#### Administration of UT of Daman & Diu., Office of the Directorate, Medical & Public Health Department, "Tel.No.0260-2230470, 2231700" File No.DMN/HLTH/GEM/MISC/7/2019/DIR DMHS

Date:-24.09.19

#### **E-Tender Notice**

The Director of Medical and Health Services, Daman & Diu on behalf of President of India, invites on line tender on <u>https://ddtenders.gov.in</u> from the Manufactures / Authorized Dealers / Suppliers for End user drinking water survey for Daman district under DMHS Daman.

Sr. No	Particulars	Estimat ed Cost	(E.M.D.) Earnest Money Deposit	Tender Fees (Non- Refundable)	e-Tender ID No.
1	End user Drinking water survey [sampling and testing] as per IS 10500:2012 Guidelines of all Public Drinking Water Sources in Daman	Rs.6.75 Lacs	Rs.17,000/-	Rs.2,000/-	2019_DAMA N_538

Bidders have to submit Technical Bid and Price Bid in Electronic format only on <u>https://ddtenders.gov.in</u> website till the last date and time for submission. Technical Bid and Price Bid in Physical format shall not be accepted in any case.

Bid submission should be done along with tender Fees and EMD in original by R.P.A.D./Speed Post or to be deposited in the tender box kept in the office of the undersigned. However, Tender Inviting Authority shall not be responsible for any postal delay. Tenders can be downloaded from <u>https://ddtenders.gov.in</u>, www.daman.nic.in

- 1. The EMD and Tender Fees should not be forwarded by cash.
- 2. The Tender Fees will be accepted only in form of DD of any Nationalized or Scheduled Bank of India payable in Daman.
- The EMD will be accepted in form of FDR /A/c Payee Demand Draft / Bankers Cheque or Bank Guarantee from any Commercial Banks in an acceptable form payable at Daman in favor of under signed.

The tender inviting authority reserves the right to accept or reject any or all the tender to be received without assigning any reasons thereof. Bidders shall have to post their queries on E-Mail address: <u>dmhs-daman-dd@nic.in</u>.

In case bidder needs any clarification or if training required for participating in online tender, they can contact the following office.

For any technical related queries please call at 24 x 7 Help Desk Number 0120-4200462, 0120-4001002, 0120-4001005,0120-6277787. International Bidders are requested to prefix 91 as country code.

Note- Bidders are requested to kindly mention the URL of the Portal and Tender Id in the subject while emailing any issue along with the Contact details. For any issues/ clarifications relating to the tender(s) published kindly contact the respective Tender Inviting Authority.

0120-4200462, 0120-4001002, 0120-4001005, 0120-6277787.

E-Mail: support-eproc[at]nic[dot]in

#### *Sd/-*Director Medical & Health Services/ UT of Daman & Diu, "Tel.No.0260-2230470" email ID : dmhs-daman-dd@nic.in

Copy to :-

Tel:

- 1) Field Publicity Officer, Daman for wide publicity in Newspaper.
- 2) NIC, Daman & Diu with a request to publish in Website.
- 3) Accounts Section, DMHS, Daman for information.
- 4) Store Dept, DMHS, Daman for information.
- 5) P&T Department, DMHS, Daman for information.

# U.T. ADMINISTRATION OF DAMAN & DIU, OFFICE OF THE DIRECTOR, MEDICAL AND HEALTH SERVICES, DAMAN

Terms and Conditions for the "End user drinking water survey for Daman district under DMHS Daman under DMHS Daman."

## \* <u>Instructions to Bidders</u> :

- 1) All Tender Documents can be downloaded free from the website <u>https://ddtenders.gov.in</u>
- 2) All bids should be submitted online on the website <u>https://ddtenders.gov.in</u>
- 3) The user can get a copy of instructions to online participation from the website <u>https://ddtenders.gov.in</u>
- 4) The suppliers should register on the website through the "New Supplier" link provided at the home page, the registration on the site should not be taken as registration or empanelment or any other form of registration with the tendering authority.
- 5) The application for training and issue of digital signature certificates should be made at least 72 hours in advance to the due date and time of tender submission.
- 6) For all queries regarding tender specifications and any other clauses included in the tender document should be addressed to personnel in tendering office address provided below:

The Director Medical & Health Services, Primary Health Centre, Moti Daman, Daman - 396220. Tel: 0260-2230570, 2230508.

