



**Hiring of Agency for Geotechnical Investigation
Work for
Proposed Ammonia-Urea Fertilizer Plant
of
M/s Assam Valley Fertilizer And Chemical
Company Ltd**

AT

NAMRUP, ASSAM, INDIA

(IFB No. PNMM/PC230/E/003)

PREPARED & ISSUED BY



**PROJECTS & DEVELOPMENT INDIA LTD.
(A Govt. Of India Enterprise)
PDIL BHAWAN, A-14, SECTOR-1,
NOIDA-201301 U.P. (INDIA)**

OCTOBER, 2025

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SECTION 1

INVITATION FOR BID (IFB)

Ref.: PNMM/PC230/E/003

Date: 22.10.2025

To,

PROSPECTIVE BIDDERS

SUBJECT: HIRING OF AGENCY FOR GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED AMMONIA-UREA FERTILIZER PLANT OF M/S ASSAM VALLEY FERTILIZER AND CHEMICAL COMPANY LTD AT NAMRUP, ASSAM, INDIA

Dear Sir/Madam,

1.0 INTRODUCTION

Projects and Development India Limited (PDIL), hereinafter referred to as PROJECT MANAGEMENT CONSULTANT (PMC) on behalf of M/s ASSAM VALLEY FERTILIZER AND CHEMICAL COMPANY (AVFCCL), hereinafter referred as OWNER, has the pleasure of inviting bids from eligible domestic bidders to submit Bid ONLINE through Central Public Procurement (CPP) Portal under Single Stage Two Bid System, for the subject works.

2.0 PROJECT PROPONENT

Assam Valley Fertilizer and Chemical Company Limited (AVFCCL) is a Joint Venture Company of Government of Assam (GoA), National Fertilizers Limited (NFL), Oil India Limited (OIL), Hindustan Urvarak & Rasayan Limited (HURL) and Brahmaputra Valley Fertilizer Corporation Limited (BVFCL).

3.0 PROPOSED PROJECT

AVFCCL intends to set-up a new Brownfield Ammonia-Urea Complex of about 12.7 Lakh Metric Tonnes (LMT) annual capacity of Urea production within the existing premises of Brahmaputra Valley Fertilizer Corporation Limited (BVFCL).

The successful bidder shall comply and perform all the duties required for completion of subject work within the specified time frame as mentioned in 'Scope of Work' for the proposed project of M/s AVFCCL.

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4.0 BRIEF DETAILS OF TENDER

A.	NAME OF WORK	HIRING OF AGENCY FOR GEOTECHNICAL INVESTIGATION WORK FOR PROPOSED AMMONIA-UREA FERTILIZER PLANT OF M/S ASSAM VALLEY FERTILIZER AND CHEMICAL COMPANY LTD AT NAMRUP, ASSAM, INDIA
B.	TENDER NO. & DATE	PNMM/PC230/E/003 dated 22.10.2025
C.	TYPE OF BIDDING SYSTEM	TWO BID SYSTEM
D.	TYPE OF TENDER	OPEN COMPETITIVE (DOMESTIC) BIDDING
	MODE OF SUBMISSION	E-TENDER, THROUGH CPP PORTAL
E.	COMPLETION PERIOD	As per Clause (7) of Technical Specifications
F.	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	Rs. 17,200/- (Rs. Seventeen Thousand Two Hundred only)
G.	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	PDIL https://www.pdilin.com CPP PORTAL https://eprocure.gov.in/eprocure/app .
H.	LAST DATE OF RECEIPT OF BIDDERS QUERIES	31.10.2025
I.	BID SUBMISSION START DATE AND TIME	07.11.2025 (3 p.m.)
J.	DUE DATE & TIME FOR BID SUBMISSION	18.11.2025 (3 p.m.)
K.	DUE DATE & TIME FOR UNPRICED BID OPENING	19.11.2025 (3 p.m.)
L.	ADDRESS FOR COMMUNICATION	
M.	PDIL	PROJECTS & DEVELOPMENT INDIA LIMITED PDIL BHAWAN, A-14, SECTOR -1, NOIDA – 201301, UTTAR PRADESH
N.	AVFCCL	ASSAM VALLEY FERTILIZER AND CHEMICAL COMPANY LIMITED (AVFCCL), C/O AIDC LTD, ZOO ROAD, GUWAHATI, KAMRUP, 781024, ASSAM.

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O.	ORIGINAL DOCUMENTS (IN PHYSICAL FORM) TO BE SUBMITTED AT	Projects & Development India Limited (MM Department) PDIL Bhawan, A-14, Sector -1, Noida – 201301, Uttar Pradesh Fax no.: +91-120-2529801 Tel no.: +91-120-2544063 Email: rituagarwal@pdilin.com ; ; amitvarshney@pdilin.com
P.	CONTACT PERSON FOR SITE VISIT	Shri Santosh Kumar Das, Sr. Manager- Civil Contact no- 9436858460
Q.	SITE ADDRESS	Namrup, P.O. Parbatpur – 786623 Dist. Dibrugarh (Assam), India (Inside Existing BVFCL Plant)

5.0 Bids must be submitted strictly as specified in Instructions To Bidder (ITB).

6.0 Bid must be submitted only on CPP Portal (<https://eprocure.gov.in/eprocure/app>). Following documents shall also be submitted in Original (in physical form to **PDIL** at address mentioned above) within 07 (seven) days from the bid due date, provided the scanned copies of the same have been uploaded on the CPP Portal by the Bidder:

- i. Earnest Money Deposit (EMD) / Declaration for Bid Security
- ii. Power of Attorney
- iii. Letter of Waiver of Conditions / Deviations

7.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.

8.0 Any bidder, who meets the Pre-Qualification Criteria (PQC) and wishes to quote against this Tender Document, may download the complete Tender Document along with its amendment(s) if any, from websites of PDIL and CPP Portal and submit their Bid online complete in all respect as per terms & conditions of Tender Document on or before the Due Date & Time of Bid Submission.

9.0 Tender Document calls for offers on single point responsibility basis and in total compliance of Scope of Works and Time Schedule as specified in Tender Document.

10.0 Any revision, clarification, corrigendum, time extension, etc. to this Tender Document will be hosted on the above mentioned website(s). Bidders are requested to visit the website regularly to keep themselves updated.

11.0 The bidder shall submit the bid online through Central Public Procurement (CPP) Portal. Bids complete in all respects should be uploaded in the CPP portal on or before the

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Bid Due Date and time. Bids through Post/ Fax OR any other mode other than that specified in ITB will not be accepted.

12.0 PDIL/AVFCCL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

This is not an Order.

Thanking you,

For and on-behalf of
Assam Valley Fertilizer and Chemical Company Limited



(Ritu Agarwal)
Deputy General Manager (M.M)
Projects & Development India Limited

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SECTION 2

PRE-QUALIFICATION CRITERIA (PQC)

I. Technical Criteria

The bidder should have satisfactorily completed similar works* during the last 07 (seven) years ending last day of the month previous to the one on which NIT is invited, which should be either of the following:

One similar completed work costing not less than the amount equal to INR 11,01,600/- (excluding taxes and duties)

OR

Two similar completed works each costing not less than the amount equal to INR 6,88,500/- (excluding taxes and duties)

OR

Three similar completed works each costing not less than the amount equal to INR 5,50,800/- (excluding taxes and duties)

***Definition of Similar Work: Geotechnical investigation.**

To meet the above criteria, Bidder shall submit copies of the following documents (self certified/attested).

1. Work Order (W.O) / Contract.
2. Completion Certificate.

II. Financial Criteria

A. Average Annual financial turnover of the bidder during the last 3 years, ending 31.03.2025, should be at least INR 4,13,100/-.

B. Net worth shall be positive as on 31.03.2025.

To meet the financial criteria A & B, the bidder is required to submit following documents:

- Copy of Audited Annual Reports (Balance Sheet and Profits & Loss Account) for the last 03 (three) financial years ending 31.03.2025. If Audited Annual Reports for the financial years ending 31.03.2025 is not available then bidder is required to submit copy of Audited Annual Reports (Balance Sheet and Profits & Loss account) for the last 03 (three) financial years ending 31.03.2024.
- OR**
- Partnership firm / Proprietary firm may submit Turnover Certificate and Net worth Certificate from Chartered Accountant.

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SECTION 3

INSTRUCTION TO BIDDERS

- 1.0** A bidder who meets the Pre-Qualification Criteria (PQC) as per ITB and intends to quote against this ITB may download the bidding document from PDIL website <http://pdilin.com> OR Central Public Procurement Portal <https://eprocure.gov.in/cppp> and submit the Bid complete in all respect as per terms & conditions of contract on or before the bid closing date and time.
- 2.0** **Submission of Bids:** Bids shall be submitted as detailed below:
- 2.1** Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement at <https://eprocure.gov.in/eprocure/app>). **No other mode of Bidding shall be allowed.**
- 1) Possession of valid Digital Signature Certificate (DSC) and enrollment/registration of the agency/bidders on **the e-procurement / e-tender portal** is a prerequisite for e-tendering.
 - 2) Bidder should do the enrollment in the e-procurement site using the “Click here to Enroll” option available on the home page. Portal enrollment is generally free of charge. During enrollment/registration, the bidders should provide the correct/true information including valid email-id. All the correspondence shall be made directly with the agency/bidders through email-id provided.
 - 3) Bidder need to login to the site thro’ their user ID/ password chosen during enrollment/registration.
 - 4) Then the Digital Signature Certificate (Class II or class III Certificates with signing key usage) issued by SIFY / TCS / nCode / eMudra or any Certifying Authority recognized by CCA India on eToken / SmartCard, should be registered.
 - 5) The DSC that is registered only should be used by the bidder and should ensure safety of the same.
 - 6) Agency/Bidder may go through the ITB / tenders published on the site and download the required ITB documents/schedules for the tenders he/she is interested.
 - 7) After downloading / getting the ITB / Tender document/schedules, the Bidder should go thro’ them carefully and then submit the documents as asked, otherwise bid will be rejected.

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- 8) If there are any clarifications, this may be obtained online thro' the tender site, or thro' the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
- 9) Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the eToken / SmartCard to access DSC.
- 10) Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my tenders' folder.
- 11) From my tender folder, he / she selects the tender to view all the details indicated.
- 12) It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the bid will be rejected.
- 13) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF/xls/rar/zip/dwf formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, permitted. Bidder Bid documents may be scanned with 100 dpi with black and white option. However of the file size is less than 1 MB the transaction uploading time will be very fast.
- 14) If there are any clarifications, this may be obtained through the site within the due date as mentioned in Clause 5 of IFB. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
- 15) The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. this will facilitate the bid submission process faster by reducing upload time of bids.
- 16) Bidder should submit the Tender Fee/ EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. Scanned copy of the instrument should be uploaded as part of the offer.
- 17) While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.

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- 18) The bidder has to select the payment option as offline to pay the Tender FEE / EMD as applicable and enter details of the instruments.
- 19) The details of the DD / any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- 20) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- 21) The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
- 22) If the price bid format is provided in a spread sheet file like BoQ_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. the Price Bid / BOQ template must not be modified / replaced by the bidder; else the bid submitted is liable to be rejected for the tender.
- 23) The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). the TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.
- 24) After the bid submission (i.e. after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
- 25) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. the bidders should follow this time during bid submission.
- 26) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not viewable by unauthorized persons during id submission & not be viewable by any one until the time of bid opening.

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- 27) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 28) The confidentiality of the bids is maintained since the secured Socket Layer 128 confidentiality technology is used. Data storage encryption of sensitive fields is done.
- 29) The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- 30) For any queries regarding e-tendering process, the bidders are requested to contact as provided in the tender document. Parallel for any further queries, the bidders are asked to contact over phone: 1-800-233-7315 or send a mail over to cppp-nic@nic.in.

2.2 Bidders are required to submit their bids under three packets/folders as created at the CPP Portal as detailed below:

Folder/Packet 1: (EMD):

- 1) Earnest Money Deposit (EMD) as per Cl. 6.0 below.

