

Centre for Industrial Consultancy and Sponsored Research (IC & SR)

IIT Madras

INVITATION FOR BID

For and on behalf of IC & SR, IIT Madras, sealed tenders are invited in Duplicate under Single Part Tender System for the following work being executed by IIT Madras:-

1)	Description:	<p>1) Conducting Discharge Measurement across Haldia dock, Haldia River & Jellingham channel in Kolkata as per cross section provided in Fig.1 of section III.</p> <p>2) Conducting water sample analysis (which includes Turbidity, salinity, Conductivity & TSS) across Haldia dock, Haldia River & Jellingham channel in Kolkata as the location provided in Fig.2 of section III.</p> <p>(Detailed scope of work as mentioned under Section-III of this specification).</p>
2)	Specification No.	oe/Kopt/2017/1.
3)	Earnest Money Deposit:	Waived
4)	Last date for Submission of Bid:	16.00 Hrs. IST on 17.03.17
5)	Date & Place of Opening of Tender (Techno commercial bid):	<p>16.01 Hrs. IST on 17.03.17</p> <p>Rm.005, Ground Floor, Department of Ocean Engineering, IIT Madras, Chennai 600036</p> <p>If the due date happens to be a holiday, the tender will be received & opened on the next working day.</p>
6)	Validity of offer:	60 days from the date of opening.
7)	Method of submission of tender:	Double cover System.
8)	Number of tender offer copies to be furnished:	In Duplicate.

9)	Clarification to be obtained from:	<p>Prof. K. Murali The Project Coordinator Department of Ocean Engineering IIT Madras, CHENNAI - 600 036 TAMIL NADU</p> <p>Phone no.: 044- 2257 4816</p> <p>Email.: murali@iitm.ac.in dr.murali.iitm@gmail.com</p>
10)	Cost of Tender specification	Nil
11)	Tender Inviting Authority:	<p>THE Dean, IC & SR IIT, Madras, Chennai – 600 036</p> <p>Telephone No: (91) (44) 2257 8061 Fax No: (91) (44) 2257 0545</p>




Dr. K. MURALI
Professor
Department of Ocean Engineering
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Chennai - 600 036, India

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K. S. Savanya

SECTION -I
INSTRUCTION TO BIDDERS

1.1 General:

Separate sealed competitive bid under "Double cover system" is invited in Duplicate for the following works.

1.2 Scope of work:

The scope of the study shall include:

- 1) Conducting Discharge Measurement across Haldia dock, Haldia River & Jellingham channel in Kolkata as per cross section provided in Fig.1 of section III.
- 2) Conducting water sample analysis (which includes Turbidity, salinity, Conductivity & TSS) across Haldia dock, Haldia River & Jellingham channel in Kolkata as the location provided in Fig.2 of section III.

(Detailed scope of work as mentioned under Section-III of this specification).

1.2.1 Specification No: oe/Kopt/2017/1.

1.2.2 Cost of Tender Specification: Waived

1.3 EARNEST MONEY DEPOSIT (EMD): Waived

1.4 Schedules for Receipt and Opening of Bid:

- | | |
|---|------------------------------|
| a) Last date and time for receipt of bids | : 16.00 Hrs. IST on 17.03.17 |
| b) Date and time for opening of bids | : 16.01 Hrs. IST on 17.03.17 |

(Techno-Commercial Bids)

1.5 Submission of Tender:

Tender should be furnished in sealed cover, super-scribed as "Carrying out discharge measurement & water sample analysis in Kolkata port trust"

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The offer should be addressed to:

Prof. K. Murali
The Project Coordinator
Department of Ocean Engineering
IIT Madras, CHENNAI - 600 036, TAMIL NADU

and if handed over in person, the same shall be handed over to **Rm.005, Department of Ocean Engineering, IIT Madras** on or before the due date and time specified above.

1.5.1

The Bidders have the option of sending the bid by Registered post, Courier or submitting the bid in person, so as to ensure that the bids are received in the specified office of the Purchaser, by the date and time indicated in the SI.No.1.5 above. Bids submitted by Telex/ Fax/ Telegram/e-mail etc. will not be accepted.

1.6 Opening of Tender

The tenders will be opened at **Rm.005, Ground Floor, Department of Ocean Engineering, IIT Madras** on the due date and time prescribed in the presence of such of those tenderers who may desire to be present. If the due date for tender opening happens to be a holiday, the tenders will be opened on the next working day.