- 9) All documents scanned/attached should be legible / readable. A hard copy of the same may be send which the department will be use if required. Uploading the required documents in <u>https://ddtenders.gov.in</u> is essential.
- 10) The Bidder has to give compliance for each quoted product for any false / Misleading statement in compliance found any time during the procurement process, the bid shall be out rightly rejected & EMD shall be forfeited.

## Keydates:

Bid document downloading Start Date	:	26 <b>.09.2019</b>
Bid document downloading End Date	:	16.10.2019, 14:00 Hrs.
Last Date & Time for receipt of Bid	:	16.10.2019, 14.00 Hrs.
Preliminary Stage Bid Opening Date	:	16.10.2019, 15.00 Hrs.
Technical Stage Bid Opening Date	:	16 <b>.10.2019, 15.30 Hrs</b> .

The Tenders shall be submitted in two-bid system, wherein the Technical bid and Commercial Bid is to be filled online on <u>https://ddtenders.gov.in</u> and the EMD and Tender Fee has to be submitted in Tender Box along with a covering letter. The envelope should be super scribing as "e-Tender - Sealed Cover of Bid for "End user drinking water survey for Daman district under DMHS Daman."

## The EMD and Tender Fees should be enclosed with BID only.

## Tender Fees (Non Refundable) Rs.2,000/- :

- a. The Tender Fees should not be forwarded by cash.
- b. The Tender Fees (Non-Refundable) will be accepted only in form of DD/A/c payee in favor of **The Director of Medical & Health Services, Daman** from any Nationalized or Scheduled Bank of India payable in Daman.
- c. All tenders must be accompanied by Tender fees as specified in schedule otherwise tender will be rejected.

# Earnest Money Deposit Rs.17,000/-:

- a. All tenders must be accompanied by EMD as specified in schedule otherwise tender will be rejected.
- b. The manufacturing units who are placed in Daman are exempted for Earnest Money Deposit. For getting exemption, tenderers have to furnish valid and certified documents along with the tender, otherwise tender will be rejected.
- c. Any firm desires to consider exemption from payment of Earnest Money Deposit, valid and certified copies of its Registration with D.G.S. & D. should be attached to their tenders.
- d. EMD can be paid in either of the form of following:
  - i. A/c Payee Demand Draft
  - ii. Fixed Deposit Receipts

In favor of **The Director of Medical & Health Services, Daman** from any Nationalized or Scheduled Bank authorized by RBI to undertake Government Business.

- e. EMD should be valid upto 12 (Twelve Months) from the date of its issuance.
- f. EMD in any other forms will not be accepted.
- g. EMD/Security Deposit shall be liable to be forfeited in following circumstances:
  - i. Tender is rejected due to failure of supply the requisite documents in proper format or giving any misleading statement or submission of false affidavit or fabricated documents.
  - ii. In case, the contractor does not execute the supply order placed with him within stipulated time, the EMD of the contractor will be forfeited to the Government and the contract for the supply shall terminated with no further liabilities on either party to the contract.
  - iii. Tenderer fails to replace the goods declared to be not of standard quality or not conforming to acceptable standards or found to be decayed/spoilt.
- h. The amount of Earnest Money paid by the tenderer(s) whose tenders are not accepted will be refunded to them by Demand Draft (as may be convenient to the Tender Inviting Officer if the amount is above Rs.200/-) drawn on any Nationalized or Scheduled Bank payable at Daman. Where this mode of payment is not possible the amount will be refunded at the cost of the tenderer.
- i. Only on satisfactory completion of the supply order for and on payment of all bills of the contractor, as to be admitted for payment, the amount of Security Deposit/Earnest Money will be refunded after expiry of guarantee/warranty period, if any, or any such date/period as may be mutually agreed upon.

- j. In case of failure to supply the store, materials etc. ordered for, as per conditions and within the stipulated time, the name articles will be obtained from the tenderer who offered next higher rates or from any other sources, as may be decided by the tender inviting Officer and the loss to the Government on account of such purchases(s) shall be recovered from the former contractor Security Deposit/Earnest Money or bills payable. The contractor shall have no right to dispute with such procedure.
- k. The Earnest Money(s) paid by the tender(s) earlier against any tender(s) or supply order(s) is not adjustable with Earnest Money required by these conditions.

