INVITATION FOR TENDER FOR SERVICE

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for the supply of the following service/s.

Geo-Scientific Drilling in and around Varanasi City, U.P

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least four months (120 days) or more from the date of the opening of this tender. Please ensure that your quotation reaches not later than 23.06.2015 at 10:00 hrs at the following address:

Prof. Abhijit Mukherjee
Professor, Geology & Geophysics, Indian Institute of Technology
Kharagpur – 721 302, West Bengal, India

Earnest money of `70,000/- is to be deposited in the form of Account payee Demand Draft in favour of IIT Kharagpur, payable at Kharagpur, India. Any bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

<table>
<thead>
<tr>
<th>Tender Reference</th>
<th>IIT/SRIC/GG/GQV/AM/2015-2016/SER/1, Dated: 20.05.2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price of Tender Document</td>
<td>NIL</td>
</tr>
<tr>
<td>Last Date and Time for submitting the tender document</td>
<td>23.06.2015 at 10:00 Hrs (Indian time)</td>
</tr>
<tr>
<td>Time and Date of Opening of Bids</td>
<td>24.06.2015 at 10:30 Hrs (Indian time)</td>
</tr>
<tr>
<td>Place of Opening tender offers</td>
<td>Dept. of Geology &amp; Geophysics, Indian Institute of Technology Kharagpur – 721 302, West Bengal, India</td>
</tr>
<tr>
<td>Address of Communication</td>
<td>As stated above</td>
</tr>
<tr>
<td>Contact Telephone Numbers</td>
<td>+91- 9007228876</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:abhijit@gg.iitkgp.ernet.in">abhijit@gg.iitkgp.ernet.in</a></td>
</tr>
</tbody>
</table>

1/8
**Detailed Specifications for**

**Geo-Scientific Drilling**

IIT Kharagpur (henceforth noted as IIT) invites sealed tender offers are, in two separate sealed covers (Technical and Commercial offers) from eligible or their authorized drilling companies (henceforth noted as *vendor*), interested in drilling of Hundred (100) boreholes in and around the Varanasi city, Varanasi district, U.P., India for geological and geophysical data acquisition and sediment sample collection, and groundwater level monitoring for the subsurface geoscientific study of Varanasi, on behalf of the Dept. of Geology and Geophysics, Indian Institute of Technology (IIT) Kharagpur, India. Mentioned below are our specific requirements:

**A. Drilling of 50 m boreholes: (95 boreholes of 50m depth below ground level [bgl])**

1. Exploratory boreholes with at least 150 mm diameter, penetrating to a depth of 50 m (without any exception) in 95 different locations in and around Varanasi city. Undisturbed (at least up to 25 m bgl) and disturbed (for the whole depth) sediment samples would have to be collected at every 1m intervals or at change of lithology, respectively, for the whole of drill-hole depth.
2. Subset (at least ~600 mL or 700 g) of the above-noted sediment samples would have to be collected and transferred, following proper procedure, to the onsite IIT/IIT-designated personnel for laboratory-based geochemical studies at IIT KGP.
3. Standard Penetration Test (SPT) at every 3.00 meter interval within the boreholes should be conducted.
4. Measurement of groundwater level at each borehole should be done at the time of drilling.
5. Bore-log data sheet as per IS practice needs to be prepared.
6. Sealing, packing and dispatching of all the samples to the laboratory have to be completed with proper care for conducting necessary tests on these sediment samples.
7. Laboratory tests should be done following ASTM standard practice for borehole sediment samples, including the followings:
   ii) Determination of Natural Moisture Content (%) of the sediment.
   iii) Determination of Atterberg Limits. [Liquid limit (%), Plastic limit (%), Plasticity Index, Fine Content (%)].
   iv) Determination of Specific Gravity of sediment.
   v) Determination of Bulk Density & Dry Density of sediment.
   vi) Detailed soil study by conducting Unconfined Compression Test, Triaxial Compression test, Direct Shear test, and Consolidation test.
8. All Bore-log data sheet and laboratory test results should have submitted in tabulated form and suitable report after completion of all the field works.

