



**TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION
OF STORM WATER AND FIREWATER
RESERVOIR, EARTH FILLING AND SITE
GRADING AND NALLAH (DRAIN) DIVERSION FOR
CREATION OF FGGS AT BAGHJAN, UPPER
ASSAM.**



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**TENDER DOCUMENT FOR CONSTRUCTION OF STORM WATER AND FIRE WATER TANK,
EARTH FILLING AND NALLAH DIVERSION FOR CREATION OF FGGS AT BAGHJAN AT
UPPER ASSAM**



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CREATION OF FGGS AT BAGHJAN, UPPER
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Oil India Limited
DEPARTMENT
(A Govt. of India Enterprise)
2807207
P.O. DULIAJAN, DIST. DIBRUGARH,
prodproj@oilindia.in
ASSAM, INDIA, PIN-786 602

PROJECTS

TEL: (91) 374-

E-mail:

Website: www.oil-india.com

FORWARDING LETTER

Sub: IFB No. CPI5523P21–Hiring of services for Construction of Storm & Fire water reservoir, Diversion & Construction of Drain and land filling for creation of FGGS at Baghjan within a period of 18 months.

Dear Sir(s),

1.0 OIL INDIA LIMITED (OIL), a “Navaratna” Category, Government of India Enterprise, is a premier Oil Company engaged in exploration, production and transportation of crude oil & natural gas with its Headquarters at Duliajan, Assam. Duliajan is well connected by Air with nearest Airport being at Dibrugarh, 45 km away.

2.0 In connection with its operations, OIL invites Local Competitive Bids (LCB) from competent and experienced/approved Contractors/Firms for the mentioned work/service under **OPEN E-TENDER COMPOSITE BID SYSTEM** through OIL’s E-Procurement Portal: “<https://etender.srm.oilindia.in/irj/portal>” for **Hiring of services for Construction of Storm & Fire Water Reservoir, Diversion & Construction of Drain and Land Filling for creation of FGGS at Baghjan within a period of 18 months.** One complete set of Bid Document covering OIL’s IFB is uploaded in OIL’s E-Procurement Portal. You are invited to submit your most competitive bid on or before the scheduled bid closing date and time through OIL’s E-Procurement Portal. For your ready reference, few salient points of the IFB (covered in detail in the Bid Document) are highlighted below:

(i)	IFB No./E-Tender No.	:	CPI5523P21
(ii)	Type of Bid	:	Open Indigenous E-Tender, Composite Bid System
(iii)	Bid Closing Date & Time	:	02.12.2020 at 11.00 Hours (IST)
(iv)	Technical Bid Opening Date & Time	:	02.12.2020 at 14.00 Hours (IST)
(v)	Price Bid Opening Date & Time	:	To be intimated to the Technically & Commercially acceptable bidders at a later date.
(vi)	Bid Submission Mode	:	Bids must be uploaded online in OIL’s E-Procurement Portal.
(vii)	Bid Opening Place	:	Office of CGM-Projects Projects Department,



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		Oil India Limited, Duliajan-786602, Assam, India.
(viii)	Bid Validity	: Minimum 90 (Ninety) days from Original Bid Closing Date. Note: In exceptional circumstances, OIL may solicit the Bidder's consent to an extension of the period of validity. The request and the response thereto shall be made in writing (or by Fax). A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request will neither be required nor permitted to modify their bid.
(ix)	Mobilization Period	: 15 (Fifteen) days from the date of issuance of LOA
(x)	Bid Security/EMD Amount	: Rs. 14,05,278.00 (Rupees Fourteen Lakh Five Thousand Two Hundred Seventy Eight only)
(xi)	Bid Security/EMD Validity	: As mentioned in the E-procurement portal. (Minimum 120 days from original bid closing date).
(xii)	Original Bid Security to be submitted	: Office of GM(C&P)-Projects, PROJECTS DEPARTMENT, OIL INDIA LIMITED, DULIAJAN, ASSAM-786 602, INDIA
(xiii)	Amount of Performance Security	: 10% of Total Contract value.
(xiv)	Validity of Performance Security	: 90 (Ninety) days beyond the contract period/ Defect Liability Period
(xv)	Location of job	Baghjan, Dist: Tinsukia, Assam.
(xvi)	Duration of the Contract	: 18 Months from the date of commencement of contract
(xvii)	Quantum of Liquidated Damage for Default in Timely Mobilization/ Completion	: Refer Clause No. 30.0 of General Conditions of Contract (GCC)
(xviii)	Integrity Pact	: Must be digitally signed & uploaded along with the Techno-commercial Un-riced Bid.



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(xix)	Bids to be addressed to	:	GM(C&P)-Projects, PROJECTS DEPARTMENT, OIL INDIA LIMITED, DULIAJAN, ASSAM-786 602, INDIA
(xx)	Pre-Bid conference	:	Not Applicable
(xxi)	Last Date of receipt of Queries	:	Not Applicable
(xxii)	Last day for online registration in OIL's e-tender portal (for new vendors)	:	25.11.2020

3.0 GUIDELINES FOR PARTICIPATING IN OIL'S E-PROCUREMENT

3.1 Bids are to be submitted online through OIL's E-Procurement Portal with digital signature. To participate in OIL's E-Procurement tender, bidders should have a legally valid digital certificate **of Class 3 with Organizations Name** and **Encryption Certificate** as per Indian IT Act from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India (<http://www.cca.gov.in>). Digital Signature Certificates having "**Organization Name**" field other than **Bidder's Name** are not acceptable. However, aforesaid Digital Signature Certificates having Bidder's Name in the "Organization Name" field are acceptable.



Encryption certificate is mandatorily required for submission of bid. In case bidder creates response with one certificate (using encryption key) and then the bidder changes his Digital Signature Certificate, then the old certificate (used for encryption) is required in order to decrypt his encrypted response for getting the edit mode of the response. Once decryption is done, bidder may use new DSC certificate for uploading and submission of their offer. It is the sole responsibility of the bidder to keep their DSC certificate properly. In case of loss of the certificate, OIL INDIA LTD. is not responsible.

The authenticity of above digital signature shall be verified through authorized CA after bid opening and in case the digital signature used for signing is not of "**Class 3 with Organizations Name** and **Encryption Certificate**", the bid will be rejected.

Bidder is responsible for ensuring the validity of digital signature and its proper usage by their employee.

The bid including all uploaded documents shall be digitally signed by duly authorized representative of the bidding company.

The bid including all uploaded documents shall be digitally signed by duly authorized representative of the Bidder/Bidding company to bind the Bidder/Bidding company to the contract.

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3.2 For participation, applicants already having User ID & Password for OIL's E-Procurement Portal need to register against the IFB. New vendors/existing vendors not having User ID & Password for OIL's E-Procurement Portal shall obtain User ID & password through online vendor registration system in E-Portal.

3.2.1 Bidders without having E-Tender Login ID and password should complete their online registration at least 07 (Seven) days prior to the scheduled Bid Closing Date and time of the tender. For online registration, bidder may visit OIL's E-Tender site <https://etender.srm.oilindia.in/irj/portal>.

3.2.2 Necessary Login ID & Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID & Password and request for bid closing date extension on that plea shall not be entertained by Company.

3.3 Parties, who do not have a User ID, can click on **Guest** login button in the E-portal to view and download the tender. **The detailed guidelines are available in OIL's E-Procurement site (Help Documentation).** For any clarification in this regard, bidders may contact E-Tender Support Cell at Duliajan at erp_mm@oilindia.in, Ph.: 0374- 2807178/4903.

3.4 Details of process for submission of Bid Security (EMD) through the online payment gateway are available in Vendor User Manual under E-Procurement Portal. (**Note:** Important Points for on-line Payment can be viewed at Oil India's website at url: <http://oil-india.com/pdf/ETenderNotification.pdf>).

3.5 The link to OIL's E-Procurement Portal has been provided through OIL's web site (www.oil-india.com).

4.0 Bid should be submitted online in OIL's E-Procurement site up to **11.00 AM (IST) (Server Time)** on the date as mentioned and will be opened on the same day at **2.00 PM (IST) (Server Time)** at the office of the CGM-PROJECTS in presence of the authorized representatives of the bidders.



5.0 The rates shall be quoted per unit as specified in the **"PRICE BIDDING FORMAT"** attached under **"Notes and Attachments"** tab. Bidder should note that no pricing information is furnished in the **"Technical Attachment"** (Un-priced Techno-Commercial Bid) otherwise the bid will be rejected.

6.0 (a) No Bidder can withdraw his bid within the validity or extended validity of the bid. Withdrawal of any bid within validity period will lead to forfeiture of his/her/their Bid Security Deposit in full and debar from participation in future tenders, at the sole discretion of the company.

(b) Once a withdrawal letter is received from any bidder, the offer will be treated as withdrawn and no further claim/correspondence will be entertained in this regard.

7.0 Conditional bids are liable to be rejected at the discretion of the Company.

8.0 The bidders are required to furnish the composition and status of ownership of the firm in whose name bid documents have been purchased/issued along with one or more of the following documentary evidences (which are applicable to the bidder) in support of the same and scanned

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copies of the same should be uploaded along with the Un-priced Techno-Commercial Bid documents.

8.1 In case of Sole Proprietorship Firm, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, business and residential address, E-mail and telephone numbers of the owner and GSTIN number.

8.2 In case of HUF, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form, Family Arrangement indicating therein the name, residential address, E-mail and telephone numbers of the owners in general and Karta in particular and GSTIN number.

8.3 In case of Partnership Firm, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the partners (including the Managing Partner), registered partnership agreement/deed and GSTIN number.

8.4 In case of Co-Operative Societies, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, registration certificate from Registrar of Co-Operative Societies and GSTIN number.

8.5 In case of Societies registered under the Societies Registration Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, registration certificate from the Registrar of the state and GSTIN number.

8.6 In case of Joint Stock Companies registered under the Indian Companies Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, Certificate of Incorporation from the Registrar of Companies, Memorandum and Articles and GSTIN number.

8.7 In case of Trusts registered under the Indian Trust Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Trustee or persons who are at the helm of affairs, registration certificate from the Registrar of the state, Trust Deed and GSTIN number.



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9.0 SCREEN SHOTS

RFx Response Number 60037504		RFx Number TESTARUP	Status In Process	Submission Deadline 15.04.2017 11:00:00 INDIA	Opening Date 15.04.2099 00:00:00 INDIA
RFx Response Version Number		Active Version	RFx Version Number 1		

RFx Information
Items
Notes and Attachments
Conditions
Summary
Tracking

Basic Data
Questions
Technical Attachments

▼ Notes

Clear

Category	Description
Conditions of Participation	-Empty-
Bid Invitation/Auction Text	-Empty-
Bidder's Remarks	-Empty-
Purchaser's Remarks	-Empty-

▼ Attachments

▼ cFolder Attachments

Add Attachment
Delete
Verify Signature

cFolder Name	Category	Description	File Name	Version	Processor	Che
The table does not contain any data						

On “**EDIT**” Mode, bidders are advised to upload “**Technical Bid**” and “**Priced Bid**” in the respective places as indicated above:

Note:

- * The “**Technical Bid**” shall contain all techno-commercial details **except the prices**.
- ** The “**Priced bid**” must contain the price schedule and the bidder’s commercial terms and conditions, if any. For uploading Priced Bid, first click on Add Attachment, a browser window will open, select the file from the PC and name the file under Description, Assigned to General Data and click on OK to digitally sign and upload the File. Please click on Save Button of the Response to Save the uploaded files.

10.0 MAINTENANCE OF TOTAL BID VALUE IN THE RESPONSE: For convenience of the Bidders and to improve transparency, the rates/costs quoted by bidders against the E-tender shall be available for online viewing after price bid opening to those bidders whose price bids have been opened in the system. For tenders where **Detailed Price Information under RFx Information Tab is “No price”**, the Price Bid is invited through attachment form under “Notes & Attachment”. As per the existing process, Bidders must upload their pricing as per the “Price Bidding Format” under “**Notes & Attachment**”. Additionally the bidders must fill up the **on-line field “Total Bid Value”** under Tab Page “**RFx Information**” with the Total Cost (Including the GST component) as per the amount of the Price Bid in attachment form.



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Create RFx Response

[Submit](#) | [Read Only](#) | [Print Preview](#) | [Check](#) | [Technical RFx Response](#) | [Close](#)

RFx Response Number 60038748 RFx Number 1396 Status In Proce
RFx Owner BHARALI Total Value 0.00 INR RFx Response Version Nu

RFx Information | **Items** | **Notes and Attachments** | **Conditions**

Basic Data | **Questions** | **Technical Attachments**

Event Parameters

Currency:

Detailed Price Information:

Terms of Payment:

Total Bid Value:

The “Total Bid Value” as entered by the Bidder in the on-line response shall be displayed in the e-tender portal amongst the Techno-Commercially qualified bidders and Company will not take any responsibility whatsoever towards incorrect information furnished by the bidders in the “Total Bid Value” field.

It is to be noted that Amount mentioned in the “Total Bid Value” field will not be considered for bid evaluation and evaluation will be purely based on the “Price bidding Format”.

11.0 The selected bidder will be required to enter into a formal contract, which will be based on their bid and OIL's Standard Form of Contract.

12.0 The successful bidder shall furnish a Performance Security Deposit in the form of Bank Guarantee as specified above before signing the formal contract. The Performance Security Deposit will be refunded to the Contractor after satisfactory completion of the work, but a part or whole of which shall be used by the Company in realization of liquidated damages or claims, if any or for adjustment of compensation or loss due to the Company for any reason. This Security Money shall not earn any interest.

13.0 BACKING OUT BY L1 BIDDER AFTER ISSUE OF LOA: In case LOA issued is not accepted by the L1 bidder or the Performance Security is not submitted as per the terms of the contract within the time specified in the Bid Document, the Bid Security shall be forfeited and the bidder shall be dealt as per the Banning Policy (available in OIL's website) of Company.

14.0 FURNISHING FRAUDULENT INFORMATION/DOCUMENT: The information and documents furnish by the bidder/contractor in respect of the subject tender/contract are accepted to be true and genuine. However, if it is detected during technical scrutiny or after award of the contract or after expiry of the contract, that the bidder had submitted any fake/fraudulent document or furnished false statement, the offer/contract shall be rejected cancelled, as the case may be and the bidder (if fake document/false statement pertains to such bidder) shall be dealt as per the Banning Policy (available in OIL's website) of Company. The bidder has to submit an undertaking in this regard as per attached **Proforma-IX**.



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15.0 PROVISION FOR ACTION IN CASE OF ERRING/DEFAULTING AGENCIES: Erring and defaulting agencies like bidder, contractor, supplier, vendor, service provider will be dealt as per OIL's Banning Policy dated 6th January, 2017 available in OIL's website: www.oil-india.com.

16.0 Time will be regarded as the essence of the Contract and the failure on the part of the Contractor to complete the work within the stipulated time shall entitle the Company to recover liquidated damages and/or penalty from the Contractor as per terms of the tender/ contract.

17.0 The contractor will be required to allow OIL officials to inspect the work site and documents in respect of the workers' payment.

