

MIRA- BHAINDAR MUNICIPAL CORPORATION

(WATER SUPPLY DEPARTMENT)

RE-TENDER NOTICE NO. 03 (2026-27)

For

**Operation & Comprehensive maintenance of Automatic Chlorine Plant
with supply of Sodium Hypochloride solution in mbmc area**

Executive Engineer

Water supply dept.

Chhatrapati Shivaji Maharaj marg,

Bhaindar (w) Ph. 2819 2828

Mira -Bhaindar Municipal Corporation

SAVE EVERY DROP OF WATER

Issued to:.....

**MIRA - BHAINDAR MUNICIPAL CORPORATION
WATER SUPPLY DEPARTMENT**

Name of work :- Operation & Comprehensive maintenance of Automatic Chlorine Plant with supply of Sodium Hypochloride solution in mbmc area

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TENDER NOTICE



मिरा-भाईंदर महानगरपालिका

पाणी पुरवठा व मलनिसारण विभाग

स्व. इंदिरा गांधी भवन, छत्रपती शिवाजी महाराज मार्ग, भाईंदर(प)

ता. जि.ठाणे - 401 101



फेर-निविदा सुचना क्र.03 (2026-27)

मिरा-भाईंदर महानगरपालिका हद्दीतील खालील कामांकरीता मोहोरबंद दर e-Tendering पद्धतीने मागविण्यात येत आहेत. सदर कामाचे कोरे निविदा फॉर्म दि.12/05/2026 ते दि.22/05/2026 रोजी 12.00 वाजेपर्यंत महानगरपालिकेच्या e-Tendering संकेतस्थळ <https://mahatenders.gov.in> येथे उपलब्ध होतील. निविदाधारकाने निविदा फॉर्म फी व इसारा रक्कम ऑनलाईन रिसीप्ट सिस्टीमव्दारे भरणा करावी. अन्यथा निविदा ग्राह्य समजण्यात येणार नाही. तसेच कामाची निविदा पूर्व बैठक दि.18/05/2026 रोजी ठिक 11.30 वाजता मा.शहर अभियंता, मिरा-भाईंदर महानगरपालिका यांचे दालनात राहिल. कामाचा अनुभव व अटीशर्ती निविदा फॉर्म मध्ये नमूद केल्याप्रमाणे असावीत.

सदर कामी मागविलेल्या मोहोरबंद निविदा दि.22/05/2026 रोजी दुपारी 1.00 वाजेपर्यंत वरील संकेतस्थळावर स्विकारण्यात येतील व दि.25/05/2026 रोजी दुपारी 12.30 वाजता उपस्थित ठेकेदार व त्यांचे प्रतिनिधी यांच्या उपस्थितीत / अनुपस्थितीत उघडण्यात येतील.

कोणतेही कारण न देता कोणतीही ऑनलाईन निविदा स्वीकारणे अथवा सर्वच निविदा नाकारणे याबाबतचा अंतिम अधिकार मा. आयुक्त, मिरा-भाईंदर महानगरपालिका यांनी राखून ठेवला आहे.

अ.क्र	कामाचे नाव	अंदाजित खर्च (GST वगळून)	निविदेचा प्रकार	कंत्राटदारचा वर्ग	इसारा रक्कम	सुरक्षा अनामत	निविदा फॉर्म फी	कामाची मुदत
1.	मिरा भाईंदर महानगरपालिका क्षेत्रातील स्वयंचलित क्लोरीन केंद्रांची दैनंदिन देखभाल, दुरुस्ती करणे व सोडीयम हायपोक्लोराईड या केमिकलचा पुरवठा करणे.	रु.2,01,30,661/-	B-1	वर्ग 3 व त्यावरील	रु.2,01,307/-	5%	रु.2000/- + रु.360/- GST = रु.2360/-	20 महिने

टीप :- लिफाफा क्र.1 मधील तांत्रिक कागदपत्रे (Hard Copy) निविदा भरल्यानंतर 72 तासांच्या आत पाणी पुरवठा व मलनिसारण विभागात सादर करण्यात यावी.

(दिपक खांबित)

शहर अभियंता

मिरा-भाईंदर महानगरपालिका

जा.क्र.मनपा/पा.पु.व मलनि/03/2026-27

दि.08/05/2026



MIRA-BHAINDAR MUNICIPAL CORPORATION
Water Supply & Sewerage Department
Indira Gandhi Bhavan, Chatrapati Shivaji Maharaj Marg,
Bhayandar (W) 401101, Tal. Dist – Thane, 28192828



RE-TENDER NOTICE No. 03 (2026-27)

Mira Bhaindar Municipal Corporation invites sealed tenders for following works in MBMC area in the form of e-Tendering. The tender form and other relevant documents will be available for download on MBMC's e-Tendering website as <https://mahatenders.gov.in> from **Dt.12/05/2026 TO 22/05/2026** till 12.00 pm. Tender Form Fee & EMD should be submitted through online receipt system. Failing which the tender will be disqualified. There is no any concession to qualified unemployed Engineer for EMD/ Security Deposit. Tender Form Fee & EMD should be submitted through online receipt system. Prequalification criteria and other terms and conditions are mention in tender form the pre-tender conformance will be held on dt.18/05/2026 at 11.30 hrs in the office of the Hon City Engineer MBMC.

The last date for submission of tenders completed in all respects on **Dt. 22/05/2026** up to 1.00 pm on the above mentioned website. Mira Bhaindar Municipal Corporation. The tenders shall be opened in the presence/absence of the bidders or their representatives on the **Dt.25/05/2026** at 12.30 pm at the Tender cell of Mira Bhaindar Municipal Corporation.

Hon.Commissioner of Mira Bhaindar Municipal Corporation has reserve right to accept or reject any or all bids without assigning any reasons.

Sr. No	Name of Work	Estimate Cost (Excluding GST)	Tender Type	Contractor's Class	Earnest Money Deposit (EMD) (In Rs.)	Security Deposit (SD)	Cost of Tender documents (In Rs.)	Period of Completion
1.	Operation & Comprehensive maintenance of Automatic Chlorine Plant with supply of Sodium Hypochloride solution in mbmc area	Rs.2,01,30,661/-	B-1	Class 3 and above	Rs.2,01,307/-	5%	Rs.2000/- + Rs.360/- = Rs.2360/-	20 Month

Note :- Hard Copy of Envelope No.1 of the same tender shall be submitted in office of Executive Engineer Water Supply Department within 72 hours after submission of online tender.

(Deepak Khambit)
City Engineer
Mira Bhaindar Municipal Corporation

No :- MNP/WS & Sew/03/2026-27

Date :- 08/05/2026.

DETAIL RE-TENDER NOTICE

MIRA - BHAINDAR MUNICIPAL CORPORATION DETAILED R E - TENDER NOTICE

Name of Work : Operation & Comprehensive maintenance of Automatic Chlorine Plant with supply of Sodium Hypochloride solution in mbmc area

TENDER PROGRAMME.

- 1) The tender document are available at <https://mahatenders.gov.in> from 12/05/2026 to 22/05/2026.
- 2) The prequalification criteria , Terms and conditions are available on website.
- 3) The digital signature is mandatory. The bidder will have to purchase it from any government digitalcertificate authority.
- 4) For any other queries, bidder can contact Help Line No. 0120-4200462, 0120-4001002.
- 5) Blank Tender document can be download from above mentioned website. The tender documentcost Rs.2,360/-(Rs. Two Thousand Three Hundred Sixty Only) (Non-Refundable) shall be paid by online.
- 6) Earnest Money Deposit of Rs.2,01,307/- (Rs. Two lakh one thousand three hundred seven Only) should be paid in the form of DD/PAYORDER/CASH-online.
- 7) Security Deposit :Initial Security deposit of 3 % in the form of D.D./ Pay order or Bank guarantee in the name of Commissioner, Mira Bhaindar Municipal Corporation drawn on any Scheduled Bank and balance 2 % will be deducted from R.A. bills.
- 8) All papers enclosed with tender should be clear & attested .
- 9) The tendered rates should be inclusive of all statutory duties and taxes GST levied by GOI &GOM in all respect
- 10) After sanctioning of tender 3 % security shall be paid either by cash / pay order or bank guarantee in favor of MBMC and remaining 2 % security shall be deducted from bills.
- 11) MANNER OF SUBMISSION OF TENDER AND ITS ACCOMPANIMENTS

Tender is to be submitted according to three envelopes system, Which should be submitted online in Technical - Bid & Financial Bid Format & Additional Security format Only. Envelop No. 1 (Technical Bid) can be submitted by uploading the required documents as demanded in tender document, which are scanned in prescribed. The EMD and Document fees should be submitted "Online".

If tenders have been submitted by multiple bidders from the same IP Address, those tenders will be rejected.

12) Detail Tender Schedule

Sr. No.	Activities	Date & Time
1.	Tender publishing date	12/05/2026
2.	Document download start date	12/05/2026 at 12 noon
3.	Document download end date	22/05/2026 at 12 noon
4.	Pre-bid meeting date	18/05/2026 at 11.30 AM
5.	Bid submission start date	12/05/2026 at 12 noon
6.	Bid submission close date	22/05/2026 at 12 noon
7.	Bid opening date (Technical Bid)	25/05/2026 at 12.30 pm

13) **Technical Proposal. :**

Technical Proposal work shall contain following documents.

1. Form Fee Receipt				(Online Form fee Receipt - Scan Copy)
2. Earnest Money Deposit Receipt				(Online Earnest Money Deposit Receipt (Scan Copy))
3. Balance Sheet of Last 3 Years.				(C.A. certified copy of Balance sheet (Scan Copy). (In Year of 2022-23, 2023-24, 2024-25))
4. GST Registration Certificate.				(GST Registration Certificate (Scan Copy))
5.	A	Maximum Turnover of Bidder in last 05 Years	- It should minimum upto 75% of the annual amount of the cost of due contract (Annual Cost = Total Cost of Work) Period of work in Years.) be	C.A. Certified copy of last 5 year annual turnover. (Scan copy) (In Year of 2020-21, 2021-22, 2022-23, 2023-24, 2024-25)
6. Following works experience in Govt./ Semi Govt. organization				
B	The minimum cost of the work of similar nature and value completed by the contractors in the last 5 years	-	Three similar completed works, of which work wise costing should not be less than the amount equal to 40% of the estimated cost. In same work following work should be done by bidder. OR Two similar completed works, of which work wise costing should not be less than the amount equal to 50% of the estimated cost. In same work following work should be done by bidder. OR One similar completed work costing should not be less than the amount equal to 80% of the	Similar work completion certificate 40% 03 Works 50% 02 Works 80% 01 Works (Scan copy) (In Year of 2020-21, 2021-22, 2022- 23, 2023-24, 2024-25)

		estimated cost. In same work following work should be done by bidder.	
7. Bid capacity of Bidders (Bid Capacity)	Bidder should have qualified for Bid Capacity $(A \times N \times 2) - B$ where A = Maximum Annual Turnover during last 5 years (at current rate) N = Number of years prescribed for completion of the project/work B = Value of works in hand (during period of the due work) (Tenderer's submission of bid capacity certificate certified by C.A (Scan Copy))		
8. Affidavit on stamp paper of Rs.500/- stating authenticity of the documents enclosed / uploaded while submission of the tender to be enclosed in envelope no.1 as per Annexure No.1	(It will be mandatory for the tenderer to submit an affidavit in the prescribed format as Annexure No. 1 on Rs. 500 stamp paper only dated after the date of publication of the tender. Otherwise, the said affidavit will not be considered)		
9. The Bidder Shall not be Blacklisted in any other government / semi government / Urban Local bodies on contractors letter head. The Bidder organization shall upload an undertaking	(Submission of declaration letter by the tenderer regarding non-blacklisting. (Scan Copy))		

The following Certifications must be required in the work.