**B. Drilling of 100 m boreholes: (5 boreholes of 100m depth below ground level [bgl])**

2/8
1. Five boreholes would have to be drilled to 100 m depth at pre-designated sites.
2. All drilling procedure and specifications, sample collections and analyses requirements will be same as noted in set (A). However, samples would have to be collected every 2 m intervals beyond 50 m depth or at change of lithology, to a depth of 100 m.
3. All tests and studies mentioned in set (A), point no. 7 would also have to be done for these samples (i.e. for whole of 100 m)

**C. Groundwater observation well (10 No’s):**

1. Seven (7) boreholes mentioned in set (A) and three (3) wells in set (B) with 150 mm diameter among the drilled holes in set (A) and Set (B) would have to be prepared and completed as permanent groundwater observations well for continuous groundwater level monitoring for the various aquifers (to be identified in-field).

2. These water observation well boreholes should be equipped with factory slotted UPVC screen (4" dia.), pipe (3"dia.), bentonite, pea gravel, GI well cap, well top casing, concreting of well pavement and wall with locking facility, as required.

**D. Down-hole/borehole geophysical well preparation (at least 20 holes)**

1. At least eighteen (18) boreholes mentioned in set (A) and two (2) boreholes in set (B) with 150 mm diameter among the drilled holes in set (A) and set (B) at pre-determined sites, would have to be prepared and completed as well for down-hole/borehole geophysical data acquisition.

2. All required precautions would have to be taken by the vendor for these holes for appropriate and safe operation of down-hole instruments.

3. Down-hole/borehole geophysical studies would executed by IIT personnel or other designated agencies, and hence the completion of the well should be properly coordinated with ground personnel from IIT.
SPECIAL TERMS and CONDITIONS:

1. **All temporary boreholes have to be properly sealed off after completion of study.** The vendor would be solely responsible for any breach of protocol and/or untoward event because of lack of proper sealing of the boreholes.

2. It is required to submit all of the reports/outputs within 7 months of the commencement of the study.

3. The site of the borehole will be selected after joint field survey by the IIT personnel and the vendor.

4. Once the field site and location have been finalized by mutual consent, the vendor is not permitted to change the location of borehole site, without written permission from the PI of the project/ designated IIT personnel.

5. On basis of technical/logistic requirement, the onsite IIT/IIT-designated personnel can change the location of a drilling site to a nearby location (the vendor will be properly informed with 7 days in advance)

6. All the boreholes have to be drilled as per the earlier mentioned requirements in Set (A) and Set (B) and undisturbed sediment sample collection has to be done for 50 m and 100 m boreholes, respectively, for consideration of completion of one bore hole.

7. If the vendor is unable to drill at a respective borehole as per the earlier mentioned required depths, the drilling will be identified as unsuccessful bore-hole.

8. For the unsuccessful boreholes, the payment will be released at a pro-rated per-meter rate.

9. At any given time, for continuous 5 nos. of unsuccessful drilling or any other technical/legitimate reasons deemed by IIT, IIT would have the right to terminate the contract in advance of 5 drillings.

10. The vendor has to inform onsite IIT/IIT-designated personnel prior to any change of plan e.g. location, drilling period, frequency etc.

11. The vendor has to maintain proper safety and mitigation measures once the drilling started on the site.

12. The vendor would be responsible for any onsite emergency.

13. The vendor has to maintain proper QA/QC during the decommissioning phase of the site.

14. All sites have to be restored or decommissioned (except the hole for observing well and bore-hole geophysics well) following proper completion procedure.

15. If the onsite IIT/IIT-designated personnel finds that the sealed-off bore-hole still have some safety related issues, the vendor will not be permitted to move to another site and any outstanding payment would be withheld.

16. Only payment as agreed through the work order would be released. IIT is not liable to pay for any other services, facilities (local travel, including by not exclusive of buying and repairing the drilling instrument, price of required accessories etc.), insurance, bonus etc.

17. IIT will not be responsible for any security/law and order related issue/s pertaining to the vendor, including (but not exclusive of) lost/stolen items of vendor’s instruments, unruly/ illegitimate behavior of vendor’s staff/s, medical conditions arising during/related to the present job etc.
GENERAL TERMS & CONDITIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. TENDER ARE INVITED COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY’S / FIRM’S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

THE FOLLOWING DOCUMENTS ARE REQUIRED FROM THE INDIAN AGENTS OF FOREIGN FIRMS:

1.1 FOREIGN PRINCIPAL’S PROFORMA INVOICE INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT AND NATURE OF AFTER SALES SERVICE TO BE RENDERED BY THE INDIAN AGENT.

1.2 COPY OF THE AGENCY AGREEMENT WITH THE FOREIGN PRINCIPAL INDICATING THE NATURE OF AFTER SALES SERVICES, PRECISE RELATIONSHIP BETWEEN THEM AND THEIR MUTUAL INTEREST IN THE BUSINESS.