Folder/Packet 2: (PQ and Un-priced Technical & Commercial Bid):

- 1) Documents in support of 'Pre-Qualification Criteria" as per Section-2, attached.
- 2) Complete ITB documents duly signed & stamped in each page with all Annexure duly filled in.
- 3) Letter of Waiver of Conditions / Deviations
- 4) **Price Confirmation Copy:** A copy of Priced offer (as per given format (BoQ), keeping price blank (hiding the price) and indicating "Quoted" or "✓" in place of Price figures, shall be submitted as a confirmation of % and GST% quoted.
 - (i) Copy of Check List duly filled by the bidder making all the points clear and not leaving any voids.
 - (ii) Photo copy of PAN card.
 - (iii) A Copy of valid GST registration certificate

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- (iv) Format of Bank Details for online payment, all the details duly filled in.
- (v) Any other document as per the requirement specified in this Invitation to Bid.

Folder/Package 3: (Price Bid):

Bidder shall fill the Price/Rate in the BoQ format (Price Schedule) after downloading it from CPP Portal. **Before filling the Price in downloaded BoQ, Bidder must read the 'Preamble' section provided in the technical specifications.**

Bidder shall quote in the BoQ format (Price Schedule) the following, without which offer may not be considered for evaluation:-

- (i) Percentage (%) [i.e. Excess (+) or Less (-)] against the Estimated Amount (excl. GST) appearing in BOQ1.
- (ii) GST percentage (%) in Form for GST.

3.0 Opening of Bids

Bid shall be opened online at CPP Portal using openers' DSC. Only Folder/Package1 & Folder/Package2 will be opened on Technical Bid Opening Date. Price Bids (Folder/Package3) will be opened for only those bidders which will be considered technically and commercially acceptable. **The Price Bid opening schedule shall be intimated at the Portal itself.**

4.0 Evaluation of Bids

Bids shall be evaluated for Pre-Qualification Criteria (PQC) first and Techno-Commercial Bid Evaluation shall be carried out, only for those Bids which shall meet the Pre-Qualification Criteria (PQC).

Bids shall be scrutinized on Techno-Commercial parameters. Bids having unacceptable deviation may be rejected or Owner may seek clarifications from bidder for any shortcoming found in their Bid at this stage.

Price Bids (Folder/Package3) will be opened for only those bidders which will be considered technically and commercially acceptable.

4.1 Unresponsive Tenders

Tenders that do not meet the basic requirements specified in the bid documents are to be treated as unresponsive and ignored. All tenders received will first be scrutinised to

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see whether the tenders meet the basic requirements as incorporated in the Bid document and to identify unresponsive tenders, if any. Some important points on the basis of which a tender may be declared as unresponsive and be ignored during the initial scrutiny are:

- i. The tender is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document;
- ii. The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption;
- iii. The bidder is not eligible to participate in the bid as per laid down eligibility criteria (example: the tender enquiry condition says that the bidder has to be a registered MSE unit but the bidder is a, say, a large scale unit);
- iv. The bid departs from the essential requirements specified in the bidding document (for example, the bidder has not agreed to delivery/completion period as per tender);

4.2 Discrepancies between Original and Additional/ Scanned Copies of a Tender

Discrepancies can also be observed in responsive tenders between the original copy and other copies of the same tender set. In such a case, the text, and so on, of the original copy will prevail.

The PRICE BID shall be opened only of those bidders who will be technically and commercially suitable.

5.0 Price Evaluation Criteria

- 5.1 Price Evaluation of Bids shall be done considering the quoted prices by the bidder in the Price Schedule/Schedule of rates along with taxes and duties, on overall lowest bidder considering the Input Tax credit (ITC) to AVFCCL.

Incomplete Price Schedule may result into rejection of bid.

The award shall be made on overall Lowest (L1) Bid subject to provision of Public Procurement (Preference To Make In India) Order 2017.

- 5.2 Public Procurement Policy For Micro & Small Enterprises (MSEs)-Order,2012 shall not be applicable for tendered works.
- 5.3 Public Procurement (Preference To Make In India) Order 2017: In line with “Public Procurement (Preference To Make In India) Order 2017” of DPIIT and related subsequent revision, only ‘Local Supplier’ are allowed to participate in this tender. Accordingly, Bidder shall provide a declaration as per format attached.

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5.4 The enquired work is not splitable.

6.0 **Earnest Money Deposit (EMD)**

Bidder must submit, **at PDIL** (Address provided elsewhere in the tender) the requisite **original Earnest money deposit (EMD)**. **The EMD shall be submitted by way of Demand Draft/ Banker's Cheque only drawn on any Scheduled/ Nationalized Bank in favour of 'Assam Valley Fertilizer And Chemical Company Ltd' payable at 'Dispur'.** **Quotation/Bid without EMD may not be considered.**

6.1 EMD shall be refunded:

- To the unsuccessful bidders after acceptance of order by the successful bidder(s).
- To the successful bidder(s) after deposition of Security money/ confirmation by the Bank of the Security cum Performance Guarantee submitted by bidder.

No interest shall be payable on EMD.

6.2 EMD may be forfeited without prejudice to any other right or remedy of PDIL/AVFCCL including but not limited to following circumstances:

- a) If a bidder withdraws his bid during the period of Bid Validity
OR
- b) If a bidder alters / modifies his bid during the period of Bid Validity (after due date and time of submission of bid).
OR
- c) In the case of successful bidder, if the bidder fails to accept/execute the order or refuses submitting Security Deposit/ Security cum Performance Guarantee/ retention from Bill, as the case may be
OR
- d) If a bidder is found to have furnished mis-representation or wrongful declaration/ presentation of qualifying data and other facts in their Bid.
OR
- e) If a bidder has indulged in corrupt/fraudulent/collusive/coercive practice.
OR
- f) In case of cartelization of bid.

7.0 **Validity of Bids**

Prices quoted should remain valid for our acceptance for a minimum period of 90 days from the date of opening of technical bids. PDIL/AVFCCL will not allow any revision in prices within validity period after sealed tender are opened.

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8.0 Operation of contract

The contact person for operation of contract shall be:

Mr. Sumit Kumar, Project Manager
Projects & Development India Limited,
A-14, Sector-1, Gautam Budh Nagar, Noida – 201 301 (UP).

- 9.0** If at any later date, it is found that documents, information and data submitted by the Bidder in the Bid, and based on which the Bidder has been considered eligible or successful or has been awarded the Contract is incorrect or false to the extent that had the correct or true information been made available to the OWNER at the time of Bid evaluation, the bid would have been declared ineligible or unsuccessful, the Bidder shall be forthwith disqualified or, as the case may be, the contract awarded based on such incorrect or false information shall be cancelled and the EMD/PBG/Security Deposit shall be liable to be forfeited.
- 10.0** Bidders are required to carefully go through the entire scope of ENQUIRY, terms and conditions, and other requirements before quoting. They should feel free to contact PDIL/AVFCCL before submission of bid if they have any query on it. Once the bid is submitted, PDIL/AVFCCL will presume that the bidder has understood thoroughly the Scope of Supply along with terms & conditions and all these are acceptable to them.
- 11.0** Bids shall be typed or written in indelible ink and must be free from corrections / erasing / overwriting etc. Any changes made must be authenticated with initial by the Bidder.
- 12.0** Bid shall be ideally in conformity to the Scope of supply/work along with all Terms & conditions, stipulated in the ENQUIRY. PDIL/AVFCCL shall appreciate to receive a Bid having no deviation. Deviations including condition(s), if any, found in the Price bid shall liable for rejection of a Bid in totality.
- 13.0** PDIL/AVFCCL reserves the right to reject any or all the bids without assigning any reason whatsoever and does not bind itself to accept the lowest or any other bid. All bids in which any of the prescribed conditions are to be fulfilled or are incomplete in any respect are liable to be rejected. PDIL/AVFCCL is at liberty to take any of the following actions in case of this ITB:
- to cancel the tender without reference to the bidders.
 - to postpone the due date and time.
- 14.0** Bidders shall not be entitled to claim any costs, charges, expenses or incidentals for or in connection with the preparation and submission of their bids even though PDIL/AVFCCL may withdraw the enquiry/tender or reject all bids.

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- 15.0 SITE VISIT:** If needed, Bidder (at their own cost) can visit site before quoting their rates. For site visit and any clarifications please contact concerned official of AVFCCL as indicated elsewhere in tender.
- 16.0** Bids submitted thro' FAX and e-mail will not be accepted. No request from any bidder to PDIL/AVFCCL to collect the bid from airlines, cargo agents etc. shall be entertained by PDIL/AVFCCL.
- 17.0** PDIL/AVFCCL reserve the rights to assess bidder's capability and capacity to perform the contract.
- 17.0** Bids must be submitted on or before the closing date and time well in advance. Bids received late are liable for rejection & no complaint shall be entertained in this regard for any reason whatsoever.
- 18.0** To know more about PDIL, please visit our website <http://www.pdilin.com>.

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SECTION 4

GENERAL CONDITIONS OF CONTRACT (GCC)

1.0 Scope of Contract

The Scope of Contract/ Purchase Order (P.O), shall be as per 'Scope of Work' defined in Section-6 along with Price Schedule (BOQ), attached to the tender, unless & otherwise it is modified, at subsequent stage of bidding.

2.0 Firm Price

Price to be quoted shall be firm and subject to no escalation whatsoever during the contractual completion period including extended period, if any, except for any statutory variations i.e. change in the rate of tax & duty and/or inclusion of any new tax & duty.

Bid with variable price will not be accepted.

3.0 Price Basis

Duly executed at Namrup, Assam as per Scope of Work.

4.0 Taxes and duties

- 4.1 Goods & Service Tax (GST): GST shall be paid EXTRA as applicable as per GST law. Bidder shall clearly indicate the present applicable rate of GST in Percentage (%). However, Bidder shall indicate corresponding HSN / SAC Code in the check list and shall also enclose a copy of GST registration certificate along with the unpriced offer.
- 4.2 In case a bidder does not fill GST% in the Space/ Cell provided for GST in the "Price Schedule" / Excel BOQ, it shall be deemed that GST as applicable is included in the Total Price of the respective item.
- 4.3 GST Rate as quoted by the bidder(s) in the "Price Schedule" / Excel BOQ shall be considered for price evaluation purpose. However, for ordering, GST Rate corresponding to the exact HSN/SAC code for the enquired item shall be considered. In case, the Lowest / Overall Lowest (L1) bidder has quoted lower rate of GST, same shall be adjusted in their quoted basic price in the Order. In no case, basic quoted price shall be increased.
- 4.4 AVFCCL shall avail Input Credit against payment of GST. Same will also be considered while evaluating the price bid. Relevant necessary documents shall be provided by the Agency to enable AVFCCL avail the above credit set off.

Bidders have to ensure that they should file the Tax return on time to avail input Tax credit; else the same shall be deducted from EMD/Security Deposit/Running Bills.

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4.5 Statutory variation in GST including imposition of any new tax & duty, within the scheduled Completion period, as per Contract, shall be paid at actual on production of documentary evidence.

4.5.1 In case of delay in execution, if there is any increase in the rate of tax & duty and/or there is imposition of any new tax/ duty by statutory authorities, AVFCCL shall restrict the payment of taxes & duties, as prevalent on the scheduled delivery/ completion period only, as mentioned in the Contract and amendment(s) there to.

4.5.2 If there is any decrease in applicable rate of taxes & duties &/or there is any withdrawal of any tax & duty by statutory authorities, during the completion period including extended/amended period of Contract, shall accrue to AVFCCL's a/c.

5.0 Effective date of Contract/ P.O.: Date of issue of Contract or Letter of Intent, whichever is earlier

6.0 Period of Contract

As per Clause (7) of Technical Specifications

7.0 Payment Terms

Payment shall be made as specified in Clause (6) of Technical Specifications.

Payment shall be made within 30 days on receipt of Bills duly approved by Engineer-In Charge, along with the required Documents.

The above payments shall be released subject to submission of Security cum Performance Guarantee/ Security Deposit, as mentioned in tender documents, failing which the same amount shall be deducted from the Agency's Bill(s). All payments will be made by account payee cheque or direct transfer in bank account through RTGS/NEFT.