The individuals attending the opening of tenders should be duly authorized by the participating firms in the tender.

If the tenderer has any doubt about the meaning of any portion of this specification, he may address the Tender Inviting authority which should reach at least one week before opening of this tender. Any clarification received after this date will not be entertained.

1.7 Tender Inviting Authority

THE Dean,
IC & SR IIT, Madras, Chennai - 600 036
Telephone No: (91) (44) 2257 8061
Fax No : (91) (44) 2257 0545

K. G. Saranya

SECTION – II

COMMERCIAL AND TECHNICAL CONDITIONS

2.1 GENERAL

The scope of services shall be as detailed in Section - III of this specification.

2.2 LOCATION

The site is located approximately 125 kilometers southwest of Kolkata, near the Haldia port.

2.3 COMPLETENESS OF TENDER

The tender should be complete in all aspects. The tenderer shall furnish all relevant details called for in the specification with supporting documents wherever required for considerations by IC & SR. The tenders not containing the complete details as requested in the specification are liable for rejection.

2.4 PRICES

Tenderers shall quote FIRM Price only. Shall quote price separately for each item in the respective schedule as prescribed in the specification

2.5 VALIDITY OF TENDERS

Tenders should be valid for acceptance for a period of at least **Sixty (60) days** from the date of tender opening. In case any bidder quotes a lower validity period than that called for, his offer shall be liable for rejection. In exceptional circumstances, the purchaser may solicit the bidder's consent to an extension of the period of the validity. The request and response thereto shall be made in writing (including fax or telex).

K. Saranya

2.6 PAYMENT TERMS:-

The consultant shall be paid lump sum fee / charges for providing the consultancy services as per the schedule below at the specified percentages:

Sl. No.	Description	% Total Consultancy charges
1	For Non-monsoon	
	a. Mobilization advance (after mobilization of equipment and commment of work)	25%
	b. On submission of Final Reports	25%
2	For monsoon (during August/September)	
	a. Mobilization advance (after mobilization of equipment and commment of work)	25%
	b. On submission of Final Reports	25%

2.6.1

Payment will be made by Cheque / Bank transfer on any one of the commercial banks or their branches in India as may be decided by IC & SR from time to time. If the contractor requests for DD payment, Exchange Commission for issue of bank draft will be to the account of the consultant.

2.6.2

Offers agreeing to the above terms of payment will be preferred. IC & SR may reject the offers with other terms of payment.

2.7 Schedule of Submission of Report:

Submission of Draft Discharge measurement & Water sample analysis	: 2 weeks from the date of award of work
Submission of Final Discharge measurement & Water sample analysis for non-monsoon	: 4 weeks from the date of award of work

K. Garaya

Submission of Final Discharge : During August or September
measurement & Water sample
analysis for monsoon

2.8 FORCE MAJEURE

2.8.1

Neither the Contractor nor the Purchaser shall be considered in default in performance of its obligations hereunder if such performance is prevented or delayed for any causes beyond the reasonable control of the party affected, such as war, hostilities, revolution, riot, civil commotion, epidemic, major fires, explosions, floods, earthquakes or because of any law, order, proclamatory regulations or ordinance of Government or because of any act of God, provided notice in writing of such cause with necessary evidence that the obligation under the Contract is thereby affected or prevented or delayed, is given within 14 days from the happening of the event and in any case it is not possible to serve the notice within 14 days period, then within the shortest possible period without delay. In case the force majeure conditions prolong beyond a continuous period of 6 months, the Purchaser shall be entitled to decide the further course of action including revisions in the terms of Contract, if any.

2.8.2

As soon as the cause of Force Majeure has been removed, the party whose ability to perform its obligation has been affected shall notify the other party the actual delay occurred on account of such activities.

2.8.3

Although the time for completion of work shall be suitably extended (not exceeding the period during which the work was stopped on account of Force Majeure clause), such extension shall not result in any financial claim by the Contractor against the Purchaser or any account of such a delay for any other reason whatsoever.

2.9 SERVICE TAX & INCOME TAX

The price quoted shall be firm and shall be inclusive of all statutory levies and taxes including service tax. Necessary income tax will be deducted at source on each bill as per the regulations in force. If the Institution is exempted from payment of income tax, the documentary evidence for the same has to be furnished.

