RAJKOT MUNICIPAL CORPORATION

e-TenderNo.: RMC/AMRUT/2018/WW/50MLD WTP/GETCO CHOWKDI



Tender Documents For

ENGINEERING, PROCUREMENT, CONSTRUCTION, COMMISSIONING AND 5 YEARS OPERATION & MAINTENANCE OF 50MLD CAPACITY WATER TREATMENT PLANTAT GETCO CHOWKDI, MAVDI, RAJKOT

VOLUME-III FORMS OF PROPOSAL & SCHEDULES

OCTOBER - 2018

:: Milestone dates of e-Tendering ::				
Downloading of e-Tender documents	13-10-2018 to 30-11-2018 up to 17.00 Hrs.			
2. Pre-bid Meeting (Queries also to be submitted by e-mail ID vcrajyaguru@rmc.gov.in & sapisnt_srt@sapient.net.in	13-11-2018 at 11.00 Hrs. at Central Zone Office -RMC			
Before 02-11-2018 up to 18:00 Hrs.)				
3. Online submission of e-Tender	30-11-2018 up to 18.00 Hrs.			
Physical submission of EMD, Tender fee, Documents required for pre-qualification and other necessary documents.	03-12-2018 up to 18.00 Hrs			
5. Verification of submitted documents (EMD, Tender fee, Documents required for pre- qualification and other Necessary documents.)	05-12-2018 AT 10.30 Hours onwards			
6. Opening of online Primary Bid (Technical Bid)	05-12-2018 at 10.30 Hrs. onwards			
7. Opening of online Commercial Bid (Price Bid) for technically qualified bidders only.	27-12-2018 at 10.30 Hrs. onwards (If possible)			
8. Bid Validity	180 Days			



413, TrinityCyygnus, Nr. Someswar BRTS Junction, University Road, Vesu Surat – 395009 (Gujarat – India) Tel: +91 261 2974000 / 2974111 E-mail: sapient_srt@sapient.net.in The Executive Engineer Water Works (Projects) Rajkot Municipal Corporation, Central Zone Dr. Ambedakar Bhavan, Dhebarbhai Road Rajkot-360 001

Tel.: +91 97 145 03709

E-mail: vcrajyaguru@rmc.gov.in

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4.0	Technical Data Sheet – Process & Mechanical Equipment	
5.0	Pipe Schedule	
6.0	Technical Data Sheet – Electrical	
7.0	Guarantee Statement	

FORMS OF PROPOSALS AND APPENDICES

Forms of Technical Proposal

Name of Contract: Contract No:
To: The Municipal Commissioner, Rajkot Municipal Corporation, Central Zone, Dr. Ambedakar Bhavan, Dhebarbhai Road, Rajkot-360 001
Sir,
We have examined the Conditions of Contract, Employer's Requirements, Schedules, Addenda Nos and the matters set out in the Appendix hereto. We have understood and checked these documents and have not found any errors in them. We accordingly offer to design, execute, commission and to comprehensively maintain for five years the said Works and remedy any defects, fit for purpose in conformity with these documents and the enclosed Proposal.
We further undertake, if invited to do so by you, and at our own cost, to attend a clarification meeting at a place of your choice, for the purpose of reviewing our Technical Proposal and duly noting all amendments and additions thereto, and noting omissions therefrom that you may require, and to submit a supplementary price proposal if the amendments, additions and omissions that you require would alter our price proposal as submitted with our bid.
We are, Yours faithfully
Signature in the capacity of duly authorized to sign bids for and on behalf of
Name Designation
Address
Phone: Fax: Email:

Appendix to Technical Proposal Conditions of Contract

Employer's name and address	Municipal Commissioner Rajkot Municipal Corporation (RMC), Central Zonal Office, Dr.Ambedakar Bhavan, Rajkot-360 001 Gujarat (INDIA)			
Contractor's name and address				
Phone No.: Fax No.: E-mail:				
Time for notice to commence	7 Days			
Name and address of the Employer's Representative/Engineer	To be nominated by Employer at the time of Award of Contract			
Time for Completion of construction of Works	18 months including monsoon period and 3 months successful trial run and acceptance of plant			
Defects liability period	60 months after commissioning and issue of certificate for completion			
Period for O & M Contract	Five years from the date of issue of certificate for completion / taking over certificate			
Language for communications	English / Gujarati			
Electronic transmission systems				
Confidential Details				
Currency of all payments	Indian Rupees			
Amount of insurance for work	Total cost of work			
Amount of third party insurance	As per law per occurrence, number of occurrences: Upto Defect Liability Period			

Periods for submission of Up to contract period till completion of O&M insurance Evidence of insurance 30 days from commencement date

60 days

-do-

Number of members of Arbitral Tribunal

Relevant policies

Arbitration rules

Place of arbitration

Members of Dispute Adjudication Board (if not agreed) to be As per the Arbitration and Conciliation Act nominated by 1996, India.

Language of arbitration English / Gujarati

Procedural Law Indian as governed by the Arbitration and

Rajkot

Conciliation Act, 1996, India.

Limit of Retention Money 10 % of the construction contract price. (5 % S.D. + 5 % to be recovered from bill)

Payments in Local Currencies In Indian Rupees

Time for access to the Site Within 15 days from the date of Letter of Work Order Acceptance / Letter of Intent

Amount of performance security 5% of contract price

Damages for delay 0.1 % per day with limit as 10 % of the

Construction Contract Price

Deductions of Labour Cess 1 % of contract price for construction workers

welfare fund from all R.A. Bills & final Bill.

Deductions of Income Tax % as applicable of contract price from all

R.A. Bills & final Bill.

Deductions of Material Testing The material testing fee at the rate of 0.5 % Expenses.

shall be deducted from every running bill of

the contractor.

SCHEDULES

CONTENTS

Sr. No.		Particulars
1.0	Schedule - I	: Deviation from Technical Specifications
1.0	Schedule - 1	. Deviation from Technical Specifications
2.0	Schedule - II	: Deviations from Conditions of Contract
3.0	Schedule - III	: Work Schedule
4.0	Schedule - IV	: Sub-Contractors
5.0	Schedule – V	: Project Execution Plan

SCHEDULE - I

DEVIATIONS FROM TECHNICAL SPECIFICATIONS

All deviations from Technical Specifications shall be filled in by the Bidder clause by clause in this Schedule. If deviations are discussed in the covering letter, then reference to the letter shall be made below:

Specification No.	Item (or Clause)	Deviation	Covering Letter Item	Price Tag in Rupees + or -
1	2	3	4	5

The bidder hereby certifies that the above mentioned are the only deviations from Technical Specifications of the Bid.

SIGNATURI	
NAMI	
DESIGNATION	_
COMPANY	_
 DATI	_

SCHEDULE - II

DEVIATIONS FROM CONDITIONS OF CONTRACT

All deviations from the Conditions of Contract (Part I - General Conditions and Part II - Conditions of Particular Application) shall be filled in by the Bidder clause by clause in this Schedule. If deviations are discussed in the covering letter, then reference to the letter shall be made below:

Item (or clause)	Covering Letter Item	Deviations	Price Tag in Rupees + or -
1	2	3	4

The Bidder hereby certifies that the above mentioned are the only deviations from the Conditions of Contract.

SIGNATURI	
NAM	
DESIGNATIO	
COMPAN	

SCHEDULE - III

WORK SCHEDULE

The Bidder shall submit the following after award of work in sufficient details (Separate Sheets) for evaluation ensuring to execute it within the Time of Completion.

1.0 **Construction Schedule**

1.1 This shall consist of a detailed bar chart showing in sufficient details completion of various sections of Work and the date and order in which the Bidder proposes to carry out different parts of the Works. The bar chart shall indicate the principal quantities of work forecast for execution monthly and payments expected to be made in connection therewith. In preparation of the programme, appropriate allowance should be made for loss of time due to inclement weather. This construction schedule shall form the basis for preparation of detailed CPM schedule to be furnished after the award of the Contract.