7.1 Tax deduction at source

Income tax, as applicable as per income tax act, shall be deducted at source from the Agency's bills and a certificate towards this deduction shall be issued to the Agency. In addition, any other statutory deduction such as BOCW, Labour Cess etc. as applicable shall be deducted.

8.0 Security Deposit

8.1 Security Deposit cum Performance Guarantee for an amount equivalent to **10%** of order value shall be submitted **at AVFCCL** within 15 days of issuance of P.O, in the form of Demand Draft (DD)/ Banker's Cheque / Bank Guarantee. The same shall be valid to cover completion period of the Contract plus Deflect Liability Period (if any) plus Three Months Claim Period.

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In the absence of submission of Security Deposit, the equivalent amount after adjustment of EMD amt., if any, shall be adjusted from the bills.

8.2 No interest shall be payable on Security Deposit.

8.3 AVFCCL, however, reserves the right to encash/ forfeit the Security cum Performance Guarantee, if the Agency fails to execute the Contract and/or abide by all the terms and conditions of the P.O.

8.4 Security Deposit shall be refunded after 30 days of completion of Contract on the certification of Engineer In Charge for due fulfilment of the contractual obligations and after adjusting the expenditure incurred by the Owner, if any, on account of any failure on the part of the agency.

9.0 Price reduction clause

In the event of delay (attributable to agency) in execution of job as per SCOPE OF WORK and TIME SCHEDULE mentioned at Section 8, price reduction @ 0.5% per week or part thereof subject to maximum 5% of total order value (excluding GST) shall be recovered from Agency's bill(s).

10.0 Insurance

Necessary insurance(s) to cover accident risk for his employees loss of life, material etc. to crew or the third party to be arranged by SUPPLIER/ Contractor at his cost. In absence of adequate insurance necessary recovery (at actual) shall be done from the bill of SUPPLIER/ Contractor.

11.0 INTERPRETATIONS & PRIORITY OF CONTRACT DOCUMENTS

The documents forming the Contract [i.e. all obligations, commitments, promises agreed upon between parties for supply of Goods including execution of the Services (if any) as per Purchase Order (PO) / Contract and its subsequent amendment(s), if any] are to be read together and interpreted as mutually explanatory of one another. In case of direct inconsistency, then unless otherwise provided in the Contract, the priority of the Contract Documents shall be in accordance with following sequence:

- 1) Purchase Order / Contract
- 2) Fax of Acceptance
- 3) Specific Technical Specification/Job Specifications (pertaining to Scope of Supply)
- 4) Drawings
- 5 Special Conditions of Contract (SCC) (if applicable)

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6) General Technical Specifications (if applicable)

7) Instructions to Bidders (ITB)

8) General Conditions of Purchase (GCP) / General Conditions of Contract (GCC)

9) Any other document forming part of the Contract Amendment issued after Purchase Order shall take precedence over respective clauses of Contract Document. In case any provision of the Contract Document is found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provisions hereto and they shall remain binding on the parties hereto.

12.0 Cancellation of Contract for Default

Without prejudice to any other remedy for breach of contract, such as removal from the list of enlisted contractor, by written notice of default sent to the Contractor, the contract may be terminated in whole or in part, if the contractor has:

i) has seriously or repeatedly breached the contract, including

a) failure to complete the work within the time period(s) specified in the contract, or any extension thereof granted;

b) failure to obey instructions in relation to his progress or defective work, material or plant;

c) breach of the prohibition against sub-contracting

d) Failure to supply sufficient and suitable constructional plant, temporary works, labour and material as proposed in the work programme;

e) Substantial suspension of work for more than the specified days without authority from the engineer and failure to proceed with the work within the specified days of receipt of notice from the engineer

f) Failure to comply with the requirements regarding JVs.

g) Not accepted order within 10 days from date of order

ii) committed fraud

iii) If the contractor fails to perform any other obligation under the contract within the period specified in the contract or any extension thereof granted.

iv) If the contract is terminated in whole or in part, recourse may be taken to any one or more of the following actions:

a) Forfeiture of the performance security;

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b) Upon such terms and in such manner as it deems appropriate, taking over the site and to complete the works himself or with another contractor (risk Purchase) and use the contractor's materials, equipment, temporary works as he/ they think proper;

However, the contractor shall continue to fulfil the contract to the extent not terminated.

13.0 Termination

In the event of unsatisfactory performance, PDIL/AVFCCL reserves right to cancel part or whole of the order / contract and make alternate arrangement at any time during currency of contract on risk & costs of agency and / or forfeit security deposit.

13.1 Termination of Contract for Insolvency

If the contractor becomes bankrupt or becomes otherwise insolvent or undergoes liquidation or loses substantially the technical or financial capability (based on which he was selected for award of contract), at any time, the contract may be terminated, by giving a written notice to the contractor, without compensation to the contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to Owner.

13.2 Termination of Contract for Owner's Failure or Convenience

After placement of the contract, there may be an unforeseen situation compelling Owner to cancel the contract. In such a case, a suitable notice shall be sent to the contractor for cancellation of the contract, in whole or in part, for its (Owner's) convenience, inter alia, indicating the date with effect from which the termination will to become effective. If termination occurs because of Owner's convenience or a fundamental breach on his part, the Engineer-in-Charge will certify the value of works executed, value of any materials lying at site, reasonable cost of removal of equipment, repatriation of project staff, cost of protecting and securing the works and deducting from it: (i) pending advances; (ii) other recoveries; and (iii) taxes as due.

14.0 Force Majeure

A Force Majeure (FM) means extraordinary events or circumstance beyond human control such as an event described as an act of God (like a natural calamity) or events such as a war, strike, riots, crimes (but not including negligence or wrong-doing, predictable/seasonal rain and any other events specifically excluded in the clause). In event of occurrence of such condition neither party shall be responsible for delay in performance. An FM clause does not excuse a party's non performance entirely, but only suspends it for the duration of the FM. The firm has to give notice of FM as soon as it occurs (within 07 days of its occurrence) and it cannot be claimed ex-post facto. The Contractor shall provide justification by documentation countersigned by the local chamber of commerce. There may be a FM situation affecting the purchase organisation only. In such a situation, the purchase organisation is to communicate with the supplier along similar lines as above for further necessary action. If the performance

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in whole or in part or any obligation under this contract is prevented or delayed by any reason of FM for a period exceeding 90 (ninety) days, either party may at its option terminate the contract without any financial repercussion on either side. Notwithstanding the punitive provisions contained in the contract for delay or breach of contract, the supplier would not be liable for imposition of any such sanction so long as the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event covered in the FM clause.

15.0 Confidential Information

Agency shall not disclose confidential information to any third party without prior written consent of PDIL/AVFCCL. Confidential information does not include any information which (i) is rightfully known to the recipient prior to its disclosure; (ii) is independently developed by the recipient without use of or reliance on confidential information; or (iii) is or later becomes publicly available without violation of this agreement or may be lawfully obtained from a third party; or (iv) which would be required to be disclosed under the (Indian) Right to Information Act

16.0 Dispute Resolution and Arbitration

Normally, there should not be any scope for dispute between the Owner and Contractor after entering into a mutually agreed valid contract. However, due to various unforeseen reasons, problems may arise during the progress of the contract leading to a disagreement between the Owner and Contractor. When a dispute/difference arises, both the Owner and Contractor shall first try to resolve it amicably by mutual discussion, mediation, and conciliation. If the parties fail to resolve the dispute within 21 (twenty-one) days, then, depending on the position of the case, either the Owner or Contractor should give notice to the other party of its intention to commence arbitration. The applicable arbitration procedure shall be as per the Indian Arbitration and Conciliation Act, 1996 as amended from time to time.

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (Other than those related to taxation), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05- 2018 and DPE-GM-05/0003/2019-FTS-10937 dated 20.02.2020.

The performance under this contract, shall not stop for any reason, whatsoever, during the said dispute / proceedings, unless the service provider is specifically directed by PDIL/AVFCCL to desist from working in this behalf.

17.0 Jurisdiction

The Contract shall be deemed to have been entered into at **Kamrup, Assam** and all cases of action in relation to the Contract shall, therefore, be deemed to have been assigned within its jurisdiction.

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SECTION 5 - ANNEXURES
CHECK LIST

(Bidder must confirm point by point and strike out whichever is not applicable)

Name of Bidder:

Offer No.:

SL. NO.	DESCRIPTION	ITB REQUIREMENT	BIDDER'S CONFIRMATION/ ACCEPTANCE/ COMMENTS
1.0	Price Basis: Firm. Duly executed at location specified in tender documents	TO CONFIRM	
2.0	Present applicable rate of GST (in %) is indicated separately in the Price Schedule (BOQ), in the space provided for.	TO CONFIRM	
3.0	Completion Period: As per Clause 6.0 of GCC.	TO ACCEPT	
4.0	Validity: Shall be 90 days from date of opening of Technical Bid.	TO CONFIRM	
5.0	DOCUMENTS (DULY SIGNED BY AUTHORISED SIGNATORY & STAMPED) TO BE FURNISHED WITH ENVELOPE-1:		
5.1.	Relevant documents (copy duly signed and stamped) in support of Bidder's Pre-Qualification Criteria (PQC) indicated in Section-2 of tender documents	To Furnish	
5.2	Complete tender documents duly signed & stamped on each page as a token of acceptance of all terms and conditions of tender documents.	To Furnish	
5.3	Price Confirmation Copy: A copy of Priced offer (as uploaded by Bidder in the Portal), keeping price blank (hiding the price) and in place indicating "Quoted" or "✓", as a confirmation of price quoted against the enquired item and GST.	To Furnish along with technical Bid.	
6.0	Photocopy of PAN Card	To Furnish	
7.0	Format of Details for payment, all the details duly filled in (Annexure-VII).	To Furnish	
8.0	Copy of GST Registration Certificate	To Furnish	
9.0	Name, Designation, Telephone Nos., Fax No. & e-mail of Contact Person for this Enquiry.		

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10.	Whether the Company is registered as M S E (Micro & Small Enterprises) if 'Yes', indicate the registration No. and enclose a copy of Registration Certificate. (YES / NO.)		
10a.	Whether the M S E Company is owned by SC / ST (YES / NO.)		
10b.	Whether the M S E Company is owned by Woman (YES / NO.)		
10c.	Declaration by bidder regarding Local Content as per given format	To Furnish	
11.	Confirmation of Acceptance to all Terms and Conditions of the Tender Document in totality.		
12.	HSN/SAC Code (Bidder to indicate)		
It is confirmed that in case any of the terms and conditions mentioned in this summary are at variance with those indicated anywhere else in our offer, the condition indicated in this summary shall prevail.			

Note: Bidder must ensure that all the above information and documents (duly signed and stamped) are furnished along with the Technical Bid.

Signature of Bidder:

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SECTION 5 - ANNEXURES
Format of Bank Details

Bidders are required to submit the following details on the company's **letter head** for online transfer to amount to their account:

1.0	Agency Name / Company Name	
	Address:	
	Phone No.	
	E-mail ID	
2.0	a.	Name of the Bank
	b.	Address of the Branch
	c.	Telephone No.
	d.	9 Digit Code number of the Bank and Branch appearing on the MICR Cheque issued by the Bank
	e.	11 Digit NEFT/IFSC Code of the Bank Branch
	f.	Account Type (SB/CC/CA)
	g.	Bank Account No.(as appearing on the Cheque)
	h.	Permanent Account Number (PAN) Under Income Tax Act.
	i.	GST Registration Number
	j.	Name of Authorized Signatory
	k.	Contact Person Name

We hereby declare that the particulars given above are correct and complete

Authorized signatory of the bidder
Title
Designation
Date:

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SECTION 5-ANNEXURES
DECLARATION

To,

Assam Valley Fertilizer And Chemical Company Ltd,
Namrup, Assam

Subject : ITB No.Dt.

Sir,

We hereby confirm that we have not been banned or blacklisted or de-listed or put on Holiday by any Government / Quasi-Government / Public Sector Undertaking/Financial Institution on due date of submission of bid.

We also confirm that we are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.