- 1) The tenderer should submit with tender offer the documentary proof from any Central/ State Govt. Organizations towards experience & expertise for successful execution of the work pertaining to supply, installation, operation & maintenance of Automatic Bacteriological Treatment Plant enabled with Programmable Logic Controller (PLC) technology for Drinking Water Treatment as per parameters of Bureau of Indian Standards, regularly operative for a minimum period of Three Years satisfactorily. The experience of plant of any other specifications will not be considered. This is the most important condition of consideration of tender offer.
- 2) The tenderer should submit the documentary proof from any Central/ State Govt. Organizations towards experience for satisfactory installation and performance of Online Digital Water Analyzer for online digital display of water characteristics in terms of total dissolved solids & hydrogen ion concentration of water.
- 3) The tenderer should submit the documentary proof of either being a manufacturer or an authorized dealer of the type of water treatment plant as mentioned in the tender notice/ tender schedule.

Annexure - 1

Affidavit (on Rs.500/- Stamp Paper)

Name of Work :- -----

I age address
..... (Authorized signatory to sign the contract), hereby submit,
vide this affidavit in truth, that I am the owner of the contracting firm
..... / authorized signatory and I am submitting the documents in
envelope no.1 for the purpose of scrutiny of the contract. I hereby agree to the conditions mentioned
below :-

- a. I am liable for action under Indian Penal Code for submission of any false / fraudulent paper / information submitted in envelope no.1.
- b. I am liable for action under Indian Penal Code if during contract period and defect liability period, any false information, false bill of purchases supporting proof of purchase, proof of testing submitted by my staff, subletting company or by myself, I will be liable for action under Indian Penal Code.
- c. I am liable for action under Indian Penal Code if any paper are found false / fraudulent during contract period and even after the completion of contract (finalization of final bill).

(Signature of contractor)
(seal of company)

14) PRE-TENDER CONFERENCE

Pre-Tender conference is open to all prospective tenderers and will be held on 18/05/2026 at 11.30 AM in the office of the City Engineer, Mira Bhainder Municipal Corporation, wherein the prospective tenderers will have opportunity to obtain clarifications regarding the work and the tender conditions.

The prospective tenderers are free to ask for any additional information or clarification either in writing or orally and the reply to the same will be given in writing and this clarification referred to as common set of conditions, shall also be common and applicable to all tenderers. The minutes of this meeting along with the letters of tenderers will form the part and parcel of the tender documents. Bidder need to submit online signed copy of pre bid minutes in a technical bid. No queries/enquiries later than the date mentioned above will be considered.

15) ENVELOPE NO. 2 (FINANCIAL BID)

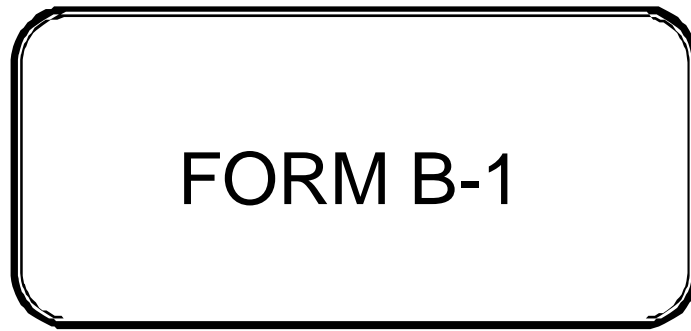
Will also be submitted online the contractor shall quote for the work as per details given in the main tender and also based on the details of conditions, issued/additional stipulations made by the Department.

b) FINANCIAL PROPOSAL :

Financial proposal shall contain offer of bid and including unconditional covering letter.

Time of Contract : The contract period is Twenty month.

16) Hon. Commissioner, MBMC reserves the right to accept or reject any or all tenders without assigning any reason thereof.



money to be deposited shall be in accordance with the provision of paras 206 and 207 of the MPW Manual

(d) This deposit shall be in paras 213 and 214 of the MPW Manual, instruction issued by MBMC from time to time.

(e) This percentage where no security deposit is taken, will vary from 5 percent to 10 percent

(f) If additional security deposit

C) Earnest Money : Rs.2,01,307/-

D) Security Deposit: Total (5% of contract amount) *accordance with*

E) i) 3% Initial Security Deposit shall be in Term of Deposit receipt or bank guarantee of Schedule Bank.

F) Bank Guarantee is allowed as Security Deposit. Security Deposit shall be in the form of fixed Deposit Receipt of scheduled Bank only.

ii) To be deducted from running account bill at 2%

G) Percentage, if any, to be deducted from bills so as to make the total amount required as security deposit. @ 5%

F) Additional Security Deposit.

If the tender is proposed to be accepted at the rate quoted less than estimated cost put to tender additional security deposit over and above 4% in at the below rate shall have to be paid by the tenderer.

a)	For offer upto 10% below	Nil
b)	For offer upto 10% to 15% below	2%
c)	For offer more then 15% below	4%

(Additional security deposit shall be based on estimated cost put to tender).

The additional Security Deposit in full in the form of FDR /' will have to deposited at the time of agreement.

The additional S.D. will be refunded after completion of work in all respect only.

(g) Give schedule where necessary showing dates by which the various items are to be completed

- G) 1. Time allowed for the work is specified in tender from the date of written order to commence . (Calendar months) including monsoon.
2. I/We agree that the offer shall remain open for a minimum period of 120 days from the date fixed for opening the same and thereafter until it is withdrawn by me/us by notice in writing duly addressed to the authority opening the leaders and sent by registered post A. D. or otherwise delivered at the office of the such authority. Term Deposit Receipt No. / Demand Draft No. dated). And date in respect of sum of Rs. in words (Rs. only) is enclosed. The amount of earnest money shall be liable to be forfeited to the MBMC should I/We fail to (i) abide by the stipulation to keep the offer open for the period mentioned above or (ii) sign and complete die contract documents as required by the Engineer and furnish the security deposit as specified in item (d) of the memorandum contained in paragraph (1) above within the time limit laid down in clause (1) of the annexed General Conditions of Contract, the amount of earnest money may be

adjusted towards the security deposit or refunded to me / us if so desired by me/us in writing unless the same or any part thereof has been forfeited as aforesaid.

3. Deleted.
4. Should this tender be accepted I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed hereto so far as applicable and in default hereof to forfeit and pay to MBMC the sums of money mentioned in the said conditions.

** Amount to be specified in words and figures*

Term Deposit Receipt No. _____ dated _____
from the Bank.*

"Name of the Rank to be specified

At _____
in respect of the sum of * Rs. _____/- (Rupees _____
_____ Only)

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

Clause 1 : The person/persons whose tender may be accepted (hereinafter called the contractor which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators and assignors) shall (A) within 10 days (which may be extended by the Executive Engineer concerned upto 15 days if the Executive Engineer thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Executive Engineer in cash or Government securities endorsed to the Executive Engineer (if deposits for more than 12 months) or the full amount to the security deposit is made up. All compensation or other sums of moneys payable by the contractor to MBMC under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there from, from any sums which may be due or may become due by MBMC to the contractor under to be paid in a lump sum within the period specified at (A) above is not paid the tender/contract already accepted shall be considered as cancelled and legal steps will be taken against the contractor for recovery of the amount. The amount of the security deposit lodged by a contractor shall be refunded along with the payment of the final bill, if the date upto, which the contractor has agreed to maintain the work in good order, or if the date upto which the contractor has guaranteed for any defect (whichever is later) is over. If such date is not over only 50% amount of security deposit shall be refunded along with the payment of the final bill and on certifying by the Engineer-in-charge that 50% Security Deposit will be sufficient to meet all the liability for the balance defect liability period. The amount of security deposit retained by the MBMC shall be released after expiry of period upto, which the contractor has agree to maintain the work in good order or upto which the contractor has guaranteed for any defect (whichever is later) is over. In the event of the contractor failing or neglecting to complete rectification work within the period upto which the contractor has agree to maintain the work in good order, then subject to provisions of clause 17 and 20 hereof the amount of security deposit retained by MBMC shall be adjusted towards the excess cost incurred by the MBMC on rectification work.

Clause 2 : The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with, with all due diligence (time being deemed to be of the essence of the as contract on the part of the contractor. And further to ensure good progress during execution of the work, the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete for complete minimum quantum of work as compared to accepted tender cost as stated below: -

- | | | |
|----|--------------------|------------------|
| 1. | 1/4 of the work in | 1/4 of the time |
| 2. | 1/2 of the work in | 1/2 of the time. |
| 3. | 3/4 of the work in | 3/4 of the time. |

And abide by the programme of detailed progress laid down by the Executive Engineer. However, in case of ground water source adopted for the scheme the work of development of source shall only be taken in band by the contractor first and only after ascertaining adequacy of the yield through GSDA during the summer period, the remaining works shall be undertaken for execution after obtaining written permission from the Executive Engineer. No material shall be purchased till the adequacy of the source is confirmed and written orders to proceed for remaining works are obtained from the Executive Engineer. In case of failure of the original source due to inadequate yield or any other reason the contractor shall have to take up the work of other suitable source suggested by GSDA and to ascertain its adequacy during summer. In such case the Executive Engineer will ascertain the reasonable time required for completion of remaining works included in the contract and shall grant suitable extension to the Contractor the decision of the engineer-in-charge regarding suitable extension shall be treated as final and binding on the contractor. However, such extension shall not be less than '1/2 of period of completion stated in the original contract. The Contractor shall prepare revised programme of work based on extended time limit granted and shall get the same approved from the executive Engineer. Based on approved revised programme the progress of the contractor shall be watched for imposing compensation by the Executive Engineer. The Contractor shall prepare modified programme on completion of successful yield test and get it approved from the Engineer-in-charge and such approved and modified programme shall be binding on the Contractor in case of all other schemes where ground water is not proposed as source and have other assured water source, works

of all the sub-works can be taken up by the contractor simultaneously and for such scheme the time limit stated in the Contract shall be treated as final and binding on the Contractor. Executive Engineer should be the final authority in this respect irrespective of the fact that the tender is accepted by MBMC.

Clause 3 : In any case in which under any clause of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (actually in hand with the Engineer-in-charge on the date on which action under this clause is taken irrespective of Security Deposit specified in the contract whether paid in one sum or Deducted by installments) or in the case, of abandonment of the work owing to serious illness or death of the contractor or any other cause the Engineer, on behalf of the MBMC, shall have power to adopt any of the following courses, as he may deem best suited to interest of MBMC:-

Action when whole of security deposit is forfeited

(a) To rescind the contract (for which recession notice in writing to the contractor under the hand of Executive Engineer shall be conclusive evidence) and in that case the Security Deposit of the contractor shall stand forfeited and be absolutely at the disposal of MBMC.

(b) To carry out the work or any part of the work departmentally or through other contractor by debiting the original contractor with the cost of the work, expenditure incurred on tools and plant, and charges for advertisement for fixing new contractor and those on additional supervisory staff including the cost of work charged, establishment for getting the unexecuted part of the work completed and crediting him with the value of the work done departmentally /or through new contractor in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as so to the value of the work so done departmentally shall be final and conclusive against the contractor.

(c) To order that the work of the contractor be measured up and to take such part thereof as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charge establishment and the cost of the work executed by the new contract agency will be debited to other contractor and the value of the work done or executed through the new contractor be credited in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under clause (a) above, the contractor shall not be entitled to recover or be paid, any sum for any work therefore actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing about the performance of the such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either the courses referred to in clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited the contractors, the amount of excess shall be deducted from any money due to the contractor by MBMC under the contract or otherwise howsoever or from his security deposit or the sale proceeds thereof provided however that the contractor shall have no claim against MBMC even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a), (b) and (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of not having purchased or procured any materials, or entered into any engagements, or made any advance on account of or with a view to the execution of the work or the performance of the contract. The extra cost involved in the completion of the balance work carried out through the other contractor under Clause - 3(C) shall be recoverable from the contractor over and above the compensation levied under Clause 2 and the Security Deposit shall be apportioned against the total recoveries for this purpose also.