1.3 PLEASE ENCLOSE THE DOCUMENT(S) RELATED TO THE ENLISTMENT OF THE INDIAN AGENT WITH DIRECTOR GENERAL OF SUPPLIES & DISPOSALS (DGS & R) UNDER THE COMPULSORY REGISTRATION SCHEME OF MINISTRY OF FINANCE.

2. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL. PROVIDE COMPLIANCE STATEMENT WITH RESPECT TO THE TECHNICAL SPECIFICATIONS MENTIONED ABOVE.

3. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

4. PRICE BIDS FOR FOREIGN FIRMS: PRICES ARE TO BE QUOTED ON ‘EX-WORKS’ DULY PACKED OR ON “FCA/FOB” INTERNATIONAL PORT BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

I) EX-WORKS PRICE
II) PACKING & FORWARDING
III) FREIGHT
IV) ANY OTHER RELEVANT EXPENSES.
V) TAXES PAYABLE BY THE INSTITUTE

INSURANCE WILL BE PAID BY OUR INSTITUTE SEPARATELY AND SHOULD NOT FORM PART OF THE QUOTED PRICE.

PRICE BIDS FOR INDIAN FIRMS: PRICES ARE TO BE QUOTED ON F.O.R., IIT KHARAGPUR, ON DOOR DELIVERY BASIS CLEARLY SHOWING THE BREAK UP.

5. PERIOD OF VALIDITY: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.

6. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN FE). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR
PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.

7. **MEASUREMENTS/WEIGHT:** NETT/GROSS OF THE CONSIGNMENT. IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

8. **SCOPE OF SUPPLY:** SHOULD INCLUDE FREE INSTALLATION AND COMMISSIONING

9. **PAYMENT TERMS** FOR FOREIGN FIRMS

   A) 100% PAYMENT THROUGH SIGHTDRAFT/FOREIGN DEMAND DRAFT/LC (EXCEPTIONAL CASES)/SWIFT TELE TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

   B) BANK CHARGES ON LC/SD (WITHIN INDIA APPLICANT ACCOUNT AND OUTSIDE INDIA TO BENEFICIARY ACCOUNT).

**PAYMENT TERMS** FOR INDIAN FIRMS

   A) 100% PAYMENT THROUGH CROSSED ACCOUNT PAYEE CHEQUE / ELECTRONIC TRANSFER AFTER RECEIPT OF STORE IN GOOD ORDER AND CONDITION.

   B) ENSURE MENTIONING

   i) BANK DETAILS OF THE BENEFICIARY AND PAN NUMBER

   ii) FULL NAME AND ADDRESS OF THE BENEFICIARY ON WHOM ORDER HAS TO BE PLACED

10. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

11. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.


13. **LIQUIDATED DAMAGES:** THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.

14. **PATENT RIGHTS:** THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.

15. ONLY THOSE BIDDERS WHO’S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL ONLY BE INVITED FOR PARTICIPATION IN THE PRICE BID.

16. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BID HAS NOT BEEN ACCEPTED BY THE INSTITUTE.
17. CONDITIONAL OFFER WILL NOT BE ACCEPTED.

18. LATE TENDERS i.e. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.

19. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

C) BANKER’S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY’S KEY PERFORMANCE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>JAN. TO MARCH</th>
<th>APRIL TO JUNE</th>
<th>JULY TO SEPT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROSS REVENUE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIT BEFORE TAX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIT AFTER TAX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RETURN ON INVESTED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAPITAL (ROIC)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH SERVICE HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

20. WARRANTY / GUARANTEE: THIS COMPREHENSIVE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED TO THE FINAL DESTINATION.

21. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO’S TECHNICAL BID HAS NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

22. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO PROF. ABHIJIT MUKHERJEE, DEPARTMENT GEOLOGY & GEOPHYSICS, INDIAN INSTITUTE OF TECHNOLOGY, KARAGPUR - 721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.
IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.

2. Promptly make arrangements for repair and / or replacement of any damaged item (s) irrespective of settlement of claim.

3. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.

4. For any query pertaining to this bid document correspondence may be addressed to Prof. Abhijit Mukherjee, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 23.06.2015

1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
2) Fax, e-mail Tender will not be accepted.
3) The General Terms and Conditions as stated above relate to supply of stores / equipment /assets etc. and for specific service other terms and conditions of the Institute will apply.

------------------------------------------------------------------------------------------