If it is found at a later date that the Contractor has secured the contract by furnishing wrong information or by suppressing facts in the bid submitted, Assam Valley fertilizer And Chemical Company Ltd (AVFCCL) reserves the right to cancel the contract and forfeit the EMD/ Security cum Performance Guarantee and put the CONTRACOR on Holiday / Banned / Blacklist list of AVFCCL.

Further, we also confirm that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to AVFCCL by us.

Signature

Name:

Designation:

Seal of the Bidder

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SECTION 5-ANNEXURES

DECLARATION BY BIDDER REGARDING LOCAL CONTENT (To be submitted in Bidders's LETTER HEAD)

To

Assam Valley Fertilizer And Chemical Company Ltd,
Namrup, Assam

SUB: _____

TENDER NO: _____

Dear Sir

We, M/s _____ (Name of Bidder) hereby declare that we are a **Class I Local Supplier / Class II Local Supplier** as per definition in Public Procurement (Preference To Make In India), Order 2017 and subsequent revisions (issued by Department for Promotion of Industry and Internal Trade of Ministry of Commerce and Industry) and eligible to participate in this tender.

Salient Points of Public Procurement (Preference to Make in India) Policy

Sr. No.	Description	Parameter / Document
1	Minimum Local Content (LC) for Availing Preference under this Policy	50%
2	Margin of Purchase Preference	20%
3	Local Content (LC) % declared by bidder.	[Tick (√) whichever is applicable] a) LC Equal to or more than 50% ☐ b) LC More than 20% but less than 50% ☐

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal of the Bidder:

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SECTION 5-ANNEXURES
BANK ACCOUNT DETAILS FOR E-PAYMENT

i.	Name	Assam Valley Fertilizer And Chemical Company Ltd
ii.	AVFCCL Bank Account No.	44420838061
iii.	Name of Bank	SBI
iv.	Name of the Branch with address	SBI, Dispur
v.	IFSC	SBIN0003030

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SECTION 5-ANNEXURES
LETTER OF WAIVER OF CONDITIONS / DEVIATIONS
(ON COMPANY'S LETTERHEAD)

SUBJECT: Hiring of Agency for Bush Clearing, Topographical & Contour Survey Work for Proposed Ammonia-Urea Fertilizer Plant of M/s Assam Valley Fertilizer And Chemical Company Ltd at Namrup, Assam, India

(Tender No : _____)

We* _____ hereby agree to fully comply with, abide by and accept without variation, deviation or reservation all technical, commercial and other condition whatsoever of the Bidding Documents and all Addenda / Corrigenda / Clarifications issued by Owner.

We further hereby waive, withdraw and abandon any and all deviations, variations, objections or reservations whatsoever hereto set out, given or indicated in our offer, clarifications, correspondence, communications, or otherwise with a view that the price bid submitted may be treated to conform to, in all respects, with the terms and conditions of the said tender documents including all Addenda / Corrigenda/Clarifications.

For and on behalf of*

Stamp & Signature**:

Name:

Designation:

Date:

* Here fill in the name of Bidder.

** The Letter of Waiver must be signed by the person (s) authorised to sign.

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SECTION 5-ANNEXURES

CERTIFICATE FOR DECLARATION OF RESTRICTION FOR BIDDERS FROM COUNTRIES WHICH SHARE LAND BORDER WITH INDIA

(To be submitted on Company's Letterhead)

PROFORMA FOR CERTIFICATION TO TENDER

To,

Assam Valley Fertilizer And Chemical Company Ltd,
Namrup, Assam

Attention: Tender inviting authority

Subject: Response against your IFB No.: _____ for _____

Dear Sir,

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered.

Thanking you,

Yours faithfully (Authorized Signatory)

Name: Designation:

Company name,
address and Seal:

Fax no.:

E mail :

Ph no.:

Mobile no.:

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SECTION 5-ANNEXURES

SECURITY CUM PERFORMANCE BANK GUARANTEE

(This guarantee should be executed on non-judicial stamp paper of appropriate value)

Bank Guarantee No.....

Date.....

To,
[Owner's Name & Address]

Dear Sirs,

In Consideration of Assam Valley Fertilizer and Chemical Company Limited (AVFCCL), having its Registered Office at C/O AIDC Ltd, Zoo Road, Guwahati, Kamrup, Assam- 781024, (hereinafter referred to as the 'Owner' which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s. _____ with its registered / Head Office at _____ (hereinafter referred to as the 'Contractor' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a Contract by issue of Owner's Letter of Intent No. _____ dated _____ and the same having been unequivocally accepted by the Contractor, resulting in a contract _____ (scope of contract) _____ and the Contractor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire Contract equivalent to Rs. _____ (%) _____ per cent) of the said value of the Contract to the Owner.

We _____ (name and address) _____ having its Head Office at _____ (hereinafter referred to as the 'Bank' which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Owner, on demand any and all monies payable by the Contractor to the extent of _____ as aforesaid at anytime upto _____ (days/month/year) without any demur, reservation, context, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Owner on the Bank shall be conclusive and binding now withstanding any difference between the Owner and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee.

The Owner shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Owner shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the contract between the Owner and the Contractor or any other course or remedy or security available to the Owner. The bank shall not be released to its obligations under these presents by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of them or by reason of any other act

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of omission or commission on the part of the Owner or any other indulgences shown by the Owner or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Owner may have in relation on to the Contractor's liabilities.

Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs. _____ and it shall remain in force upto and including _____ and shall be extended from time to time for such period (not exceeding one year), as may be desired by M/s _____ {Contractor's Name} _____ on _____ whose behalf this guarantee has been given.

IN WITNESS, the Principal and surety have executed this performance bond and have affixed their seals on the date set forth.

Dated this.....day of.....20.....at.....

WITNESS:

.....
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

.....
(Official Address)

.....
(Designation with
Bank Stamp)

Attorney as Power
of Attorney No.....
Dated.....

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Technical Specifications
(refer Attached Technical Section)

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TENDER DOCUMENT

FOR

GEO-TECHNICAL INVESTIGATION WORK

FOR PROPOSED FERTILIZER COMPLEX

AT AVFCCL- NAMRUP-IV, ASSAM

CLIENT: ASSAM VALLEY FERTILIZER AND CHEMICAL

COMPANY LIMITED (AVFCCL), ASSAM

CONSULTANT: PROJECTS & DEVELOPMENT INDIA LIMITED

0	07.10.2025	07.10.2025	ISSUED FOR TENDER	AR	VP	SA/RNS
REV	REV DATE	EFF DATE	PURPOSE	PREPD	REVWD	APPD

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GENERAL SPECIFICATIONS

FOR

GEO-TECHNICAL INVESTIGATION WORK

0	07.10.2025	07.10.2025	ISSUED FOR TENDER	AR	VP	SA/RNS
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1.0 GENERAL

- 1.01 Government of India has formed a joint venture company of Government of Assam (GoA), Oil India Limited (OIL), National Fertilizers Limited (NFL), Hindustan Urvarak & Rasayan Limited (HURL) and Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) by name as Assam Valley Fertilizer and Chemical Company Limited (AVFCCL) hereinafter also referred to as "OWNER", for setting up Ammonia-Urea Fertilizer Complex along with its associated Offsite & Utility facilities at existing fertilizer complex at Namrup in North-Eastern Indian State of Assam located on the bank of the river Dilli on the South-Western border of Dibrugarh District in Assam, India.

The Existing Fertilizer complex of BVFCL is situated at Namrup in the State of Assam. Namrup is a village 135 meters above sea level and situated in the south-east border of district Dibrugarh in the Upper Assam. Nearest Airport is located at Dibrugarh district head quarter connected by about 70 km motorable road. Namrup is also connected by broad gauge rail and road to rest of the country.

- 1.02 In the event of conflict between the requirements of two or more clauses of the Specifications / Documents, the more stringent requirement as per the interpretation of the Owner / Consultant shall prevail.
- 1.03 The Bidder shall inspect and examine the site and its surroundings and shall satisfy himself before submitting his bid as to nature of the ground and subsoil, the form and nature of the site, the quantum and nature of work and material necessary for successful completion of the works and the means of access to site and in general, shall himself obtain all necessary information as to risks, contingencies and other circumstances, which may influence or affect his tender. Under no circumstances, extra payment consequent on any misunderstanding or otherwise on the part of the Bidder shall be allowed.
- 1.04 Works covered herein below may have to be executed also near existing buildings, if required. The Bidder shall have to take all necessary precaution to protect all existing structures, facilities and buildings etc. from damage. In case, any damage occurs due to the activities of the Contractor on account of negligence, ignorance, accidental or any other reasons whatsoever, the damage shall be made good by the Bidder at his own cost to the satisfaction of the Owner / Consultant. The Bidder shall also take all necessary safety measure, at his own cost, to avoid any harm / injury to his workers and staffs and existing facilities.

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2.00 SCOPE OF WORK

2.01 The Scope of Work consists of carrying out Geo – Technical Investigation Works for the proposed site area associated with the proposed Fertilizer Complex at AVFCCL-NAMRUP-IV, ASSAM.

2.02 The work consist of supplying & providing all labour, material except if indicated in Schedule of Rates, supervision, scaffolding, construction equipments, tools, tackles and plants, supplies & transportation of all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Specifications” and “Schedule of Rates” of this Tender including sampling and testing on item Rate basis. The nature of work shall generally involve carrying out soil investigation of the proposed site area. The Tender Drawings attached with these specifications provides a general ideal about the work to be performed under the scope of this Contract. The enclosed Drawings are preliminary Drawings which are for bidding purposes only and are by no means the final Drawings or show the full range of the work under the scope.

3.00 GEO – TECHNICAL INVESTIGATION

The detailed Geo – Technical Investigation Works shall be carried out at the desired locations, as shown in Tender Drawing enclosed with this document. The locations of the tests shown are indicative and may be changed according to site conditions as per direction of Engineer-in-Charge. The numbers of test indicated are minimum and may be increased according to site conditions as per direction of Engineer-in-Charge. The work consists of mobilization of all relevant and adequate equipment, plants, tools, machineries etc. and providing necessary engineering supervision through qualified and technical personnel, skilled and unskilled labour, etc., required to match the work schedule and to carry out the followings, complete in all respects as per direction of Engineer-in-Charge:

- a) Making 150 mm diameter boreholes at the desired locations.
- b) Conducting Standard Penetration tests in boreholes at a specified interval including at the change of strata.
- c) Collection of undisturbed soil samples from the boreholes at specified interval and at the change of strata.
- d) Collection of water samples from the boreholes.

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- e) Conducting Static Cone Penetration test.
- f) Conducting Plate Load Test and Cyclic Plate Load Test.
- g) Performing different laboratory tests as specified in “Schedule of Rates”.
- h) Preparation and submission of Interim Report in 3 copies and Final Report in 5 – copies for the Geo – Technical Investigation Works including all field records, graphs, laboratory test results including interpretation of test result, sample calculations and Recommendation etc. for the design of Foundation System with shallow and deep foundations as open type and in piles. Recommendation shall also indicate safe bearing capacity of soil for various widths of foundation for 25 mm & 40 mm settlements. In case of piles, the following information should also be provided :
 - i) Vertical, lateral and uplift capacities for different diameters.
 - ii) Pile longitudinal view showing depth of fixity, cut off level.
 - iii) Negative skin friction, if any.
- i) Recommendation should also consist of ground improvement technique, stabilizing slopes, etc. adopting internationally accepted norms and practices considering economy of foundation system.

All the above work shall be carried out in accordance with the “Technical Specifications” Preamble to SOR “Schedule of Rates” and Tender Drawing enclosed with this document.

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1.00 INTRODUCTION

Government of India has formed a joint venture company of Government of Assam (GoA), Oil India Limited (OIL), National Fertilizers Limited (NFL), Hindustan Urvarak & Rasayan Limited (HURL) and Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) by name as Assam Valley Fertilizer and Chemical Company Limited (AVFCCL) hereinafter also referred to as “OWNER”, for setting up Ammonia-Urea Fertilizer Complex along with its associated Offsite & Utility facilities at existing fertilizer complex at Namrup in North-Eastern Indian State of Assam located on the bank of the river Dilli on the South-Western border of Dibrugarh District in Assam, India.