Clause 4 : If the progress the of any particular portion of the work is unsatisfactory, the Executive Engineer shall not with standing that the general progress of the work is in accordance with the condition mentioned in clause 2 be entitled to take action under clause 3 (b) after giving the contractor 10 Contractor/Agency No. of Corrections Executive Engineer

on when the work is progress; of particular portion of the work unsatisfactory

which the work or any part of its could be or could have been safely stopped or suspended shall be final and conclusive against the contractor. The contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

2) Where the total suspension of work ordered as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 90 days prior notice in writing to the Engineer, within 30 days of the expiry of the said period of 90 days, of such mention and requiring the Engineer to record the final measurements of the work already done and to pay final bill. Upon giving such notice the contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days, from the receipt of such notice in respect of the work already done by the contractor. Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provisions of this clause.

3) Where the Engineer required the contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate, the contractor shall be entitled to apply to Engineer within 30 days of the resumption of work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery rendered idle on the site or on the account of his having required to pay the salary or wages of Labour engaged by him during the said period of suspension, provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension whatsoever occasioned by unsatisfactory work or any other default on his part. The decision of the Engineer in this regard shall be final and conclusive against the contractor.

[4] In the event of – Any total stoppage of work on notice from the Engineer under Sub clause (1) in that behalf. Withdrawal by the Contractor from the contractual obligation to complete the remaining unexecuted work under sub clause (2) on account of continued suspension of work for a period exceeding 90 days.

(iii) Curtailment in the quantity of item or item originally tendered on account of any alteration, omission or substitution in the specifications, drawings, designs or instructions under clause 14 where such curtailment exceed 25% in quantity and the value of the quantity curtailed beyond 25% at the rates for the item specified in the tender is more than Rs.5000/-.

It shall be open to the contractor, within 90 days from the service of (I) the notice of stoppage of work or (ii) the notice of withdrawal from contractual obligations under the contract on account of the continued suspension of work or (iii) notice under clause 14 resulting in such curtailment to produce to the Engineer satisfactory documentary evidence that he had purchased or agreed to purchase materials for use in the contracted work, before receipt by him of the notice of stoppage, suspension or curtailment and require the MBMC to take over on payment such material at the rates determined by the Engineer, provided, however, such rates shall in no case exceed the rates at which the same was acquired by the contractor. The MBMC shall thereafter take over the material so offered provided the quantities offered are not in excess of the requirements of the unexecuted work as specified in the accepted tender and are of quality and specifications approved by the Engineer.

Clause 8 (A): The contractor shall not be entitled to claim any compensation from MBMC for the loss suffered by him on account of delay by MBMC in the supply of materials entered in Schedule 'A' where such delay is caused by –

Difficulties relating to the supply of railway wagons,

- i) Force major.

Contractor/Agency

No. of Corrections

Executive Engineer

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- ii) Act of God
- iii) Act of enemies of the State or any other reasonable cause beyond the control of MBMC.

In the case of such delay in the supply of materials. MBMC shall grant such extension of time for the completion of the works as shall appear to the Executive Engineer to be reasonable in accordance with the circumstances of the case. The decision of the Executive Engineer as to the extension of time shall be accepted as final by the contractor.

Clause 9: Under no circumstance whatever shall the contractor be entitled to any compensation from MBMC on any account unless the contractor shall have submitted claim in writing to the Engineer-in-charge within one-month case of such claim occurring.

*Time limit for
unforeseen
Claims*

Clause 10: If any time before the security deposit or any part thereof is refunded to the contractor, it shall appear to the Engineer-in-charge or his subordinate in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of inferior quality or that any materials or articles provided by him for the execution of the work are unsound, or of a quality inferior to that contracted for or otherwise not in accordance with contract it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the contractor and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for the contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or if so required shall remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding ten days during which the failure so continues and in the case of any such failure the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained of as the case may be at the risk and expense in all respects of the contract. Should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted or may use of it shall be within his discretion to accept the same at such reduced rates as he may fix therefore.

*tion and
mpensation
yable in case of
d work*

Clause 11 : All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-charge and /or his subordinate and /or his superior and the contractor shall at all time during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer-in-charge and his subordinate and / or his superior to visit the work shall have been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

*o be opened to
ion
tor or responsible
be present*

Clause 12 : The Contractor shall give not less than 5 days notice in writing to the Engineer-in-charge or his subordinate in-charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions therefore taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice have been given or consent obtained, the same shall be uncovered at the contractor's expense, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed.

*Notice to be
given before
work is
covered*

Clause 13: If during the period of 12 months from the date of completion as certified by the Engineer-in-charge pursuant to clause 7 of the contract or 63 months from commissioning the work, whichever is earlier in the opinion of the Executive Engineer, the said work is defective in any manner, whatsoever, the contractor shall forthwith on receipt of notice in that behalf from the Executive Engineer duly commence execution and completely carry out at his cost rectifying and setting right the defects

*contractor liable
r damage done
r imperfections.*

specified therein including dismantling and reconstruction of unsafe portion strictly in accordance with and in the manner prescribed and under the supervision of the Executive Engineer in the event of the contractor failing or neglecting to commence execution of the said rectification work within the period prescribed therefore in the said notice and/or to complete the same as aforesaid as required by the said notice and/or to complete the same as aforesaid as required by the said notice, the Executive Engineer get the same executed and carried out departmentally or by any other agency at the risk on account and at the cost of contractor. However the defect shall not include the works of routine maintenance, repainting, replacement of stolen items / damaged works for which contractor is not responsible defect arise due to lack of timely maintenance, reduction in performance due to use of the machinery and equipment to the extent such are normally affects the performance / efficiency, normal wear and tear of machinery accessories and equipments, rewinding of electrical motors damaged due to inadequate voltage/ damaged due to use conditions not recommended by the contractor / manufacturer, damages due to unusual floods etc. The contractor shall forthwith on demand pay to the MBMC the amount of such costs, charges and expenses sustained or incurred by the MBMC of which the certificate of Executive Engineer, shall be final and binding on the contractor. Such cost charges and the expenses shall be deemed to be debt due from the contractor and in the event of the contractor failing or neglecting to the same on demand as aforesaid without prejudice to any other rights and remedies of the MBMC the same may be recovered from the contractor as arrears of land revenue through the Collector of District. The MBMC shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter become payable by the MBMC to the contractor either in respect of the said work or any other work whatsoever or from the amount of security deposit retained by the MBMC.

ANNEXURE TO CLAUSE 20 :

The defect liability period shall be as under :

Types of Work	Defect liability period after commissioning
Operation & Comprehensive maintenance of Automatic Chlorine Plant with supply of Sodium Hypochloride solution in mbmc area	03 months

a) Distribution System.

Clause 14 : **The contractor shall supply at his cost all materials (except such special materials, if any as may in accordance with the contract, be supplied from the MBMC's stores) plant tools, appliances implements, ladders, tools, tackle scaffolding and temporary works requisite or proper for the proper execution of the work whether in the original, altered or substituted from the whether included in the specification or other documents forming part of the contract of referred to in these conditions or not and which may be necessary for the purpose or satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied or which he is entitled to require together with the carriage here for to and from the work. The contractor shall also supply without charge and from the work. The contractor shall also supply without charges the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting weighing and assisting in the measurement or examination at any time and from time to time of the work or the materials failing which the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof, or a sufficient portion thereof. The contractor shall provide all necessary fencing and lights required to protect the public from accident and shall also be bound to bear the expenses of defense of every suit, action or other legal proceeding, that may be brought by any person for injury sustained owing to neglect of the above precautions, and to pay any**

Contractor to supply plant, ladders, scaffolding etc

damages and costs which may be awarded in any such suit action or proceedings to any such person, or which may with consent of the contractor be paid or compromising any claim by any such person.

Clause 15: The contractor shall not set fire to any standing jungle, trees, brushwood or grass without a written permission from the Executive Engineer.

When such permit is given and also in all cases when destroying cut or dug up trees brushwood, grass etc. by fire, the contractor shall take necessary measure to prevent such fire spreading to or otherwise damaging surrounding property.

The Contractor shall make his own arrangements for drinking water for the labours employed by him.

Clause 16: Compensation for all damages done intentionally or unintentionally by contractor's labour directly or indirectly in connection with execution of the contracted work whether in or beyond the limits of MBMC's property including any damage caused by the spreading at fire mentioned in clause 22 shall be estimated by the Engineer-in-charge or such other officer as he may appoint and the estimate of the Engineer-in-charge subject to the decision of the Superintending Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand failing which the same will be recovered from the contractor as damages in the manner prescribed in Clause -1 or deducted by the Engineer-in-charge from any sums mat may be due or become due from MBMC to contractor under this contract to otherwise. The contractor shall bear the expenses of defending any action or other legal proceedings mat may be brought by any persons for injury sustained by him owing or neglect of precautions to prevent the spread of fee and he shall pay any damages and cost that may be awarded by the court in consequence thereof

Clause 17: The employment of female labour on works in neighborhood of soldier's barracks should be avoided as far as possible.

Clause 18 : No work shall be done on a Sunday without the sanction in writing of the Engineer-in-charge.

Clause 19 : The contractor shall not be assigned or sublet this work and if the contractor without become insolvent or commence any proceedings to get himself adjudicated and insolvent or make any composition with his creditors, or attempt to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the contractor or any of his servants or agents to any public officer or person in the employment of MBMC in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-charge may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall ensure as if the contract had been rescinded under Clause 3 hereof and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

Clause 20 : All works to be executed under the contract shall be executed under the direction & subject to the approval in all respect of the Executive Engineer shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

Clause 21 : (1) Except where otherwise specified in the contract and subject to the powers delegated to him by the MBMC under the code, rules, orders then in force, the decision of the Superintending Engineer of the Circle for the time being shall be final, conclusive and binding on all parties of the contract upon all questions relating to the meaning of the specifications, designs. drawings and instructions hereinbefore mentioned and as to the quality of workmanship or materials used on the work, or as to any other question claim, right matter, or thing whatsoever, in anyway arising out of or relating to the contract designs drawings, specifications, estimates instructions, orders or these conditions, or otherwise concerning the works, or the execution, or failure to execute the same whether arising during the progress of work, or after the completion abandonment thereof.

(2) The contractor may within thirty days of receipt by him of any order passed by the Executive Engineer as aforesaid appeal against it to the Commissioner concerned with the contract work or project provided that -

- (a) The accepted Value of the Contract exceeds Rs. 10 lakh (Rupees Ten Lakhs).
- (b) Amount of claim is not less than Rs. 1.00 Lakh (Rupees One Lakh).

(3) If the contractor is not satisfied with the order passed by the Executive Engineer as aforesaid, the contractor may, within thirty days of receipt by him of any such order, appeal against it to the Commissioner, Mira-Bhaindar Municipal Corporation who if convinced that prima facie, the contractor's claim rejected by Executive Engineer is not frivolous and that there is some substance in the claim of the contractor as would merit a detailed examination in the claim of the contractor as would merit a detailed examination. The decision of the Commissioner shall be final and binding on the contractor and the Engineer-in-charge.

*Lump sums
in Estimate*

Clause 22: When the estimate on which a tender is made include lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the hems of work involved or the part of the work in question at the same rates as are payable under this contract for each hems, or if the part of work in question is not in the opinion of the Engineer-in-charge capable of measurement, the Engineer-in-charge may as his discretion pay the lump sum amount entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

*Action where
no
specifications*

Clause 23: In the case of any class of work for which there is no such specification as is mentioned in Rule 1 of form B-1 such work Shall be carried out in accordance with the Divisional specifications and in the event of there being no Divisional specification, then in such case the work shall be carried out in all respects in accordance with all instructions and requirements of the Engineer-in-charge.