18.0 OIL now looks forward to your active participation in the IFB.

Thanking you,
Yours faithfully,

OIL INDIA LIMITED

Sd/-

SR. OFFICER (P- C&P)

GM (PROJECTS- C&P)

For CGM (PROJECTS)

Date: 28.10.2020

For RESIDENT CHIEF EXECUTIVE



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VOLUME-1
INSTRUCTION TO BIDDER



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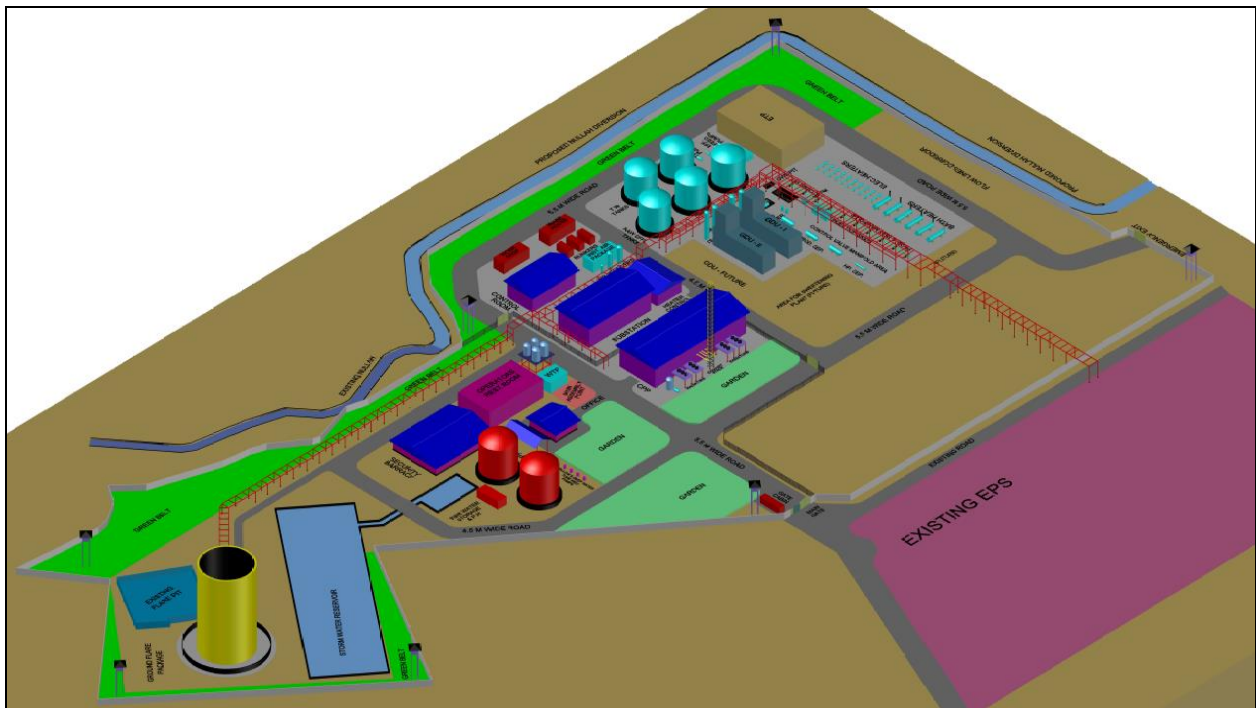
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VOLUME-1 PART - 1
INSTRUCTIONS TO BIDDERS

1. ELIGIBILITY OF THE BIDDER:

- 1.1. The eligibility of the bidder are listed under BID EVALUATION CRITERIA (BEC) of the tender document
- 1.2. Bidder shall bear all costs associated with the preparation and submission of bid. Oil India Limited, hereinafter referred to as Company, will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process

2. BID DOCUMENTS:

- 2.1. The services required, bidding procedures and contract terms are prescribed in the Bid Document. This Bid Document includes the following:

- a) A Tender Forwarding Letter
- b) Instructions to Bidders (ITB)
- c) Bid Evaluation Criteria (BEC)
- d) General Conditions of Contract (GCC) : Part-I
- e) Schedule of Work, Unit, Quantities (SOQ) : Part-II
- f) Special Conditions of Contract (SCC) : Part-III
- g) Schedule of Company's Plants, Materials and Equipments (SCPME):
Part-IV [Not applicable for this Tender]
- h) Safety Measures (SM) : Part-V
- i) Integrity Pact (IP) : Part-VI
- a) Bid Form : Proforma-I
- b) Statement of Non-Compliance : Proforma-II
- c) Authorisation for Attending Bid Opening : Proforma-III
- d) Proforma of Letter of Authority : Proforma-IV
- e) Format of Bid Security : Proforma-V
- f) Proforma for E-Remittance : Proforma-VI
- g) Format of Performance Security : Proforma-VII
- h) Agreement Form : Proforma-VIII
- i) Format of Undertaking by Bidders towards submission of authentic information/documents : Proforma -IX
- j) Certificate of Compliance of Financial Criteria : Proforma -X
- k) Price Bidding Format (Attached under "**Notes and Attachments**" tab in the main bidding engine of OIL's E-Tender portal)
- l) Technical Evaluation Sheet for BEC-BRC & others
- m) Commercial Check List (Proforma -XI)
- n) Sub-Proforma for submission of details of specific experience and annual turnover details as called in "qualification criteria" of invitation for bid (Proforma-XIIA)
- o) Sub-Proforma for annual turnover statement: Proforma-XIIB



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- p) Format for chartered accountant / statutory auditor certificate for financial capability of the bidder- Proforma-XIIC
- q) Details of similar work completed during last five years- Proforma-XIII
- r) Details regarding ESI & PF as per form-f registration (as applicable)- Proforma-XIV
- s) Income tax, PAN number, PF registration number, esic registration no., GST registration nos. including copies of registration certificates proforma-XV
- t) Checklist for submission of bid proforma-XVI
- u) Information about any current litigation / arbitration, if any, in which bidder is involved or details regarding holiday/banning and liquidation, court receivership (proforma-XVII)
- v) Declaration of bidder regarding liquidation, court receivership or similar proceedings (Proforma-XVIII)

2.2. The bidder is expected to examine all instructions, forms, terms and specifications in the

Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a bid not substantially responsive to the Bid Documents in every respect will be at the Bidder's risk & responsibility and may result in the rejection of its bid.

2.3 Bidders shall be deemed, prior to submitting their bids, to have satisfied themselves about the weather conditions, working culture in the area, socio-political environment, safety & security aspects, law & order situation and law of the land, and obtain for themselves all necessary information as to the risks, contingencies and all other circumstances, which may influence or affect the various obligations under the Contract.

3. TRANSFERABILITY OF BID DOCUMENTS:

- 3.1. Bid Documents are non-transferable. Bid can be submitted only in the name of the bidder in whose name the Bid Document has been issued.
- 3.2. In case of e-Tender, Bidder must submit the bid using Organizational Class-3 Digital Signature issued by the Competent Authority in favour of the bidder. Bid submitted using Digital Signature other than the Digital Signature of the bidder shall be summarily rejected.
- 3.3. Unsolicited bids will not be considered and will be rejected straightway.

4. AMENDMENT OF BID DOCUMENTS:

- 4.1. At any time prior to the deadline for submission of bids, the Company may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bid Documents through issuance of an Addendum(s)/Corrigendum(s)/Amendment(s).
- 4.2. The Addendum will be uploaded in OIL's E-Tender Portal in the Tab "Technical Rfx" and under External Area - "Amendments" folder. The Company may, at its discretion, extend the deadline for bid submission. Bidders are expected to take the Addendum into account in preparation and submission of their bid. Bidders are to check from time to time the E-



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Tender portal ["Technical RFx" Tab and under the folder "Amendments"] for any amendments to the bid documents before submission of their bids. No separate intimation shall be sent to the Bidders.

5. PREPARATION OF BIDS:

- 5.1. Language of Bids: The bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the OIL shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in English, duly authenticated by local chamber of Commerce of bidder's country, in which case, for purposes of interpretation of the bid, the translation shall prevail.
- 5.2. Bidder's/Agent's Name & address: Bidders should indicate in their bids their detailed postal address including the Fax/Telephone / Cell Phone Nos. and E-mail address. Similar information should also be provided in respect of their authorised Agents in India, if any.
- 5.3. Documents comprising the bid: Bids are invited under Composite Bid System. The bid to be uploaded by the Bidder in OIL's E-Tender portal shall comprise of the following components:
- (A) Technical Bid (to be uploaded in "Technical Attachments" tab) :
- a) Complete technical details of the services offered.
 - b) Documentary evidence established in accordance with Clause No. 8.0.
 - c) Bid Security (scanned) in accordance with Clause No. 9.0 hereunder. Original Bid Security should be sent as per Clause No. 9.2 (c) below.
 - d) Copy of Bid Form without indicating prices in Proforma-I.
 - e) Statement of Non-compliance as per Proforma-II.
 - f) Copy of Priced Bid without indicating prices.
 - g) Integrity Pact digitally signed by OIL's competent personnel as Part-VI.
 - h) Proforma-IV attached with the bid document to be signed by the bidders Authorized representative.
 - i) All Other relevant Undertakings and Proformas as applicable as part of Bid.

Note: No price should be mentioned in the "Technical Attachments" tab.

(B) The Price Bid as per the Price Bid Format shall be uploaded in "Notes and Attachments" tab.

Note: The Priced Bid shall contain the prices along with the currency quoted and any other commercial information pertaining to the service offered.



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6.0 BID FORM: The bidder shall complete the Bid Form and upload the same along with their bid.

7.0 BID PRICE:

7.1 Prices must be quoted by the Bidders online as per the price bid format available in OIL's E-Tender Portal under "Notes & Attachment" Tab. Prices must be quoted by the bidders as per the Price/Bidding format.

7.2 Prices quoted by the successful bidder must remain firm during its performance of the Contract and is not subject to variation on any account, except as otherwise mentioned in the bid document.

7.3 All duties (except customs duty which will be borne by the Company) and taxes (excluding GST) including Corporate Income Tax, Personal Tax, Assam Entry Tax etc. and other Cess/levies payable by the successful bidder under the Contract for which this Bid Document is being issued, shall be included in the rates, prices and total Bid Price submitted by the bidder and the evaluation and comparison of bids shall be made considering the quoted GST in the Price Bid Format. For example, personal taxes and/or any corporate taxes arising out of the profits on the contract as per rules of the country shall be borne by the bidder.

8.0 DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS: These are listed in BID EVALUATION CRITERIA (BEC), of the tender documents.

9.0 BID SECURITY:

9.1 The Bid Security is required to protect the Company against the risk of Bidder's conduct, which would warrant forfeiture of the Bid Security, pursuant to sub-clause 9.8.

9.2 All the bids must be accompanied by Bid Security in Original as prescribed under, for the amount as mentioned in the "Forwarding Letter" of the tender documents:

- a. The Bid Security should be submitted in the form of irrevocable Bank Guarantee (as per Proforma-V) issued by Nationalized or Scheduled Bank in favour of M/s Oil India Limited and payable at DULIAJAN. The Bank Guarantee must be on Non-Judicial Stamp Paper of requisite value as per Indian Stamp Act purchased in the name of Banker.
- b. Alternately Bid Security can also be paid through Bank Draft/Cashier's Cheque/Banker's Cheque/Fixed Deposit Receipt (Account OIL INDIA LIMITED)/irrevocable Letter of Credit/NEFT/RTGS /Electronic Fund Transfer through Online Payment Gateway of OIL's e-tender portal (subject to credit in OIL's account within prescribed time) to designated account of OIL.
 - i. If the Bid Security is submitted in the form of Bank Draft, Banker's Cheque, Cashier's Cheque, Fixed Deposit Receipt or Letter of Credit, the same should be in favour of "Oil India Limited" payable at Duliajan.



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- ii. Bid Security amount through NEFT or RTGS mode may be deposited on or before bid closing date and time to the following designated OIL's bank account:

	Bank Details of Beneficiary: OIL INDIA LIMITED	
a	Bank Name	STATE BANK OF INDIA
b	Branch Name	Duliajan
c	Branch Address	Duliajan, Dist-Dibrugarh
d	Bank Account No.	10494832599
e	Type of Account	Current Account
f	IFSC Code	SBIN0002053
g	MICR Code	786002302
h	SWIFT Code	SBININBB479

If the bid security is submitted through NEFT or RTGS mode, details such as **UTR No., Tender No., Bidder's name & Deposited Amount etc.** must be uploaded with the Unpriced Techno-Commercial Bid documents.

c. In case of Bidders submitting Bid Security in the form of Bank Guarantee/Bank Draft/Cashier's Cheque/Banker's Cheque/Fixed Deposit Receipt/Letter of Credit, the original hard copy of Bid Security should reach the office of CGM-PROJECTS on or before **12.45 p.m. (IST)** on the bid closing/opening date otherwise bid will be rejected.

d. A scanned copy of Bid Security document should also be uploaded along with the Unpriced Techno-Commercial Bid documents.

e. This Bid Security Deposit shall be refunded to all unsuccessful bidders, but is liable to be forfeited in full or part, at Company's discretion, as per **Clause No 9.8** below. Bids without Bid Security Deposit in the manner specified above will be summarily rejected.

- f. No other mode of payment will be accepted by the Company. The Bid Security shall not earn any interest to the bidder from the Company.

Note:

- i. Bidders claiming waiver of Bid Security shall upload supporting documents as mentioned in **Para No. 10.0** below along with technical bid.
- ii. Any offer not accompanied with the Bid Security shall be treated as invalid and summarily rejected unless the bidder is exempted from submission of Bid Security as



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per Bid Security Exemption Criteria of this tender and proper proof towards this exemption is submitted by the bidder. Any subsequent deposit of Bid Security after the bid closing date shall not be permitted. Also, adjustment of Bid Security due against the instant tender, against dues from the Company or on any account shall not be permitted.

9.3 Any bid not secured in accordance with sub-clause 9.2 above shall be rejected by the Company as non-responsive.

9.4 The bidders shall extend the validity of the Bid Security suitably, if and when specifically advised by OIL, at the bidder's cost.

9.5 Unsuccessful Bidder's Bid Security will be discharged and/or returned within 30 days after finalization of the Tender.

9.6 Successful Bidder's Bid Security will be discharged and/or returned upon Bidder's furnishing the Performance Security and signing of the contract. Successful bidder will however ensure validity of the Bid Security till such time the Performance Security in conformity with Clause No. 24.0 below is furnished.

9.7 Bid Security shall not accrue any interest during its period of validity or extended validity.

9.8 The Bid Security may be forfeited:

- a. If the bidder withdraws the bid within its original/extended validity.
- b. If the bidder modifies/revises their bid suo-moto within its original/extended validity.
- c. If the bidder does not accept the contract.
- d. If the bidder does not furnish Performance Security Deposit within the stipulated time as per tender/contract.
- e. If it is established that the bidder has submitted fraudulent documents or has indulged into corrupt and fraudulent practice, the bid security shall be forfeited after due process in addition to other action against the bidder.

9.9 Deleted

9.10 In case any bidder withdraws their bid during the period of bid validity, Bid Security will be forfeited and the party shall be debarred as per the prevailing Banning Policy of the Company (OIL).

9.11 A bid shall be rejected straightway if Original Bid Security is not received within the stipulated date & time mentioned in the Tender and/or if the Bid Security validity is shorter than the validity indicated in Tender and/or if the Bid Security amount is lesser than the amount indicated in the Tender.

9.12 The Bank Guarantee issuing bank branch must ensure the following:



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The Bank Guarantee issued by the bank must be routed through SFMS platform as per the following details:

- (i) MT 760 / MT 760 COV for issuance of bank guarantee.
- (ii) MT 760 / MT 767 COV for amendment of bank guarantee.