The Existing Fertilizer complex of BVFCL is situated at Namrup in the State of Assam. Namrup is a village 135 meters above sea level and situated in the south-east border of district Dibrugarh in the Upper Assam. Nearest Airport is located at Dibrugarh district head quarter connected by about 70 km motorable road. Namrup is also connected by broad gauge rail and road to rest of the country.

Projects & Development India Ltd. (PDIL) has been retained as Consultant for providing Engineering Consultancy Services and Project Management Services for the aforesaid project.

For the selection of LSTK contractors for the above work, it is proposed to conduct Geo-Technical investigation work for the new Fertilizer Complex inside the existing plant premises of the old BVFCL plant. The Geo-Technical investigation work shall have to be conducted in the proposed plant area as indicated in the Drg. No. PC230-0000-0202, General specification- Doc No. PC230-PNCV-GS-0202, Technical Specification-Doc No. PC230-PNCV-TS-0202, Preamble to SOR - No. PC230-PNCV-PR-0202 and Schedule of Rates PC230-PNCV-SOR-0202 attached.

1.01 SCOPE

- 1.01.1 These specifications cover the procedure for soil investigations for foundations.
- 1.01.2 The work shall be carried out in accordance with the specification set out below and as directed by the Engineer-in-Charge, where necessary.

2.00 CODES

- 2.01 These specifications conform to the Indian Standards on soils and Foundations as given below :
 - IS: 1498 Classification and Identification of Soil for General Engineering Purposes.
 - IS: 1888 Method of Load Tests on Soil.
 - IS: 1892 Code of practice for Site Investigations for Foundations.
 - IS: 2131 Method for Standard Penetration Test.

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- IS: 2132 Code of Practice for Thin Walled Tube sampling of soils.
- IS: 2720 Method of Test for Soils (Relevant Parts).
- IS: 2911 Code of practice for design and construction of pile foundations.
(Part-I)
- Section-1: Driven cast-in-situ concrete piles.
- Section-2: Bored cast-in-situ piles.
- Section-3: Driven precast concrete piles.
- IS: 2911 Code of practice for design and construction of pile foundations.
(Part-II) Under Reamed Piles.
- IS: 4434 Code of Practice for In-Situ-Vane-Shear Test for Soils.
- IS: 4968 Method for sub-surface sounding for Soil:
(Part-I) Dynamic Method Using Cone without Bentonite Slurry.
- IS: 4968 Method for sub-surface sounding for Soil:
(Part-II) Dynamic Method Using Cone and Bentonite Slurry.
- IS: 4968 Method for sub-surface sounding for Soil:
(Part-III) Static Cone Penetration Test.
- IS: 5249 Method of Tests for Determination of In-situ Dynamic Properties of Soils.
- IS: 5313 Guide for core drilling observations
- IS: 5529 Code of Practice for in-situ permeability tests :
(Part-I) Test in overburden.
- IS: 6403 Code of Practice for determination of allowable bearing pressure on shallow foundations.
- IS: 6935 Determination of water level in borehole.
- IS: 8009 Code of practice for calculation of settlement of foundations: Shallow foundations subject to symmetrical static vertical loads.
- IS: 9118 Method for measurement of pressure by means of manometer.

2.02 Reference to any IS Code in these specifications shall mean the Latest revision of the code unless otherwise mentioned. In the event of any conflict between the requirements in these specifications and the referred codes, the former shall govern.

3.00 SOIL INVESTIGATIONS

3.01 BORING

Boring shall be carried out in accordance with the provisions of IS: 1892 and as per the specifications given below:

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3.01.1 AUGER BORING

- 3.01.1.1 Augers shall be of helical or post hole type and may be manually or power operated. The Augers shall be used only up to ground water level and no water shall be added during auger boring. The diameter of the hole shall be minimum 100 mm and preferably 150 mm.
- 3.01.1.2 Uncased holes shall be permitted only up to a depth where the sides of the hole can stand unsupported. In case side fall is noticed, steps shall be taken immediately to stabilize the holes by using bentonite slurry or by casing pipes as directed by the Engineer.
- 3.01.1.3 No water shall be added while boring through cohesive soils and cohesion less soils above water table. While boring through cohesion less soil below water table, water in the casing shall always be maintained at or above the water table.
- 3.01.1.4 The cuttings brought up by the auger shall be carefully examined and soil descriptions duly recorded. Representative samples shall be preserved for laboratory testing.
- 3.01.1.5 Wherever in-situ tests are conducted and undisturbed samples are obtained at specified depths from the borehole, care shall be taken to ensure that the borehole is properly cleaned and free from foreign matters at the time of conducting these operations.
- 3.01.1.6 Water table in the borehole shall be carefully recorded and reported.

3.01.2 SHELL AND AUGER BORING

- 3.01.2.1 Augers shall be of helical or post hole type and may be manually operated. The diameter of the hole shall be minimum 100 mm and preferably 150 mm.
- 3.01.2.2 Specifications set forth in clauses 3.01.1.2 to 3.01.1.7 for Auger Borings shall apply to shell and Auger borings also.
- 3.01.2.3 Auger shall be used for soft to firm clay and for silty deposits at upper depths of 10 meters or up to the water table whichever is deeper. For deeper depths in such deposits and for very stiff to hard clays and dense sands located at any depth, use of shell may be made.
- 3.01.2.4 While boring in soft clays and in sandy deposits below water table, it shall be ensured that the shell diameter shall be at least 25 to 50 mm less than the casing diameter. This is to ensure that suction is not created in the borehole during withdrawal of the shell with consequent "Caving in and blowing" in the boreholes.

3.01.3 ROTARY MUD CIRCULATION DRILLING

- 3.01.3.1 The drilling shall be carried out manually conforming to IS: 1892 or by use of a suitable mechanical rig.
- 3.01.3.2 Drilling up to water table shall be done by auger and provisions of clauses 3.01.1.1 to 3.01.1.7 shall apply. Below the water table drilling by rotary and circulation shall be adopted.
- 3.01.3.3 Use of percussion tools may be permitted in very stiff to hard clays and dense sandy deposits.

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3.01.4 **TERMINATION CRITERIA**

If very hard soil is met within the borehole at depths shallower than specified in tender documents, the borehole shall be advanced by chiseling. If in the opinion of the Engineer-in-Charge, the rate of advancement of borehole is still low, coring may be resorted to subsequently.

3.01.5 **BORE-LOG**

Immediately on completion of a borehole, bore-log shall be prepared and submitted to the Engineer-in-Charge in triplicate.

3.01.6 **BACK-FILLING OF BOREHOLES**

On completion of boreholes, backfilling shall be carried out with an approved material as and when directed by the Engineer-in-Charge. Unless otherwise specified, the excavated soil shall be used for the purpose.

3.02 **IN-SITU TESTING**

3.02.1 **STANDARD PENETRATION TEST**

3.02.1.1 The test shall be conducted at regular intervals or at a depth where the strata changes, whichever occurs earlier. Up to a depth of 10 m, interval shall be 1.5 m. Thereafter SPT tests shall be conducted at an interval of 2 m up to 20 m depth, followed by an interval of 3 m beyond 20 m depth.

3.02.1.2 The test shall be carried out by driving a standard split spoon by means of 65 kg hammer with a 75 cm free fall. Detailed procedure of testing, as specified in IS: 2131 - "Method of Standard Penetration Test in Soils" shall be followed. The samples obtained in the split spoon shall be labeled and preserved for identification tests in the laboratory.

3.02.1.3 The standard penetration test shall be discontinued when N is greater than 75 blows for 30 cms of penetration.

3.02.2 **VANE SHEAR TEST**

3.02.2.1 These tests shall be conducted in soft to firm clays and sensitive clays. These tests shall also be conducted in case of stiff fissured clays where samples cannot be taken.

3.02.2.2 Test may be conducted from the bottom of bore-hole or by direct penetration from ground surface as per IS: 4434. The results of vane shear test shall be maintained and submitted to the Engineer-in-Charge in triplicate.

3.02.2.3 The apparatus used for Vane Shear Tests shall satisfy the requirements conforming to IS: 4434.

3.02.2.4 The following points shall be carefully supervised in the field:

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- a. The vane selected shall be the largest size suitable for the general soil conditions at site.
- b. The vane shall be frequently checked for straightness.
- c. If torque versus rotation curve is to be determined, It is essential that the torque rods shall be calibrated prior to the use in the field. The amount of rod twist, if any, shall be established in degree per meter per unit torque. This correction becomes progressively more important as the depth of test increases. The calibration shall be made at least to the maximum depth of testing anticipated.
- d. During the test, it is essential that the rods and Vane are placed centrally in the bore-hole. For this purpose guides shall be used at an interval in depth of not more than 5.0 m.
- e. The apparatus shall be checked and calibrated as and when required.
- f. Straightness of vane shall be checked while the entire assembly of vane connected with rod is lowered to the bottom of bore-holes. Vane shall be pushed with a moderate steady force up to a depth of five times the bore-hole diameter below the bottom of bore-holes. Precaution shall be taken to ensure that no torque is applied to the torque rods during the application of thrust. No hammering shall be done.
- g. 5-minute's time shall be allowed to lapse after insertion of vane.
- h. Torque indicator readings shall be recorded at intervals of 30 seconds until the vane readings drop appreciably from the maximum.
- i. Samples shall be collected from the levels at which the tests have been conducted.
- j. In case of tests by Direct Penetration from Ground Surface, rods shall remain tight when vane is lowered. Guides shall be placed at every 3.0 m. to centralize and reduce friction between rods and extension pipe.

3.02.3 DYNAMIC CONE PENETRATION TEST

- 3.02.3.1 The method of conducting the tests and the details of the equipment shall conform to one of the two alternatives given below. The particular method to be followed is indicated under specific requirements:
 - a. The test shall be conducted in accordance with IS:4968 (Part- I). The cone size shall be 50 mm.
 - b. The test shall be conducted in accordance with IS: 4968 (Part- II). A continuous flow of bentonite slurry shall be maintained through the rods and the cone so as to avoid friction between the rods and the soil. The cone size shall be 65 mm. and provided with vents for flow of bentonite slurry.
- 3.02.3.2 Dynamic cone penetration tests shall be terminated when blow counts (Ne) exceed 150 for two successive penetrations of 30 cm each.
- 3.02.3.3 The results shall be recorded in a suitable tabular form enclosed, giving blow counts for every 30 cm. penetration, supplemented by a graphical plot of blow counts versus depth.

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3.02.4 STATIC CONE PENETRATION TEST

- 3.02.4.1 The method of conducting tests and the details of the equipment used for this test shall conform to the requirements of IS: 4968 (Part- III).
- 3.02.4.2 The capacity of the equipment to be used for test shall be 10.0 tonnes.
- 3.02.4.3 The test shall not be carried out on gravelly soils and for soils with Standard Penetration Value "N" greater than 50.

3.02.5 PLATE LOAD TEST

3.02.5.1 Plate Size and Thickness:

- a. For Clayey and silty soils and for loose to medium compact sandy soils ($N < 15$), chequered plate of 60 x 60 cm shall be used. Alternatively, circular plate of equivalent area also may be used.
- b. For dense sandy or gravelly soils ($15 < N < 30$) the smallest size shall be 30 cm. square and largest 75 cm. square. Circular plates of equivalent areas may also be used.
- c. The minimum thickness of the chequered plate shall be 25 mm.

3.02.5.2 Test Pit:

- a. Test pit shall be at least five times as wide as the test plate and the depth of the pit shall be the same as the depth of actual foundations.
- b. If the test is to be done on strata below water table, the water level shall be maintained at the plate level, throughout the test by dewatering, especially in sandy soils.
- c. The test shall be conducted immediately after excavation of soil.

3.02.5.3 Placing of Test Plate:

Plate shall be placed on the soil by spreading fine sand in a layer not exceeding 5 mm carefully leveled and set horizontally at the bottom of the pit. A minimum seating pressure of 70 g/cm² shall be applied and removed before starting of the load test.