## Security Deposit: (SD)

- a. The successful tenderer will have to pay within 10 days from the date of demand, an amount equal to 10% of the total value of articles, which may be ordered, as the amount of security deposit.
- b. Non-receipt of Security Deposit within stipulated time will result in automatic cancellation of the order for supply without any intimation.
- c. However, in case if any articles are received for which the Security Deposit may not have been deposited, the full Security Deposit as may be due from the contractor will be recovered from the bill(s) for such articles.
- d. The Security Deposit(s) paid by the tender(s) earlier against any tender(s) or supply order(s) is not adjustable with Security Deposit required by these conditions.
- e. In case of failure to replace the accepted and rejected articles from the supplies made, as mentioned in the conditions the loss undergone by the Government will be recovered from the contractor Security Deposit or payment due of any bill(s) to the extend required.
- f. The tender inviting officer will consider extension of time for remitting the Security Deposit as demanded. However, in case of denial to consider such extension the contractor is bound to abide by the limit given and liable to make good for the loss made to the Government on account of his failure to abide by the time limit.

## \* <u>Conditions of Contract</u>:

## **1. ACCEPTANCE OF TENDER:**

- a. The tender is liable for rejection due to any of the reasons mentioned below:
  - i. Non-Submission of tender within stipulated time online.
  - ii. Submission of tender physically in the Office but not submitted online on <u>https://ddtenders.gov.in</u>
  - iii. Tender is unsigned or not initialed on each page or with unauthenticated corrections.
  - iv. Non-payment of Earnest Money Deposit (if not exempted).
  - v. Non-Submission of required documents as mentioned in schedule.
  - vi. Conditional/vague offers.
  - vii. Unsatisfactory past performance of the tenderer.
  - viii. Items with major changes/deviations in specifications/ standard/ grade/ packing/ quality offered.
  - ix. Offering an accessory optional even though required to operate the instrument.
  - x. Submission of misleading/contradictory/false statement or information and fabricated/ invalid documents.
  - xi. Tenders not filled up properly.
- b. Any discount which the bidder wants to give has to be considered and total final bid amount has to be mentioned clearly in the price bid form on <u>https://ddtenders.gov.in</u>

- c. Discount offered after price bid opening will not be considered.
- d. The consolidated rates entered in the online website will be taken in to account for preparing price statements. However, the tender which is found technically acceptable as well as lowest in terms of evaluated rates only be considered for placing the order.
- e. The Director, Medical and Health Services may seek any clarifications / explanation / documentary evidence related to offer at any stage from tenderers if required.
- f. The rate should be quoted in the prescribed form given by the department; the rate should be valid upto One Year from the date of tenderization.
- g. All/Taxes/Duties/Royalties Charges payable on the sales/transport etc. within and/or outside the state shall be payable by the supplier.
- h. The decision of the Tender Inviting Officer for acceptance/rejection of any articles supplied including the decision for equivalent specifications, standard and quality etc. of articles shall be final.
- i. The right to accept or reject without assigning any reasons or all tenders in part or whole is reserved with the Tender Inviting Officer and his decision(s) on all matters relating to acceptance or rejection of the tenders as a whole or in part will be final and binding to all.
- j. No separate agreement will be required to be signed by the successful tender(s) for the purpose of this contract for supply. Rates tendered/offered in response to the concerned Tender Notice shall be considered as acceptance of all above terms and conditions for supply for all legal purpose.
- k. The rate(s) quoted should be strictly for free delivery at FOR CHC/PHC Moti Daman and Govt Hospital Daman and will be valid and operative for supply orders issued within one year from the date of invitation of tenders.
- 1. The department shall not take any responsibility of unloading the goods; the successful bidder has to make arrangements for unloading at the site.
- m. Bidder / its sister concerns / companies where its Promoters / Directors either directly or indirectly are involved, should not have ever been blacklisted in tender / supplies by any state/Central Govt . Bidder should submit affidavit in this regard. The bidder should provide accurate information of litigation or arbitration resulting from contracts completed or under execution by him over the last ten years. False affidavit would lead to blacklisting and termination of the contract at any stage. In such cases all the losses that will arise out of this issue will be recovered from the Tenderer / Contractor and he will not have any defence for the same. In case of bidder / principal is involved / penalized under any investigation of CVC or any State/Central Govt. Commission in relation to the similar work project issue; the bid will be out rightly rejected.
- n. The tendered quantity is tentative and the actual purchase can be 20% Less or More than the quantity put to tender for all items and the tenderer is bond to supply such requirement without any demur.