[Tender Number should reflect in the SFMS text under MT 760 / MT 760 COV]

The above message / intimation shall be sent through SFMS by the BG issuing Bank branch to HDFC Bank, Duliajan Branch, IFS Code – HDFC0002118; SWIFT Code - HDFCINBBAL. Branch Address: HDFC Bank Limited, Duliajan Branch, Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602. The Bank details are as under:

	Bank Details of Beneficiary	
A	Bank Name	HDFC BANK LTD
B	Branch Name	DULIAJAN
C	Branch Address	Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602
D	Banker Account No.	21182320000016
E	Type of Account	Current Account
F	IFSC Code	HDFC0002118
G	MICR Code	786240302
H	SWIFT Code	HDFCINBBAL

10.0 EXEMPTION FROM SUBMISSION OF BID SECURITY: In case any bidder is exempted from paying the Bid security, they should upload the supporting documents along with their technical bid. The detailed guidelines for exemption of the Bid security are given below.

- a) MSEs Units (manufacturers/Service Providers only and not their dealers/ distributors) eligible for exemption of Bid Security shall furnish the following:
 - i. Udyam Registration Number with Udyam Registration Certificate.
or
 - ii. Proof of registration with District Industry Centres or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts & Handloom or Udyog Aadhaar registration or registration with any other body specified by Ministry of MSME.

Note:



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i. Categorization and various criteria applicable to MSE bidders shall be guided by the Gazette Notification No. CG-DL-E-26062020-220191 dated 26.06.2020 issued by MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES. The existing enterprises registered under EM-Part-II or UAM till 30th June, 2020 shall continue to be valid only for a period up to the 31st day of March, 2021.

ii. In case bidding MSE is owned by Schedule Caste or Schedule Tribe or Woman entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ST entrepreneur should also be enclosed.

b) Central Government Departments and Central Public Sector Undertakings (CPSUs) are also exempted from submitting bid security.

Note: Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant Document/Certificate towards exemption of EMD, issued by appropriate authority.

11.00 PERIOD OF VALIDITY OF BIDS

11.1 Bids shall remain valid as per the requirement mentioned in forwarding letter from the date of closing of bid prescribed by the Company. Bids of shorter validity will be rejected as being non-responsive. If nothing is mentioned by the bidder in their bid about the bid validity, it will be presumed that the bid is valid for 90 days from Original Bid Closing Date.

11.2 In exceptional circumstances, the Company may solicit the Bidder's consent to an extension of the period of validity. The request and the response thereto shall be made in writing through Fax or e-mail. The Bid Security provided under Para 9.0 above shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request will neither be required nor permitted to modify their Bid.

12.0 SIGNING & SUBMISSION OF BIDS:

12.1 Signing of bids:

12.1.1 Bids are to be submitted online through OIL's E-procurement portal with digital signature. The bid and all attached documents should be digitally signed by the bidder using "Class 3" digital certificates with Organization's Name [e-commerce application (Certificate with personal verification and Organisation Name)] as per Indian IT Act 2000 obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India before bid is uploaded. Digital Signature Certificates having Bidder's Name in the "Organization Name" field are only acceptable. Digital Signature Certificate having "Organization Name" field other than Bidder's Name shall be rejected summarily.

The bid including all uploaded documents shall be digitally signed by duly authorized representative of the bidder holding a Power of Attorney to bind the Bidder to the contract.



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If any modifications are made to a document after attaching digital signature, the digital signature shall again be attached to such documents before uploading the same. The Power of Attorney shall be submitted by bidder.

In case the digital signature is not of "Class-3" with organization name, the bid will be rejected. Bidder is responsible for ensuring the validity of digital signature and its proper usage by their employees.

12.1.2 The original and all copies of the bid shall be typed or written in indelible inks. Since bids are to be submitted ONLINE with digital signature, manual signature is NOT relevant. The letter of authorisation (as per Proforma-IV) shall be indicated by written Power of Attorney accompanying the Bid.

12.1.3 Any physical documents submitted by bidders shall contain no interlineations, white fluid erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such correction shall be initialed by the person or persons who has/have digitally signed the Bid.



12.1.4 Any Bid, which is incomplete, ambiguous, or not in compliance with the Bidding process shall be rejected.

12.2 Submission of bids:

The tender is processed under Composite bid system. Bidder shall submit the Technical bid and Priced bid along with all the Annexures and Proforma (wherever applicable) and copies of documents in electronic form through OIL's e-procurement portal within the Bid Closing Date & Time stipulated in the e-tender. For submission of Bids online at OIL's E-Tender Portal, detailed instructions is available in "User Manual" available in OIL's E-Tender Portal. Guidelines for bid submission are also provided in the "Forwarding Letter". The Technical Bid is to be submitted as per Terms of Reference/Technical Specifications of the bid document and Priced Bid as per the Price Schedule. The Technical Bid should be uploaded in the "Technical Attachment" Tab Page only. Prices to be quoted as per Price Bid Format and should be uploaded as 'Attachment' under "Notes & Attachments" Tab. No price should be given in the "Technical Attachment", otherwise bid shall be rejected. The priced bid submitted in physical form shall not be considered. However, the following documents in one set should necessarily be submitted in physical form in sealed envelope super-scribing the Tender no., Brief Description of services and Bid Closing/Opening date & Time along with the bidder's name and should be submitted to CGM-Projects, Oil India Ltd., Duliajan-786602 (Assam) on or before 12.45 Hrs (IST) on the bid closing date indicated in the IFB No. CPI5523P21.

12.2.1 All the conditions of the contract to be made with the successful bidder are given in various Sections of the Bid Document. Bidders are requested to state their non-compliance to each clause as per Proforma-II of the bid document and the same should be uploaded along with the Technical Bid.

12.2.2. Timely delivery of the documents in physical form as stated in Para 12.2 above is the responsibility of the bidder. Bidders should send the same through Registered Post or by Courier Services or by hand delivery to the Officer in Charge of the particular tender before the Bid Closing Date and Time. Company shall not be responsible for any postal delay/transit loss.

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12.2.3 Bids received through the e-procurement portal shall only be accepted. Bids received in any other form shall not be accepted.

13.0 DEADLINE FOR SUBMISSION OF BIDS:

13.1 Bids should be submitted online as per the online tender submission deadline. Bidders will not be permitted by System to make any changes in their bid/quote after the bid submission deadline is reached. Bidders are requested to take note of this and arrange to submit their bids within the submission deadline to avoid last minute rush/network problems.

13.2 No bid can be submitted after the submission dead line is reached. The system time displayed on the e-procurement web page shall decide the submission dead line.

13.3 The documents in physical form as stated in Para 12.2 must be received by Company at the address specified in the "Forwarding Letter" on or before 12.45 Hrs (IST) on the Bid Closing Date mentioned in the "Forwarding Letter". Timely delivery of the same at the address mentioned in the Forwarding Letter is the responsibility of the Bidders.

14.0 LATE BIDS: Bidders are advised in their own interest to ensure that their bids are uploaded in system much before the closing date and time of the bid. The documents in physical form if received by the Company after the deadline for submission prescribed by the Company shall be rejected and shall be returned to the Bidders in unopened condition immediately.

15.0 MODIFICATION AND WITHDRAWAL OF BIDS

15.1 The Bidder after submission of Bid may modify or withdraw its Bid prior to Bid Closing Date & Time in the e-portal using Digital Signature by the person or persons who has/have digitally signed the Bid. Withdrawal or modification of bid through physical correspondence shall not be considered and accepted.



15.2 No Bid can be modified or withdrawn subsequent to the deadline for submission of Bids.



15.3 No Bid can be withdrawn in the interval between the deadline for submission of Bids and the expiry of the period of Bid Validity specified by the Bidder on the Bid Form. Withdrawal of a Bid during this interval shall result in the Bidder's forfeiture of its Bid Security and bidder shall also be debarred from participation in future tenders of OIL.

16.0 EXTENSION OF BID SUBMISSION DATE Normally no request for extension of Bid Closing Date & Time will be entertained. However, OIL at its discretion, may extend the Bid Closing Date and/or Time due to any reasons.

17.0 BID OPENING AND EVALUATION:

17.1 Company will open the Bids, including submission made pursuant to clause 12.2, in presence of Bidder's representatives who choose to attend at the date, time and place mentioned in the Forwarding Letter. However, an authorization letter (as per Proforma-III) from the Bidder must be produced by the Bidder's representative at the time of Bid Opening. Unless this Letter is presented, the representative will not be allowed to attend the Bid Opening. The Bidder's representatives who are allowed to attend the Bid Opening

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<p>shall sign a register evidencing their attendance. Only one representative against each Bid will be allowed to attend.</p> <p>17.2 In technical bid opening, only “Technical Attachment” will be opened. Bidders therefore should ensure that technical bid is uploaded in the “Technical Attachment” Tab Page only in the E-portal.</p> <p>17.3 In case of any unscheduled holiday or Bandh on the Bid Opening Date, the Bids will be opened on the next full working day. Accordingly, Bid Closing Date / time will get extended up to the next working day and time.</p> <p>17.4 Bids which have been withdrawn pursuant to clause 15.0 shall not be opened. Company will examine bids to determine whether they are complete, whether requisite Bid Securities have been furnished, whether documents have been digitally signed and whether the bids are generally in order.</p> <p>17.5 At bid opening, Company will announce the Bidder's names, written notifications of bid modifications or withdrawal, if any, the presence of requisite Bid Security and such other details as the Company may consider appropriate.</p> <p>17.6 Normally no clarifications shall be sought from the Bidders. However, for assisting in the evaluation of the bids especially on the issues where the Bidder confirms compliance in the evaluation and contradiction exists on the same issues due to lack of required supporting documents in the Bid (i.e. document is deficient or missing), or due to some statement at other place of the Bid (i.e. reconfirmation of confirmation) or vice versa, clarifications may be sought by OIL. In all the above situations, the Bidder will not be allowed to change the basic structure of the Bid already submitted by them and no change in the price or substance of the Bid shall be sought, offered or permitted.</p> <p>17.7 Prior to the detailed evaluation, Company will determine the substantial responsiveness of each bid to the requirement of the Bid Documents. For purpose of these paragraphs, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bid Document without material deviations or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of work, or which limits in any substantial way, in-consistent way with the Bid Documents, the Company's right or the bidder's obligations under the contract, and the rectification of which deviation or reservation would affect unfairly the competitive position of other bidders presenting substantial responsive bids. The Company's determination of Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.</p> <p>17.8 A Bid determined as not substantially responsive will be rejected by the Company and may not subsequently be made responsive by the Bidder by correction of the non-conformity.</p> <p>17.9 The Company may waive minor informality or nonconformity or irregularity in a Bid, which does not constitute a material deviation, provided such waiver, does not prejudice or affect the relative ranking of any Bidder.</p> <p><u>18.0 OPENING OF PRICED BIDS:</u></p>				

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<p>18.1 In case of composite bid system, Price bids will be opened on the scheduled bid closing date itself.</p> <p>18.2 In case of two bid system, Company will open the Priced Bids of the techno-commercially qualified Bidders on a specific date in presence of representatives of the qualified bidders. The techno-commercially qualified Bidders will be intimated about the Priced Bid Opening Date & Time in advance.</p> <p>18.3 In case of any unscheduled holiday or Bandh on the Priced Bid Opening Date, the Bids will be opened on the next working day.</p> <p>18.4 The Company will examine the Price quoted by Bidders to determine whether they are complete, any computational errors have been made, the documents have been properly signed, and the bids are generally in order.</p> <p>Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price (that is obtained by multiplying the unit price and quantity) the unit price shall prevail and the total price shall be corrected accordingly. If there is a discrepancy between words, and figures, the amount in words will prevail. If any Bidder does not accept the correction of the errors, their Bid will be rejected.</p> <p>19.0 EVALUATION AND COMPARISON OF BIDS: The Company will evaluate and compare the bids as per BID EVALUATION CRITERIA (BEC) of the Tender Documents.</p> <p>19.1 Discounts / rebates:</p> <p>19.1.1 Unconditional discounts/rebates</p> <p>Post bid or conditional discounts/rebates offered by any bidder shall not be considered for evaluation of bids. However, if the lowest bidder happens to be the final acceptable bidder for award of contract, and if they have offered any discounts/rebates, the contract shall be awarded after taking into account such discounts/rebates.</p> <p>20.0 CONTACTING THE COMPANY:</p> <p>20.1 Except as otherwise provided in Clause 17.0 above, no Bidder shall contact Company on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded except as required by Company vide sub-clause 17.6.</p> <p>20.2 An effort by a Bidder to influence the Company in the Company's bid evaluation, bid comparison or Contract award decisions may result in the rejection of their bid.</p> <p>21.0 AWARD OF CONTRACT:</p> <p>21.1 Award criteria: The Company will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.</p>				



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22.0 COMPANY'S RIGHT TO ACCEPT OR REJECT ANY BID: Company reserves the right to accept or reject any or all bids and to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability to the affected bidder, or bidders or any obligation to inform the affected bidder of the grounds for Company's action.

23.0 NOTIFICATION OF AWARD:

23.1 Prior to the expiry of the period of bid validity or extended validity, Company will notify the successful Bidder in writing by registered letter or by fax or E-mail (to be confirmed in writing by registered / couriered letter) that its Bid has been accepted.

23.2 The notification of award will constitute the formation of the Contract.

23.3 Upon the successful Bidder's furnishing of Performance Security pursuant to Clause 24.0 below, the Company will promptly notify each un-successful Bidder and will discharge their Bid Security, pursuant to Clause 9.0 hereinabove.

24.0 PERFORMANCE SECURITY: Successful bidder has to submit Performance Security amount as mentioned in Forwarding Letter, within 02 Weeks from the date of issue of Letter of Award (LOA).

24.1

- a. The Performance Security should be submitted in the form of irrevocable Bank Guarantee (as per Proforma-VII) issued by Nationalized or Scheduled Bank in favour of M/s Oil India Limited and payable at DULIAJAN. The Bank Guarantee must be on Non-Judicial Stamp Paper of requisite value as per Indian Stamp Act purchased in the name of Banker.
- b. Alternately, the Performance Security can also be paid through Bank Draft/Cashier's Cheque/Banker's Cheque/Fixed Deposit Receipt (Account OIL INDIA LIMITED)/irrevocable Letter of Credit/NEFT/RTGS /Electronic Fund Transfer (subject to credit in OIL's account within prescribed time) to designated account of OIL.
 - i. If the Performance Security is submitted in the form of Bank Draft, Banker's Cheque, Cashier's Cheque, Fixed Deposit Receipt or Letter of Credit, the same should be in favour of "Oil India Limited" payable at Duliajan.
 - ii. Performance Security amount through NEFT or RTGS mode may be deposited on or before bid closing date and time to the following designated OIL's bank account:

	Bank Details of Beneficiary: OIL INDIA LIMITED	
a	Bank Name	STATE BANK OF INDIA
b	Branch Name	Duliajan
c	Branch Address	Duliajan, Dist-Dibrugarh
d	Bank Account No.	10494832599



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e	Type of Account	Current Account
f	IFSC Code	SBIN0002053
g	MICR Code	786002302
h	SWIFT Code	SBININBB479

TenderNumber should reflect in the SFMS text under MT 760/MT 760 COV]

The above message / intimation shall be sent through SFMS by the BG issuing Bank branch to HDFC Bank, Duliajan Branch, IFS Code – HDFC0002118; SWIFT Code - HDFCINBBCAL. Branch Address: HDFC Bank Limited, Duliajan Branch, Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602. The Bank details are as under:

	Bank Details of Beneficiary	
A	Bank Name	HDFC BANK LTD
B	Branch Name	DULIAJAN
C	Branch Address	Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602
D	Banker Account No.	21182320000016
E	Type of Account	Current Account
F	IFSC Code	HDFC0002118
G	MICR Code	786240302
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24.5 This Performance Security must be valid for 90 (Ninety) days after the date of expiry of the contract period/defect liability period (if any). In the event of contract being extended



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within the provisions of the contract agreement, the contractor will have to extend suitably the validity of the "Security Deposit" for the extended period.