*Definition
of work*

Clause 24: The expression 'works' or 'work' where used in these conditions, shall unless there by something in the subject or context repugnant to such construction, be construed to mean the work or works contracted to be executed under or in virtue of the contract, whether temporary or permanent and whether original, altered, substituted or additional.

Clause 25: The percentage referred to in the tender shall be deducted from/added to the gross amount of the bill before deducting the value of any stock issued.

*Contractor's
percentage*

*Refund of
quarry fees
and royalties*

Clause 26: All quarry fees, royalties, Octroi duties and ground rent for stacking materials, if the contractor should pay any, royalties who will not be entitled to a refund of such charges from MBMC

*Compensation
under Workmen
compensation Act,*

Clause 27: The contractor shall be responsible for and shall pay any compensation to his workmen payable under the Workmen's 1923 (VIII of 1923) (hereinafter called the said Act) for injuries caused to the workmen. If such compensation is payable/paid by MBMC as principal employer under Sub-section (1) of section 12 of the said Act on behalf of the contractor. Claim for quantities entered in the tender or estimate it shall be recoverable by MBMC from the contractor under sub section (2) of the said section, such Compensation shall be recovered in the manner laid down in Clause 1 above.

Clause 28 (A): The contractor shall be responsible for and shall pay the expenses of providing medical aid to any workman who may suffer a bodily injury as a result of an accident. If such expenses are incurred by MBMC, the same shall be recoverable from the contractor forthwith and be deducted without prejudice to any other remedy of MBMC from any amount due or that may become due to the contractor.

Clause 28 (B): The contractor shall provide all necessary personal safety equipment and first aid apparatus available for the use of the persons employed on the site and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulations in connection therewith.

- (a) The workers shall be required to use the equipment so provided by the contractor and the contractor shall take adequate steps to ensure proper use of the equipment by those concerned.
- (b) When work is carried on in proximity to any Place where there is a risk or drawing all necessary equipment shall be provided and kept ready for use and all necessary steps shall be taken for the prompt rescue of any person in danger.
- (c) Adequate provision shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

Clause 28 (C) : The contractor shall duly comply with the provisions of 'The Apprentices Act, 1961' (LII of 1961) and the rules and orders made there under and the orders that may be issued from time to time under the Act. If he fails to comply the said rules and on his failure or neglect to do so, he shall be subject to all the liabilities and penalties provided by the said Act and said rules. Further his failure will be treated as breach of the contract and the Superintending Engineer may at his discretion cancel the contract. The contractor shall also be liable pecuniary liability arising on account of any violation by him of the provisions of the Act.

(2) Quantities in respect of the several items shown in the tender are approximate and no revision in the tendered rate shall be permitted in respect of any of the items so long as, subject to any special provision contained in the specifications prescribing a different percentage of permissible variation the quantity of the them does not exceed the tender quantity by more than 25 percent or so long as the value of the excess quantity beyond the limit of tendered quantities at the rate of the item specified in the tender, is not more than Rs.5000/- (whichever is more).

(3) The contractor shall, if ordered in writing by the Engineer to do also carry out any quantities in excess or the limit mentioned in sub clause (1) hereof on the same conditions as and in accordance with the specifications in the tender and at the rates (i) derived from the rates entered in the current schedule of rates and in the absence of such rates (ii) at the rate prevailing in the market, the said rates being increased or decreased as the case may be by the percentage which the total tendered amount bears to the estimated cost of the work as put to tender based upon the schedule of rates applicable to the year in which the tenders were invited (for the purpose of operation of this clause, this cost shall be taken to be Rs. in words (Rupees only) as per D.S.R..

(4) This clause is not applicable to extra items.

(5) Claims arising out of reduction in the tendered quantity of any item beyond 25 percent will be governed by the provision of clause 15 only when the amount of such reduction beyond 25 percent at the rate of the item specified in the tender is more than Rs.5000/-. This reduction is exclusively of the reduction mentioned in clause No. 14 & 15 of work and site condition.

(6) There is no change in the rate if the excess is less than or equal to 25%. Also there is no change in the rate if quantity of work done is more than 25% of the tendered quantity, but value of the excess work at the tender rates does not exceed Rs.5000/-.

(7) The quantities to be paid at tendered rate shall include: - Tendered quantity plus. 25% excess of the tendered quantity or the excess quantity of the value of Rs.5000/- at the tendered rates whichever is more.

(8) In the schedule B any probable item is included without stating its quantity but by stating the rate for such item, then the tendered quantity for such item shall be treated as Zero for applicability of this Clause.

ANNEXURE CLAUSE – EXCESS QUANTITY

CLARIFICATION TO THE CLAUSE OF EXCESS QUANTITY.

1) The Executive Engineer will see that the claim towards the excess quantities as per respective Clause of B - 1 agreement is submitted to the higher authorities for approval immediately on its cropping up. While making such payments, the total expenditure on the scheme shall not exceed sanctioned cost of the scheme.

2) Quantity equal that of quantity as per Schedule B plus 25% or Rs. 5,000.00 (Rupees Five Thousand Only) whichever is more, shall be paid at accepted tender rate as usual after submission of excess quantity proposal to the competent authority for approval.

3) The Executive Engineer is hereby authorized to make 50% payment of the excess quantity beyond 25% over tender quantity or Rs. 5,000.00 (Rupees Five Thousand Only) cost, whichever is more at proposed rates after submission of excess quantity proposal to the competent authority for approval.

4) The powers for approval of excess beyond estimated quantity worth Rs. 10.00 lakhs are vested with Executive Engineer. The City Engineer is empowered to approve proposal of excess quantity worth Rs. 30.00 lakhs only subject to condition that due to approval of excess quantity proposal there should not be any increase in the sanctioned cost of the Scheme. Excess Quantity proposal involving approval of excess quantity beyond 30.00 lakhs is in the power of Commissioner of MBMC subject to revised administrative approval to the work.

Clause 29: If the rate entered into Schedule B for the work of excavation of pipe line is a combined rate for different strata's, then the rate entered in Schedule B will be applicable for quantity 25% in addition to the quantity mentioned in Schedule - B of all items of excavation for pipe line trenches and for excess over 25% of Schedule - B quantity the rate payable to the contractor shall be worked out from the CSR by considering following percentage of excavation in different strata's irrespective of actual strata met at the site for the increased quantity.

For Distribution System

- i) Earth all types of earth, soils, sand, gravel, and soft murum, with lead upto 50 m and lift as involved, including dewatering, shoring and strutting etc. excluding refilling etc. 40% of average rate for Lift 0.00 to 1.50 m and 0% for lift 1.50 to 3.00 m.
- ii) Excavation in hard murum with lead of 50 m and lifts as involved, including dewatering, shoring and strutting, excluding refilling 0.00% for average rate of lift 0.00 to 1.50 m and 0.00% for 1.50 to 3.00.
- iii) Excavation for pipe trenches in Slush / Muddy / Slushy / soil with lead upto 50 m dewatering shoring and strutting, excluding backfilling 30% of average rate for lift 0.00 to 1.50 m and 0.00% for lift 1.5 to 3.00 m.
- iv) Excavation for pipe trenches in soft rock and old cement lime masonry including lead upto 50 m, required lift, dewatering, shoring, strutting, excluding back filling 15% of average rate for lift 0.00 to 1.50 and 0% for lift 1.5 to 3.0 m.

- v) Excavation for pipe trenches in hard rock by chiseling and by mechanical means or by any other means including rimming and leveling - lead upto 50 m, dewatering, shoring, strutting, excluding back filling 15% of average rate for lift 0.00 to 1.50 m

Clause 30: The contractor shall employ any famine, convict or other labour of a particular kind or class if ordered in writing in writing to do so by the Engineer-in-charge.

Clause 31: No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance works on account of any delay in according to sanction of estimates.

Clause 32: No compensation shall be allowed for any delay in the execution of the work on account of water standing in borrow pits compartments. The rates are inclusive for hard or cracked soil, excavation in mud, sub-soil, water standing in borrow pits and no claim for an extra rate shall be entertained, unless otherwise expressly specified.

Clause 33: The contractor shall not enter upon or commence any portion of work except with the written authority and instructions of the Engineer - in Charge or of his subordinate-in-charge of the work Failing such authority the contractor shall have no claim to ask for measurements of or payment for work.

Clause 34:

j) No contractor shall employ any person who is under the age of 18 years

ii) No contractor shall employ donkeys or other animals with breeching of string of thin rope. The breeching must be at least three inches wide and should be of tape (Newar).

iii) No animal suffering from sores, lameness or emaciation or which is immature shall be employed on the work.

iv) The Engineer-in-charge or his Agent is authorized to remove from the work, any person or animal found working which does not satisfy these conditions and no responsibility shall be accepted by MBMC for any delay caused in the completion of the work by such removal.

v) The contractor shall pay fair and reasonable wage to the workmen employed by him in the contract undertaken by him. In the event of any dispute arising between the contractor and his workmen on the grounds that the wages paid are not fair and reasonable the dispute shall be referred without delay to the Executive Engineer who shall decide the same. The decision of the Engineer shall be conclusive and binding on the contractor but such decision shall not in any way affect the conditions in the contract regarding the payment to be made by MBMC to the contractor at the sanctioned tender rates.

vi) Contractor shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.

vii) Contractor to take precaution against accidents which takes place on account of labour using loose garments while working near machinery. He shall not allow his workers to wear loose clothes like Dhoti, Jhabba etc. near machinery.

Clause 35: Payment to contractors shall be made by cheque drawn on any Bank within the division convenient to them MBMC provided .

Clause 36: Any contractor who does not accept these conditions shall not be allowed to tender for works. Entering into contract by the Contractor with MIP by the contractor shall be considered as incontrovertible proof of acceptance of all conditions of the contract by the contractor.

Clause 37: If Government declares a state of scarcity of famine to exist in any village situated within 16 kilometers of the work, the contractor shall employ upon such parts of the work, as are suitable for

Contractor/Agency

No. of Corrections

Executive Engineer

unskilled labour, any person certified to him by the Executive Engineer or be any person to whom the Executive Engineer may have delegated this duty in writing, to be in need of relief and shall be bound to pay to such person wages not below the minimum which Govt. may have fixed in his behalf. Any dispute which may arise in connection with the implementation of this clause shall be decided by the Executive Engineer whose decision shall be final and binding on the Contractor.

Clause 38: The price quoted by the contractor shall not in any case exceed the control price if any fixed by Govt. or reasonable price which it is permissible for him to charge a private purchaser for the same class and description, the controlled price or the price permissible under Hoarding and Profiteering Ordinance 1948 as amended from time to time, if the price quoted exceeds the controlled price or the price permissible under Hoarding and Profiteering Prevention Ordinance the contractor will specifically mention this fact in his tender along with the reasons for quoting such higher prices. The purchaser at his discretion will in such case exercise the right of revising the price at any stage so as to conform with the controlled price on the permissible under the Hoarding and Profiteering Prevention Ordinance. The discretion will be exercised without prejudice to any other action that may be taken against the contractor.

Clause 39: The rates to be quoted by the contractor must be inclusive of Sales Tax and other taxes. No extra payment on this account will be made to the contractor.

Clause 40: In case of materials that may remain surplus with the contractor from those issued by the MBMC for the work contracted for the date of ascertainment of the materials being surplus will be taken as the date of sale for the purpose of sales tax and the sales tax will be recovered on such sale.

Clause 41 : The contractor shall employ at east 80 per cent of the total number of unskilled labour to be employed by him on the said work from out of the persons ordinarily residing in the district in which site of the said work is located.

Provided, however, that if the required number of unskilled labour from that district is not available, the contractor shall in the first instance employ such number of persons as is available and thereafter may with previous permission in writing of the Executive Engineer-in-charge of the said work, obtain the rest of the requirement of unskilled labour from outside district.