The Bidder shall keep above in view while preparing his Work Schedule.

2.0 **Employment Schedule**

This shall consist of a chart showing deployment of monthly manpower (including skilled and unskilled labour of various categories) commensurate with the Construction Schedule.

3.0 **Equipment Use Schedule**

This shall consist of a chart showing monthly deployment of equipment (under various categories) commensurate with the Construction Schedule.

SIGNATURE	-
NAME	-
DESIGNATION	
COMPANY	-
DATE	-

SCHEDULE - IV

SUB CONTRACTORS

The bidder shall enter in this Schedule, a list of the sections and appropriate value of the work for which he proposes to use sub-contractors, together with the names and addresses of the proposed subcontractors. The bidder shall also enter a statement of similar works previously executed by the proposed subcontractors, including description, location and value of work, year completed, and name and address of the Employer/Engineer. Notwithstanding such information the bidder, if awarded the Contract, shall remain entirely and solely responsible for the satisfactory completion of the Works.

Element of Work	Approxi mate Value	Name & Address of Subcontractor	Statement of Similar works Previously Executed by the Sub Contractor	Location & Value of similar Works executed	Name of the Employer	Year completed

SIGNATURE
NAME
DESIGNATION
COMPANY
DATE

SCHEDULE V

PROJECT EXECUTION PLAN (PEP)

The Bidder is required to furnish Project Execution Plan (PEP) in the following format after award of work. A brief but clear PEP is required for describing planning and programming of the works.

- a) **Project Strategy:** Outline statement of the organisation and methods to be employed by the applicant to undertake the work.
- b) **Organisation Chart :** Preliminary Organisation Chart indicating relationship between the site management and the head branch office, the on site direct works operations, the sub-contractors, suppliers and the supervising Consulting Engineer.
- c) **Responsibility of Key Personnel :** Identify key personnel with management responsibilities by activity or section of work.
- d) **Quality Management System :** Provide a description of the Quality Assurance / Quality Control System: organization and procedures in use and identify the accreditation authority.
- e) **Project Safety Plan:** Provide a statement outlining the Health and Safety Plan operated by the company.
- f) Contractor shall indicate any permanently established groups within the organisation which would provide specific functions in the execution of the contract.
- g) **Program/Bar Chart** showing major activities.

Signature Name Designation Company Date

TECHNICAL DATA SHEETS

PROCESS & MECHANICAL EQUIPMENT

INLET / STILLING CHAMBER

No. of Units	
Design Flow	
Max. Flow (M3/Hr.)	
Detention Time at Design Flow (M3/Hr.)	
Capacity	
Size (M x M)	
Liquid depth	
Design. F.S.L., m	
M.O.C.	
Free board	
Drain Valve (diameter mm)	

PARSHALL FLUME (RAW WATER)

No. of Units	
Design Flow	
Max. Flow	
Size of Channel	
Liquid depth	
Free board	
Range of flow measurement	
Material of Construction	

FLASH MIXER

No. of Units	
Design Flow (M ³ /Hr.)	
Detention Time at Design flow (min.)	
MOC	
Size (M x M)	
Liquid depth	
Free board	
Drain Valve Size (mm)	
Design F.S.L., m	

CLARIFLOCCULATOR

No. & Type	
MOC of Clariflocculator	
Design Flow (M ³ /Hr.)	
Max. Flow (M ³ /Hr.)	
Inside diameter of Clarifier (M)	
Water depth of Clarifier (M)	
Water depth of Flocculator(M)	
Free Board of Clarifier (M)	
Dia of Flocculator (M)	
Detention time in Flocculator (Min.)	
Detention time for Clarification (Min.)	
Surface loading in Clarification zone (M ³ /M ² /Hr.)	
Width of Rotating Bridge walkway (mm)	
Number of scraper arms	
Support system of Mechanism	
Speed of scrapper Mechanism (cm/sec)	
MOC of Bridge & Walkway	
MOC of Flocculator paddle	
MOC of Flocculator Shaft / Type	
MOC of scrapper Mechanism	
MOC of weir plate	
Type / No. of Flocculator (Paddle)	
RPM of Flocculator	
Details of Gear box	
HP/RPM of Bridge Drive	
HP/RPM of Flocculator Drive	
De-sludging system	
Pipe size/material/class	
Make and type of valve	