# 2. TERMS OF WORK EXECUTION:

- a. Extension of time limit of work order shall be considered by the Tender Inviting Officer. The extension so granted may be without levy of compensation for delay in execution of work the cost of work order for at the discretion of the authority competent to grant extension of time limit provided such request is made well in time, depending upon the circumstances and such decision in the matter will be final.
- b. Inspection will be carried out in the premises of DMHS. If goods to be inspected in factory premises all expenditure to be borne by the Tenderer.

## 3. <u>Bid Evaluation Methodology</u> :

A. <u>Preliminary Evaluation</u>: Tender Fee and EMD Submission.

# B. <u>Technical Evaluation</u>:

- Scrutiny of technical specifications and other relevant documents as asked by the department with the quoted specification.
- Scrutiny of Compliance Statement given by the bidder.
- Technical Demonstration if required.
- C. <u>Financial Evaluation</u>: Lowest quoted offered by Technically Qualified Bidders

# 4. **PAYMENT TERMS** :

- a. 100% of the invoice amount will be paid only after competition of work successfully and submission of Security deposit i.e. 10% of the tender value.
- b. Price escalation clause will not be entertained under any circumstances.
- c. All bills should be in **TRIPLICATE** and should invariably mention the number and date of work order.
- d. All bills for amount above Rs.5,000/- should be pre-receipted on a Revenue Stamp of proper value. Bills for amount exceeding Rs.5,000/- not pre-receipted on Revenue Stamp of proper value will not be accepted for payment.
- e. Each bill in which Service Tax is charged must contain the following certificates on the body of the bill: "CERTIFIED" that the service on which Service Tax has been charged have not been exempted under the Central Service Tax Act or the

Rules made there under and the amount charged on account of Service Tax on these service is not more than what is payable under the provisions of relevant Act or Rules made there under".

- f. No extra charge for transportation, forwarding and insurance etc. will be paid on the rates quoted.
- g. The rates should be quoted only for the work specified in the list of requirements.

Signature of Agency With Rubber Stamp

> Sd/-Director Medical & Health Services Daman & Diu "Tel.No.0260-2230570, 2230508"

## **INTRODUCTION**:

- 1. Water is a fundamental human need.
  - Safe and readily available water is important for public health. Whether it is used for drinking system, domestic use, food production or recreational purpose. Improved water supply and sanitation with better management of water resources, can boost country's economic growth and can contribute greatly to poverty reduction.
  - The provision of an adequate supply of safe water was one of the major components of primary health care. In most countries, the risk to human health associated with consumption of polluted water are microbiological in nature. An estimated 80% of all disease are due to the contaminated water.
  - The risk of acquiring a water borne infection increase with the level of contamination by pathogenic micro organisms. In Dadra and Nagar Haveli region majority source of drinkable water is from ground water.
  - Ground water quality is dependent on weather conditions also. In summer, the growth of the micro organisms are very fast. If ground water will be contaminated with micro organisms, the supply chain is also affected.
  - Primarily we are disinfecting the water at storage and distribute the safe, decontaminated drinking water. Due to the leakages and other reasons the water is also contaminated during distribution channel and it is vital to check the quality at consumer end.
  - Water quality testing is important because it identifies contaminants and prevents water-borne diseases.
  - Essentially, water quality testing makes sure that water is safe and meets local and international water standards. This type of testing can be completed using water sampling techniques and using technology to estimate the amount and level of chemicals. All water for human and animal use should be tested for safety and quality.
  - Microbial aspects: Securing the microbial safety of drinking-water supplies is based on the use of multiple barriers, from catchment to consumer, to prevent the contamination of drinking-water or to reduce contamination to levels not injurious to health. Safety is increased if multiple barriers are in place, including protection of water resources, proper selection and operation of a series of treatment steps and management of distribution systems (piped or otherwise) to maintain and protect treated water quality.
  - Chemical aspects: The health concerns associated with chemical constituents of drinking-water differ from those associated with microbial contamination and arise primarily from the ability of chemical constituents to cause adverse health effects after prolonged periods of exposure. There are few chemical constituents of water that can lead to health problems resulting from a single exposure, except through massive accidental contamination of a drinking-water supply. Moreover, experience shows that in many, but not all, such incidents, the water becomes undrinkable owing to unacceptable taste, odour and appearance.
  - In situations where short-term exposure is not likely to lead to health impairment, it is often most effective to concentrate the available resources for remedial action on finding and eliminating the source of contamination, rather than on installing expensive drinking-water treatment for the removal of the chemical constituent. There are many chemicals that may occur in drinking-water; however, only a few are of immediate health concern in any given circumstance. The priority given to both monitoring and remedial action for chemical contaminants in drinking-water

should be managed to ensure that scarce resources are not unnecessarily directed towards those of little or no health concern.