- 24.6 The Performance Security Deposit will be refunded to the Contractor after 90 (Ninety) days of satisfactory completion of works/defect liability period (if any) under the contract (including extension, if any), but a part or whole of which shall be used by the Company in realization of liquidated damages or claims, if any or for adjustment of compensation or loss due to the Company for any reason.

25.0 SIGNING OF CONTRACT:

- 25.1 At the same time as the Company notifies the successful Bidder that its Bid has been accepted, the Company will either call the successful Bidder for signing of the agreement or send the Contract Form provided in the Bid Documents, along with the General & Special Conditions of Contract, Technical Specifications, Schedule of Rates incorporating all agreements agreed between the two parties.

- 25.2 The successful Bidder shall sign and date the contract and return it to the Company after receipt of LOA. Till the contract is signed, the LOA issued to the successful bidder shall remain binding amongst the two parties.

- 25.3 In the event of failure on the part of the successful Bidder to sign the contract, OIL reserves the right to terminate the LOA issued to the successful Bidder and invoke the Bid Security or the Performance Security if submitted by the successful Bidder. Action shall be taken as per OIL's Banning Policy.

- 26.0 **CREDIT FACILITY:** Bidders should indicate clearly in the Bid about availability of any credit facility inclusive of Government to Government credits indicating the applicable terms and conditions of such credit.

27.0 MOBILISATION AND ADVANCE PAYMENT:

- 27.1 Request for advance payment shall not be normally considered. However, depending on the merit and at the discretion of the Company, advance against mobilisation charge may be given at an interest rate of 1% above the prevailing Bank rate (CC rate) of SBI from the date of payment of the advance till recovery/refund.

- 27.2 Advance payment agreed to by the Company shall be paid only against submission of an acceptable bank guarantee whose value should be equivalent to the amount of advance plus the amount of interest covering the period of advance. Bank guarantee shall be valid for 2 months beyond completion of mobilisation and the same may be invoked in the event of Contractor's failure to mobilise as per agreement.

- 27.3 In the event of any extension to the mobilisation period, Contractor shall have to enhance the value of the bank guarantee to cover the interest for the extended period and also to extend the validity of bank guarantee accordingly

28.0 INTEGRITY PACT:



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- 28.1 OIL shall be entering into an Integrity Pact with the Bidders as per format enclosed vide Part-VI of the Bid Document. The Integrity Pact has been duly signed digitally by OIL's competent signatory and uploaded in the OIL's e-portal. The Integrity Pact shall be returned by the bidder (along with the technical Bid) duly signed by the same signatory who signed the Bid i.e. who is duly authorized to sign the Bid. Uploading the Integrity Pact in the OIL's E-portal with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who has signed the bid. If any bidder refuses to sign Integrity Pact or declines to submit the Integrity Pact, their bid shall be rejected straightway.
- 28.2 OIL has appointed Shri Sutanu Behuria, IAS (Retd.), Shri Rudhra Gangadharan, IAS (Retd.) and Shri Om Prakash Singh, IPS (Retd.) as Independent External Monitors (IEM) for a period of 03 (Three) years to oversee implementation of Integrity Pact in OIL. Bidders may contact the Independent External Monitors for any matter relating to the Integrity Pact at the following addresses:
- Shri Sutanu Behuria, IAS (Retd.),
E-mail: sutanu2911@gmail.com
 - Shri Rudhra Gangadharan, IAS (Retd.), Ex-Secretary, Ministry of Agriculture
E-mail id : rudhra.gangadharan@gmail.com
 - Shri Om Prakash Singh, IPS (Retd.), Former DGP, Uttar Pradesh
E-mail: Ops2020@rediffmail.com

29.0 LOCAL CONDITIONS:

It is imperative for each Bidder to be fully informed themselves of all Indian as well as local conditions, factors and legislation which may have any effect on the execution of the work covered under the Bidding Document. The bidders shall be deemed, prior to submitting their bids to have satisfied themselves of all the aspects covering the nature of the work as stipulated in the Bidding Document and obtain for themselves all necessary information as to the risks, contingencies and all other circumstances, which may influence or affect the various obligations under the Contract.

No request will be considered for clarifications from the Company (OIL) regarding such conditions, factors and legislation. It is understood and agreed that such conditions, factors and legislation have been properly investigated and considered by the Bidders while submitting the Bids. Failure to do so shall not relieve the Bidders from responsibility to estimate properly the cost of performing the work within the provided timeframe. Company (OIL) will assume no responsibility for any understandings or representations concerning conditions made by any of their officers prior to award of the Contract. Company (OIL) shall not permit any Changes to the time schedule of the Contract or any financial adjustments arising from the Bidder's lack of knowledge and its effect on the cost of execution of the Contract.

- 30.0 SPECIFICATIONS:** Before submission of Bids, Bidders are requested to make themselves fully conversant with all Conditions of the Bid Document and other relevant information related to the works/services to be executed under the contract.

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31.0 **GOODS AND SERVICES TAX:**

31.1 In view of **GST** Implementation from 1st July 2017, all taxes and duties including Excise Duty, CST / VAT, Service tax, Entry Tax and other indirect taxes and duties have been submerged in **GST**. Accordingly, reference of Excise Duty, Service Tax, VAT, Sales Tax, Entry Tax or any other form of indirect tax except of **GST** mentioned in the bidding document shall be ignored.

Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever **GST** (CGST & SGST / UTGST or IGST) is applicable.

31.2 Bidder should also mention the **Harmonised System of Nomenclature (HSN) and Service Accounting Codes (SAC)** at the designated place in the Price Bid Format.

31.3 **Where the OIL is entitled to avail the input tax credit of GST:**

OIL will reimburse the GST to the Supplier of Goods / Services (Service Provider) at actual against submission of Invoices as per format specified in rules/ regulation of GST to enable OIL to claim input tax credit of GST paid. In case of any variation in the executed quantities, the amount on which the GST is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

The input tax credit of GST quoted shall be considered for evaluation of bids, as per evaluation criteria of tender document.



31.4 **Where the OIL is not entitled to avail/take the full input tax credit of GST:**

OIL will reimburse GST to the Supplier of Goods / Services (Service Provider) at actual against submission of Invoices as per format specified in rules / regulation of GST subject to the ceiling amount of GST as quoted by the bidder. In case of any variation in the executed quantities (If directed and / or certified by the In-Charge) the ceiling amount on which GST is applicable will be modified on pro-rata basis.

The bids will be evaluated based on total price including **GST**.

31.5 It is the responsibility of the bidder to quote the correct GST rate. The classification of goods / services as per GST (Goods & Service Tax) Act should be correctly done by the contractor to ensure that input tax credit on GST (Goods & Service Tax) is not lost to the OIL on account of any error on the part of the contractor.

31.6 Further, it is the responsibility of the bidders to make all possible efforts to make their accounting / IT system GST compliant in order to ensure availability of Input Tax Credit (ITC) to Oil India Ltd.

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- 31.7 GST liability, if any, on account of supply of free samples against any tender shall be to bidder's account.
- 31.8 In case the bidder is covered under Composition Scheme under GST laws, then bidder should quote the price inclusive of the GST (CGST & SGST / UTGST or IGST). Further, such bidder should mention "Cover under composition system" in column for GST (CGST & SGST/UTGST or IGST) of price schedule.
- 31.9 OIL will prefer to deal with registered supplier of goods / services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet. However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST while evaluation of bid. Where OIL is entitled for input credit of GST, the same will be considered for evaluation of bid as per evaluation methodology of tender document.
- 31.10 Procurement of Specific Goods: Earlier, there is no tax incidence in case of import of specified goods (i.e. the goods covered under List-34 of Customs Notification no. 12/2012-Cus dated. 17.03.2012 as amended). Customs duty is not payable as per the policy. However, under GST regime, IGST Plus GST compensation cess (if applicable) would be leviable on such imports. Bidders should quote GST as inclusive considering IGST component for the imported Materials portion while quoting their prices on destination basis. However, GST rate to be specified in the price bid format.
- 31.11 The Supplier of Goods / Services may note the Anti-profiteering Clause (Clause No. 12.5) of Part-I GCC and quote their prices accordingly.
- 31.12 In case the GST rating of bidder on the GST portal / Govt. official website is negative / black listed, then the bid may be rejected by OIL.

32.0 QUERIES / CLARIFICATIONS ON THE TENDER:

The prospective bidders shall submit their queries/clarifications against the tender through E-mail/Fax/Courier addressed to GM(C&P)-Projects, Projects Department, Oil India Limited, Duliajan, Assam-786602.

Email: prroy@oilindia.in

With a copy to: spdeka@oilindia.in

33.0 CONSULTANT:

OIL has appointed M/s. Jayathe Petrotech Engineers & Consultants Pvt. Ltd (JPEC) Kochi, Kerala as their EPMC Consultant for implementation of the project. OIL has also authorized the Consultant to enter into correspondence with bidders and obtain clarification/confirmation, if any, with respect to this Tender.

Email: - PM (JPEC): bijuppaul@jpecgroup.com



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VOLUME-1 PART – 2

BID EVALUATION CRITERIA (BEC)



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1.0 BID EVALUATION CRITERIA (BEC)

The bid shall conform generally to the specifications and terms and conditions given in the Tender Documents. Bids will be rejected in case services offered do not conform to the required parameters stipulated in the technical specifications. Notwithstanding the general conformity of the bid to the stipulated specifications, the following mandatory requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. All the documents related to BEC must be submitted along with the Technical Bid.

1.1 FINANCIAL CRITERIA

1.1.1 Annual Financial Turnover of the bidder during any of preceding 03 (Three) financial/accounting years from the original bid closing date should be at least **INR 2.57 Crore. (Rupees Two Crore Fifty Seven Lakhs Only).**

1.1.2 Net worth of the bidder must be Positive for the preceding financial/accounting year.

Note: The Net worth to be considered against Clause 1.1.2 above, should be read in conjunction with the definition of Net worth as mentioned in Section 2 (57) of The Companies Act, 2013.

Notes to BEC Clause 1.1 above:

a. For proof of Annual Turnover & Net worth (refer clauses 1.1.1 & 1.1.2 above), any one of the following documents/photocopies must be submitted along with the bid:

(i) Audited Balance Sheet along with Profit & Loss account.

OR

(ii) A certificate issued by a practicing Chartered or Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in **Proforma-XIIC**.

Note: Mention of UDIN (Unique Document Identification Number) is mandatory for all Certificates w.e.f. February 1, 2019, issued by Chartered Accountant in Practice.

Considering the time required for preparation of Financial Statements, if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial/accounting year are not available with the bidder, then the financial turnover of the previous three financial/accounting years excluding the preceding financial/accounting year will be considered. In such cases, the Net worth of the previous financial/accounting year excluding the preceding financial/accounting year will be considered. However, the bidder has to submit an undertaking in support of the same along with their technical bid as per **Proforma-X**.



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- b.** In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.
- c.** In case the bidder is a Government Department, they are exempted from submission of documents mentioned under para **a.** and **b.** above.
- d.** Bid will be rejected if not accompanied with adequate documentary proof in support of Annual turnover & Net worth as mentioned in Para 1.1.1 & 1.1.2.

1.2 TECHNICAL CRITERIA:

The bidder must have experience in successfully executing/completing at least 01 (One) SIMILAR work of Civil Construction under single Contract in previous 07 (seven) years to be reckoned from the original bid closing date in Central Govt./State Govt./Public Sector Undertaking/State Govt. Enterprise/Public Limited Company.

- a. Minimum Value of **INR 3.85 Crore (Rupees Three Crore Eighty Five Lakhs Only).**
or
- b. Minimum quantity RCC concreting 700 Cubic Meter and land filling of 50,000 cubic meter

Notes to BEC Clause 1.2 above:

- a.** "SIMILAR" nature of work mentioned in 1.2 means "The bidder must be in the business of Civil Construction.
- b.** For proof of requisite Experience (refer Clause No. 1.2), the following documents/ photocopy (self-attested/attested) must be submitted along with the bid:

In case of OIL contract, Copy of 'Certificate of Completion (COC)'/ Certificate of Payment last day of months previous to the one in which applications are invited (COP) / SES of jobs successfully completed in last 7(seven)years ending bid closing date, showing gross value of job done. It may be clearly noted that simply mentioning of OIL Contract Number, LOA or Work Order or Contract document will not be accepted.

Completion Certificate issued by any other Public Limited company / Public Sector Undertaking/ Govt. Department in last seven years ending bid closing date showing:
 - (a) Gross value of job done; and
 - (b) Nature of job done; and
 - (c) Time period covering the financial year(s) as per the NIT



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c. Only Letter of Intent (LOI)/Letter of Award (LOA), or Work Order(s) are not acceptable as evidence.

d. Mere award of contract(s) will not be counted towards experience. Successful completion of the awarded contract(s) to the extent of volume & value, as stipulated respectively under Clause Nos. 1.2 will only be treated as acceptable experience.

e. Following work experience will also be taken into consideration:

(i) If the prospective bidder has executed contract in which similar work is also a component of the contract. However contract cost for the similar work component must meet the criteria under clause no. 1.2

(ii) In case the start date of the requisite experience is beyond the prescribed 07 (seven) years reckoned from the original bid closing date but completion is within the prescribed 07 (seven) years reckoned from the original bid closing date.

(iii) If the prospective bidder is executing similar work which is still running, and the contract value/quantity executed prior to original bid closing date is equal to or more than the minimum prescribed value in the BEC.

Note : If the completion certificate submitted by the bidder does not indicate the experience in Civil Construction Works then the bidder is to submit the complete Contract Document along with the completion certificate. The scope of work in the complete Contract Document should indicate the Civil Construction Works. Otherwise, the experience will not be considered.



f. SIMILAR work executed by a bidder for its own organization/subsidiary cannot be considered as experience for the purpose of meeting BEC.

g. Bids submitted for part of the work will be rejected. Bid will be rejected if not accompanied with adequate documentary proof in support of Work experience as mentioned in Notes to BEC Clause 1.2 above.

1.3 A substantially responsive bid is one that meets the terms and conditions of the Tender and/or the acceptance of which bid will not result in indeterminate liability on OIL.

1.4 Bidders are required to quote for all the items as per Price Bid Format, otherwise the offer of the bidder will be straightway rejected.

1.5 If there is any discrepancy between the unit price and the total price, the unit price will prevail, and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

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The quantities shown against each item in the "Price Bid Format" shall be considered for the purpose of Bid Evaluation. It is, however, to be clearly understood that the assumptions made in respect of the quantities for various operations are only for the purpose of evaluation of the bid and the Contractor will be paid on the basis of the actual number of days/parameter, as the case may be.

1.7 The bidders are advised not to offer any discount/rebate separately and to offer their prices in the Price Bid Format after considering discount/rebate, if any.

1.8 Conditional and unsolicited discount will not be considered in evaluation. However, if such bidder happens to be the lowest recommended bidder, unsolicited discount without any condition will be considered for computing the contract price.

1.9 In case of identical overall lowest offered rate by more than 1(one) bidder, the selection will be made by draw of lot between the parties offering the same overall lowest price.

1.10 EXEMPTION TO OIL REGISTERED “A” CLASS CIVIL CONTRACTORS:

OIL registered ‘A’ class bidders are exempted from submitting documents fulfilling their experience criteria as well as depositing the bid security amount as specified in the clauses 1.1 of BEC/BRC of this tender document, provided they have submitted the revised “One Time Security Deposit” in line with OIL’s notification no.: CONT/CIV/988/2016 dated 01.07.2016, on or before 13:30 Hrs. of Bid Closing/Opening date of this tender. However, they are not exempted from the financial criteria as per clause 1.2 and all other qualifying criteria and accordingly, they must submit the necessary documents.