3.02.5.4 The method of conducting Plate Load Tests shall conform to IS: 1888.

3.02.5.5 Settlement and Observation:

- a. Settlement shall be recorded with at least two dial gauges, resting at diametrically opposite ends of the plate.
- b. Settlement shall be observed for each increment of load after an interval of 1, 4, 9, 16, 25, 36 and 64 minutes and thereafter every one hour.
- c. The next load increment shall be applied when the rate of settlement is less than 0.02 mm/hr with a minimum period of two hours. For computing the rate of settlement its extrapolation for periods less than one hour shall not be permitted.

3.02.5.6 Record:

- a. Record shall consist of the following:

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1. Load-settlement reading in tabular form.
 2. Time-settlement curve for each load stage.
 3. Load-settlement curve in natural and log-log scale.
 4. Modulus of sub-grade reaction evaluated from test.
- b. In addition to above, the record shall also contain the followings :
1. Date
 2. List of personnel
 3. Weather conditions
 4. Irregularity in routine procedure, if any.

3.02.5.7 Post Test Requirements:

- a. Back-filling of the pit shall be carried out in an approved manner and as per the directions of Engineer-in-Charge on completion of test.
- b. An auger bore-hole shall be made from the depth of test extending to a depth of 6.0 m below test depth so as to ascertain the nature of sub-soil test depth. If required, undisturbed samples shall be obtained at suitable depths from bore-hole.

3.02.6 PERCOLATION TEST

Percolation test to determine the soil absorption capacity shall be conducted in accordance with IS: 2470 (Part- I)-- Code of practice for Design and Construction of Septic Tank (Small Installations).

3.02.7 FIELD CBR TEST

This test shall be conducted as per IS: 2720 (Part-XXXI) at specified depth after removing top soil, vegetation and organic matter.

3.02.8 DYNAMIC SOIL TESTS

3.02.8.1 General

The following tests shall be conducted for the determination of dynamic properties of soil for use in the design of foundations subject to vibratory loads:

3.02.8.2 Cyclic Plate Load Test

Cyclic Plate Load Test shall be conducted as per general procedure of IS 1888. The details of maximum load intensity and loading increments shall be as per ordinary plate load test. The test results shall be used to estimate the safe bearing capacity and to determine the coefficient of elastic uniform compression. Two preliminary copies of the data and computed results shall be submitted to the Engineer in charge within one week after completion of test.

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3.02.8.3 Repeated Triaxial Shear Test

This test shall be carried out for confining pressure ranging from 0.5 Kg/cm² 4.0 Kg/cm².

The triaxial sample shall first be subjected to an initial load equal to the anticipated static working load, which shall be indicated at the time of testing. Positive and negative values of a small increment of load shall then be applied to the sample in cycles and graph plotted of stress against strain. E-Value shall be obtained from this plot after obtaining a stable state.

Results of all the above tests shall be incorporated in the form of a plot of shear modulus Vs. confining pressure for a range of pressure upto 4.0 Kg/cm².

3 . 03 **SAMPLING**

3.03.1 **Sampling Record:**

All samples (disturbed and undisturbed) collected from the pit/bore-hole shall be labeled and attached to the top of sampler, in case of undisturbed samples. In case of samples collected in Jar or other containers, the label should be properly pasted to the Jar/container.

3.03.2 **Undisturbed Soil Samples from Borehole:**

3.03.2.1 Samplers for recovering undisturbed samples from cohesive soils at the specified depth shall conform to IS: 2132. However, use of samples less than 70 mm diameter shall not be permitted.

3.03.2.2 The sampling procedure shall conform to IS: 2132. Both the area ratio of the cutting edge, as well as recovery ratio of the sample shall be measured and reported. For normal soils, area ratio of the sampling tubes, shall conform to IS: 2132, that is it may vary from 10.9 percent to 12.4 percent but for sampling in very hard and dense soils, use of thick walled sampling tubes with area ratio not exceeding 20% may be permitted subject to the approval of the Engineer-in-Charge.

3.03.2.3 In order to reduce the wall friction, suitable precautions such as oiling inside and outside the sampling tubes shall be observed. The sampling tube shall have smooth finish.

3.03.2.4 In soft to firm clays, undisturbed samples shall be collected by pushing the tube continuously without impact or twisting. Driving of sampling tubes shall be permitted only if stiff to very stiff and hard deposits exists.

3.03.2.5 For highly sensitive soils, piston samples shall be employed.

3.03.2.6 For soft clays exceeding more than 15 m depth from the ground level, collection of undisturbed samples shall be supplemented by the In-situ Vane shear test.

3.03.2.7 The top and bottom of the sample shall be clearly marked on the sampling tube.

3.03.2.8 Undisturbed samples shall be tested within a period of two weeks of taking them from the bore holes of Trial pit.

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3.03.2.9 If any space is left between the end of the tube and top of wax, the same shall be tightly packed with raw dust or any other suitable material. A close fitting lid or screwed cap shall then be placed on each end of the tube and held in position by adhesive tape.

3.03.3 Undisturbed Soil Samples from Trial Pits

3.03.3.1 Samples shall be obtained at specified depths from Trial Pits in a timber or steel box as under :

A benching shall be made at the level where it is proposed to take the sample. A cube of 30 cm size shall be formed by careful trimming with knife or any other suitable sharp instrument. A timber box having dimensions slightly larger than the soil cube shall be slipped on it so as to act as a container and the sample removed from the pit without causing any disturbance.

3.03.3.2 After recovery of the sample, all exposed faces shall be sealed with wax to prevent moisture loss and the sample shall be properly labeled and transferred to the laboratory immediately.

3.03.4 Disturbed Soil Samples

Disturbed soil samples shall be collected at every half a meter and at every change of strata from boreholes as well as from trial pits. Identification labels indicating depth, Borehole number and visual soil classification shall be affixed on the containers.

3.03.5 Water Samples

3.03.5.1 Samples of ground water shall be obtained from the specified boreholes at the depths specified by Engineer-in-Charge.

3.03.5.2 At the specified depth water shall be bailed or pumped out so that fresh ground water flows into the borehole. Care shall be taken in avoiding any contamination with surface water at any time. Water sample shall be collected in a five liter polythene or glass container and labeled properly.

4.00 LABORATORY TESTING OF SOILS

4.01 STORING OF SOIL SAMPLES IN LABORATORY

4.01.1 Soil samples shall be inspected and tested shortly after their arrival at the laboratory. Proper arrangement for storing shall be made in cases where testing of samples is not possible immediately after they are brought to the laboratory.

4.01.2.0 Bags of canvas, cans and bins can be used for storing large quantities of soil. The containers should have a label or tag which gives such data as soil type, project location, sampling date, boring number, sample depth, etc.

4.01.3.0 If the undisturbed clay samples are taken from pit, they should be covered with a protective coating. The coating shall preferably be with wax having melting point between 120° to 160°F. The wax coating can be applied by either dipping the soil sample in the

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melted wax or using a soft brush to spread the melted wax. Wax should not be heated to more than a few degrees above its melting temperature, since heating to higher temperatures tend to drive off more volatile hydro-carbons, thus making the wax more permeable and more brittle upon coating.

4.01.4.0 If the soil sample is to be stored for more than 15 days, a protective coating of wax, in more than one layer, is recommended with a total thickness of 12 mm to 18 mm.

4.01.5.0 A few selected soil samples shall be stored in the laboratory till the soil investigation report is finalized and approved by the Engineer.

4.02 **HANDLING OF UNDISTURBED SAMPLES IN LABORATORY**

4.02.1 The undisturbed samples shall be handled in the laboratory with due precaution to avoid disturbances and loss of moisture content which may adversely affect the test results.

4.02.2 Unprotected samples shall never be handled with bare hands because the hands foster disturbance and loss of moisture. The sample shall be protected by using Aluminium cellophane or wax paper before handling it.

4.02.3 When transporting a specimen, it should be supported over its entire length by using a mould, plate or paper sling.

4.02.4 A chunk from an undisturbed sample collected from pit shall be cut with a wire saw which consists of a frame with a piano wire stung tightly across it. Any wax or other covering used to protect the sample shall be cut with a knife or hacksaw. Care shall be taken when trimming the finished specimen. The wire in the wire saw used for final trimming shall be smaller in diameter than that used for preliminary cutting and the wire shall be cleaned prior to each cut.

4.02.5 In case of samples taken in sample tubes, the samples shall be extrude from their tubes by a steady pushing process and not by a jerky or driving one. Prior to extrusion, the plug which protects the end of the soil shall be removed by scrapping it with a knife or sawing off that portion of the tube which contains plug. The extrusion shall employ the same direction of motion or motion of the soil with respect to the tube as existed during sampling, because a reversal of stress tends to cause disturbance.

4.03 **PROCEDURES OF TESTING**

4.03.1 All apparatus used for laboratory testing shall conform to the specifications laid down in the relevant Indian Standards.

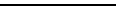
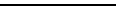
4.03.2 All testing procedures shall conform to those laid down in relevant Indian Standards.

4.03.3 For proper interpretation, results of each laboratory test shall be presented either as given in relevant Indian Standard or as specified in specific requirements.

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5.00 REPORT

- 5.01 The report shall state in brief the description of the test procedures employed. It shall contain all field and laboratory test results.
- 5.02 The report shall also include wherever required a sample calculation with reference to formula used to evaluate the various parameters.
- 5.03 Report shall also contain the summary of various soil parameters evaluated, in a Performa as given in ANNEXURE- A enclosed.
- 5.04 Report shall contain character and genesis of soil.
- 5.05 Detailed bore-logs, subsoil sections, laboratory and field test results both in tabular as well as in graphical form and a plot plan showing locations and reduced levels of bore holes and other tests.
- 5.06 Results obtained and their interpretation.
- 5.07 Recommendation for type, depth, ultimate and safe bearing pressure and settlement of foundations for the following structures:
- Process units, power plants etc., which carry a heavy unit load.
 - Non plant structures such as administrative buildings etc., which are lightly loaded.
 - Storage tanks and other structures founded at or near ground surface.
- 5.08 Recommendations shall also be given for allowable bearing pressure and settlements for foundations of sizes ranging from 1 to 10 metres placed at different depths ranging from surface to 3 metres below the ground surface.
- 5.09 Aggressiveness of soil and soil water to reinforced concrete and steel and other building materials.
- 5.10 Suitability of soil and degree of compaction of fill for the pavement and tank farms and recommendation for thickness of pavement for class AA and Class A loadings.
- 5.11 Modulus of sub grade reaction for pressure ranging up to 3 Kg/cm². The recommended values shall include the effect of size, shape and depth of foundation.
- 5.12 In case of poor soil conditions recommendations are to be made for the following:
- Ground improvement techniques, stabilizing slopes, etc. adopting internationally accepted norms and practices considering economy of foundation system. In case of ground improvement, type(s) of improvement method(s) recommended, depth of treatment and settlements and bearing capacity estimates after treatment shall be indicated.
 - Pile foundations, if considered necessary. If so, type(s) of pile recommended, depth of pile, depth of fixity, negative skin friction, safe load capacity for different sizes of piles.
- All recommendations shall be supported by back up calculations.
- 5.13 Any other information of special significance encountered during investigation and likely to have a bearing on design and construction.

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5.14 Interim reports based on the data available shall be supplied to the Engineer-in-Charge on demand.

6.00 PAYMENT

Payment for Geo-tech work shall be made on item basis as per Schedule of Rates. All connected works including supply of drawings and documents shall be considered as a part of total work.

Terms of payments are as follows:-

- 60% payment shall be released on Submission of interim report with all Drawings / Documents duly certified by Engineer In Charge of PDIL.
- 20% payment shall be released on Submission of final report with all Drawings / Documents after compliance of Consultant's/Owner's comments duly certified by Engineer In Charge of PDIL.
- 20% payment shall be released on acceptance of final report with all Drawings / Documents by the Consultant's/Owner, duly certified by Engineer In charge of PDIL.