RAPID GRAVITY SAND FILTERS

No. of filters	
Total Flow	
Design Flow /Filter Bed	

Internal Dimension of Filter (M x M) Size of filter beds (m2) Type of Filter
Type of Filter
E14 (* D.) (A3/II.)
Filtration Rate (M ³ /Hr.)
Maximum starting rate (m/h)
Effective size of filter sand
Uniformity coefficient of filter sand
Depth of filter sand
Depth of graded support (gravel)
Water depth Above filter media (Meter.)
Backwash Interval (HRS)
Total out put between two back wash (M ³)
MOC of nozzles on floor
Free Board above water level (M)
Backwash pipe size (mm)
Inlet pipe size (mm)
Outlet pipe size (mm)
Air inlet pipe size (mm)
Wastewater outlet pipe size (mm)
Total waste water quantity Per filter back wash M ³)
Type of back wash
Rate of air scouring
Duration of air scouring
Rate of backwash flow
Total Backwashing period (Minutes)
Backwash Water velocity through media (M/Hr)
Air velocity through media (M/Hr.)
Filter valves and gates (all) sizes
Filter Inlet Valve/gate
Filter outlet Valve
Flow restrictor Valve
Backwash Inlet Valve
Wash Water Drain Valve/gate
Air Inlet Valve
Filter Drain Valve
Under Drain system – Type

No. of Nozzles	
Make / type of valve and gate actuators	
Make / Type of Loss of Head and Rate of Flow	
Indicators	

AIR SCOUR BLOWER

Nos.	
Туре	
Capacity (NM3/Hr.)	
Head (MWC)	
Details of Acoustic Insulation	
MOC	
Shaft	
Lobes	
Casing	
Side Plates and any other parts	
Gears	
Base Frame	
RPM of Blower	
Motor HP/RPM	

BACKWASH WATER OVERHEAD TANK

No.	
MOC	
Dimension	
Capacity, effective (M ³)	
Location	
Elevation of Invert Level from floor (M)	

BACKWASH WATER SUMP

No.	
MOC	
Dimension	
Capacity, effective (M ³)	
Location	
Size of Pump House	

BACKWASH WATER PUMP	
No.	
Туре	
Make	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Maximum Size of solid handle	
Shut off Head	
Pump input KW	
MOC	
Shaft	
Impeller	
Casing	
Motor HP/RPM	
Flow meter for back wash line	
Range of Flow meter (M3/Hr.)	
CHLORINE CONTACT TANK	
CHLORINE CONTACT TANK Design Flow	
Design Flow No. of Units	
Design Flow	
Design Flow No. of Units Retention time Capacity	
Design Flow No. of Units Retention time	
Design Flow No. of Units Retention time Capacity	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth Free board	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth Free board Material of Construction	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth Free board Material of Construction CHLORINATORS (PRE & POST)	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth Free board Material of Construction CHLORINATORS (PRE & POST) No. of Pre-Chlorinator	
Design Flow No. of Units Retention time Capacity Size of each tank / chamber Liquid depth Free board Material of Construction CHLORINATORS (PRE & POST) No. of Pre-Chlorinator No. of Post-Chlorinator	