1.11 PURCHASE PREFERENCE CLAUSE: Purchase Preference to Micro and Small Enterprises registered with District Industry Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME.

1.11.1 In case participating MSEs Quote price within price band of L1+15%, such MSE shall be considered for award of contract by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE.

1.11.2 In case of more than one such MSE qualifying for 15% purchase preference, the contract shall be awarded to lowest eligible MSE amongst the MSEs qualifying for 15% purchase preference.

1.11.3 Documentation required to be submitted by MSEs:

- i. Udyam Registration Number with Udyam Registration Certificate.
- or

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ii. Proof of registration with District Industry Centres or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts & Handloom or Udyog Aadhaar registration or registration with any other body specified by Ministry of MSME.

Note: Categorization and various criteria applicable to MSE bidders shall be guided by the Gazette Notification No. CG-DL-E-26062020-220191 dated 26.06.2020 issued by MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES. The existing enterprises registered under EM-Part-II or UAM till 30th June, 2020 shall continue to be valid only for a period up to the 31st day of March, 2021.

iii. In case bidding MSE is owned by Schedule Caste or Schedule Tribe or Woman entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ST/Woman entrepreneur should also be enclosed.

Price Bids shall be evaluated on overall lowest cost to OIL (L-1 offer) basis i.e. considering total quoted price for all services including applicable GST (CGST & SGST/UTGST or IGST).

1.12 OIL will prefer to deal with registered bidder under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet.

However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST while evaluation of bid. Where OIL is entitled for input credit of GST, the same will be considered for evaluation of bid as per evaluation methodology of tender document.

1.13 Price Bid uploaded without giving any of the details of the taxes (Including rates and amounts) will be considered as inclusive of all taxes including GST.

When a bidder mentions taxes as extra without specifying the rates & amount, the offer will be loaded with maximum value towards taxes received against the tender for comparison purposes. If the bidder emerges as lowest bidder after such loading, in the event of order on that bidder, taxes mentioned by OIL on the Purchase Order/Contracts will be binding on the bidder.

1.14 Input Tax Credit on GST (Goods & Service Tax) for this service is NOT available to OIL & the bids will be evaluated based on total price including GST.

1.15 Based on the evaluation of techno-commercially qualified bidders, the job will be awarded to L-1 bidder.

2.0 BID REJECTION CRITERIA (BRC):



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2.1 The bids are to be submitted in Composite Bid System i.e. Un-priced Techno-Commercial Bid and Price Bid together. Only the Price Bid should contain the quoted price.

2.2 The price quoted by the successful bidder must be firm during the performance of the contract and not subject to variation on any account except as mentioned in the bid document. Any bid submitted with adjustable price quotation other than the above will be treated as non-responsive and rejected.

2.3 Bid security shall be furnished as a part of the Techno Commercial Un-priced Bid. The amount of bid security should be as specified in the forwarding letter. Any bid not accompanied by a proper bid security will be rejected.

2.4 Bid Documents/User Id & Password for OIL's E-Tender portal are not transferable.

2.5 Any bid received in the form of Physical document/ Telex/Cable/Fax/E-mail will not be accepted.

2.6 Bids shall be typed or written in indelible ink. The bidder or his authorized representative shall sign the bid digitally, failing which the bid will be rejected.

Bids shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by bidder, in which case such corrections shall be initiated by the persons(s) signing (digitally) the bid. However, white fluid should not be used for making corrections. Any bid not meeting this requirement shall be rejected.

2.8 Any bid containing false statement will be rejected and action will be taken by Company as per Bid Document.

2.9 Bidders must quote clearly and strictly in accordance with the price schedule outlined in Price Bidding Format attached under "Notes and Attachments" tab in the main bidding engine of OIL's E-Tender portal; otherwise the bid will be rejected. All other techno-commercial documents other than price details to be submitted with Unpriced Techno-Commercial Bid as per tender requirement under "Technical Attachment" Tab Page only.

2.10 Bidder must accept and comply with the following provisions as given in the Tender Document in toto, failing which offer will be rejected:

- (i)** Firm price
- (ii)** EMD / Bid Bond
- (iii)** Period of validity of Bid
- (iv)** Price Schedule
- (v)** Performance Bank Guarantee / Security deposit
- (vi)** Delivery / Completion Schedule
- (vii)** Scope of work
- (viii)** Guarantee of material / work



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- (ix) Liquidated Damages clause
- (x) Tax liabilities
- (xi) Arbitration / Resolution of Dispute Clause
- (xii) Force Majeure
- (xiii) Applicable Laws
- (xiv) Specifications
- (xv) Integrity Pact

2.11 There should not be any indication of price in the Un-priced Techno-Commercial Bid. A bid will be straightway rejected if this is given in the Un-priced Techno-Commercial Bid.

2.12 Bid received with validity of offer less than 90 (ninety) days from the Original Bid Closing Date will be rejected.

2.13 The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide “**Part-VI/Integrity Pact**” of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the Un-priced Techno-Commercial Bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

3.0 GENERAL:

In case bidder takes exception to any clause of bidding document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the bidder does not withdraw/modify the deviation when/as advised by company. The loading so done by the company will be final and binding on the bidders. No deviation will however be accepted in the clauses covered under BEC/BRC.

3.2 To ascertain the substantial responsiveness of the bid the Company reserves the right to ask the bidder for clarification in respect of clauses covered under BEC/BRC also and such clarifications fulfilling the BEC/BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be will be evaluated based on the submission. However, mere submission of such clarification shall not make the offer responsive, unless company is satisfied with the substantial responsiveness of the offer.

3.3 If any of the clauses in the BEC/BRC contradict with other clauses of bidding document elsewhere, the clauses in the BEC/BRC shall prevail.

3.4 Bidder(s) must note that requisite information(s)/financial values etc. as required in the BEC/BRC & Tender are clearly understandable from the supporting documents submitted by the Bidder(s); otherwise Bids shall be rejected.



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3.5 OIL will not be responsible for delay, loss or non-receipt of applications for participating in the bid sent by mail and will not entertain any correspondence in this regard.

3.6 The originals of such documents [furnished by bidder(s)] shall have to be produced by bidder(s) to OIL as and when asked for.



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VOLUME-1 Part-3
SECTION-I
GENERAL CONDITIONS OF CONTRACT

	TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION OF STORM WATER AND FIREWATER RESERVOIR, EARTH FILLING AND SITE GRADING AND NALLAH (DRAIN) DIVERSION FOR CREATION OF FGGS AT BAGHJAN, UPPER ASSAM.			
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1.0 APPLICABILITY, DEFINITION & INTERPRETATION:

1.1 Applicability

All clauses in the General Conditions of Contract [GCC] shall apply to all transactions except as otherwise stated in the Special Conditions of Contract [SCC] and/or BEC-BRC. Furthermore, in the event if there is any conflict between the Principal text of the Agreement and the Appendixes, the Principal text will prevail.

1.2 Definition & Interpretation

In the contract (as hereinafter defined) the following words and expressions shall have the meaning hereby assigned to them except where the context otherwise requires:

1.2.1 COMPANY/OIL/Operator:

Shall mean Oil India Limited [OIL] a public sector undertaking, incorporated under COMPANY's Act 1956 having its registered office at Duliajan-786602, Assam, India and includes its successor and permitted assigns.

1.2.2 CONTRACTOR:

Shall mean the person or persons, firm or COMPANY or corporation incorporated in India or abroad, who has been awarded with the contract and includes contractor's legal representatives, his successors and permitted assigns.

1.2.3 Contract:

Shall mean a written agreement between the COMPANY and the CONTRACTOR for execution of the services/works including all contract documents and subsequent amendments, if any.

1.2.4 Site:

Shall mean the place in which the operations/services are to be carried out or places approved by OIL for the purposes of the CONTRACT together with any other places designated in the CONTRACT as forming part of the site.

1.2.5 COMPANY's Site Representative/Engineer:

Shall mean the person or the persons appointed by the COMPANY from time to time to act on its behalf at the site for overall co- ordination, supervision and project management at site.

1.2.6 Sub-Contract:



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Shall mean order/ contract placed by the CONTRACTOR for any portion of the CONTRACT or work sublet with necessary written consent of COMPANY on third party. Such sub-letting shall not relieve the CONTRACTOR from any obligation, duty or responsibility under the CONTRACT.

1.2.7 Sub-Contractor:

Shall mean any person or firm or COMPANY (other than CONTRACTOR) to whom any part of the work has been entrusted by CONTRACTOR, with written consent of OIL or the persons appointed by OIL, successors and permitted assigns of such persons, firm or COMPANY.

1.2.8 Contractor's Representative:

Shall mean such person/or persons duly appointed representative at the site and base as the CONTRACTOR may designate in writing to the COMPANY as having authority to act for the CONTRACTOR in matters affecting the work and to provide the requisite services.

1.2.9 Contract Price/Value:

Shall mean the sum accepted or the sum calculated in accordance with the rates accepted in tender and/or the contract rates as payable to the CONTRACTOR for the entire execution and completion of the services/works, including amendments/modification/change order issued by the COMPANY.

1.2.10 Firm price:

The prices will remain unchanged, except for statutory changes, during currency of the CONTRACT unless specifically agreed to in writing by COMPANY.

1.2.11 Service/Works/Operations:

Shall mean and include all items and things to be supplied/done and all work /Service to be performed by the CONTRACTOR as specified in the Scope of Work under this CONTRACT and shall also include all extra, additional, altered or substituted works/services as required for the purpose of successful execution of the Contract.

1.2.12 Equipment/Materials/Goods:

Shall mean and include any equipment, machinery, instruments, stores, goods which CONTRACTOR is required to provide to the COMPANY for/under the CONTRACT and amendments thereto.

1.2.13 Drawings:



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Shall mean and include all Engineering sketches, general arrangements/ layout drawings, sectional plans, all elevations, photographs, etc. related to the CONTRACT together with modification and revision thereto.

1.2.14 Specifications:

Means and includes all technical specifications, provision attached and referred to in the tender/contract document regarding method and manner of performing the services and qualities of the service/materials to be provided under the contract and also as modified by the COMPANY/its site representative during the execution of contract in the best interest of service.

1.2.15 Engineer In-charge (EIC):

Shall mean the person designated from time to time by the COMPANY and shall include those who are expressly authorized by the COMPANY to act for and on its behalf for operation of the contract.

1.2.16 Inspectors:

Shall mean any person or outside Agency nominated by COMPANY to inspect equipment, materials and services, if any, in the CONTRACT (stage wise as well as final) as per the terms of the CONTRACT.

1.2.17 Tests:

Shall mean such process or processes to be carried out by the CONTRACTOR as are prescribed in the CONTRACT, considered necessary by the COMPANY or their representative to ascertain quality, workmanship, performance and efficiency of equipment or services thereof.

1.2.18 Approval:

Shall mean and include the written consent duly signed by COMPANY or their authorized official in respect of all documents, drawings or other particulars in relation to the CONTRACT

1.2.19 Day:

Shall mean a calendar day of twenty –four (24) consecutive hours beginning at 00:00 hours with reference to local time at the site.

1.2.20 Month:

Shall mean a calendar month as per Gregorian calendar.



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1.2.21 Year:

Shall mean calendar year as per Gregorian calendar.

1.2.22 Working day:

Means any day which is not declared to be holiday by the COMPANY.

1.2.23 Bid/offer:

Shall mean the proposal/Offer along with supporting documents submitted by the bidder in response to the tender or enquiry in accordance with the terms of Tender or Enquiry, for consideration by COMPANY, prior to award of contract.

1.2.24 Guarantee:

Shall mean the period and other conditions governing the warranty/guarantee of the services as provided in the CONTRACT.

1.2.25 Mobilization:

Shall mean rendering the equipment fully manned and equipped as per CONTRACT and ready to begin work at site designated by the COMPANY and accepted by the COMPANY after inspection.

1.2.26 De-mobilization:



Shall mean the removal of all items forming part of the Mobilization from the site of the COMPANY and inspection and acceptance thereafter by the COMPANY including compliance of requirement in relation to re-export of imported equipment/materials under concessional duty scheme in accordance with relevant notification from Customs Authorities.

1.2.27 Willful Misconduct:

Shall mean intentional disregard of good and prudent standards of performance or proper conduct under the Contract with knowledge that it is likely to result in any injury to any person or persons or loss or damage of property of the Company or Third Party.

1.2.28 Gross Negligence:

Shall mean any act or failure to act (whether sole, joint or concurrent) by a person or entity which was intended to cause, or which was in reckless disregard of or unjustifiable indifference to, avoidable and harmful consequences such person or entity knew, or should have known, would result from such act or failure to act. Notwithstanding the foregoing, Gross negligence shall not include any action taken in good faith for the safeguard of life or property.

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1.2.29 Criminal Negligence:

Shall mean that the crime happened negligently, there was duty of care upon the Person but inadvertently due to his negligence, the duty was breached, which causes harm to the people in the form of death or serious injury.

1.2.30 GST Legislations:

‘GST legislations’ means ‘any or all of the following legislations as may be applicable to the CONTRACTOR and OIL:

- (A) The Central Goods & Services Tax Act, 2017;
- (B) The Integrated Goods & Services Act, 2017;
- (C) The Union Territory Goods & Services Tax Act, 2017;
- (D) The respective State Goods & Service Tax Acts’
- (E) The Goods and Services (Compensation to States) Act, 2017
- (F) The Customs Act and the Customs Tariff Act.
- (G) Any other applicable Act related to GST



2.0 CONTRACT DOCUMENT:

2.1 Governing language: The governing language for the CONTRACT shall be English. All CONTRACT documents and all correspondence and communication to be given and all other documentation to be prepared and supplied under the CONTRACT shall be written in English and the CONTRACT shall be construed and interpreted in accordance with English language.

2.2 Entire Agreement: The CONTRACT constitutes the entire agreement between OIL and the CONTRACTOR with respect to the subject matter of the CONTRACT and supersedes all communication, negotiations and agreement (whether written or oral) of the parties with respect thereto made prior to the date of this agreement, unless such communication(s) expressly forms part of the contract or included by reference.

2.3 Amendment in CONTRACT: No Amendment of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto. OIL shall not be bound by any printed conditions, provisions in the CONTRACTOR’s BID, forms of acknowledgement of CONTRACT, invoice and other documents which purport to impose any condition at variance with or supplement to CONTRACT.

2.4 WAIVERS AND AMENDMENTS:

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2.5 Waivers: It is fully understood and agreed that none of the terms and conditions of this contract shall be deemed waived by either party unless such waiver is executed in writing only by the duly authorized representatives of both the parties. The failure of either party to execute any right shall not act as a waiver of such right by such party.

3.0 Change Program: It is agreed that CONTRACTOR shall carry out work in accordance with the completion program (e.g. Drilling programme) to be furnished by the COMPANY, which may be changed from time to time by reasonable modifications in the program as COMPANY sees fit. COMPANY's instruction in this regard shall be final and binding.

4.0 CONTRACT TIMELINE:

4.1 Effective Date of Contract: The contract shall become effective as of the date COMPANY notifies the CONTRACTOR in writing that it has been awarded the contract. This date of issuance of Letter of Award (LOA) by the COMPANY will be the Effective Date of Contract. All terms and conditions of the contract shall come into force with the date of issuance of LOA.

4.2 Date of Commencement of Operation:

The date on which the mobilization is completed in all respects and CONTRACTOR is ready to commence operation as per the contract provision [Certified by the COMPANY's representative] will be treated as the date of Commencement of Operation.