Clause 42:The contractor shall pay the labourers skilled and unskilled according to the wages prescribed by the Minimum wages Act applicable to the area in which the work of contractor labours engaged contractor is located.

Clause 43 : All amounts whatsoever which the contractor is liable to pay to the MBMC in connection with the execution of the work including the amount payable in receipt of (i) materials and/or stores supplied/issued hereunder by the MBMC to the contractor (ii) hire charges in respect of heavy plant, machinery and equipment given on hire by the MBMC to the Contractor for execution by him of the work and/or on which advances have been given by the MBMC to the contractor, (iii) excess amount incurred by MBMC over the Security Deposit furnished by the Contractor for completion of works in view of provision of Clause 3(b), 3(c) and Clause 5(iv). Liquidated Damages ' Compensation amount which could not be recovered from the Security Deposit due to non-availability of adequate Security Deposit to cover such compensation, (v) Penalty under Clause 8 so far as the part which could not be recovered from any payment due to the contractor or from Security Deposit available with Engineer-in-Charge, (vi) amount of compensation recoverable under Clause 17 which could not be recovered from the amount of Security Deposit, (vii) extra expenditure incurred by the Engineer-in-charge for carrying out rectification of defective works under Clause 20, (viii) any other payment / compensation/ penalty / dues etc. recoverable by the Engineer-in-charge from contractor which could not be recovered from the amount of security deposit shall be deemed to be debt payable by the Contractor to the MBMC and the MBMC without prejudice to any other right and remedies of the MBMC may recover the same from the contractor as arrears of land revenue through the Collector of the District.

Clause 44 : The successful tenders will be required to produce to the satisfaction of the specified concerned authority a valid and consequent license issued in favour under the provisions of the Contract

Labour (Regulation and Abolition) Act, 1970 before starting the work. On failure to do so, the acceptance of tender should be liable to be withdrawn and also Earnest Money / Security Deposit forfeited.

"The Contractor shall duly comply with all the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules 1971 as amended from time to time and all other relevant statutes and statutory provisions concerning payment of wages particularly to workmen employed by the contractor and working on the site of the work. In particular the contractor shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour (Regulation and Abolition) Rules 1971. If the contractor

fails or neglects to pay wages at the said rates or makes short payment and the MBMC makes such payment of wages in full or part thereof less paid by the contractor, as the case may be, the amount so paid by the MBMC to such workers shall be deemed to be debt payable by the contractor and the MBMC shall be entitled to recover the same as such from the contractor or deduct same from the amount payable by the MBMC to the contractor hereunder or from any other amounts payable to him by the MBMC

Clause 45 : Where the workers are required to work near Machine and are liable to accident they should not be allowed to wear loose clothes like Dhoti. Jhabba etc.

Clause 46 : Provision of all applicable Indian Laws shall be treated as applicable for this contract.

Clause 47 : In view of difficult position regarding the availability of the Foreign exchange, no foreign exchange, will be released by the Department for the purchase of the Plant and Machinery required for the execution for the work concerned.

Clause 48 : The tendered rates shall be inclusive of all taxes, tax payable in respect of works contract under the provisions of the Maharashtra Sales Tax on transfer of property in goods involved in the execution of works contract Act, 1985 (Maharashtra Act No .XIX of 1985). However the works contract tax shall be deducted from the Contractor's Running Account bills at the rates applicable as per rules in force and the same shall be remitted in the Govt. treasury / Bank and no reimbursement in this respect shall be made by the department.

Anti-Malaria A other health services

Clause 49:

- (A) The anti malaria and the health measures shall be as directed by the Joint Director (Malaria and Filariasis) of Health Service, Pune.
- (B) Contractor shall see that mosquitogenic conditions are not created so as to keep vector population to minimum level.
- (C) Contractor shall carry out anti malaria measures in the area as per guidelines prescribed under National Malaria Eradication Programme and as directed by the Joint Director (M & F) of Health Services, Pune.
- (D) In case of default in carrying out prescribed anti malaria measures resulting in increase in malaria incidence contractor shall be liable to take measures to control the situation in addition to fine.

(E) Relations with Public Authorities:

The contractor shall make sufficient arrangements for draining away the village water as well as water coming from the bathing and washing places and shall dispose off this water in such a way as not to cause, any nuisance. He shall also keep the premises clean by employing sufficient number of sweepers.

The contractor shall comply with all rules, regulations, bye-laws and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charge which are livable on him without any extra cost to Government.

Clause 50: The successful contractor will have to enter into agreement in form specified by MBMC on a stamp of required amount as per rules in force. The stamp charges shall be borne by the contractor.

1. Receipts for payments made on account of any work, when executed by a firm should also be signed by all the partners except where the contractors are described in their tender as firm, in which case the receipt shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts of the firm.

2. All works shall be measured net by standard measure and according to the rules and customs of the MBMC and in absence of such rules and custom in MBMC then as per rules and customs of P. W. Department of Govt. of Maharashtra without reference to any local custom.

3. The measurements of work will be taken according to the usual methods in use in the Mira-Bhaindar Municipal Corporation and no proposals to adopt alternatives methods will be accepted. The Executive Engineer's decision as to what is the usual method in use in the MBMC will be final

4. The contractor will have to construct shed, for storing controlled and valuable materials issued to him under Schedule 'A' of the agreement, at work site having double locking arrangement. The materials will be taken for use in the presence of the Department person. No materials will be allowed to be removed from the site of works.

5. The tendered rate shall be inclusive of all taxes, duties levies, cess (including Sales Tax) as amended from time to time. No extra payment on this account shall be made to the contractor.

Clause 51 : Price Variation Clause : not Applicapal

Clause 52: The contractor shall provided and maintain guards, guard rails, temporary bridge and walkways, watermen headlights and danger signals illuminated from sunset to sunrise and other necessary appliances and safeguards to protect the work, life property, the public, excavations, equipment and materials barricades shall be substantial construction and shall be painted such as to increase then visibility at night. For any accident arising out of the neglect of above instructions, the contractor shall be bound to bear the expenses of defense of every suit, action or other legal proceedings, at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay all damages and costs which may be awarded in any such suit, action or proceedings to any such person on which may with the consent of the contractor be paid in compromising any claim by any such person.

Clause 53: (Insurance)

Contractors shall take out necessary Insurance Policy / Policies so as to provide adequate insurance cover for execution of the awarded contract work from the Director of Insurance, Maharashtra State, Mumbai - 51 only. Its postal address for correspondence is "264, Ist Floor, MHADA, Opp. Kalanagar, Bandra (East), Mumbai - 400 051. Tel. No. 26438403 / Fax : 26438461 / 26438690). Insurance however, if the contractor desire to effect insurance with the local office of any insurance company, the same should be under the co-insurance-cum-servicing arrangements approved by the Director of Insurance If the policy taken out by the contractor is not on co-insurance basis (G.I.F. 60% and Insurance company 40%) the same will not be accepted and the amount of premium calculated by the Director of Insurance will be recovered directly from the amount payable to the contractors for the executed contract work which may be noted

- a) Loss of or damage to the Civil and Mechanical equipment's supplied / installed including the materials such as pipes, valves specials etc. brought on she.
- b) Loss of or damage to contractor's equipment's including his vehicles.
- c) Loss of or damage to property (except the works, Plant Material and Equipment) in connection with the contractor. And ;

Personal injury or death due to vehicles of the contractor and / or due to any accident that may arise at or around the site to the Contractor personal or to the MBMC staff or to any other person not connected with MBMC/contractor.

1. *Policies and certificates for insurance* shall be delivered by the Contractor to the Engineer for the Engineer's approval before the date of actual starting of work. All such insurance shall provide for compensation to be payable in the types of proportions of currencies required to rectify the loss or damage incurred.
2. *If* the contractor does not produce any of the policies and certificates required, the engineer may effect the insurance for which the contractor should have produced the policies and certificates and recover the premiums it has paid from payments otherwise due to the contractor or, if no payment is due, the payment of the premiums shall *be* of debt due.
3. Alterations to the terms of insurance shall not be made without the approval of the engineer.
4. The minimum insurance cover for loss and damages to physical, injury and death shall be 10% of the contract cost per occurrence with number of occurrences as 4 (four). After each occurrence the contractor shall pay additional premium necessary so as to keep the insurance policy valid always till the defect liability period is over.
5. No payment will be released to the contractor until the insurance coverage with the Govt. insurance fund, Maharashtra State is provided and unless the proof of insurance coverage is produced by the contractor to the Engineer- in- charge.

Clause 54: (CSMC)

In case MBMC decides to appoint a construction, supervision and management consultant for supervising/ monitoring works under this contract, the civil / mechanical / electrical contractor shall be liable to execute the work under the supervision of C.S.M.C. All decisions regarding the work in such cases shall be taken by the C.S.M.C. on behalf of M.B.M.C. and will be binding on the contractor.

In such cases the contractor will have to sign the agreement between the MBMC of C.S.M.C. in token of acceptance of the C.S.M.C. as the sole supervisor of the works under the agreement.

**MIRA-BHAINDAR MUNICIPAL CORPORATION
WATER SUPPLY DEPARTMENT**

CONDITIONS FOR MATERIAL SCHEDULE 'A'

CSA-1 Other materials except as shown in Schedule 'A' required for the work shall be procured and supplied by the contractor at his cost. In such cases the test certificate for their quality shall have to be produced by the contractor.

CSA-2 Material shall be available for delivery on any working day from 11.00 A.M. to 05.00 P.M. with at least week's intimation in advance.

CSA-3 The contractor shall maintain proper account of consumption of all material supplied to him by the department as per schedule 'A' in the register which may be if required, modified as prescribed by Board and shall submit the extract of the same monthly to the Executive Engineer. The Executive Engineer shall reserve the right to stop further issue of material to the contractor if monthly account of the previously issued material is not submitted by the contractor. He shall be fully responsible for the consequence arising out of this.

The contractor shall responsible for proper handling and safe custody of material issued to him by Board, for use on the work and shall return to Government all surplus material after completion of work, if and as ordered by the Executive Engineer vide Clause - 12 of B.1 Form. The cost of damages or unserviceable material as would be fixed by the Engineer-in-Charge shall be recovered from the contractor. The material, which is not found, accounted properly after considering reasonable percentage of wastage shall be charged at panel rates or determined by the Engineer-in- Charge

CSA-4 The contractor shall at his own cost make arrangement for storing cement brought by him by constructing a pucca shed and platform, etc. with double locking arrangements. Any damage to the cement due to inadequate provision of store theft etc. will to the account of the contractor

CSA-5 If there is delay in supplying the materials due to reasons outside the control of the Department or due to the materials being out of stock, no claim for compensation will be considered on the ground of delay in the supply of the materials

CSA-6 All the materials mentioned in Schedule 'A' required for the work shall be obtained from the Department's store only where otherwise provided. The material obtained from other sources shall not be allowed to be used except under written permission of the Engineer-in-Charge and after producing necessary test certificate.

CSA-7 The contractor shall inspect the material thoroughly before taking delivery of the same and shall take the delivery in good and sound condition and sign the unstamped receipt in token of receipt. Damages to the material noticed afterwards will be to the account of the contractor.

CSA-8 Quantities in Schedule 'A' are approximate and shall vary according to actual and bonafied use.