- 2. Medical & Health Services now invites eligible agencies / firms to indicate their interest in providing the Services. Interested agencies / firms must provide supporting document pertaining to the pre-qualification criteria for the assignment specified in Annexure I. Consultants may associate to enhance their qualifications. [Such an "Association" may take the form of a joint venture (with joint and several liability) or of a sub-consultancy]. More specifically, such consultancy firms must provide information pertaining to (A) Name, address, fax/email of Firms along with ownership and organizational structure of the firm; (B) List of major assignments /studies undertaken with special emphasis on similar studies completed in recent years.
- 3. Agencies / firms will be evaluated in accordance with the qualification criteria. Detailed tender document will be issued to qualified bidders as per the prequalification criteria
- 4. Interested Agencies / firms may obtain further information at the address given below from 11:00 AM to 5 PM on any working day.
- 5. The E-Tender with the accompanying supporting document as per the Performa for Tender should be submitted for the evaluation should be uploaded on <u>https://ddtenders.gov.in</u> and should reach the Director, Medical & Health Services latest by . up to PM.
- 6. Time allowed for completion of work shall be 12 months from the date of written order to commence the work.
- 7. Not more than one Tender shall be submitted by agencies or by a firm.
- 8. No two or more concerns in which an individual is interested as proprietor and/or partner shall submit offer against this invitation. If they do so, all such offer shall be liable to be rejected.
- 9. The officer competent to sanction the pre-qualification / short listing as per Govt. rule shall be accepting officer hereinafter referred to as such for the purpose of this pre-qualification work.
- 10. Tender documents can be downloaded from https://ddtenders.gov.in

# ANNEXURE - I

## **TENDERS PRE-QUALIFICATION CRITERIA**

Name of Division : Director, Medical & Health Services UT of Daman and Diu.

Name of Work : End user Drinking water survey [sampling and testing] as per IS 10500:2012 Guidelines of all Public Drinking Water Sources in Daman & Diu"

## A Criteria for evaluation of bid.

- 1. Bidder should have specific experience in the same 10000 sources in a single year within last five years for any Government Department or undertaking in India. The bidders shall demonstrate their capability with details of relevant completion certificate of the same nature of work from competent authority not below the rank of Executive Engineer. Emphasis will be given on the relevance of projects to the assignment, comparable size, complexity.
- 2. The bidder should have completed single work of value at least Rs 50 lakhs for any government department in India in last ten years. Failure to provide proof will invite disqualification of the concerned bid.
- 3. Bidder should have financial turnover not less than Rs. 50 lakhs, in each year during the last three years ending 2014. The bidder should have a positive net worth.
- 4. Valid ISO 17025:2017 accreditation along with FSSAI recognition also, laboratory must be recognized by MoEF.
- 5. Bidder should have sufficient qualified staff for the same assignment to carry out the work.
- 6. The agencies shall provide list of equipments available with them and also which will be procured by them and used by them for this work.

## **B** Details of Documents to be submitted against qualification criteria

S.No.	Clause	Documents Required
1	Tender Fees, EMD	Copy to be uploaded
2	PAN No, GST	Copy of Pan and GST
1	Bidder should have specific experience in the same Work of water Quality testing and GPS mapping which shall not be less than of 10,000 sources in a last five years within last three years for any Government Department or undertaking in India.	Copy of work order from competent authority not below the rank of Executive Engineer to be attached
2	The bidder should have completed single work of value at least Rs 10 lakhs for any government department or undertaking Failure to provide proof will invite disqualification of the concerned bid.	Copy of work order from competent authority not below the rank of Executive Engineer to be attached.
3	Bidder should have Financial turnover not less than Rs. 10 Lakhs, in each year during the last three years ending 2019. The bidder should have a positive net worth.	Copy Audited profit & loss account statement and Balance Sheet of the Company showing turnover of the company for the last three years
4	Bidder should ISO 17025:2017 accreditation along with FSSAI recognition also, laboratory must be recognized by MoEF.	Copy Valid certificates to be attached.
5	Bidder should have sufficient qualified staff for the same assignment and required software's, instruments, hardware, and laboratories, to carry out the work.	The evidence shall consist of written details and documents of the infrastructure facilities of the bidder
6	The bidder should be a company registered under the companies act 1956 or a	Certificate of registration/ Certificate of Incorporation/Memorandum and