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2.10 JURISDICTION FOR LEGAL PROCEEDINGS

No suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in a Court Save in the City Civil Court of Chennai or the Courts of Small Causes at Chennai. It is agreed that no other courts shall have jurisdiction to entertain any suit or proceedings even though part of the cause of action might arise within their jurisdiction. In case any part of cause of action arises within the jurisdiction of any of the courts in Tamil Nadu and not in the courts in the Chennai City, it is agreed to between the parties that such suits or proceedings shall be instituted in a court within Tamil Nadu and no other court outside Tamil Nadu shall have jurisdiction, even though any part of the cause of action might arise within the jurisdiction of such courts.

The bidders shall furnish an undertaking in a non-judicial stamp paper of value Rs.80/- agreeing to the above condition as per schedule furnished in Annexure-II.

2.11 ARBITRATION

Arbitration is not applicable to this contract.

2.12 SPECIAL CONDITIONS

The tenderers should clearly indicate their acceptance or otherwise to the following terms and conditions.

1. Specific acceptance of Board's terms of payment.
2. Board's terms of Liquidated damages for delay in completion of work.
3. Validity of tender.

If no indication is given by the tenderer in his offer, it is presumed that the tenderer is agreeable to the terms and conditions of IC & SR mentioned in the specification.

All information in the bid shall be in ENGLISH only. All corrections, over typing etc. in the tender should be attested.

Tenderers are advised to post sufficiently early so as to ensure that the tenders reach this office in time. Tenders though posted in time but delayed in transit by post will not be considered, if received after the due date and time.

2.13 DEVIATIONS IN TENDER

Offers which conform to the specification without any deviation will be preferred. If the tenderer wants to deviate from any of the terms and conditions, the same shall be mentioned clearly.

2.14 IC & SR BOARD RESERVES THE RIGHT

- a) Not to accept the lowest or any tender.
- b) To reject any or all the tenders without assigning any reasons thereof.
- c) To relax or waive any of the conditions stipulated in the tender specification as deemed necessary in the best interest of the project for good and sufficient reasons.
- d) To revise the quantum of works/completion period of work of any or all the items covered by this enquiry during the pendency of contract and to terminate the contract in between the agreed stipulated period.

2.15 EVALUATION AND COMPARISON OF TENDER OFFERS

- a) The evaluation of the Tender will be done as per IIT Madras guidelines IC & SR.
- b) The evaluation shall include contract value of works with applicable sales/service tax, etc.,
- c) In case of discrepancy between the prices quoted in words and in figures, the lower of the two shall be considered.

K. Saranya

SECTION – III

TECHNICAL SPECIFICATION

1. SCOPE OF SERVICE

1.1. SCOPE OF WORK

The scope of the study shall include

- 1 Conducting Discharge Measurement across Haldia dock, Haldia River & Jellingham channel in Kolkata as per cross section provided in Fig.1.
- 2 Conducting water sample analysis (which includes Turbidity, salinity, Conductivity & TSS) across Haldia dock, Haldia River & Jellingham channel in Kolkata as the location provided in Fig.2.

1.2. COMPONENTS

1.2.1 Discharge Measurements

Acoustic Doppler Current Profiler (ADCP) capable of providing vertical cross section of current speed and direction shall be used in this study. Discharge measurements shall be taken at cross sections 175, 176 & 191 for 15 days from dawn to dusk continuously during spring to spring for post monsoon and monsoon seasons. The measurement of discharge rate and direction of the flow has to be obtained. The discharge across the Haldia dock, Haldi river and Jellingham channel with tidal fluctuation shall be obtained from these measurements and will be used in estimating the overall discharge in this region. The cross sections of discharge measurements have been indicated in Fig.1