7. 00 WORK SCHEDULE:-

- a) Completion of all field tests along with laboratory tests related to Geo-Technical Investigation including interim report with all Drawings / Documents - Within 6 weeks of issue of LOI.
- b) Submission of final Report, Drawings. – 1 week after receipt of consultant's / owner's comments.

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ANNEXURE-A

Consolidation Test	mv	(Kg/Cm ²)	
	Pr. Range	(Kg/Cm ²)	
Shear Test	Ø	(Deg.)	
	C	(Kg/Cm ²)	
Atterberg Limit	PL	(%)	
	LL	(%)	
Grain Size Distribution	Clay	(%)	
	Silt	(%)	
	Sand	(%)	
	Gravel	(%)	
Sp. Gravity			
Dry Density (g/cc)			
Bulk Density (g/cc)			
NMC			
Brief Description			
Depth in Metre			
Borehole / Pit No.			

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PREAMBLE
TO
SCHEDULE OF RATES
FOR
GEO-TECHNICAL INVESTIGATION WORK

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NOTES

1. The Tenderer shall refer to the “Technical Specifications” before quoting their Rates. The rates quoted shall be inclusive of all the works specified therein, for the successful completion of the work, including submission of Initial as well as Final reports, after incorporating client’s/owner’s comments., complete, as specified in the tender document.
2. The Tenderer shall note that the supply of Manpower, arranging precise instruments, cutting of wild bushes etc. required for proper execution of the work, shall be their responsibility.
3. The Tenderer shall note that the supply /procurement of all the materials, required for the job, shall be their responsibility.
4. The Tenderers are specially advised to visit the site prior to quoting rates, as no change in rates and amount will be accepted later on for any reason whatsoever.
5. The tenderer shall note that the quantities of different items as given below are tentative based on available drawings/ information collected from site and are subject to variation and they shall not be entitled to claim anything extra or compensation on this account. Owner / consultant do not guarantee the work under each item the “Schedule of rates”. Quotation of individual item may vary up to any extent. The total quantum of work may vary up to 25% on either side of the total awarded contract value and on this account, no variation of quoted rates of item will be permitted.

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1.00 GENERAL

- 1.01 The plans have been evolved tentatively based on information available with Owner / Consultant but the dimensions and details etc. are liable to changes. The Tenderers shall not be entitled to claim any higher rate or compensation on this account. The tender drawings are intended mainly to give an indication of the probable type of works. The successful Tenderers will, however, be required to execute the work as per detailed approved drawings issued to them from time to time. Owner reserves the right to add / delete any of works mentioned in the N.I.T., during the currency of the contract.
- 1.02 The Tenderers shall note that the quantities of the different Items, as given in the "Schedule of Rates" are tentative based on tentative tender drawings and are subject to variation and they shall not be entitled to claim any higher rate or compensation on this account. Owner / Consultant reserve the right to change / modify the size and type of sections at any time. Owner / Consultant does not guarantee work under each item of the Schedule of Quantities. The total quantum of work may vary up to 25% on either side and nothing extra will be paid on this account. Quantum of individual item may vary to any extent. **However, in case of any increase in executed / work order value beyond awarded value, contractor shall prepare statement of such expected variation based on the drawings issued for construction or as per site condition and shall obtain prior issuance of formal amendment to Contract from the OWNER/CONSULTANT in this regard. In no case, the value of executed value should exceed the awarded value without prior written approval from OWNER/CONSULTANT.**
- 1.03 The Tenderers shall be fully responsible for the correct setting out and execution of the work in accordance with approved drawings which will be supplied to them progressively. All tools, tackles, construction equipments etc., required for the successful execution / construction of the complete work, shall be responsibility of the Tenderers.
- 1.04 The quantities given in the "Schedule of Rates" are approximate and are given only for the guidance for quoting rates. Payments on bills shall, however, be made on actual measurements of quantities of work done as per approved drawings. Unless otherwise specified, measurements of quantities shall be taken as per Indian Standards IS: 1200.
- 1.05 The rates to be inserted in the "Schedule of Rates" are to be inclusive of the value of the work described under several items including all costs and expenses which may be required for the construction of the work described together with all taxes, general risks, liabilities and obligations such as temporary buildings / hutments, fencing, watching, lighting, insurance, labour regulations, indemnity, maintenance and the like. The prices shall be inclusive of all labours, materials, tools, plants,

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- equipment, hoists, tackles, scaffoldings, the sundries, etc., as may be necessary for the completion of the work in all respects.
- 1.06 No work shall be undertaken at site until detailed approved drawings have been issued by the Owner / Consultant in writing. Subsequent revision in the drawings which become necessary shall be incorporated and revised drawings issued to the Contractor who shall execute the work as per the latest revised drawings. Nothing extra will be paid on this account and no claim whatsoever will be entertained on this account. The Owner / Consultant reserves to themselves the right to modify / revise / alter etc. in any drawing supplied to the Contractor.
 - 1.07 Any fabrication / construction done before final approval of the drawings shall be the Contractor's responsibility.
 - 1.08 In case of any discrepancy between the description of items given in the "Schedule of Rates" and Specifications, drawings and other documents, the decision of the Owner / Consultant in writing shall be final, binding and conclusive for the purpose of this contract.
 - 1.09 The term "Design and drawings" mentioned in the description of Items in the "Schedule of Rates" means the detailed approved design drawings marked "Good for Construction".
 - 1.10 The work "As described", "As shown", "As directed" or "As approved", "As mentioned" in the description of Items shall mean as directed in design or detailed drawings and as directed by the Engineer-in-Charge.
 - 1.11 The Owner shall furnish the Contractor with only reference points of the job site and a level bench mark, and the Contractor shall at his own cost and initiative, set out the works to the satisfaction of the Engineer-in-Charge but shall solely be responsible for the accuracy of such setting up notwithstanding satisfaction as aforesaid of the Engineer-in-Charge or any other assistance rendered by the Engineer-in-Charge for the purpose.
 - 1.12 The Contractor shall provide, fix and be responsible for the maintenance of all stakes, templates, level marks, profiles and the like and shall take all precautions necessary to prevent their removal or disturbance, and shall be responsible for the consequence of such removal or disturbance and for their efficient and timely reinstatement. The Contractor shall also be responsible for the maintenance of all survey marks, boundary marks, distance marks and centre line marks, whether existing or supplied / fixed by the Contractor.
 - 1.13 Before commencing the work, the Contractor shall at his own cost and initiative provide all necessary references, level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the work in accordance with the scheme for fixing bench marks acceptable to the Engineer-in-Charge. The centre of longitudinal or face line and cross line shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the center to enable a

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theodolite to be set over it. No work shall be started until all these points are approved by the Engineer-in-Charge in writing.

But such approval shall not relieve the Contractor of any of his responsibilities in respect of the adequacy or accuracy, thereof. The Contractor shall also provide all labour, material and other facilities necessary for the proper checking of layout and inspection of the points during construction.

- 1.14 Pillars bearing geodetic marks located at the site / unit of works under construction should be protected and fenced by the Contractor.
- 1.15 On completion of works, the Contractor must submit to the Engineer-in-Charge the geodetic documents according to which the work was carried out.
- 1.16 The Contractor shall be exclusively responsible for the provision and maintenance of horizontal and vertical alignments and levels and for the correctness of every part of the work in accordance there with and shall at his own cost rectify any errors or imperfections therein.
- 1.17 The Contractor shall at all times during the progress and continuance of the works be responsible for and effectively maintain and uphold in good, substantial, sound and perfect condition of all / and every part of works and shall make good from time to time and at all times as often as the Engineer-in-Charge shall require any damage or defect that may during the above period arise in or be any way connected with works.
- 1.18 The portion which is under HOLD shown in the approved drawing or the portion which would be brought under HOLD during execution on account of coordinating different activities of other working agencies shall be taken up by the Contractor to execution only after the said HOLD is withdrawn. The Contractor on this account shall not be entitled to claim for any compensation.
- 1.19 The Contractor shall maintain adequate drainage facilities at the work site at all times during the execution of the work.
- 1.20 No compensation shall be made by the Owner / Consultant for any damage done by rain or traffic during the execution of the work.
- 1.21 The Contractor shall afford all reasonable facilities such as scaffolding etc., and cooperation to the various other agencies and Contractors, for services not included in this contract, who may be working on the site simultaneously so that entire work can proceed smoothly and simultaneously to a successful completion. The Tenderer must take all the aforesaid factors into consideration while quoting his rates. Nothing extra shall be paid on any ground out of or relating to the aforesaid factors.
- 1.22 For details of works, materials and workmanship, attention is invited to the "Schedule of Rates", Scope Drawings, Special Conditions of Contract, Materials

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and Job Specifications, this section, etc. and the Tenderers must quote the rates keeping in full view the requirement of the said documents.

- 1.23 Except otherwise clearly stated, CPWD Specifications with Correction Slips (latest) shall be followed in all Civil, Structural and other allied Works and in absence of CPWD Specifications for any work, relevant Indian Standard codes of practices (latest) shall be followed. Where there are no Specifications available for any work either in CPWD Specifications or in IS Codes of practices, the work shall be carried out as per the direction of Engineer-in-Charge.
- 1.24 The following notations have been used throughout the "Schedule of Rates" and Materials and job Specifications:

1.	Cu.M	Cubic Metre
2.	Sq.M	Square Metre
3.	m.	Metre
4.	mm	Millimeter
5.	Cm. / Cms.	Centimeter / Centimeters
6.	No. / Nos.	Number / Numbers
7.	Tonne / Te.	Metric Tonne
8.	Kg.	Kilogram
9.	RCC	Reinforced Cement Concrete
10.	PCC	Plain Cement Concrete

- 1.25 The quoted rates shall be applicable for all heights, depths etc. except otherwise clearly stated in the description of items and nothing extra shall be paid to the contractor on this account.
- 1.26 Description of items and mode of measurement for payment indicated herein shall override those given elsewhere if these are at variance.
- 1.27 Any materials / accessories / fittings etc. which may not be specifically mentioned in the description of items but which are normally used or necessary are to be provided by the contractor without any extra cost to Owner / Consultant and the work must be completed in all respects.

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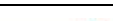
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Item No.	Description Of Work	Unit	Quantity	Unit Rate (in Rs.)	Total Amount (in Rs.)
1	Mobilization of necessary plant / equipment, personnel and materials at site, shifting the same from place to place complete in all respect for carrying out Geotechnical investigation work for the specified area as per final plot plan and as per enclosed scope of work, specifications and direction of Engineer-in-Charge within the stipulated time schedule and demobilization after completion of field work.	Lump-Sum	1	1,00,000.00	1,00,000.00
2	Making 150 mm nominal diameter boreholes at various locations in all types of soil including laterite using suitable approved method of boring including chiseling, cleaning, providing casing pipe as required or as directed by the Engineer-in-Charge including collection of water samples and disturbed soil samples, observation of ground water table etc., transportation of all the collected samples to the laboratory and back filling of bore holes on completion of the same, complete in below natural ground level as follows: all respect as per scope of work, specifications and direction of Engineer-in-Charge for depths.				
	a. From natural ground level to 10.0 M depth	Meter	200	1,200.00	2,40,000.00
	b. From 10.0 M depth to 20.0 M depth	Meter	200	1,200.00	2,40,000.00
	c. From 20.0 M depth to 30.0 M depth	Meter	100	1,400.00	1,40,000.00
3	Collecting 100 mm nominal diameter undisturbed soil samples at every 3.0 M interval and at the change of strata from the bore holes at various locations and transporting all the collected samples to the laboratory for specified tests, complete in all respect as per scope of work and specifications and direction of Engineer- in- Charge.	Each	200	100.00	20,000.00