	Registered society working in the relevant field and should have been in this business for a period exceeding three years as on submission date.	Articles of Association should also be attached.
7	Company should have their office in UT of Daman & Diu/Gujarat or Maharashtra. However if the local presence is not there in the UT, the selected bidder should give an undertaking for establishment of an office in the UT within 1 month of award of the contract.	Relevant Document or Undertaking signed by the Authorized Signatory
8	The bidder shall not be under a declaration of ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government agencies for which a Declaration by the authorized signatory of the vendor should be attached.	Declaration in this regard by the authorized signatory of the bidder, duly notarized on a stamp paper of Rs. 100/- should be attached.

Signature & Designation of Tender Inviting Officer...

## Sd/-Director Medical & Health Services/ UT of Daman & Diu, "Tel.No.0260-2230470" email ID : dmhs-daman-dd@nic.in

The above terms and conditions are accepted and are binding to me/us.

Place: Dated: Signature of tenderer Name of tenderer with seal of the firm

## SPECIFICATION AND SCOPE OF WORK

Name of Division: Director, Medical & Health Services

Name of Work: Consumer End Drinking water survey [sampling and testing] as per IS 10500:201 Guidelines of all Public Drinking Water Sources in Daman & Diu"

#### Main Scope of Work

Groundwater is one of the most important sources of drinking water and is scarce; hence its conservation and prevention is need of the hour. Due to over exploitation of ground water in the state, drinking water sources are depleting / drying and water quality problem is arising out of it.

## Introduction:

Water is a fundamental human need.

- Safe and readily available water is important for public health. Whether it is used for drinking system, domestic use, food production or recreational purpose. Improved water supply and sanitation with better management of water resources, can boost country's economic growth and can contribute greatly to poverty reduction.
- The provision of an adequate supply of safe water was one of the major components of primary health care. In most countries, the risk to human health associated with consumption of polluted water are microbiological in nature. An estimated 80% of all disease are due to the contaminated water.
- The risk of acquiring a water borne infection increase with the level of contamination by pathogenic micro organisms. In Dadra and Nagar Haveli region majority source of drinkable water is from ground water.
- Ground water quality is dependent on weather conditions also. In summer, the growth of the micro organisms are very fast. If ground water will be contaminated with micro organisms, the supply chain is also affected.
- Primarily we are disinfecting the water at storage and distribute the safe, decontaminated drinking water. Due to the leakages and other reasons the water is also contaminated during distribution channel and it is vital to check the quality at consumer end.
- Water quality testing is important because it identifies contaminants and prevents water-borne diseases.
- Essentially, water quality testing makes sure that water is safe and meets local and international water standards. This type of testing can be completed using water sampling techniques and using technology to estimate the amount and level of chemicals. All water for human and animal use should be tested for safety and quality.
- Microbial aspects: Securing the microbial safety of drinking-water supplies is based on the use of multiple barriers, from catchment to consumer, to prevent the contamination of drinking-water or to reduce contamination to levels not injurious to health. Safety is increased if multiple barriers are in place, including protection of water resources, proper selection and operation of a series of treatment steps and management of distribution systems (piped or otherwise) to maintain and protect treated water quality.
- Chemical aspects: The health concerns associated with chemical constituents of drinking-water differ from those associated with microbial contamination and arise primarily from the ability of chemical constituents to cause adverse health effects after prolonged periods of exposure. There are few chemical constituents of water that can lead to health problems resulting from a single exposure, except through massive accidental contamination of a drinking-water supply. Moreover, experience shows that

in many, but not all, such incidents, the water becomes undrinkable owing to unacceptable taste, odour and appearance.

• In situations where short-term exposure is not likely to lead to health impairment, it is often most effective to concentrate the available resources for remedial action on finding and eliminating the source of contamination, rather than on installing expensive drinking-water treatment for the removal of the chemical constituent. There are many chemicals that may occur in drinking-water; however, only a few are of immediate health concern in any given circumstance. The priority given to both monitoring and remedial action for chemical contaminants in drinking-water should be managed to ensure that scarce resources are not unnecessarily directed towards those of little or no health concern.