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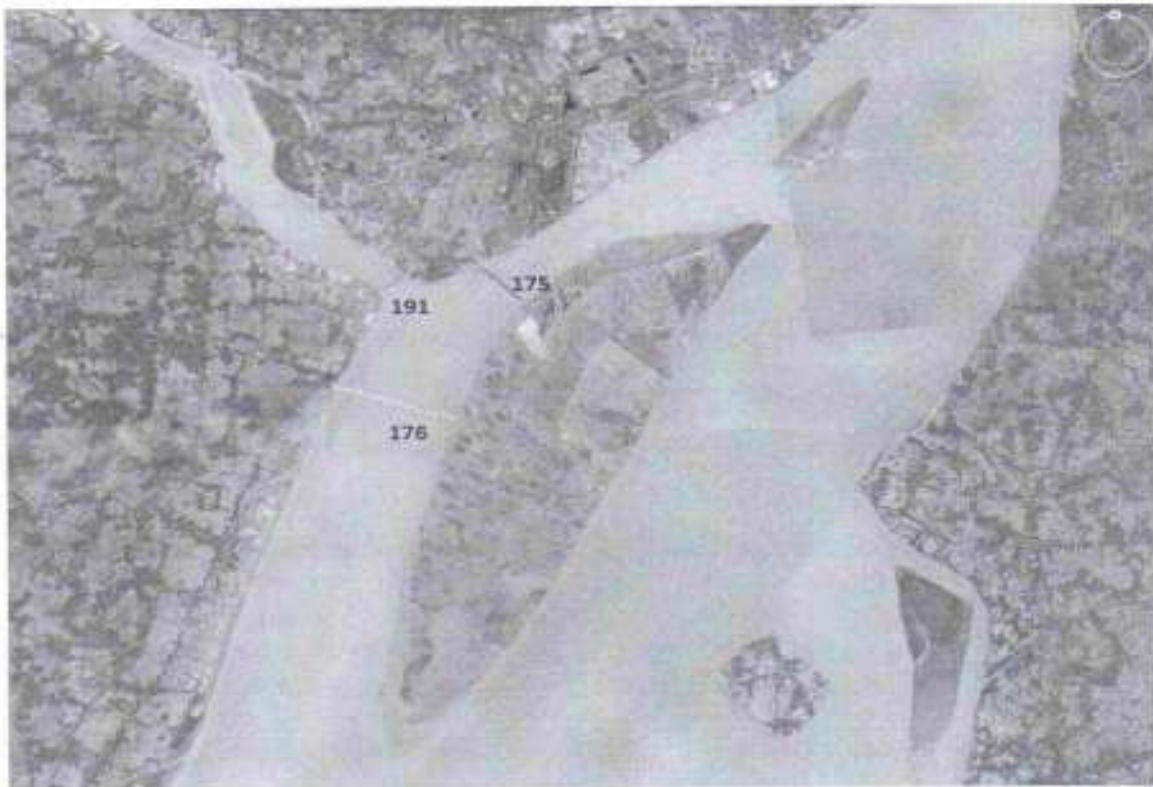


Fig.1 Cross sections for Discharge Measurement

1.2.2 Water Sample Analysis

Water quality parameters (Turbidity and Salinity) and water sampling (Conductivity and TSS analysis) shall be conducted at locations JW1 to JW5, HRW1 to HRW5 & HDW1 to HDW5 covering one neap and spring for post monsoon and monsoon. The locations of Water sample analysis have been indicated in Fig.2

1.2.2.1 Salinity

Salinity values are to be determined by Mohr-Knudsen titration method, where in the chlorosity was first obtained by titration of sample with silver nitrate solution. From chlorosity value, salinity was determined from the Knudsen hydrographic table (Strickland and Parson, 1968).

1.2.2.2 Turbidity

Turbidity to be measured by the Nephelometric method after calibrating the Nephelometer using known dilutions of standard prepared from hydrazine sulfate and hexamethylene tetra mine in distilled water.

1.2.2.3 Total suspended solids (TSS)

12.5/2018

The TSS of seawater samples are to be determined by filtering a known volume (250 ml) of seawater sample through pre-weighed Whitman GF/C glass microfiber filter paper. Filtration will be carried out under controlled vacuum source. The filter papers are then dried till a constant weight observation. The difference between the final and initial weight of the filter paper resulted in the estimation of TSS from the water samples.

1.2.2.4 Water Sampler

A Water sampler is a device made of iron or steel and painted with a rust inhibitor. Typically, it uses a 1-Litre sample bottle, but smaller bottles may be used. The sample bottles are placed in the sampler and secured by a neck holder. A sample is obtained at required depth over the entire depth (depth-integrated sample) by allowing the sampler to sink to the desired depth and then to retrieve it.

The water sampler is the most useful near the centre of the dugout or pond when sampled from the side of a boat or off of a dock or other support structure. The necessary safety precautions need to be taken when using this sampler or performing any other type of work on or near open water.