4.3 Duration of the contract:

The contract shall be valid for a period as defined in the LOA and Special Conditions of Contract [SCC].

5.0 SCOPE OF WORK/CONTRACT:

Scope of the CONTRACT shall be as defined in the CONTRACT, specifications, drawings and Appendices.

6.0 GENERAL OBLIGATION OF CONTRACTOR:

CONTRACTOR shall, in accordance with and subject to the terms and conditions of this Contract:

6.1 Perform the work described in the Terms of Reference/Scope of Work. The CONTRACTOR shall execute the work with professional competence and in an efficient and workman like manner.

6.2 Except as otherwise provided in the Terms of Reference and the special Conditions of the contract, employ all labours/personnel as required to perform the work.

6.3 Perform all other obligations, work and services which are required by the terms of this



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contract or which reasonably can be implied from such terms as being necessary for the successful and timely completion of the work.

6.4 Comply with all applicable statutory obligations specified in the contract.

6.5 CONTRACTOR shall be deemed to have satisfied himself before submitting their bid as to the correctness and sufficiency of its bid for the services required and of the rates and prices quoted, which rates and prices shall, except insofar as otherwise provided, cover all its obligations under the contract.

6.6 CONTRACTOR shall be deemed, prior to submitting their bids, to have satisfied themselves about the weather conditions, working culture in the area, socio-political environment, safety & security aspects, law & order situation and law of the land, and obtain for themselves all necessary information as to the risks, contingencies and all other circumstances, which may influence or affect the various obligations under the Contract.

6.7 CONTRACTOR shall give or provide all necessary supervision during the performance of the services and as long thereafter within the warranty period as COMPANY may consider necessary for the proper fulfilling of CONTRACTOR's obligations under the contract.

7.0 GENERAL OBLIGATION OF COMPANY:

COMPANY shall, in accordance with and subject to the terms and conditions of this contract:

7.1 Pay CONTRACTOR in accordance with terms and conditions of the contract.

7.2 Allow CONTRACTOR access, subject to normal security and safety procedures, to all areas as required for orderly performance of the work as specified in the Scope of Works of the contract or work connected therewith.

7.3 Perform all other obligations required of COMPANY by the terms of this contract.

8.0 DUTIES AND POWER /AUTHORITY:

8.1 OIL's site representative/engineer:

The duties and authorities of OIL's site representative/engineer are to act on behalf of OIL for:

- i. Overall supervision, co-ordination and Project Management at site
- ii. Proper and optimum utilization of equipment and services.
- iii. Monitoring of performance and progress



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iv. Commenting/ countersigning on reports made by the CONTRACTOR's representative at site in respect of works, receipts, consumption etc. after satisfying himself with the facts of the respective cases.

v. He shall have the authority, but not obligation at all times and any time to inspect/test/examine/ verify any equipment machinery, instruments, tools, materials, personnel, procedures and reports etc. directly or indirectly pertaining to the execution of the work. However, this shall not construe to imply an acceptance by the inspector.

Hence, the overall responsibility of quality of work shall rest solely with the CONTRACTOR.

vi. Each and every document emerging from site in support of any claim by the CONTRACTOR has to have the countersignature/ comments of the OIL's representative/engineer without which no claim shall be entertained by the OIL.

CONTRACTOR's representative:

(a) The CONTRACTOR's representative shall have all the powers requisite for the performance of the Service/Works, subject to holding due authorisation from the CONTRACTOR.

(b) Representative(s) shall liaise with OIL's representative/engineer for the proper co-ordination and timely completion of the works and on any matter pertaining to the works.



(c) Representative(s) shall extend full co-operation to OIL's representative/inspector/engineer in the manner required by them for supervision/inspection/observation of equipment, material, procedures, performance, reports and records pertaining to works.

(d) To have complete charge of CONTRACTOR's personnel engaged in the performance of the work and to ensure compliance of rules and regulations and safety practice.

9.0 Personnel to be deployed by contractor:

CONTRACTOR warrants that it shall provide competent, qualified and sufficiently experienced personnel to perform the work correctly and efficiently.

9.1 The CONTRACTOR should ensure that their personnel observe all statutory safety requirement including those prescribed by the COMPANY. Upon COMPANY's written request, CONTRACTOR, entirely at its own expense, shall remove immediately any personnel of the CONTRACTOR determined by the COMPANY to be unsuitable and shall promptly replace such personnel with personnel acceptable to the COMPANY. Replacement personnel should be mobilized within 15 days from the date of issuance of

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notice without affecting the operation of the COMPANY.

9.2 The CONTRACTOR shall be solely responsible throughout the period of the contract for providing all requirements of their personnel including but not limited to, their transportation to & fro from Duliajan/field site, enroute/ local boarding, lodging, personal protective gear & medical attention etc. COMPANY shall have no responsibility or liability in this regard.

9.3 However, COMPANY shall provide available medical assistance/facilities to CONTRACTOR's Personnel in case of emergency at its own establishment on chargeable basis.

9.4 CONTRACTOR's key personnel shall be fluent in English language (both writing and speaking).

10.0 PERFORMANCE SECURITY:

10.1 On receipt of notification of award from the COMPANY, the CONTRACTOR shall furnish the Performance Security to COMPANY within 02 Weeks from the date of issue of LOA for an amount specified in the Forwarding Letter and Letter of Award (LOA) as per Proforma-Form and must be in the form of a Bank Draft/ Cashier's cheque/ Banker's cheque*/ NEFT/RTGS/Electronic fund transfer to designated account of OIL# or Fixed Deposit Receipt (account OIL INDIA LIMITED) or irrevocable Bank Guarantee or irrevocable Letter of Credit (LC) from:

a. Any schedule Indian Bank or Any Branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in case of domestic CONTRACTOR/service provider.

OR

b. Any scheduled bank in India or from International bank who has its branch in India registered with Reserve Bank of India, in case of foreign CONTRACTOR/service provider.

OR

c. Any foreign Bank which is not a Scheduled Bank in India, provided the Bank Guarantee issued by such Bank is counter-guaranteed by any Branch situated in India of any Scheduled Bank incorporated in India.

Note: Bank Guarantee issued by a Scheduled Bank of India at the request of some other Non-Schedule Bank of India shall not be acceptable.

10.2 Bank Guarantee issued by a Bank, amongst others, must contain the following particulars of such bank:

Full address

Branch Code



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Code Nos. of the authorized signatory with full name and designation.

Phone Nos.

Fax Nos.

E-mail address.

- 10.3** The domestic CONTRACTOR/service provider(s) will have to submit the Bank Guarantee from any of the scheduled banks and on non-judicial stamp paper of requisite value as per the Indian Stamp Act, purchased in the name of the issuing banker.
- 10.4** The foreign CONTRACTOR/service provider(s) will submit the Bank Guarantee from Banks of Indian origin situated in their country. In case no such bank of Indian origin is situated in their country, the Bank Guarantee may be submitted from the bankers as specified above.
- 10.5** The Performance Security shall be denominated in the currency of the contract.
- 10.6** The Performance Security specified above must be valid for the entire duration of the Contract and claim period should be valid for a minimum of 03 (three) months beyond the contract period. The Performance Security will be discharged by COMPANY not later than 30 days following its expiry of claim period. In the event of any extension of the Contract period, Bank Guarantee should be extended by CONTRACTOR by the period equivalent to the extended period.
- 10.7** The Performance Security shall be encashed by COMPANY on account of CONTRACTOR's failure to fulfil its obligations under the Contract and/or non-performance/un-satisfactory performance of the Contractor. Company shall not be required to proof any loss or damage on account of Contractor's non-performance/un-satisfactory performance.
- 10.8** The Performance Security will not accrue any interest during its period of validity or extended validity.
- 10.9** Failure of the successful Bidder to comply with the requirements of clause 10.0 shall constitute sufficient grounds for annulment of the award and forfeiture of the Bid Security. In such an eventuality, action will be initiated as per the Bidding Policy of OIL in vogue.

Subject to credit in OIL's account within prescribed time

* The validity of Bank Draft/Cashier's/Banker's cheque (as applicable) should not be less than 3 months.

In the event CONTRACTOR fails to honour any of the commitments entered into under this agreement, and /or in the event of termination of the contract under provisions of Integrity Pact and /or in respect of any amount due from the CONTRACTOR to OIL, OIL shall have unconditional option under the guarantee to invoke the above bank



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guarantee and claim the amount from the bank. The bank shall be obliged to pay the amount to OIL on demand.

11.0 SIGNING OF CONTRACT:

11.1 The successful bidder is required to sign a formal detailed contract with OIL within a maximum period of 60 days of date of LOA. Until the contract is signed, the LOA **as well as GCC & SCC as prescribed in the Tender**, shall remain binding amongst the two parties. In the event of failure on the part of the successful Bidder to sign the contract, OIL reserves the right to terminate the LOA issued to the successful Bidder and invoke the Bid Security or the Performance Security if submitted by the successful Bidder. Such CONTRACTOR shall be put on holiday as per the Banning Policy of OIL [available at www.oil-india.in].

12.0 CLAIMS, TAXES & DUTIES:

Claims: CONTRACTOR agrees to pay all claims, taxes and fees for equipment, labour, materials, services and supplies to be furnished by it hereunder and agrees to allow no lien or charge resulting from such claims to be fixed upon any property of COMPANY. COMPANY may, at its option, pay and discharge any liens or overdue charges for CONTRACTOR's equipment, labour, materials, services and supplies under this CONTRACT and may thereupon deduct the amount or amounts so paid from any sum due, or thereafter become due, to CONTRACTOR hereunder.

12.1 Notice of claims: CONTRACTOR or COMPANY, as the case may be, shall promptly give the other, notice in writing of any claim made or proceeding commenced for which that party is entitled to indemnification under the CONTRACT. Each party shall confer with the other concerning the defense of any such claims or proceeding, shall permit the other to be represented by counsel in defense thereof, and shall not affect settlement of or compromise any such claim or proceeding without the other's written consent.

12.2 Taxes:

12.2.1 CONTRACTOR, unless specified otherwise in the CONTRACT, shall bear all tax liabilities, duties, Govt. levies etc. including GST and customs duty, Corporate and personnel taxes levied or imposed on the CONTRACTOR on account of payments received by it from the COMPANY for the work done under this CONTRACT. It shall be the responsibility of CONTRACTOR to submit to the concerned Indian authorities, the returns and all other concerned documents required for this purpose and to comply in all respects with the requirements of the laws in this regard, in time.

12.2.2 Tax levied on CONTRACTOR as per the provisions of Indian Income Tax Act and any other enactment/rules on income derived/payments received under the contract will be on CONTRACTOR's account.

12.2.3 CONTRACTOR shall be responsible for payment of personal taxes, if any, for all the



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personnel deployed in India by CONTRACTOR.

12.2.4 The CONTRACTOR shall furnish to the COMPANY, if and when called upon to do so, relevant statement of accounts or any other information pertaining to work done under the contract for submitting the same to the Tax authorities, on specific request from them in accordance with provisions under the law. CONTRACTOR shall be responsible for preparing and filing the return of income etc. within the prescribed time limit to the appropriate authority.

12.2.5 Prior to start of operations under the contract, the CONTRACTOR shall furnish the COMPANY with the necessary documents, as asked for by the COMPANY and/ or any other information pertaining to the contract, which may be required to be submitted to the Income Tax authorities at the time of obtaining "No Objection Certificate" for releasing payments to the CONTRACTOR.

12.2.6 Corporate income tax will be deducted at source from the invoice at the specified rate of income tax as per the provisions of Indian Income Tax Act as may be in force from time to time and COMPANY will issue TDS Certificate to the CONTRACTOR as per the provisions of Income Tax Act.

12.2.7 Corporate and personnel taxes on CONTRACTOR shall be the liability of the CONTRACTOR and the COMPANY shall not assume any responsibility on this account.

12.2.8 All local taxes, levies and duties, sales tax, octroi, etc. on purchases and sales made by CONTRACTOR shall be borne by the CONTRACTOR.

12.2.9 CONTRACTOR shall provide all the necessary compliances/ invoice/documents for enabling OIL to avail Input tax credit benefits in respect of the payments of GST which are payable against the CONTRACT. The CONTRACTOR should provide tax invoice issued under GST legislations for the goods and Services (indicating GST). Payment towards the components of GST shall be released by OIL only against appropriate documents i.e.: Tax Invoice/Bill of entry for availing input tax credit (as applicable).

12.2.10 The tax invoices as per above provisions should contain all the particulars as required under the invoicing rules under the GST legislations, including, but not limited to the following:

Name, Address and the GST Registration Number (under the relevant Tax Rules) of the Service Provider (CONTRACTOR)

ii. Name and Address and GST Registration Number of the Service Receiver (Address of OIL)

iii. Description, Classification and Value of taxable service/goods and the amount of applicable tax (CGST, SGST, IGST, UTGST and cess)



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12.2.11 In case of imported goods, CONTRACTOR/supplier is required to provide original Bill of Entry or copy of Bill of Entry duly attested by Custom authority.

12.2.12 The CONTRACTOR should mention the Place of supply in the invoice raised under GST Law.

12.2.13 OIL would not accept any invoice without its GSTIN mentioned on the invoice

Note: CONTRACTOR who is under composition levy of the GST legislation would raise Bill of supply instead of Tax invoice, which will have GSTIN of supplier as well as OIL.

12.3 Goods and Services Tax:

12.3.1 "GST" shall mean Goods and Services Tax charged on the supply of material(s) and services. The term "GST" shall be construed to include the Integrated Goods and Services Tax (hereinafter referred to as "IGST") or Central Goods and Services Tax (hereinafter referred to as "CGST") or State Goods and Services Tax (hereinafter referred to as "SGST") or Union Territory Goods and Services Tax (hereinafter referred to as "UTGST") depending upon the import/interstate or intrastate supplies, as the case may be. It shall also mean GST compensation Cess, if applicable.

12.3.2 Where the OIL is entitled to avail the input tax credit of GST:

OIL will reimburse the GST to the Supplier of Goods/Services (Service Provider) at actual against submission of Invoices as per format specified in rules/ regulation of GST to enable OIL to claim input tax credit of GST paid. In case of any variation in the executed quantities, the amount on which the GST is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

12.3.3 Where the OIL is not entitled to avail/take the full input tax credit of GST:

OIL will reimburse GST to the Supplier of Goods/Services (Service Provider) at actual against submission of Invoices as per format specified in rules/ regulation of GST subject to the ceiling amount of GST as quoted by the bidder. In case of any variation in the executed quantities (If directed and/or certified by the In-Charge) the ceiling amount on which GST is applicable will be modified on pro-rata basis.

12.3.4 The CONTRACTOR will be under obligation for charging correct rate of tax as prescribed under the respective tax laws. Further the CONTRACTOR shall avail and pass on benefits of all exemptions/concessions available under tax laws. Any error of interpretation of applicability of taxes/ duties by the CONTRACTOR shall be to CONTRACTOR's account.

12.3.5 In case of statutory variation in GST, other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods/ Services (Service



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Provider) shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.

12.3.6 Beyond the contract period, in case OIL is not entitled for input tax credit of GST, then any increase in the rate of GST beyond the contractual delivery period shall be to Service provider's account whereas any decrease in the rate GST shall be passed on to the OIL.

12.3.7 Beyond the contract period, in case OIL is entitled for input tax credit of GST, then statutory variation in applicable GST on supply and on incidental services, shall be to OIL's account.

12.3.8 Claim for payment of GST/ Statutory variation, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) GST, otherwise claim in respect of above shall not be entertained for payment of arrears.