Make

MOC of Chlorinator

MOC of Chlorinator gas Line	
MOC of Chlorine Solution Line	
Diameter of Chlorine Solution Line	
Accessories for chlorinators	
Control unit	
Vaccum regulator	
Ton container adapter	
Injector	
Vaccum and vent tubing	
PRE-CHLORINE BOOSTER PUMP	
No.	
Туре	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Pump input KW	
KW rating of Motor	
POST-CHLORINE BOOSTER PUMP	
No.	
Туре	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Pump input KW	
KW rating of Motor	
CHLORINATION ROOM	
Size of Chlorination Room	
Height of room	
	,
CHLORINE TONNER ROOM	
Size of Tonner Room	
No. of Tonners	
Capacity of each tonners	

Capacity of Hoist	
PAC / ALUM SOLUTION (DOSING) TANK	
No.	
Size	
Capacity (M ³)	
MOC	
Internal Lining	
MOC of Agitator	
RPM of Agitator	
Make of Agitator	
KW rating of Agitator	
DIRTY WATER SUMP	,
No.	
MOC	
Dimension	
Capacity, effective (M ³)	
Location	
Elevation of Invert Level from floor (M)	
Size of Pump House	
THICKENER FEED PUMP	J
Qty.	
Туре	
Make	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Maximum Size of solid handle	
Pump input KW	
Motor KW/RPM	
THICKENER	
No. of thickener	
	J.

Type of thickener	
Inlet solids Kg./day	
Inlet sludge solids concentration (%)	
Outlet sludge solids concentration (%)	
Specific gravity of Sludge	
Solid loading rate kg/m2/day	
Hydraulic loading rate kg/m3/day	
Size of each unit	
Liquid depth	
Bottom slope	
Free board	
Material of Construction	

THICKENED SLUDGE SUMP & PUMP HOUSE

Sludge flow (m3/hr)	
Holding time in Sludge Sump (hrs.)	
Liquid depth (m)	
Length (m)	
Width (m)	

CENTRIFUGE FEED PUMP

Qty.	
Туре	
Make	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Maximum Size of solid handle	
Pump input KW	
Motor KW/RPM	

DWPE DOSING SYSTEM

Dewatering Polyelectrolyte Solution Dosing	
Tank with Agitator	
No. of Tanks	
MOC	
Capacity (m3)	

1	
Holding time (hrs.)	
Liquid depth (m)	
Length (m)	
Width (m)	
Free board	
Agitator Type	
Nos.	
MOC	
Speed (RPM)	
Motor (KW)	
DWPE Dosing Pump	
No. of pumps	
MOC	
Туре	
Capacity (LPH)	
Head (m)	
Motor Rating – KW / RPM	
CENTRIFUGE Capacity (m3/hr)	
Type Quantity (Working + Standby)	
Material of Construction	
Bowl	
Screw	
Sciew	
Motor rating (KW)	
Motor rating (KW)	
Motor rating (KW) FILTRATE SUMP	
FILTRATE SUMP	
FILTRATE SUMP No.	
No. MOC	
No. MOC Dimensions	
No. MOC Dimensions Capacity, effective (M³)	

Make	
Capacity (M ³ /Hr.)	
Head (MWC)	
Pump Efficiency	
Pump input KW	
Motor KW/RPM	
WOOD KW/KIW	
CHEMICAL CUM ADMINISTRATIO	ON BUILDING
Ground floor carpet area (Min.)	
Ground Floor clear height (Min.)	
First floor carpet area (Min.)	
First Floor clear height (Min.)	
Size	
AID DI OWED DOOM	
AIR BLOWER ROOM Floor cornet cree (Min.)	
Floor carpet area (Min.) Floor clear height (Min.)	
Size	
Size	
CLEAR WATER RESERVOIR & PUI	MP HOUSE
Design Flow	
No. of Units / Compartments	
Retention time	
Capacity	
Size of each Compartment	
Liquid depth	
Free board	
Material of Construction	
Size of pump house	
ELEVATED SERVICE RESERVOIR	
Capacity	
Staging Height	
Liquid depth	
Free board	
Material of Construction	
L	l l