- CSA-9 All the materials remaining unused after the completion of the work are to be returned to Board at their store at the cost of the contractor and the credit if due will be given as per rules enforces.
- CSA-10 Once the materials are issued to the contractor at the MBMC's store he shall remove the same immediately to his stores, failing which rent as decided by Engineer-in-Charge shall be recovered from the contractor.
- CSA-11 The contractor shall submit account of all the materials issued to him previously before demand for any fresh materials is made. Materials that cannot be accounted for shall be recovered from him at the rates decided by the Executive Engineer.
- CSA-12 The contractor will have to provide the manufacturer list report from Government Laboratory regarding steel to be provided by the contractor.
- CSA-13 If the contractor fails to return the balance materials with the firm, the same shall be recovered at 2.0 times the issue rate or at the prevailing market rate, whichever is higher.
- CSA-14 C.I. Flanged and S/s Specials required other than that not available with the department for the work will be supplied by contractor as per necessity of the work.
- CSA-15 The contractor shall be responsible for safety of materials (even if it is laid in ground) till satisfactory Hydraulic Test is completed and work is finally handed over to the MBMC.
- CSA-16 If the material supplied to the contractor at the place other than mentioned in Schedule-A, the Transport charges will be paid as per prevailing DSR for the shortest between stipulated place of delivery and actual place of delivery. In addition octroi on such a material, if paid by the contract, same shall be reimbursed to the contractor on production of proof of payment of such charges to Municipal Council.

GENERAL CONDITIONS

**MIRA-BHAYANDAR MUNICIPAL CORPORATION
WATER SUPPLY DEPARTMENT**

GENERAL CONDITIONS

1. The rates quoted should be Exclusive of GST etc.
2. The time allowed for completion of said project shall be 20 months from the date of purchase order .
3. The meters shall remain in every respect be responsible at the risk of supplier until their actual installation & commissioning at proposed location.
4. The meters shall strictly confirm to the Technical specification stipulated in the tender .
5. The minimum period of guarantee shall be 24 months from date of commissioning of full meters in totality. During this period the agency shall repair all meters or any parts thereof by replacement of entire quantity if necessary.
6. Regarding the quality and performance of the meters the decision of city engineer shall be final .
7. The contractor shall not liable for any price increase of article in the market during the tenure of the contract.
8. Two technician shall be trained for maintenance of the meters if required.
9. After Supply to MBMC 80% of the material shall be released on inspection of meters for accuracy at manufacturer end and testing at FCRI – Kerala if required. The quantity of meters that shall be tested shall be decided by Executive Engineer - MBMC.
10. The cost of testing shall be borne by agency .
11. The quantities in the schedule are approximate and can be increased and the rates shall remain the same.
12. In case the meters are rejected the agency should take it back and correct the same at its own risk and cost within stipulated time.
13. The meters shall invariably should satisfy all test.
14. The agency shall provide all necessary catalogue operating manual , test certificates as well as performance certificates.
15. Only Manufacturer and their authorized bidder whose meters comply to condition stipulated in eligibility criteria shall be allowed to participate in the tender.
16. Battery powered GPRS modem capable of sending one reading per second and having battery life of 5 years shall be supplied with each meter separately.

ADDITIONAL GENRAL CONDITIONS

1. ACQUATANTANCE WITH SITE AND WORK CONDITIONS ETC.

The tenderer at his own expenses and prior to submitting the tender shall visit the installation and determine the extend characteristics and quality of the work required to be performed. The specification, description and drawing attached to the tender are indicative and guidance only. All time, matter and things omitted in the description are provided on the equipments are provided on the equipments are deemed to be included in the scope of contract for operation, maintenance and rutine rectification. In case of doubt about any item or data included in the tender or otherwise shall be got clarified by applying in writing to the Executive Engineer prior to data of submission of tender. The tenderer shall also examine the local conditions, facilities available in the locality, prevailing wages and other factors affecting cost and performance of work.

2. MATERIAL AND EQUIPMENT TO BE PROVIDED BY THE CONTRACTOR

All materials of construction/laying of pipe line shall be best quality and suitable for the intended. These shall be got approved by the Executive Engineer-in-charge before erection use. Unapproved material shall be removed from the site immediately.

Following materials, tools and equipments shall be kept with the contractor for maintenance and operation.

a. Cleaning

Cotton
waste

- i) Degreasing chemical/agents
- ii) Bucket, plastic pipe etc.
- iii) Brushes

b. Tools

- i. Open ended spanner set

- ii. Ring spanner set
 - iii. Normally required tools etc.
 - iv. Pipe wrenches

 - v. Box spanner etc.
 - vi. Bearing puller
 - vii. Fuse puller
 - viii. Crippling tools
 - ix. Bolt and nut spanner
 - x. Great gun
- c. Protection Equipment
- i. Hand Gloves (Suitable for use on 22 KV)
 - ii. Boots/Shoes (Suitable for use on 22 KV)
- d. Phone & Vehicle
- i. The contractor shall have mobile phone for communication of message at the time of emergency.

3. ELECTRICAL POWER SUPPLY

Electric power supply required by the contractor will be provided free of cost.

4. POWER OF ATTORNEY

In case of tenderer is a firm or a company it shall in its forwarding letter mention the names of partners and of the persons would hold the power of attorney authorizing him to conduct the transaction on behalf of the firm or company and shall produce certified true copy of irrevocable power of attorney the tender and original shall produced for verification on demand.

5. TENDER TO BE STRICTLY ACCORDING TO TENDER CONDITION

It should be clearly noted that the tender has to strictly comply with the condition and specifications lay down in the tender and no variation are permissible.

Deviations made by the tenderer submitting the tender without following above instruction would result in treating the tender as conditional tender and would not be binding on the Department to

consider such conditional tender and is liable for rejection.

6. WORK ORDER BOOK

About half sheet size work order book shall be provided by the contractor and handed over to the department for maintaining a work site. This shall be permanent record. The contractor or his resident engineer shall sign below the orders recorded by the Engineer-in-charge in token of having received them. He may take out a copy thereof if necessary. He will not record any remarks in the order book but may record and remarks in the order book he may take up the matter recorded thereon. He shall carry out the order promptly and report compliance.

7. DESCRIPANCIES AND OMISSIONS

The tender drawing and specifications shall be considered as explanatory of each and together shall form the technical requirements and stipulations of tender documents. Detailed drawing shall have preference over small scale drawings. Similarly in case of detailed specifications should any discrepancy arise as to the decision of the Engineer-in-charge shall be the final and binding on the contractor. The provision in the specification supersede those in the item of the schedule of there any variation.

8. ACCIDENT ON THE WORK.

The contractor shall be fully responsible for any accident that may occur to the labour on his work on duty and report the same to the Engineer-in-charge and concerned Government Labour Department Authority and shall pay all necessary compensation as per rules, failing which the same would be paid by the Mire-Bhayandar Municipal Corporation and recovered from the amount payable to the contractor.

9. RATES INCLUSIVE OF ALL SALES TAXES, DUTIES

The tendered rates should be Exclusive of GST levied by GOI & GOM in all respect

10. INTEREST CLAIMS

No interest shall be payable by the department on the amount due to the contractor pending final settlement of the claims.

11. TERMS OF PAYMENT

Payment shall be made as per Progress of the work.

12. COMPLIANCE

The contractor shall be bound by all ordinances, acts, codes, rules, regulations, orders and decrease of which in any way affect the work or workmen engaged for the work. The contractor shall be deemed to have protected and indemnified the Mira-Bhayandar Municipal Corporation against any claim or liability arising from violation of above.

13. ACCOMMODATION

The Mira-Bhayandar Municipal Corporation does not take any responsibility to provide living accommodation. However, accommodation if available (the barters) the same will be given on rental basis as per terms and conditions of the Mira-Bhayandar Municipal Corporation.

14. MINIMUM STAFFING PATTERN

The minimum staffing pattern shall be as per the detailed specification.

15. SHIFT

A shift shall be of 8 hours duration. The contractor will have to operate the maintenance in the shift as instructed by the Engineer-in-charge. Shift duration timing will be informed to the contractor and he has to carry out the operation in that timing only.

16. STAFF

If any of the person working on the job is found to be incompetent, irregular, inefficient or does nit abbey instruction etc. then his presence will not be allowed and he should be immediately

removed and the satisfaction of the Engineer-in-charge. The employee shall be provided with the specific uniform and identifying nameplate prominently displayed on his uniform. The contractor shall within 15 days of issue of work order train the staff in fire fighting and treatment on electric etc.

17. The tender shall be economical sound to wait for payment. If the contractor harass for supply of material at site against payment of bill, the contractor will be black listed and no future tender will be issued to him.

18. **DAMAGES TO UNDER / ABOVE GROUND UTILITY:**

The distribution pipe line will be laid in the main areas of the Mira- Bhayander Municipal area. During the course of excavation and laying of the pipe line utmost care of existing main, electrical and telephone cables and private water connection shall be taken. Any damage to existing main, electrical and telephone cable and private water connection, etc occur during the course of execution, same shall be restored at the cost the contractor. In case, the repair is done by respective Department/Owner, the cost of such repair will be recovered from the contractor.

SCHEDULE - B

MIRA BHAYANDER MUNICIPAL CORPORATION
Water Supply & Sewerage Department

NAME of WORK - Designing, Fabrication, Delivery, Installation, Commissioning and testing of PLC Based, CBR-MMS Integrated Centralized Automatic Bacteriological Treatment Plant with Online Comprehensive Analyzer At Various ESR's in MBMC Area for Treatment of Water. (Phase – II)

Item No	Item of Work	Qty.	Estimated Rate		Unit	Amount	Additional Specification
			In Figures	In Words			
1	ITEM No. 1 :- COMPREHENSIVE MAINTENANCE						
	Comprehensive maintenance of CBR-MMS intergrated PLC-Based Automatic Bacteriological Treatment Plant with Online Comprehensive Analyzer, 200Ltrs capacity chemical measuring tank, Electronic chemical infusing device, water fflow sensing system, inbuilt GSM modern with SIM and complete with all electrical accessories as per specifications with provision & use of genuine spares & accessories to keep the entire system in serviceable and operative condition for disinfection of drinking water with required manpower.						As per the Direction given by the Engineer in Charge
	PHASE - I	20.00	93500.00	Rs. Ninety three thousand five hundred only	Month	1870000.00	As per the Direction given by the Engineerin Charge
	PHASE - II	12.00	144500.00	Rs. One lac forty four thousand	Month	1734000.00	As Above

Contractor/Agency

No. of Corrections

Executive Engineer

				five hundred only			
	ITEM No. 2 :- SUPPLY & FILLING OF CHEMICAL SOLUTION						
	Supply & filling of CALFIX (Grade A-Technical)/Sodium Hypochlorite based Chemical solution in chemical measuring tank of above plant for disinfection of drinking water with required manpower.						
	PHASE - I	554400.00	21.72	Rs. Twenty one & seventy two paisa only	Ltr	12041568.00	As Above
	PHASE - II	206496.00	21.72	Rs. Twenty one & seventy two paisa only	Ltr	4485093.12	As Above
					Total Rs	20130661.12	

Contractor/Agency

No. of Corrections

Executive Engineer

SPECIFICATION

MIRA BHAINДАР MUNICIPAL CORPORATION

NAME OF WORK - OPERATION & COMPREHENSIVE MAINTENANCE OF AUTOMATIC CHLORINE PLANT WITH SUPPLY OF SODIUM HYPOCHLORIDE SOLUTION IN MBMC AREA.

DETAILED TECHNICAL – SPECIFICATIONS

1. GENERAL DESCRIPTION

This tender covers the complete operation, comprehensive maintenance, Breakdown maintenance, servicing, monitoring and upkeep of MMS Integrated PLC-Based Automatic Bacteriological Treatment Plant installed in phase-I, 1.Uttan ESR, 2.Subhash Maidan ESR (Old), 3. Kamla Park ESR, 4.Navghar ESR (Old), 5.Asmita ESR (Old), 6.Silver Park ESR (New), 7.MIDC (Low level), 8.Kankiya, 9.Indralok Phase 04 ESR, 10.Kashi ESR, 11.Akaruti & phase-II, 1. Chowk ESR , 2. Light House ESR , 3. Dongri ESR , 4. Morva ESR , 5. Subhash Maidan ESR , 6. Sudama Nagar ESR , 7. Navghar ESR (New) , 8. Geeta Nagar ESR , 9. Asmita ESR new , 10. Shantinagar Sector 2 ESR , 11. Shantinagar Sector 7 ESR , 12. Shantinagar Sector 11 ESR , 13. Silver Park ESR old , 14. MIDC ESR , 15. Mira Pumping ESR , 16. Mahajanwadi ESR , 17. Ghodbunder ESR site under Municipal Corporation jurisdiction. The system includes PLC-based automatic dosing, bacteriological treatment, online comprehensive analyser, GSM communication, flow sensing, chemical storage and dosing equipment along with all associated mechanical, electrical, electronic and instrumentation components and chemical required for proper functioning of the plant.