12.3.9 The base date for the purpose of applying statutory variation shall be the Bid Opening Date.

12.3.10 The CONTRACTOR will be liable to ensure to have registered with the respective tax authorities, wherever applicable and to submit self- attested copy of such registration certificate(s) and the CONTRACTOR will be responsible for procurement of material in its own registration (GSTIN) and also to issue its own Road Permit/ E-way Bill, if applicable etc.

12.4 Anti-profiteering clause

12.4.1 As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices.



12.4.2 In case rating of Contractor is negative/black listed after award of work for supply of goods/services, then OIL shall not be obligated or liable to pay or reimburse GST to such vendor/Contractor and shall also be entitled to deduct/recover such GST along with all penalties/interest, if any, incurred by OIL.

13.0 CUSTOMS DUTY, IF APPLICABLE:

13.1 CONTRACTOR shall be responsible to import the equipment/tools/spares/ consumables etc. required for execution of the contract. The CONTRACTOR shall undertake to complete all the formalities as required under the Customs Act/Foreign Trade Policy (FTP) and indemnify OIL from all the liabilities of Customs in this regard.

13.2 CONTRACTOR will be solely responsible for payment of all applicable Customs Duty and to comply all Rules and Regulations. Total Contract Price/Value is inclusive of all Customs Duty, if not mentioned otherwise elsewhere in the Contract.

13.3 Above clause is to be read with Customs Duty Clause in SCC, if any.

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14.0 INSURANCE:

14.1 CONTRACTOR shall at his own expense arrange secure and maintain insurance with reputed insurance companies to the satisfaction of the Company as follows:

Contractor at his cost shall arrange, secure and maintain insurance as may be necessary and to its full value for all such amounts to protect the works in progress from time to time and the interest of Company against all risks as detailed herein. The form and the limit of such insurance, as defined here in together with the under works thereof in each case should be as acceptable to the Company. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of his responsibilities & obligations under Contract. All costs on account of insurance liabilities covered under Contract will be to Contractor's account and will be included in Value of Contract. However, the Company may from time to time, during the currency of the Contract, ask the Contractor in writing to limit the insurance coverage risk and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in value of Contract to the extent of reduced premium amounts. Contractor shall cover insurance with Indian Insurance Companies.

14.2 Any deductible set forth in any of the above insurance shall be borne by Contractor.

14.3 CONTRACTOR shall require all of his sub-Contractor to provide such of the foregoing insurance coverage as Contractor is obliged to provide under this Contract and inform the Company about the coverage prior to the commencement of agreements with its sub-Contractors.

14.4 All insurance taken out by Contractor or their sub-contractor shall be endorsed to provide that the underwriters waive their rights of recourse on the Company and to the extent of the liabilities assumed by Contractor under this Contract.

14.5 Certificate of Insurance:

Before commencing performance of the CONTRACT, CONTRACTOR shall furnish OIL with certificates of insurance indicating:

- a) Kinds and amounts of insurance as required herein
 - b) Details of coverage
 - c) Insurance corporation or companies carrying the aforesaid coverage
 - d) Effective and expiry dates of policies
- That OIL shall be given thirty (30) days written advance notice of any
- e) material change in the policy
 - f) Waiver of subrogation endorsement has been attached to all policies and
 - g) The territorial limits of all policies.

14.6 Contractor shall also inform the Company at least 60 days in advance regarding the expiry cancellation and/or changes in any of such documents & ensure revalidation/renewal,



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etc., as may be necessary well in time.

14.7 If any of the above policy expire or/are cancelled during the term of this CONTRACT and CONTRACTOR fails for any reason to renew such policies, OIL in no case shall be liable for any loss/damage occurred during the term when the policy is not effective. Furthermore, a penal interest @ 1% of the Total contract value shall be charged towards not fulfilling of the contractual obligations. Notwithstanding above, should there be a lapse in any insurance required to be taken by the Contractor for any reason whatsoever, loss/damage claims resulting therefrom shall be to the sole account of Contractor.

14.8 Contractor on demand from Company shall furnish the Insurance Policy having detail terms and conditions, with respect to any Certificate of Insurance submitted to the Company.

CONTRACTOR shall, at his own expense, arrange appropriate comprehensive insurance to cover all risks assumed by the CONTRACTOR under this CONTRACT in respect of CONTRACTOR's equipment, tools and any other belongings of the CONTRACTOR and its personnel as well deputed under this CONTRACT during the entire period of their engagement in connection with this CONTRACT including extensions if any. The CONTRACTOR shall also carry adequate insurance cover against damage/loss to third party person/property. OIL will have no liability on this account.

14.9 Principal Assured:

The following are to be included as Principal Assured(s) in the Insurance Policies (except in case of Workmen's Compensation/Employer's Liability insurance):

"Oil India Limited, and CONTRACTOR's name (as appearing in the Contract/LOA)"

14.10 Waiver of subrogation:

All insurance policies of the CONTRACTOR with respect to the operations conducted hereunder as set forth in clauses hereof, shall be endorsed by the underwriter in accordance with the following policy wording:

"The insurers hereby waive their rights of subrogation against Oil India Limited or any of their employees or their affiliates and assignees".

14.11 Deductible:

The CONTRACTOR shall take policy with minimum deductible as per IRDA prescribed for the policy(ies). That portion of any loss not covered by insurance provided for in this article solely by reason of deductible provision in such insurance policies shall be to the account of the CONTRACTOR.

14.12 Compliance with Sec 25(1), of "The General Insurance Business (Nationalization) Act 1972"



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Section 25(1) of “The General Insurance Business (Nationalization) Act 1972” is reproduced below:

“No person shall take out or renew any policy of insurance in respect of any property in India or any ship or other vessel or aircraft registered in India with an insurer whose principal place of business is outside India save with the prior permission of the Central Government”.

The above requirement of aforesaid Act needs to be complied with by the CONTRACTOR wherever the aforesaid provisions of Act apply, and compliance confirmations submitted.

14.13 Loss Payee Clause:

The Insurance Policies should mention the following in Loss Payee Clause:

“In respect of Insurance claims in which OIL’s interest is involved, written consent of OIL will be required”.



14.14 On account payment to OIL in case of claim

In case any loss or damage happen and where OIL’s interest is involved, OIL reserves the right to recover the loss amount from the CONTRACTOR prior to final settlement of the claim.

14.15 CONTRACTOR shall require all of its SUB-CONTRACTORS to provide such of the foregoing insurance cover as the CONTRACTOR is obligated to provide under this CONTRACT.

14.16 CONTRACTOR shall at all time during the currency of the contract provide, pay for and maintain the following insurance amongst others:

- i) **Workman Compensation and/ Employers’ Liability Insurance:** Workmen's compensation and employer's liability insurance as required by the laws of the country of origin of the employee.
- ii) **Commercial General Liability Insurance:** Commercial General Public Liability Insurance covering liabilities including contractual liability for bodily injury, including death of persons, and liabilities for damage of property. This insurance must cover all operations of CONTRACTOR required to fulfil the provisions under this Contract.
- iii) **Comprehensive General Automotive Liability:** Automobile Public Liability Insurance covering owned, non-owned and hired automobiles used in the performance of the work hereunder, with bodily injury limits and property damage limits shall be governed by Indian Insurance Regulations.
- iv) **Carrier’s Legal Liability Insurance:** Carrier’s Legal Liability Insurance in respect of **all CONTRACTOR’s items** to be transported by the CONTRACTOR to the site of work, for

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physical loss or destruction of or damage to goods or merchandise, while in transit.

- v) **Public Liability Act Policy:** Public Liability Act Policy covering the statutory liability arising out of accidents occurring during the currency of the contract due to handling hazardous substances as provided in the Public Liability Insurance Act 1991 and the Rules framed there under.
- vi) **Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):** CONTRACTOR shall, ensure that all his/ its personnel deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of OIL.
- vii) CONTRACTOR's equipment used for execution of the work hereunder shall have an insurance cover with a suitable limit (as per international standards).
- viii) **Any other insurance policy set forth in the SCC**

Note: An undertaking by the service provider has to be mandatorily provided during the Mobilization time that they have taken all the Insurance provisions as per the contract and as the Law and Insurance Regulation.

15.0 LIABILITY:

- 15.1** Except as otherwise expressly provided herein, neither COMPANY nor its servants, agents, nominees, CONTRACTORs, or sub- CONTRACTORs shall have any liability or responsibility whatsoever to whomsoever for loss of or damage to the equipment and/or loss of or damage to the property of the CONTRACTOR and/or their CONTRACTORs or sub-CONTRACTORs, irrespective of how such loss or damage is caused and even if caused by the negligence of COMPANY and/or its servants, agent, nominees, assignees, CONTRACTORs and sub-CONTRACTORs.
- 15.2** The CONTRACTOR shall protect, defend, indemnify and hold harmless COMPANY from and against such loss or damage and any suit, claim or expense resulting there from. Neither COMPANY nor its servants, agents, nominees, assignees, CONTRACTORs, sub-CONTRACTORs shall have any liability or responsibility whatsoever for injury to, illness, or death of any employee of the CONTRACTOR and/or of its CONTRACTORs or sub-CONTRACTOR irrespective of how such injury, illness or death is caused and even if caused by the negligence of COMPANY and/or its servants, agents nominees, assignees, CONTRACTORs and sub-CONTRACTORs. CONTRACTOR shall protect, defend, indemnify and hold harmless COMPANY from and against such liabilities and any suit, claim or expense resulting there from.
- 15.3** The CONTRACTOR hereby agrees to waive its right of recourse and further agrees to cause its underwriters to waive their right of subrogation against COMPANY and/or its



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underwriters, servants, agents, nominees, assignees, CONTRACTORS and sub-CONTRACTORS for loss or damage to the equipment of the CONTRACTOR and/or its sub-CONTRACTORS and/or their employees when such loss or damage or liabilities arises out of or in connection with the performance of the contract limited to the CONTRACTOR's liabilities agreed to under this Contract.

15.4 The CONTRACTOR hereby further agrees to waive its right of recourse and agrees to cause its underwriters to waive their right of subrogation against COMPANY and/or its underwriters, servants, agents, nominees, assignees, CONTRACTORS and sub-CONTRACTORS for injury to, illness or death of any employee of the CONTRACTOR and of its CONTRACTORS, sub-CONTRACTORS and/or their employees when such injury, illness or death arises out of or in connection with the performance of the contract limited to the CONTRACTOR's liabilities agreed to under this Contract.

15.5 Except as otherwise expressly provided herein, neither CONTRACTOR nor its servants, agents, nominees, CONTRACTORS or sub- CONTRACTORS shall have any liability or responsibility whatsoever to whomsoever for loss of or damage to the equipment and/or loss or damage to the property of the COMPANY and/or their CONTRACTORS or sub-CONTRACTORS, irrespective of how such loss or damage is caused and even if caused by the negligence of CONTRACTOR and/or its servants, agents, nominees, assignees, CONTRACTORS and sub- CONTRACTORS. The COMPANY shall protect, defend, indemnify and hold harmless CONTRACTOR from and against such loss or damage and any suit, claim or expense resulting there from.

15.6 Except as otherwise expressly provided herein, neither CONTRACTOR nor its servants, agents, nominees, assignees, CONTRACTORS, sub- CONTRACTORS shall have any liability or responsibility whatsoever to whomsoever for injury or illness, or death of any employee of the COMPANY and/or of its CONTRACTORS or sub- CONTRACTORS irrespective of how such injury, illness or death is caused and even if caused by the negligence of CONTRACTOR and/or its servants, agents, nominees, assignees, CONTRACTORS and sub- CONTRACTORS. COMPANY shall protect, defend indemnify and hold harmless CONTRACTOR from and against such liabilities and any suit, claim or expense resulting there from.

15.7 The COMPANY agrees to waive its right of recourse and further agrees to cause its underwriters to waive their right of subrogation against CONTRACTOR and/or its underwriters, servants, agents, nominees, assignees, CONTRACTORS and sub-CONTRACTORS for loss or damage to the equipment of COMPANY and/or its CONTRACTORS or sub-CONTRACTORS when such loss or damage or liabilities arises out of or in connection with the performance of the contract.

15.8 The COMPANY hereby further agrees to waive its right of recourse and agrees to cause it underwriters to waive their right of subrogation against CONTRACTOR and/or its underwriters, servants, agents, nominees, assignees, CONTRACTORS and sub-CONTRACTORS for injury to, illness or death of any employee of the COMPANY and of its



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CONTRACTORS, sub-CONTRACTORS and/or their employees when such injury, illness or death arises out of or in connection with the performance of the Contract.

16.0 LIMITATION OF LIABILITY:

- a) Notwithstanding any other provisions herein to the contrary, except only in cases of Wilful misconduct and/or criminal acts and/or criminal negligence, neither the CONTRACTOR nor the COMPANY (OIL) shall be liable to the other, whether in Contract, tort, or otherwise, for any consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided however that this exclusion shall not apply to any obligation of the CONTRACTOR to pay Liquidated Damages to the COMPANY and/or COMPANY's right to forfeit the Performance Bank Guarantee(s) in terms of the contract.
- b) Notwithstanding any other provisions incorporated elsewhere in the contract, the aggregate liability of the CONTRACTOR in respect of this contract, whether under Contract, in tort or otherwise, shall not exceed 100% of the Contract Price (if not specified otherwise in SCC), provided however that this limitation shall not apply to the cost of repairing or replacing defective equipment by the CONTRACTOR, or to any obligation of the CONTRACTOR to indemnify the COMPANY with respect to Intellectual Property Rights.
- c) COMPANY shall indemnify and keep indemnified CONTRACTOR harmless from and against any and all claims, costs, losses and liabilities in excess of the aggregate liability amount in terms of clause (b) above.

17.0 LIABILITY OF UNION GOVERNMENT OF INDIA:

It is expressly understood and agreed upon by and between CONTRACTOR and OIL INDIA LIMITED, and that OIL INDIA LIMITED is entering into this agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that Union of India is not a party to this agreement and has no liabilities, obligations or rights, whatsoever hereunder. It is expressly understood and agreed that OIL INDIA LIMITED is an independent legal entity with power and authority to enter into contracts solely on its own behalf under the applicable laws of India and general principles of the Contract law. The bidder/ CONTRACTOR expressly agrees, acknowledges and understands that OIL INDIA LIMITED is not an agent, representative or delegate of the Union of India. It is further understood and agreed that Union of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the contract. Accordingly, bidder/ CONTRACTOR hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Union of India arising out of this contract and covenants not to sue the Union of India as to any manner, claim, cause of action or thing whatsoever arising of or under this agreement.

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18.0 CONSEQUENTIAL DAMAGE:

Except as otherwise expressly provided, neither party shall be liable to the other for special, indirect or consequential damages resulting from or arising out of the contract, including but without limitation, to loss or profit or business interruptions, howsoever caused and regardless of whether such loss or damage was caused by the negligence (either sole or concurrent) of either party, its employees, agents or sub- CONTRACTORS.

RISK PURCHASE:

In the event, CONTRACTOR's failure to provide the services as per the Contractual scope, terms and conditions, COMPANY (OIL) reserves the right to hire the services from any other source at the CONTRACTOR's risk & cost and the difference in cost shall be borne by the CONTRACTOR. Further, OIL shall retain the right of forfeiture of Performance Bank Guarantee and any other action as deemed fit. In certain operational situations OIL reserves the right to take over the site including the service equipment at the risk and cost of the CONTRACTOR.