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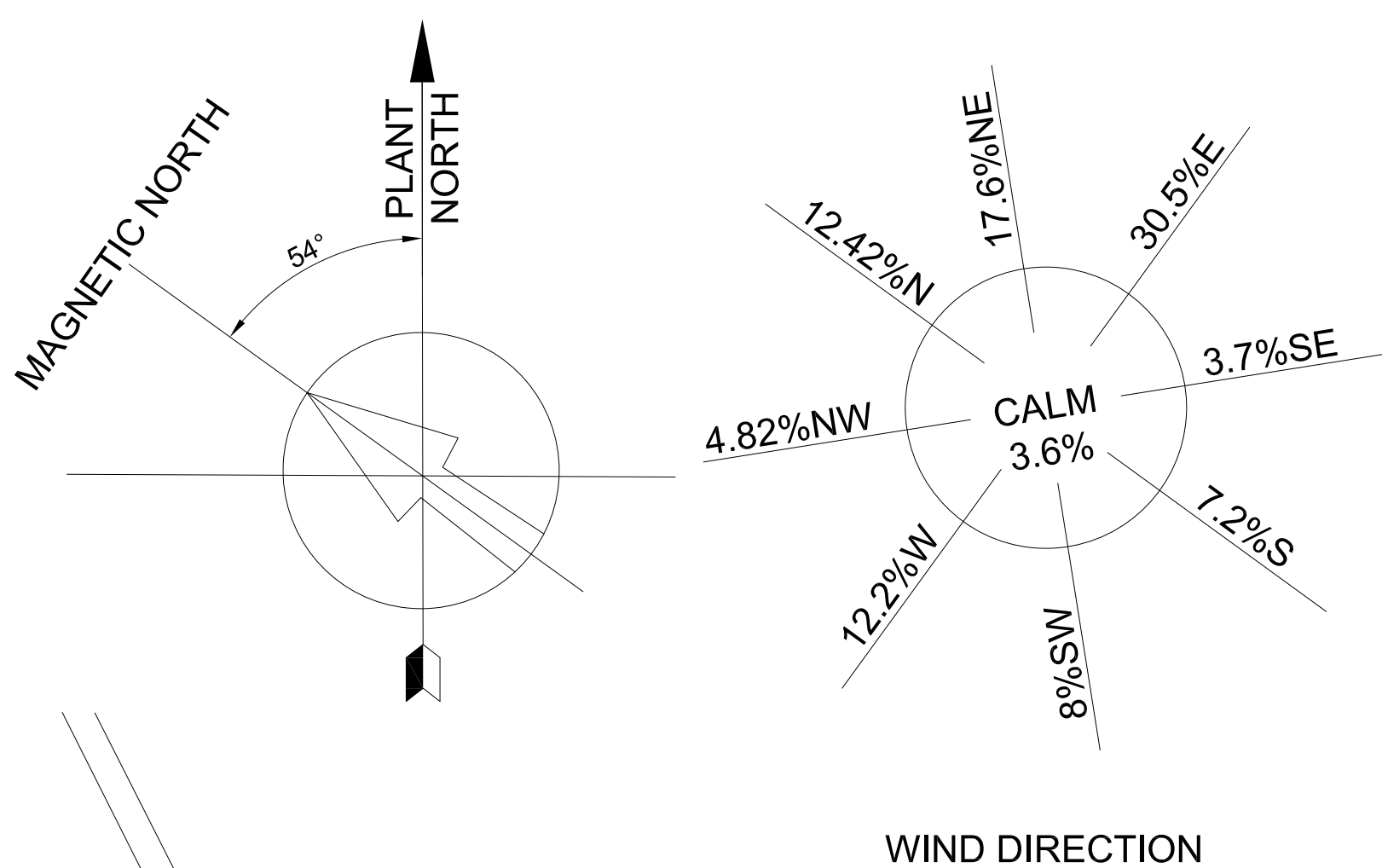
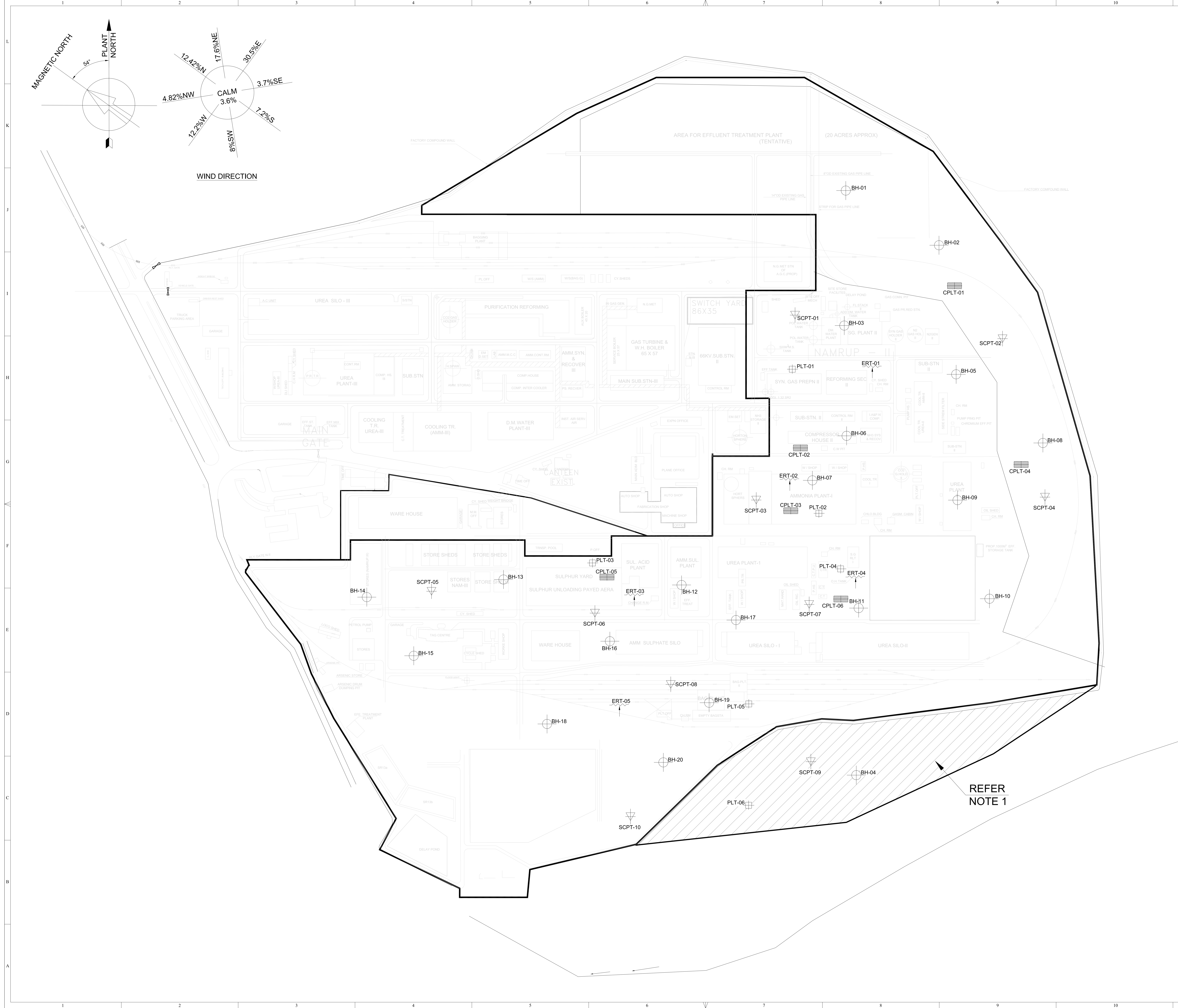
Item No.	Description Of Work	Unit	Quantity	Unit Rate (in Rs.)	Total Amount (in Rs.)
4	Performing Standard Penetration tests in the bore holes at specified interval and at the change of strata complete in respect as per specifications and direction of Engineer- in-Charge.	Each	200	100.00	20,000.00
5	Conducting Static Cone Penetration test at various locations, completed in all respect as per the scope of work and specifications and direction of Engineer-in-Charge.	Each	10	19,800.00	1,98,000.00
6	Conducting Plate Load Tests at various locations, complete in all respect as per the scope of work and specifications and direction of Engineer-in-Charge upto the depth as directed / as specified.				
	a) Cyclic Test	Each	6	30,000.00	1,80,000.00
	b) In in-situ condition	Each	6	30,000.00	1,80,000.00
7	Conducting Electrical Resistivity Tests at various locations, by Wenner's method as per IS:3043 electrodes configuration .In each location , four electrodes shall be driven into earth in a straight line along N-S and E-W directions at equal intervals at s (distance between two successive electrodes) equal to 1 m, 2 m, 5 m, 10 m, 15 m and 20 m and direction of Engineer-in-Charge.	Each	5	1,000.00	5,000.00
8	Conducting Various laboratory tests on soil samples at an approved laboratory including preparation of soil samples to determine the following properties of soil, complete in all respect as per scope of work and specifications :				
	a) Natural Water Content	Each	200	50.00	10,000.00
	b) Bulk and Dry Density	Each	200	50.00	10,000.00

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Item No.	Description Of Work	Unit	Quantity	Unit Rate (in Rs.)	Total Amount (in Rs.)
	c) Specific Gravity and Void Ratio	Each	20	50.00	1,000.00
	d) Liquid Limit and Plastic Limit	Each	200	50.00	10,000.00
	e) Grain Size Analysis :				
	i) Sieve Analysis	Each	200	50.00	10,000.00
	ii) Hydrometer Analysis	Each	20	50.00	1,000.00
	f) Unconfined Compression Test	Each	20	50.00	1,000.00
	g) Direct Shear Test	Each	20	50.00	1,000.00
	h) Triaxial Shear Tests				
	i) Unconsolidated Undrained Test	Each	20	50.00	1,000.00
	ii) Consolidated Undrained Test	Each	20	50.00	1,000.00
	iii) Consolidated Drained Test	Each	20	50.00	1,000.00
	i) Consolidation Test	Each	20	50.00	1,000.00
	j) Swelling Pressure Test	Each	20	50.00	1,000.00
	k) Shrinkage Limit Test	Each	20	50.00	1,000.00
	l) Modified Proctor Density Test	Each	20	50.00	1,000.00
	m) CBR Test	Each	20	50.00	1,000.00
9	Conducting Chemical Test on soil samples to determine pH Value, Sulphate Content and Chloride Content.	Each	20	50.00	1,000.00

	SCHEDULE OF RATES FOR GEO-TECHNICAL INVESTIGATION WORK	PC230-PNCV-SOR-0202	0	
		DOCUMENT NO.	REV	
		Sheet 5 of 5		

Item No.	Description Of Work	Unit	Quantity	Unit Rate (in Rs.)	Total Amount (in Rs.)
10	Collecting ground water samples from bore holes and transporting the same to the laboratory as per the scope of work, specification and direction of Engineer-in-Charge. Conducting Chemical Test on ground water samples to determine pH value, Sulphates content and chloride content.	Each	20	50.00	1,000.00
TOTAL AMOUNT Excluding of GST (in Rs.)					13,77,000.00



REFERENCE DRAWING

- LEGEND:-
- BH - BORE HOLE - 20 NOS.
 - SCPT - STANDARD CONE PENETRATION TEST - 10 NOS.
 - PLT - PLATE LOAD TEST - 06 NOS.
 - CPT - CYCLIC PLATE LOAD TEST - 06 NOS.
 - ERT - ELECTRICAL RESISTIVITY TEST - 05 NOS.

NOTE 1:- THIS AREA WORK SHALL BE CARRIED OUT AFTER CONFIRMATION FROM AVFCL/BVFCL

THIS DRAWING IS ISSUED SOLELY FOR THE PURPOSE OF GEOTECH INVESTIGATION TENDER

REFER NOTE 1

0	06.10.25	ISSUED FOR TENDER PURPOSE	UP	AR	SA
REV	DATE	DESCRIPTION	BY	CHKD	APPD.
		ASSAM VALLEY FERTILIZER & CHEMICAL COMPANY LIMITED NAMRUP	REV	0	
PROJECT	AMMONIA - UREA FERTILIZER COMPLEX AT AVFCL		SCALE:-1:50		
TITLE	MARKING OF BOREHOLES FOR GEOTECH INVESTIGATION		DRG. NO.- PC230-0000-0202 FILE- PC230-0000-0202_R0		
	प्रोजेक्ट एंड डेवलपमेंट इंडिया लिमिटेड, नोएडा		PROJECTS & DEVELOPMENT INDIA LIMITED, NOIDA		