The scope includes ensuring continuous, safe, reliable and efficient operation of the system as per CPHEEO norms, MPCB guidelines, BIS standards and manufacturer specifications.

TECHNOLOGY HIGHLIGHTS:

1. The PLC technology of the plant offers accessibility of data from any remote location across the world through mobile/tablet/PC.
2. CBR-MMS enables the user to monitor and communicate the operation of the plant 24/7 from any remote location.
3. The plant is fully automatic in terms of operation. Its operation is controlled and monitored by Programmable Logic Controller. The in-built memory of the controller is min. 2GB to store more

than 100 programmers for complete one year to ensure regular and effective operation of the plant as per user's need and requirement.

4. The PLC of the Plant is enabled with Water Flow Sensing system and Proportional Dosing System to ensure the treatment of water in consonance with variation in water flow rate, automatically.
5. Digital Proportional Dosing Control system offers the facility of on-side digital dose rate setting in Ltr./hr with LED display.
6. Plant has provision of printer interfacing to take print out of operational schedule & other data.
7. The plant is designed to offer maximum treatment capacity up to 1000 M³/hr and capable to treat in Proportion to variable flow rate of water, automatically.
8. The Plant is capable to treat water as per its flow rate, automatically according to the operational schedule programmed in the logic controller & proportional dosing controller for complete one year.
9. The Electronic Chemical Infusing Device of the plant is covered with transparent glass jacket to prevent mishandling/ misuse. It offers up to 10 Kg/cm² injection pressure.
10. The Chemical Measuring Tank of the plant is of 200 / 400 Ltrs. capacity, made of Chemical Resistant Plastic material, suitable for corrosive chemical handling, fitted with standard fittings & accessories of P.P. material and Visual Level Indicator.
11. The Plant is based on the use of Sodium Hypochlorite Solution or similar chemical, conforming to IS: 11673-1992 to accomplish bacteriological treatment process (Chlorination) for disinfection of Drinking Water as per IS: 10500-2012.
12. The plant is provided with all safety factors to achieve its full-service life.
13. The controller of the plant offers multi-channel output facility to synchronize the operation of Electric Motor of pump house with the plant, if required.

TECHNICAL SPECS OF CBR-MMS's HMI:

Available Ports:

1. Serial Port

2. Ethernet Port

3. USB port (version. 2.0-1.1)

Power Supply System Resources:

1. Display - Colors 7" TFT 16:9 - 64K

2. Resolution 800x480, WVGA

3. Brightness 200 Cd/m² typ.

4. Dimming Yes

5. Touchscreen Resistive

6. CPU ARM Cortex-A8-1 GHz

7. Operating System Linux 3.12

8. Flash 4 GB

9. RAM 512 MB

10. Real Time Clock, RTC Back-up, Buzzer Yes

Interface:

1. Ethernet port 1 (port 0-10/100)

2. USB port 1 (Host v. 2.0, max. 500 mA)

3. Serial port 1 (RS-232, RS-485, RS-422, software configurable)

Power Ratings:

1. Power supply 24 Vde (10 to 32 Vde)

2. Current Consumption 0.3 A at 24 Vdc (max.)

3. Input Protection Automatic

4. Battery yes (Super capacitor)

Environment Conditions:

1. Operating Temp 0 to 50 °C (vertical installation)

2 Storage Temp -20°C to +70°C

3. Operating/Storage Humidity 5-85% RH, non-condensing

4. Protection Class IP66 (front), IP20 (rear) Type: 2, 4X

Approvals & Certifications:

1. CE
2. Emission EN 61000-6-4, Immunity EN 61000-6-2
3. for installation in industrial environments
4. Emission EN 61000-6-3, Immunity EN 61000-6-1
5. for installation in residential environments
6. UL cULus: UL508
7. UL cULus: Class 1 Div 2
8. ATEX Zone 2: II 3 G Ex ic ec IIC T6 Gc
9. DNV-GL Yes
10. EU RO MR Yes
11. RCM Yes SALIENT FEATURES OF CBR-MMS's HMI & SOFTWARE 1. 7" TFT widescreen (16:9) display with a fully dimmable LED backlight.

Salient Features Of Cbr-Mms's Hmi & Software:

1. 7" TFT widescreen (16:9) display with a fully dimmable LED backlight.
2. 800x480 pixel (WVGA) resolution, 64K colors
3. Resistive touchscreen
4. Ethernet port
5. USB port
6. Remote monitoring and control with Client-Server functionality.
7. Compatible with J-Mobile Studio.
8. Off-line and on-line simulation with J-Mobile Studio:
9. Full vector graphic support. Native support of SVG graphic objects, transparency and alpha blending
10. Screen object dynamics: control visibility and transparency, move, resize, rotate any object on screen. Change properties of basic and complex objects.
11. Multilanguage applications with TrueType fonts.
12. Easily create, install and maintain applications in multiple languages to meet global requirements. 13. Data display in numerical, text, bar graph, analog gauges and graphic image formats.

14. Rich set of state-of-the-art HMI features: data acquisition and logging, trend presentation, alarm handling, schedule and timed actions (daily and weekly schedulers, exception dates), recipes, security and user management, e-mail and RSS feeds.
15. VPN Based access to each location.
16. World wide Web Access to each location from phone/ipad/browser
17. Configurable from anywhere in the world
18. Multiple user access for remote view.
19. User based profile on basis of designation
20. ID & Password based profiles
21. VPN Software for Admin for remote view & control.

Tech Specs For Router:

1. Wireless Dual Band 4G LTE Router
2. 4G LTE network with multiple Wi-Fi devices
3. download speeds of up to 150 Mbps
4. Wi-Fi networks, with maximum speeds of up to 300 Mbps on the 2.4GHz band and 433 Mbps on the 5GHz band

Hardware Features

Interface	3x10/100Mbps LAN Ports, 1x 10/100Mbps LAN/WAN Port, 1x Micro SIM Card Slot
Button	WPS/RESET Button, Wi-Fi ON/OFF Button
External Power Supply	12V/1A
Antenna	2 Detachable External 4G LTE Antennas
Wireless Standards	IEEE 802.11a/n/ac 5 GHz, IEEE 802.11b/g/n 2.4 GHz
Frequency	2.4 GHz and 5 GHz
Signal Rate	300 Mbps at 2.4 GHz, 433 Mbps at 5 GHz
	5 GHz: 11a 54M: -78 dBm 11ac VHT20 MCS0: -92 dBm 11ac VHT20 MCS8: -72 dBm 11ac VHT40 MCS0: -90 dBm 11ac VHT40 MCS9: -67dBm

Reception Sensitivity	11ac VHT80 MCS0: -87 dBm 11ac VHT80 MCS9: -64dBm
	2.4 GHz: 11g 54M: -74 dBm 11 n HT20 MCS0: -91 dBm 11n HT20 MCS7: -72 dBm 11n HT40 MCS0: -88 dBm 11n HT40 MCS7: -69 dBm
Transmit Power	<20 dBm (2.4 GHz), <23 dBm (5 GHz)
Wireless Functions	Enable/Disable Wireless Radio, Wireless Schedule, WMM, Wireless Statistics.
WAN Failover	Yes
Wireless Security	64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK encryptions
Network Type	4G: FDD-LTE B1/B3/B7/B8/B20(2100/1800/2600/900/800 MHz), TDD-LTE B38/B40/B41 (2600/2300/2500 MHz) 3G: DC-HSPA+/HSPA+/HSPA/UMTS BI/BS (2100/900MHz)

Software Features:

Quality of Service	Prioritizes network traffic by device or application
Operating Modes	3G/4G Router, Wireless Router
WAN Type	Dynamic IP/Static IP/PPPoE/PPTP(Dual Access)/L2TP(Dual Access)
Management	Access Control, Local Management, Remote Management, reboot schedule
DHCP	Server, DHCP Client List, Address Reservation
Port Forwarding	Virtual Server, Port Triggering, UPnP, DMZ
Dynamic DNS	DynDns, NO-IP, TP-Link DDNS

Access Control:

Firewall Security	DoS, SPI Firewall, IP and MAC Address Binding
Protocols	Supports IPv4 and IPv6
Guest Network	2.4GHz guest network x 1, 5GHz guest network x 1

VPN Server	PPTP VPN, OpenVPN
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OTHERS:

Certification	Certification CE, RoHS
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The Plc Offers The Following Operative Sequences:

1. Memory is 2 G.Bytes.
2. On line monitoring facility with LED display & provision to check and modify the programmes.
3. Capable to store up more than 100 programs at a time for complete One year.
4. Provision for indication when memories are full.
5. Capable to program the Operation of the E.C.L.D. to function automatically.
6. Capable to program 'Six' operational schedules on a single Channel in a day.
7. Offers minimum two channels out-put or more, switched either manually or automatically, independently or simultaneously. LED display for Daily, Weekly, Date-wise, Monthly & Yearly.
8. Facility to by-pass the keypad for synchronization to be incorporated.
9. Special Locking facility is incorporated to prevent misuse & circumvention of Program.
10. Time compensation for present program in case of power failure is provided.
11. Facility of LED display to indicate HI & LO status of chemical in the Tank.
12. Facility to by-pass level indicator for direct control of ECID.
13. Annunciation facility to sound an alarm for refilling of chemical with "MutingFacility"
14. Remote intermittent annunciation facility is provided.
15. C. Voltmeter to indicate actual mains In-Put.
16. In-built Voltage controller
17. Battery back-up with automatic recharging arrangement
18. Pilot lamp to indicate ON/OFF status of the system.
19. Provision for real time clock setting & display with leap year programming.

20. Facility to clear all memory.
21. Water-flow sensing system.
22. Facility to modify next day's program without disturbing present day's program.
23. Proportional Dosing Control System.

Operational Safety Factors Of The Plant:

1. The Plant is provided with miniature circuit breaker & fuse for protection against voltage fluctuation.
2. The programmable controller is provided with SMPS technology to facilitate the operation of the plant in voltage range from 110 volt to 270 volts.
3. It is provided with fuse wire to protect against any electrical short-circuiting.
4. Controller is provided with individual circuits to avoid any interference of H.T. voltage with any other supply to avoid any damage & malfunctioning.
5. Controller is provided with lock and key facility to prevent intervention/ circumvention of the operation of the plant:
6. The controller is provided with an exhaust fan to keep the controller in constant cool condition, during Summer Season.
7. The controller is covered with transparent Acrylic Covers to protect against dust and other foreign particles.
8. The chemical measuring tank of the plant is coated with Bisphenol resin system, a chemical resistant compound to prevent leakage/seepage caused by corrosive chemical.
9. The chemical measuring tank is fitted with polypropylene material valves and other fitting to avoid corrosion.
10. The electronic chemical infusing device is provided with a fuse to prevent any damage caused by electrical short-circuiting or voltage fluctuation.
11. The Electronic Chemical Infusing device is covered with transparent acrylic plate to protect against any mishandling/misuse of the unit.
12. Electronic constant level system is provided for the protection against dry running of the Electrode chemical Infusing Device with the aid of constant level sensing.
13. Electronic Chemical Infusing Device is provided with facility to de-pressurize the discharge line in wake of sudden increase of line pressure.