## **Total Coliform (TC)**

The presence of Total Coliform bacteria may indicate contamination in a water supply. The presence of Total Coliforms alone is not necessarily a health risk, but it does require a further investigation of the water system. The presence of any Coliform bacteria indicates that the sampled water is potentially unsafe and unsatisfactory.

The absence of Coliforms in a water supply is usually interpreted as evidence of safe drinking water. This indicates that the water sample is free of pathogens and contains a low risk of waterborne infectious disease.

#### Escherichia coli (E. Coli)

*E. coli* has been demonstrated to be a specific indicator for the presence of fecal (human or animal waste) contamination. This is a potentially dangerous situation. Immediate steps need to be taken to disinfect the water, remove the source of contamination or find an appropriate alternate source. Water containing E. Coli bacteria must not be consumed or used in cases where the water could be a health hazard. Even brushing your teeth with this water can pose a health risk.

## PROPOSAL

Looking to the above considerations, It is proposed to entrust routine water quality assessment at all user end drinking water sources in Dadra and Nagar Haveli by outsourcing it to private organizations on item rate basis. They shall collect water samples of all the user end drinking water sources and analyze them for all the parameters mentioned herewith.

## **OBJECTIVES OF PROPOSED PROJECT**

- To determine the quality [Physico Chemical and Microbiological] of water at consumer ends to verify the effectiveness of treatment.
- To assess the impact of the activities of human beings upon the quality of water.
- To obtain reliable and useful data of water quality as a whole and to adopt corrective measures to ensure safe supply of drinking water in rural areas.

## **SCOPE OF WORK :**

• Survey and Creation of Database by Physico Chemical and Microbiological Analysis of parameters all end user's water sources applying the standard methods as per the GOI guidelines.

Frequency of sampling and analysis :

Analysis	Frequency
Physico Chemical Analysis	
1. Colour	
2. Odour	
3. pH Value	Weekly
4. Taste	
5. Turbidity	
6. Total Dissolved Solids	
Chemical Analysis	
7. Calcium as Ca	
8. Chloride as Cl	
9. Fluoride as F	
10. Iron as Fe	
11. Magnesium as Mg	Monthly
12. Nitrate as O3	
13. Sulphate as SO4	
14. Total Hardness as CaCO3	
15. Arsenic as As	
16. Salinity	
Microbiological Analysis	
17. Total Coliforms	Weekly
18. E.coli	

- Parameters to be tested: Water quality assessment provides the base line information on water safety. Since water quality in any source of water and at the point of use, can change with time and other factors, continuous monitoring of water is essential.
- Indian Standard guidelines provide values for 46 substances. It is very expensive, time consuming, difficult and largely unnecessary to test for all these parameters. The list of parameters to be selected from the guidelines and included in water assessment and monitoring program and vary according to the local conditions. The following basic parameters are to be included:
- Microbiological parameters: basic microbiological tests should cover Total Coliforms and E. coli In addition, physical and chemical parameters, such as disinfectant residuals Residual free chlorine, pH and turbidity, affect the microbiological quality of water.
- Physical parameters: in addition to turbidity, mentioned above, [A] Organoleptic and Physical Parameters 1 Colour 2 Odour 3 pH Value 4 Taste 5 Turbidity 6 Total Dissolved Solids [B] General Parameters Concerning Substances Undesirable in Excessive Amounts 7 Calcium as Ca 8 Chloride as Cl 9 Fluoride as F 10 Iron as Fe 11 Magnesium as Mg 12 Nitrate as O3 13 Sulphate as SO4 14 Total Hardness as CaCO3 15 Arsenic as As 16 Salinity

## **TESTING METHODS :**

• Testing for most of the parameters shall be carried out by Indian Standard Method mentioned in IS 10500: 2012 guidelines.

# **STUDY AREA :**

All rural and urban habitations of UT of Daman & Diu considering district as a unit, details are to be covered.

Sr. No.	Location Name (Faliya/Pada)]	Total Nos. of Sample From User Point
1	Amaran Dabhel	20
2	Bhandarwad - Ringanwada	13
3	Braman Faliya - Bhimpore	14
4	Januni Wadi - Dunetha	10
5	Chokdi Faliya - Bhensrol	05
6	Medi Faliya -Varkund	19
7 Patel Faliya Marwad		04
8	Halpatieas - Devka	03
9	Choki Faliya - Dalwada	03
10	Bhandarwad - Devka	01
11 Mahyavansi Faliya - Dalwada		03
Total Samp	bles	95

List of water treatment schemes in district daman UT of Daman and Diu.