Fig. 2 Water Sample Analysis Locations
Table.1 Technical Specification

K. Saranya

Sl. No.	Details	Quantity	Unit
1	Discharge measurement at 3 cross section	42	Per Observation
2	Water sampling at 3 locations at three levels during three tide phases for one Spring & one Neap (3*5*3*2)	90	Per Sample

Table.2 Location/Cross Section-Latitude & Longitude

Sl. No.	LOCATION	Latitude	Longitude
1	175 (c/s)	22° 0'48.15"N	88° 4'47.72"E
2	176 (c/s)	21°59'7.74"N	88° 3'9.46"E
3	191 (c/s)	22° 0'53.23"N	88° 3'15.37"E
4	HRW1	22° 1'3.61"N	88° 3'7.74"E
5	HRW2	22° 1'24.21"N	88° 2'39.40"E
6	HRW3	22° 1'43.98"N	88° 2'9.60"E
7	HRW4	22° 2'7.12"N	88° 1'44.05"E
8	HRW5	22° 2'33.24"N	88° 1'21.65"E
9	HDW1	22° 0'38.99"N	88° 4'34.06"E
10	HDW2	22° 1'8.84"N	88° 5'18.49"E
11	HDW3	22° 1'28.32"N	88° 6'7.52"E
12	HDW4	22° 1'50.12"N	88° 6'56.10"E
13	HDW5	22° 2'10.49"N	88° 7'43.67"E
14	JW1	22° 0'7.39"N	88° 3'46.95"E
15	JW2	21°58'56.54"N	88° 3'7.96"E
16	JW3	21°57'38.02"N	88° 2'30.12"E
17	JW4	21°56'19.08"N	88° 1'58.14"E
18	JW5	21°54'59.09"N	88° 1'31.72"E

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2. SCHEDULE OF FEES - I

SPECIFICATION NO. oe/KoPT/2017/1

Name of the Work:

Carrying out discharge measurement & water sample analysis in Kolkata port trust

Sl. No.	Description	Prices in Rs.
1.	Carrying out discharge measurement in Kolkata port trust (For non-monsoon & monsoon)	
2.	Carrying out water sample analysis in Kolkata port trust (For non-monsoon & monsoon)	
3.	Service Tax – 15% (This shall be inclusive of the all taxes)	
4.	Total amount	

Note:

Rate per additional copy of Marine EIA Report may be furnished separately

SIGNATURE :
NAME :
DESIGNATION :
DATE :
PLACE :
SEAL :

K. Sanjaya

3. ANNEXURE-I

UNDERTAKING TOWARDS JURISDICTION FOR LEGAL PROCEEDINGS (NON JUDICIAL STAMP PAPER VALUE RS.80/=)

This undertaking executed at.....
on this..... (Date)..... (Month) Two thousand and
by
M/s Registered under Companies
Act, 1956 having its registered office at
..... hereinafter called the
contractor (which expression shall where the context so admits mean and
include its successors in office and in favour of Tamil Nadu Generation and
Distribution corporation Limited, a company incorporated under the company
Act 1956, having its registered office at No. 144, (Old NO. 800), Anna Salai,
NPKRR Maaligai, Chennai-600 002 herein after called the purchaser (which
expression shall where the context so admits means and includes its
successors if Office and assigns).

WHEREAS a contract for the supply ofhas been
awarded in favour of the contractor under the Purchase order
No.....dated.....

AND WHEREAS in accordance with the terms of the above Purchase order,
the contractor has to furnish un undertaking to the effect that no suit or any
proceedings in regard to any matter arising in any respect under this contract
shall be instituted in any matter in any respect under this contract shall be
instituted in any court other than in the High court, Madras or District court at
..... or Sub-court ator at the District Munsiff court at
..... as the case may be.

IN CONSIDERATION of the Board having agreed to accept the undertaking the
contractor hereby undertakes that no suit or any proceedings in regard to any
matter arising in respect of this contract shall be instituted in any court, save in
the High court , Madras or District court at.....or sub court at
..... Or at the District Munsiff court atas the
case may be it is agreed that no other court shall have jurisdiction to entertain
any suit or proceedings, even though , part of the cause of action might arise
within their jurisdiction. In case any part of the cause of action might arise
within the jurisdiction of any other Courts in Tamil Nadu and rest within the
jurisdiction of Courts outside the State of Tamil Nadu , then it is agreed to
between the parties that such suits on proceedings shall be instituted in a court
within the State of Tamil Nadu and no other Court outside the State of Tamil
Nadu shall have jurisdiction.

K. Saranya

IN WITNESS WHEREOF
Thiru.....of
M/s hereby put his hand and seal for due observance
of the undertaking in the presence of the following witnesses

COMPANY SEAL
DESIGNATION :
COMPANY :
DATE :

SIGNATURE :

WITNESSES:

- 1)
- 2)

H. S. Srinivas