2. SCOPE OF WORK:

The contractor shall be responsible for day-to-day operation of the treatment system including but not limited to:

2.1 Continuous operation and monitoring of the PLC-based automatic bacteriological treatment plant. 2.2 Calibration, setting and programming of PLC system for accurate dosing and treatment cycles.

2.3 Operation of all chemical dosing systems including chemical measuring tanks, electronic chemical infusion devices, and dosing pumps.

2.4 Monitoring and control of Online Comprehensive Analyzer for parameters such as:

Residual Chlorine

pH

Turbidity

Flow rate and pressure

2.5 Operation of GSM modem and MMS system for real-time data transmission, alarm notifications and remote monitoring.

2.6 Adjustment of chemical dosing as per water flow variations and quality requirements.

2.7 Ensuring bacteriological treatment dosage as per IS / CPHEEO standards.

2.8 Maintenance of logbooks, registers, MMS reports and performance records.

2.9 Immediate response to system alarms, fault indications and breakdown scenarios.

3. COMPREHENSIVE MAINTENANCE SCOPE:

The work shall include complete preventive, routine and breakdown maintenance of all components of the system.

3.1 Mechanical Maintenance

Maintenance of dosing pumps, Inspection, alignment and lubrication of pumps and rotating equipment.

Overhauling and replacement of worn-out mechanical parts. Maintenance of valves, pipes, fittings, NRVs, flow meters. Cleaning of chemical tanks and pipelines to avoid clogging.

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3.2 Electrical Maintenance

Maintenance of panels, control panels, PLC panels and distribution boards. Checking and tightening of electrical connections, terminations and cable glands. Inspection of contactors, relays, MCBs, MCCBs and protection devices. Insulation resistance testing and earthing checks. Replacement of damaged wiring and electrical accessories.

3.3 Instrumentation & Automation

Calibration and maintenance of:

- Online analysers
- Sensors and probes
- Flow transmitters
- Level sensors
- PLC troubleshooting, software updates and parameter tuning.
- MMS system health monitoring and backup management.
- Maintenance of GSM modem, SIM cards and communication network.

3.4 Chemical Handling System

- Operation and maintenance of 200 Litres chemical measuring tanks.
- Maintenance of dosing lines and injection points.
- Cleaning and servicing of chemical infusion devices.
- Replacement of damaged tubing, hoses, nozzles and dosing accessories.
- Leak detection and correction.

4. Preventive Maintenance Schedule

- The contractor shall prepare and follow a structured preventive maintenance plan including:
- Daily inspection of equipment and performance parameters
- Weekly inspection of pumps, analyzers and dosing system
- Monthly calibration of sensors and online analyzers
- Quarterly inspection of panels and electrical systems
- Half-yearly servicing of mechanical equipment

- Maintenance checklist and records shall be submitted to the Engineer-in-Charge.

5. Breakdown Maintenance

- Attending all breakdowns within 8 hours of intimation.
- Replacement or repair of faulty components within minimum downtime.
- Supply and installation of genuine spare parts.
- Emergency response during system failures.
- Root cause analysis and corrective action report for major failures.

6. Manpower Requirement

- Contractor shall deploy qualified and experienced personnel for time to time deployment as per specific requirement for repair/ maintenance/ servicing including:
 - Plant Operator – Skilled
 - Electrician – Skilled
 - Instrumentation Technician
 - Supervisor / Site Engineer

All personnel shall be trained in handling bacteriological treatment systems, safety procedures and PLC operations.

7. Supply of Spares & Consumables

The contractor shall supply all consumables and spare parts as per site requirement including but not limited to:

- Dosing pump spares
- Sensor probes
- Tubing and pipes
- Valves and fittings
- Electrical accessories
- Fuses, relays, contactors
- PLC modules and communication units
- And other necessary material.

All spares shall be genuine and approved.

8. Chemical Supply & Handling

- Regular supply of treatment chemicals as per requirement.
- Safe storage and transportation of chemicals.
- Compliance with safety regulations.
- Use of personal protective equipment (PPE).

9. Health, Safety & Environment

- Compliance with statutory safety norms.
- Training for staff on chemical handling and emergency procedures.
- Spill management and containment system.
- Safe disposal of waste and chemical residues.

10. Documentation & Reporting

The contractor shall provide:

- Operational log sheets
- Monthly performance report
- Breakdown & maintenance reports
- Water quality analysis reports
- MMS data reports

11. Performance Guarantee

- Ensure continuous operation with minimum downtime.
- Maintain treated water quality within prescribed limits.
- Minimum period for breakdowns.

12. Exclusions (if any)

To be clearly defined, such as civil structural repairs beyond normal wear and tear due to vandalism or force majeure.

13. Contract Duration

O&M contract period shall be for 20 months, extendable as per corporation requirement.

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14. Compliance

All operation and maintenance shall adhere to:

- CPHEEO Manual
- BIS Standards
- MPCB Guidelines
- OEM Instructions

This Scope of Work shall be considered inclusive of complete operational responsibility to keep the MMS Integrated PLC-Based Automatic Bacteriological Treatment Plant in perfect 24 x 7 working condition throughout the contract period.

15. Enhanced Technical Scope – OEM Level Requirements

15.1 PLC & Control System

- Detailed configuration, diagnostics and health monitoring of PLC CPU, I/O modules, communication cards and power supply units.
- Verification and optimization of auto/manual override functions.
- Configuration of alarm thresholds, dosing logic and treatment cycle sequences.
- Data logging configuration for minimum 30 days online and 1 year offline backup.
- Firmware updates and software patch management as per OEM recommendations.

15.2 Online Analyzer System – Technical Performance

Analyzer accuracy tolerance:

- Residual Chlorine: ± 0.05 mg/L
- Auto-cleaning and manual cleaning protocol implementation.

15.3 Dosing System Performance

- Flow-proportional dosing synchronization with water flow sensor.
- Automatic shut-off for overdosing/underdosing conditions.

15.4 Electrical System Standards

- All electrical works shall comply with IS 732, IS 3043 and CEA safety regulations.

15.5 Communication & MMS System

- 24x7 connectivity verification to central dashboard/server.
- SMS/email alert configuration for critical parameters.

16. Detailed Preventive Maintenance Matrix (Expanded & Technical)

The contractor shall strictly adhere to the following preventive maintenance schedule to ensure uninterrupted and efficient operation of the MMS Integrated PLC-Based Automatic Bacteriological Treatment Plant:

Sr No	Equipment / System	Maintenance	Frequency	Standard / Method	Responsibility
1	PLC Panel	Check CPU health, I/O status, error logs	Monthly	OEM Diagnostic Tool	Automation Engineer
2	PLC Software	Backup of program & configuration	Monthly	External Storage + Cloud	Automation Engineer
3	Online Analyzer	Calibration with standard solution	Monthly	OEM Calibration Protocol	Instrument Technician
4	Analyzer Probes	Cleaning & membrane inspection	Fortnightly	OEM Cleaning Kit	Operator
5	Flow Sensor	Accuracy verification	Standard	Flow	Instrument

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		Monthly		Comparator	Technician
6	Dosing Pumps	Stroke adjustment & performance test	Weekly	Flow Output Test	Mechanical Technician
7	Chemical Tanks	Cleaning & sediment removal	Monthly	Manual + Chemical Wash	Operator
8	Injection Nozzles	Blockage inspection	Weekly	Visual + Pressure Test	Operator
9	Electrical Panels	Tightening of terminals & thermal scan	Quarterly	IR Camera	Electrician
10	MCC/DB	Insulation resistance test	Half-Yearly	Megger Testing	Electrician
11	GSM Modem	Signal strength & connectivity check	Monthly	Network Diagnostic Test	IT / Technician
12	MMS Dashboard	Data integrity verification	Monthly	Random Sampling Audit	Supervisor
13	Entire System	Mock fault simulation & response test	Quarterly	Emergency Drill	Site Engineer

All preventive maintenance records shall be documented and submitted monthly with certification by the Engineer-in-Charge. Non-compliance shall be treated as breach of contract conditions.

17. Specification for Supply & Filling of CALFIX (Grade A-Technical) / Sodium Hypochlorite Solution

17.1 Scope

The contractor shall supply, transport, store, handle and fill CALFIX (Grade A-Technical) or Sodium Hypochlorite-based chemical solution in the chemical measuring tank of the MMS Integrated PLC-Based Automatic Bacteriological Treatment Plant for effective disinfection of drinking water, including all required manpower, tools, safety arrangements and testing.

17.2 Chemical Technical Specifications

The chemical shall strictly comply with the following standards:

A. Sodium Hypochlorite Solution

- Available Chlorine Content: as per IS 11673 for drinking water treatment
- Appearance: Clear, pale yellow liquid
- Specific Gravity: 1.18 – 1.22
- Shelf Life: Minimum 30 days from date of supply
- Compliance Standard: IS 11673 / AWWA / CPHEEO Guidelines

B. CALFIX (Grade A – Technical)

- Available Chlorine Content as per OEM specification.
- Conforming to IS 11673 standards for drinking water treatment
- Shelf Life: Minimum 30 days from date of supply

17.3 Quantity & Dosage Control

- Dosing shall be as per flow rate and calculated to maintain residual chlorine of 0.2 – 0.5 mg/L at consumer end.
- Contractor shall adjust dosing via PLC according to treated water flow and quality.
- Overdosing or underdosing shall be strictly avoided.

17.4 Filling & Handling Procedure

- Filling of chemical solution shall be carried out in 200 Ltr chemical measuring tank or as installed capacity.
- Filling shall be done only by trained personnel using PPE.
- Tank cleaning prior to refilling shall be mandatory.
- Spill containment arrangements shall be provided.

17.5 Storage Requirements

- Chemical shall be stored at provided place in cool, shaded and ventilated area.
- Storage area shall be away from direct sunlight and heat sources.
- Containers shall be corrosion-resistant and properly labelled.

17.6 Quality Testing & Certification

- Contractor shall submit batch-wise test certificates from OEM/ approved laboratory.
- Rejected chemical shall be replaced immediately at contractor cost.

17.7 Manpower Deployment

- Skilled operator for chemical handling
- Trained helper for carrying and filling
- Safety supervisor during filling operations

All personnel must be trained in:

- Chemical handling procedures
- Emergency response
- Spill control techniques

17.8 Safety & Environmental Compliance

- Supply of safety equipment including gloves, goggles, masks, aprons and safety shoes.
- Provision of eyewash station and neutralizing agents at site.
- Disposal of empty containers as per Pollution Control Board norms.

17.9 Measurement & Payment

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- Measurement shall be on actual liters/kg supplied at respective site.
- Payment shall include cost of chemical, transport, loading, unloading, filling, testing and manpower.
- Payment against comprehensive maintenance & supervision shall be done on monthly basis.

This specification shall be integral part of comprehensive O&M tender and treated as mandatory scope under chemical disinfection system.

18. Payment Terms

Payment shall be made on a monthly basis for chemical supply and plant maintenance as per supply quantity and certification by Engineer-in-Charge.

19. Performance Benchmarks

Parameter	Required Standard
System Uptime	90% minimum
Residual Chlorine	0.2 – 0.5 mg/L
Response Time to Breakdown	Max 8 Hours

DECLARATION

DECLARATION

I hereby declare that I have made myself thoroughly conversant with the local conditions regarding all materials and other expenses such as cylinder, transportation, vehicles, fuel cost, octroi, availability of water etc. and labour on which I have based my rates for this work. The specifications and requirements for this work have been carefully studied and understood by me before submitting the tender. I undertake to use only the best materials, to be approved by the Engineer-in-charge if the work or his duly authorized representative before starting the work and also to abide by his decision.

I hereby undertake to pay the labour engaged on the work as per minimum wages Act 1984 applicable to the zone concerned or any other as applicable.

Contractor's Signature