#### **SOURCES OF INFORMATION :**

Primarily location of sources will be given by M&HS officials in consultation with other departmental officials. Support from local Gram Panchayat, SMC and local public will also be taken by the agency for doing the job, as all the private drinking water sources which are being used commonly by community are also proposed to be tested.

#### **QUALITY CONTROL AND ERROR CHECKING :**

The UT officials will cross verify samples not more than **2% per block** to ensure effective external analytical quality control and suggest remedies as the need maybe. Standard procedures for laboratory testing and analysis would be used. Samples analyzed by the agency shall be randomly selected and will be cross verified by the district laboratory and or also through any other agency as per the discretion of the Engineer in Charge at the expenses of the agency. Sample for cross checking shall be collected and sealed by the Govt. officials themselves in the presence of the representative of the agency if he/she wants to remain present, else the sample for cross checking the department's officers in the presence of any five persons (through Panchnama). If in the cross checking the results for any parameter varies more than 10 %, the agency shall have to repeat the test for all sources of that habitation. Also the agency shall submit the quality control (QC) plans and checklists together with the Inception Report.

#### ANNEXURE - III

#### Performa for application

No.

Date:

Application for E-Tender of "Testing of water, GPS data collection, Sanitation Survey of all Drinking Water Sources in UT of Daman & Diu"

- I. Name of the Agency/Firm :
- II. Name of Contact Person: (With Mobile Number)
- III. Address :
- IV. Phone Number with STD Code :
- V. Fax Number with STD code :
- VI. E-mail ID :
- VII. Details of GPS based mapping and water quality testing of drinking water sources carried out by the Agency/Firm for the Government departments or undertaking during 2009-10 and onwards, along with true copies of certificates of experience copies of work orders as well as the completion certificate :

Sr. No.	Name of dept/ undertaking	Title of the Project	Name, address, telephone No. and e-mail ID of the client	Duration of Project, Start & Completion date	Value of the Project (Rs. In Lakh)	No. of Drinking water Sources covered.

# VIII. Projects/assignments carried out by the Agency/Firm on the similar nature of work of more than Rs 5 Crorer :

Sr. No.	Name of deptt/ undertaking	Title of the Project	Name, address, telephone No. and e-mail ID of the client	Duration of Project, Start & Completion date	Value of the Project (Rs. In Lakh)	No. of Drinking water Sources covered.

IX. Annual turnover, along with the documentary evidence, of the Agency/Firm from the projects/ assignments related to GPS based mapping and water quality testing of drinking water sources, carried out by the Agency/Firm during the following three years :-

Sr. No.	Year	Turnover (Rs. In Lakh)
1.	2011-12	
2.	2012-13	
3.	2013-14	

X. Profile of Team Leader (for the last 15 years):-

Name:	Position*	Academic Qualification* Ph.D./P.G.(with discipline and year)	No. of years of experience* in carrying out the work of GPS based mapping and water quality testing	Role in this project

#### XI. GPS equipment available for the study:-

Sr. No.	Name of Equipment*	Number*	Technical Specifications	Details

(\*Documentary evidence to be enclosed)

- XII. Agency / Firm's office address in the state of UT of Daman & Diu (Attached undertaking on company letter head for establishment of office in UT of Daman & Diu signed by the authorized signatory if presently there is no office in the state.)
- XIII. In case of a consortium / joint venture a registered agreement as per the Annexure IV should be submitted.
- XIV. Agencies / Firms should submit declaration of ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government agencies by the authorized signatory of the bidder, duly Notarized on a stamp paper of Rs. 100.00.

**CERTIFICATE** (On company letter head)

It is certified that:

The information given above is TRUE to the best of my knowledge. The Agency/Firm shall stand liable for any information given above which is later found to be FALSE, including the forfeiture of any payment due to it.

This Agency/Firm is fully equipped to handle this assignment and would implement this within the given time frame, to the best satisfaction of the Mission.

I am competent / authorized to sign this Certificate.

Date:

Place:

Seal of the Agency/Firm:

Authorized Signatory

Name:

Designation: