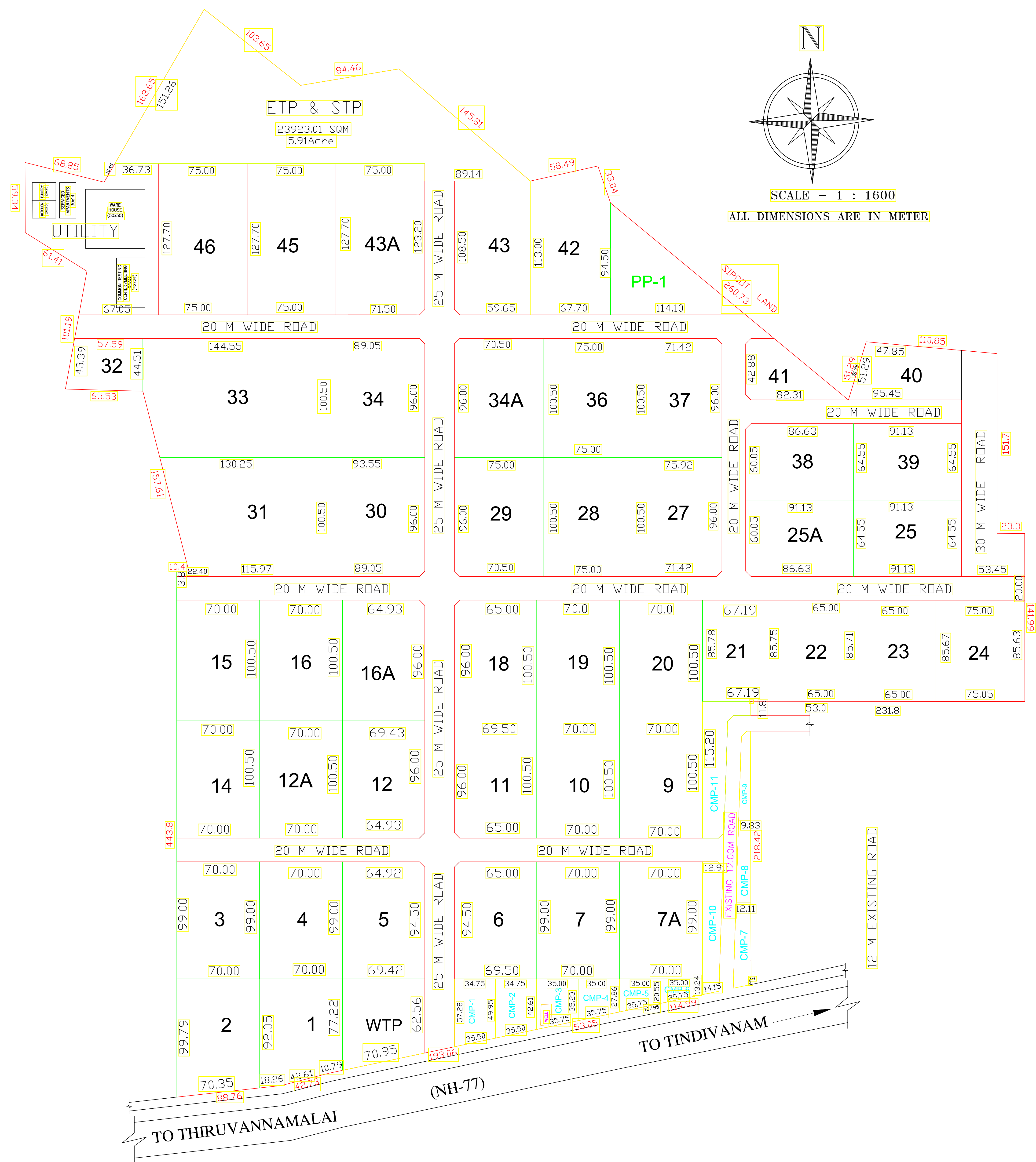
S.No	Description	Submitted	Page No.(see Note below)
COVER - 1- TECHNICAL BID			
SUB COVER - 1			
1	EMD	Yes / No	
SUB COVER - 2			
1	Copy of Incorporation Certificate issued by Registrar of Companies / Partnership Deed	Yes / No	
2	Copy of GST Registration Certificate	Yes / No	
3	Copy of Pan Card along with IT returns for the last five preceding financial years.	Yes / No	
4	Annual Reports / Audited Financial Accounts of the Bidder for the last five financial years preceding the Bid Due Date.	Yes / No	
5	Signed copy of Technical Specifications as per Annexure - I	Yes / No	
6	Covering letter as per Annexure - II	Yes / No	
7	Structure and Organization of Bidder as per Annexure - III	Yes / No	
8	Details of Similar Projects carried out in the last five years as per Annexure - IV	Yes / No	
9	Details of Current works and Immediate Works as per Annexure - IV- A	Yes / No	
10	Financial Eligibility along with all relevant documents as per Annexure - V	Yes / No	
11	Net worth Certificate as per Annexure - VI	Yes / No	
12	Letter of Undertaking for not blacklisted as per Annexure - VII	Yes / No	
13	Declaration of not tampered the Tender Document as per Annexure - VIII	Yes / No	
14	Clarification on Tender Document as per Annexure - IX	Yes / No	
15	Additional Information if any	Yes / No	
	COVER - 2		
1	Price Bid		

Notes:-

1. All the statements, copies of the certificates, documents etc., should be given page numbers on the right corner of each certificate, which will be indicated in last column against each item. The statements furnished should be in the formats appended to the Tender document.
2. The information should be filled-in by the Bidder in the checklist and Annexure - I to IX, for the purposes of verification as well as evaluation of the Bidder's compliance to the qualification criteria as provided in the Tender document.
3. All copies of the supporting documents submitted by the Bidder should be duly attested by Notary Public/ Gazetted officer.

SIGNATURE OF THE BIDDER
(With seal and Address)

This page is intentionally left blank.



PROPOSED TREATMENT SCHEME