DATA SHEET OF CLEAR (TREATED) WATER PUMPS – VERTICAL TURBINE (VT) PUMP AT CLEAR WATER PUMP HOUSE

SR. NO.	PARTICULAR	DESCRIPTION	DATA TO FILL BY BIDDER
1.0	LIQUID DATA		
1.1	Liquid handled	Water	
1.2	Specific gravity	1.0	
1.3	Temperature	Ambient temp.	
1.4	Suc. Pre.@ rated capacity-m	Flooded	
2.0	PUMP DATA		
2.1	Make	Please Furnish Detail	
2.2	Pump type	Vertical Turbine	
2.3	Pump Model	Pl furnish	
2.4	Number of pumps - Nos.	Pl furnish	
2.5	Type of duty	Continuous	
2.6	Design capacity-m³/hr.	As specified	
2.7	Total Bowl Head-mlc	As specified	
2.8	Guaranteed Bowl efficiency at rated capacity-%	Min. w/o -ve tolerance	
2.9	Bowl input at rated duty-KW	Pl furnish	
2.10	Rated Speed of pump- RPM	Max. 1450	
2.11	Max. Bowl Input KW @ Rated Impeller.	Pl furnish	
2.12	Reco. Drive motor rating- KW	Pl furnish	
2.13	Min. Submergence Required, m	Pl. furnish	
2.14	Shut off head-m	Pl. furnish	

Signature of the Bidder &
Company Seal

PIPE SCHEDULE

Service	From	То	Pipe MOC	Pipe Size, mm
	Service	Service From	Service From To	Service From To Pipe MOC

Signature of the Bidder &
Company Seal

DATA SHEET FOR ELECTRICAL

DATA SHEET FOR ELECTRICAL ITEMS

SR. NO	DESCRIPTION	PARTICULARS TO BE FILLED BY BIDDER
A	HT PANEL BOARD	
1	General	
a	Manufacturer/ Type	
b	Bus Bar	
	Material (Al/Cu)	
	Continuous rating, A	
С	Short time (one second) withstand rating KA (rms)	
d	Clearances	
	Between phase, mm	
	Between live part and earth, mm	
e	One minute power frequency withstand voltage KV	
	(rms)	
f	Thickness of steel sheey	
	Frame, mm	
	Door, mm	
	Cover, mm	
g	Dimensions of cubicle (mm)	
	Draw out space required in front (mm)	
	Weight of heaviest cubicle (Kg)	
2	Circuit Breaker	
a	Manufacturer/ Type	
b	Rated voltage, V	
c	Rated current for various circuit breakers	
	Normal, A	
	De-rating factor for site conditions, A	
	When installed within cubicles, A	
d	Method of closing	
	Normal	
	Emergency	
e	Type of closing mechanism	
f	Normal ratting of closing mechanism (V/W)	
g	Type of tripping mechanism	
h	Normal rate of tripping mechanism (V/W)	:
i	Spring changing motor details	
	Output rating (KW)	
	Rated voltage (V)	
3	FUSES (FOR PT'S)	
a	Manufacturer	
b	Type	
С	Rated Voltage, V	
d	Rated Current, A	
e	Category of duty	
f	Rupturing capacity (prospective current), KA	

В	DISTRIBUTION TRANSFORMERS	
1	Manufacture / Type	
2	Applicable standard & Eff. Class	
3	Type of cooling	
4	Rated KVA	
5	Rated Voltage of	
	HV winding (KV)	
	LV Winding (KV	
6	Voltage ratio at different taps	
7	Rated frequency	
8	Temperature rise	
	of oil by thermometer (OC)	
	of winding by resistance (OC)	
9	No. of phases	
10	Vector group reference	
11	Guaranteed no load losses at 75 degree Centigrade,	
11	rated frequency at rated voltage (KW)	
12	Total losses at normal ratio, rated frequency and	
	maximum attainable temperature at site (KW)	
13	Tolerance on losses	
14	Percentage impedance of winding at rated current,	
17	rated frequency at 75 degree centigrade (%)	
15	Efficiency at rated voltage, rated frequency at 750	
	Centigrade (%)	
16	Noise level, Db	:
17	Overall dimensions (L x B x H)	:
18	Crane lift required (mm)	:
19	Complete transformer weight (Kg)	:
20	Are radiators detachable (Yes/ No)	:

Signature of the Bidder &
Company Seal

GUARANTEE STATEMENT

Schedule of Performance Guarantees

Table-I: Plant Output Water Quality

S.	Name of Unit	Parameter	Unit	Guaranteed Figure	
No.				24 Hours	Any Instant
				Average	
1.	Clariflocculator	Outlet water	N.T.U		
		Turbidity			
2.	Clarifloccualtor Outlet /	Residual Chlorine	mg/lit		
	Filter Inlet Channel				
3.	Filter outlet / CWR Outlet /	Turbidity	N.T.U		
	CWR Pump Header				
4.	CWR Outlet or CWR Pump	Residual Chlorine	mg/lit		
	Header				
5.	CWR Outlet or CWR Pump	Colour	Pt-Co		
	Header		Scale		
6.	CWR Outlet or CWR Pump	рН	-		
	Header				
7.	CWR Outlet or CWR Pump	Fecal Coliform	-		
	Header	Organism.			

Table-II: Plant Output

S.	Name of Unit	Parameter	Unit	Guaranteed Figure
No.				
1.	Input of Plant	Max. Raw input water requirement to give 50MLD output with guaranteed quality	MLD	
2.	Clariflocculator	Maximum Continuous output from each unit meeting Guaranteed quality	M ³ /hr.	
3.	Filter	Minimum filter run period between two back wash for 90% time of the year	Hrs.	
4.	Filter	Minimum filter run period between two back wash, any time in the year	Hrs.	
5.	Filter	Maximum Continuous output from each filter meeting Guaranteed quality	M ³ /hr.	
6.	Pre Chlorinator	Maximum Continuous output from each chlorinator	Kg/hr.	
7.	Post Chlorinator	Maximum Continuous output from each chlorinator	Kg/hr.	

Table III: Chemical Consumption (Guaranteed)

Chemical Description	Units	Qty.		
Chlorine (Pre-chlorination)	Mg/l			
	Kg/MLD			
Chlorine (Post-chlorination)	Mg/l			
	Kg/MLD			
Alum	Kg/Day			
	Kg/MLD			
Other Chemicals (if any)				

Table IV: Power Consumption (Guaranteed)

The average daily power requirement is	
guaranteed to be (shall match with	Not more thanUnits.
figure as furnished in power statement	
as per Power Guar. Statement at Table	
V):	

The guaranteed power requirement for each month or for duration as per duration / billing cycle of power supply company shall be calculated based on daily power requirement guaranteed by bidder as above for the calculation of Liquidated Damages for failing O&M performance guarantees.

Signature of the Bidder &
Company Seal

Table V) POWER GUARANTEE STATEMENT FOR 50MLD WATER WORKS FACILITY (WTP & CWPH) AT GETCO CHOWKDI, RMC

Sl. No.	Name of Unit	Wkg	S/B	Total	Motor Rating, KW	Pump Input, KW	Motor Input, KW = Pump Input KW / Mot. Eff.	Running Hours		Total KWH for Daily Consumpt ion
								Each Unit per Day	Total	
		1	2	3	4	5	6 = 5 / Mot. Eff.	7	8 = 1 * 7	9 = 6 * 8
	GUARANTEED TOTAL POWER CONSUMPTION IN KWH OF DAILY CONSUMPTION:									

Notes:

- 1. Load Statement to include Lighting & Misc. Load for Guarantee purpose.
- 2. Units to be mentioned by bidder as per tender specifications and may consider addl. eqpt. as required for meeting process requirement.
- 3. Bidder shall note that column no. 9 shall add up to the power consumption per day guaranteed by the bidder.
- 4. In case of discrepancy, the data given in the above Table shall be considered as final.

Signature of the Bidder &
Company Seal