20.0 INDEMNITY AGREEMENT:

20.1 Except as provided hereof CONTRACTOR agrees to protect, defend, indemnify and hold COMPANY harmless from and against all claims, suits, demands and causes of action, liabilities, expenses, cost, liens and judgments of every kind and character, without limit, which may arise in favour of CONTRACTOR's employees, agents, CONTRACTORS and sub-CONTRACTORS or their employees or in favour of any third party(is) on account of bodily injury or death, or damage to personnel/property as a result of the operations contemplated hereby, regardless of whether or not said claims, demands or causes of action arise out of the negligence or otherwise, in whole or in part or other faults.

20.2 Except as provided hereof COMPANY agrees to protect, defend, indemnify and hold CONTRACTOR harmless from and against all claims, suits, demands and causes of action, liabilities, expenses, cost, liens and judgments of every kind and character, without limit, which may arise in favour of COMPANY's employees, agents, CONTRACTORS and sub-CONTRACTORS or their employees or in favour of any third party(is) on account of bodily injury or death, or damage to personnel/property as a result of the operations contemplated hereby, regardless of whether or not said claims, demands or causes of action arise out of the negligence or otherwise, in whole or in part or other faults.

20.3 INDEMNITY APPLICATION:

The indemnities given herein above, whether given by COMPANY or CONTRACTOR shall be without regard to fault or to the negligence of either party even though said loss, damage, liability, claim, demand, expense, cost or cause of action may be caused,



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occasioned by or contributed to by the negligence, either sole or concurrent of either party.

22.0 ROYALTY PATENTS:

Each party shall hold harmless and indemnify the other from and against all claim and proceedings for or on account of any patent rights, design, trade mark or other protected rights arising from any use of materials, equipment, processes, inventions and methods, which have not been imposed on the attending party by the terms of the contract or the specifications forming part thereof.

23.0 WARRANTY AND REMEDY OF DEFECTS:

23.1 CONTRACTOR warrants that they shall perform the work in a first class, workmanlike, and professional manner and in accordance with their highest degree of quality, efficiency and current state of the art technology/industry practices and in conformity with all specifications, standards and drawings set forth or referred to in the Terms of Reference and with instructions and guidance, which COMPANY may, from time to time, furnish to the CONTRACTOR.

23.2 Should COMPANY discover at any time during the tenure of the Contract or till the Unit/equipment/tools are demobilised from site or base camp (if applicable) that the work does not conform to the foregoing warranty, CONTRACTOR shall after receipt of notice from COMPANY, promptly perform any and all corrective work required to make the services conform to the Warranty. Such corrective Work shall be performed entirely at CONTRACTOR's own expenses. If such corrective Work is not performed within a reasonable time, the COMPANY, at its option may have such remedial Work performed by others and charge the cost thereof to CONTRACTOR subject to a maximum of the contract value payable for the defective work which needs corrective action which the CONTRACTOR must pay promptly. In case CONTRACTOR fails to perform remedial work, or pay promptly in respect thereof, the performance security shall be forfeited.

24.0 SUBCONTRACTING/ASSIGNMENT:

24.1 CONTRACTOR shall not subcontract, transfer or assign the contract, or any part under this contract, to any third party(ies). Except for the main services under this contract, CONTRACTOR may sub-contract the petty support services subject to COMPANY's prior written approval. However, CONTRACTOR shall be fully responsible for complete execution and performance of the services under the Contract.

24.2 Consequent upon of placement of contract, if successful bidder(s)(other than Micro/Small Enterprise) is procuring materials/services from their sub-vendor, who is a Micro or Small Enterprise registered with District Industry Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME with prior consent in writing of the purchasing



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authority/Engineer in Charge the details like Name, Registration No., Address, Contact No., details of material and value of procurement made, etc. of such enterprises shall be furnished by the CONTRACTOR at the time of submission of invoice/bill.

25.0 RECORDS, REPORTS AND INSPECTION:

The CONTRACTOR shall, at all times during the currency of the contract, permit the COMPANY and its authorized employees and representatives to inspect all the Work performed and to witness and check all the measurements and tests made in connection with the said work. The CONTRACTOR shall keep an authentic, accurate history and logs including safety records of each service item with major items consumed, which shall be open at all reasonable times for inspection by the COMPANY's designated representatives and its authorized employees. The CONTRACTOR shall provide the COMPANY's designated representatives with a daily written report, on form prescribed by the COMPANY showing details of operations during the preceding 24 hours and any other information related to the said services requested by the COMPANY whenever so requested. The CONTRACTOR shall not, without COMPANY's written consent allow any third person(s) access to the said information or give out to any third person information in connection therewith.

26.0 CONFIDENTIALITY, USE OF CONTRACT DOCUMENTS AND INFORMATION:

26.1 CONTRACTOR shall not, without COMPANY's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing pattern, sample or information furnished by or on behalf of COMPANY in connection therewith, to any person other than a person employed by CONTRACTOR in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only, as may be necessary for purposes of such performance with prior permission from COMPANY. However, nothing hereinabove contained shall deprive the CONTRACTOR of the right to use or disclose any information which is:

- a) possessed by the CONTRACTOR, as evidenced by the CONTRACTOR's written records, before receipt thereof from the COMPANY which however the CONTRACTOR shall immediately inform to COMPANY; or
- b) required to be disclosed by the CONTRACTOR pursuant to an order of a court of competent jurisdiction or other governmental agency having the power to order such disclosure, provided the CONTRACTOR uses its best efforts to provide timely notice to COMPANY of such order to permit COMPANY an opportunity to contest such order subject to prior permission from COMPANY.

26.2 CONTRACTOR shall not, without COMPANY's prior written consent, make use of any document or information except for purposes of performing the contract.

26.3 Any document supplied to the CONTRACTOR in relation to the contract other than the Contract itself remain the property of COMPANY and shall be returned (in all copies) to



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COMPANY on completion of CONTRACTOR's performance under the Contract if so required by COMPANY.

26.4 During the currency of the Contract, COMPANY and its employees, agents, other CONTRACTORS, sub-CONTRACTORS (of any tier) and their employees etc. may be exposed to certain confidential information and data of the CONTRACTOR. Such information and data held by the COMPANY, its employees, agents, other CONTRACTORS, sub-CONTRACTORS (of any tier) and their employees in the strictest Confidence and shall not be disclosed to any other party except on a need to know basis.

However, the above obligation shall not extend to information which:

- i) is, at the time of disclosure, known to the public which CONTRACTOR shall immediately inform COMPANY ;
- ii) is lawfully becomes at a later date known to the public through no fault of CONTRACTOR subject to CONTRACTOR's undertaking that no information has been divulged by them to the public;
- iii) is lawfully possessed by CONTRACTOR before receipt thereof from COMPANY which should be immediately informed to COMPANY;
- iv) is developed by CONTRACTOR independently of the information disclosed by COMPANY which should be shared with the COMPANY;
- v) CONTRACTOR is required to produce before competent authorities or by court order subject to prior permission from COMPANY;

27.0 REMUNERATION AND TERMS OF PAYMENT:

27.1 COMPANY shall pay to the CONTRACTOR during the term of the Contract the amount due from time to time calculated according to the rates of payment set and in accordance with other provisions hereof. No other payments shall be due from COMPANY unless specifically provided for in the Contract. All payments will be made in accordance with the terms hereinafter described.

27.2 Request for payment/part payment to third party i.e. other than the party on whom the contract has been awarded will not be entertained by OIL under any circumstances.

27.3 MANNER OF PAYMENT: All payments due by COMPANY to CONTRACTOR hereunder shall be made at CONTRACTOR's designated bank. Bank charges, if any will be on account of the CONTRACTOR

27.4 Payment of any invoices shall not prejudice the right of COMPANY to question the validity of any charges therein, provided COMPANY within one year after the date of payment shall make and deliver to CONTRACTOR written notice of objection to any item or items the validity of which COMPANY questions.



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- 27.5** INVOICES: Mobilization charges will be invoiced only upon completion of mobilization as certified by COMPANY representative and CONTRACTOR is ready at site for starting the services/ operation. Payment of mobilization charges shall be made within 45 days following the date of receipt of undisputed invoices by COMPANY.
- 27.6** CONTRACTOR shall send invoice to COMPANY on the day following the end of each month for all daily or monthly charges due to the CONTRACTOR.
- 27.7** CONTRACTOR will submit 02 (Two) sets of all invoices duly super scribed 'Original' and 'copy' as applicable to the COMPANY for processing payment. Separate invoices for the charges payable under the contract shall be submitted by the CONTRACTOR for foreign currency and Indian currency.
- 27.8** Payment of monthly invoices, if undisputed, shall be made within 30 days following the date of receipt of invoice by COMPANY.
- 27.9** COMPANY shall within 30 days of receipt of the invoice notify the CONTRACTOR of any item under dispute, specifying the reasons thereof, in which event, payment of the disputed amount may be withheld until settlement of the dispute, but payment shall be made of any undisputed portion on or before the due date. This will not prejudice the COMPANY's right to question the validity of the payment at a later date as envisaged in clause no. **27.4** above.
- 27.10** The acceptance by CONTRACTOR of part payment on any billing not paid on or before the due date shall not be deemed a waiver of CONTRACTOR's rights in any other billing, the payment of which may then or thereafter be due.
- 27.11** Payment of Final demobilization charges shall be made if applicable within 45 days on receipt of invoice by COMPANY accompanied by the following documents from the CONTRACTOR:
- Audited account up to completion of the Contract.
 - Tax audit report for the above period as required under the Indian Tax Laws.
 - Documentary evidence regarding the submission of returns and payment to taxes for the expatriate personnel engaged by the CONTRACTOR or by its sub-CONTRACTOR.
 - Proof of re-export of all items including the unutilized spares and consumables (excepting consumables consumed during the contract period) and also cancellation of re-export bond if any.
 - Any other documents as required by applicable Indian Laws.

In case, no demobilization charges are payable, the documents mentioned above will have to be submitted by the CONTRACTOR before release of the final payment by the COMPANY. A certificate from Chartered Accountant on (a), (b) & (c) above will suffice

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27.12 CONTRACTOR shall maintain complete and correct records of all information on which CONTRACTOR's invoice are based upto 02 (two) years from the date of last invoice. Such records shall be required for making appropriate adjustments or payments by either party in case of subsequent audit query/objection.

PAYMENT OF COMMISSION/FEE/REMUNERATION OF INDIAN AGENT/CONSULTANT/REPRESENTATIVE/RETAINER/ASSOCIATE OF FOREIGN PRINCIPAL (APPLICABLE IN ICB TENDERS ONLY):

The Commission/Fee/remuneration of the Indian agent/consultant/associate/representative/retainer, if any, will be paid within 30 days of the payment of invoice made to the CONTRACTOR, The amount of commission/fee/remuneration as a percentage of invoice value as per contract provisions will be deducted by COMPANY/OIL from the monthly invoices of the CONTRACTOR and paid to the Indian agent/consultant/ representative/retainer/associate.

29.0 DETAILS OF STATUTORY PAYMENTS LIKE EPF AND ESI, ETC:

Wherever applicable, the CONTRACTOR (including those engaging 'International Workers') shall have itself registered under Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and Employees' State Insurance Act, 1948 and follow the relevant statutory provisions including Rules made there-under concerning contractual workers.

The CONTRACTOR shall be required to submit the following documents/details to the Corporation:

- (i) Copy of PF-ECR duly stamped by the designated Bank, alongwith a print of the digitally signed PDF data sheet of the ECR, as proof of payment, each month, details of this PDF data sheet shall be verified by the appropriate authority (i.e. Payment Making Authority) in the COMPANY from the official website of EPFO (<http://www.epfindia.gov.in>).
- (ii)
 - (a) Copy of the online challan endorsed/stamped by the designated bank as proof of receipt of payment towards monthly contribution of ESI contribution.
 - (b) Copy of Return of contribution in respect of ESI for each contribution period of the six months i.e. for the contribution period ended 30th Sept and the contribution period ended 31st March.
- (iii) As an Annexure to each EPF-ECR and ESI Challan(s), CONTRACTOR shall also furnish the following Certificates:
 - 1) The furnished information is correct to the best of his knowledge.
 - 2) In case any discrepancies or irregularities is /are noticed in this undertaking, then



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OIL is free to inform the PF/ESIC Authorities.

3) Before the completion of contract, CONTRACTOR shall serve one-month notice to all his contractual workers, informing that their services will be terminated.

4) Within one month on completion/expiry of the contract, CONTRACTOR shall pay all the dues/ terminal dues such as leave with wages, bonus (if applicable), Gratuity (if applicable), to all his contractual workmen, failing which CONTRACTOR's Bank Guarantee/ Security Deposit may be withheld by OIL.

COMPANY may verify the deposit of statutory contribution made by the CONTRACTORs with the EPFO/ESI authorities, where deemed necessary. However, before making payment of the last bill/invoice of the CONTRACTOR, the COMPANY may verify the details/status of the payment towards EPF/ESI made by the CONTRACTOR from the authorities/official website of EPF/ESI (i.e. <http://www.epfindia.gov.in> and <http://www.esic.in>). In case the information furnished by the CONTRACTOR is found to be incorrect the COMPANY shall take appropriate action against the CONTRACTOR in accordance with law.

The CONTRACTOR agrees and undertakes to indemnify OIL for any liabilities arising out of declarations made by him in future on violation or provisions of the EPF Act 1952 and ESI Act 1948.

30.0 TIMELY MOBILIZATION AND LIQUIDATED DAMAGES:

a) Time is the essence of this Contract. If the CONTRACTOR fails to mobilize and deploy the required manpower/equipment and/or fails to commence the operation within the period specified as specified under mobilization clause under SCC, OIL shall have, without prejudice to any other right or remedy in law or contract including sub clause (b) below, the right to terminate the contract.

b) If the contractor is unable to mobilize/deploy and commence the operation within the period specified in sub clause (a) above, it may request OIL for extension of the time with unconditionally agreeing for levy and recovery of LD. Upon receipt of such a request, OIL may at its discretion, extend the period of mobilization and shall recover from the CONTRACTOR, as an ascertained and agreed Liquidated Damages, a sum equivalent to @ 0.5% of contract value including mobilization cost, per week or part thereof of delay subject to maximum of 7.5% of the Contract Price.

c) The parties agree that the sum specified above is not a penalty but a genuine pre-estimate of the loss/damage which will be suffered by OIL on account of delay on the part of the CONTRACTOR and the said amount will be payable without proof of actual loss or damage caused by such delay.

d) LD will be calculated on the basis of Total Contract value [(if not specified otherwise in SCC] excluding duties and taxes, where such duties/taxes have been shown



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separately in the contract. However, the applicable GST on the LD shall have to be borne by the CONTRACTOR. Accordingly, the liquidated damages shall be recovered from the CONTRACTOR along with applicable GST.

31 FORCE MAJEURE:

In the event of either party being rendered unable by 'Force Majeure' to perform any obligation required to be performed by them under the contract, the relative obligation of the party affected by such 'Force Majeure' will stand suspended as provided herein. The term force majeure as employed herein shall mean Acts of God such as earthquake, hurricane, typhoon, flood, volcanic activity etc.; war (declared /undeclared); riot, revolts, rebellion, terrorism, sabotage by persons other than the CONTRACTOR's Personnel; fires, explosions, ionising radiation or contamination by radio-activity or noxious gas, if not caused by CONTRACTOR's fault; declared epidemic or disaster; acts and regulations of respective Govt. of the two parties, namely the COMPANY and the CONTRACTOR and civil commotions, lockout not attributable to the CONTRACTOR.

Upon occurrence of such cause, the party claiming that it has been rendered unable as aforesaid thereby, shall notify the other party in writing within 72 (Seventy-Two) hours of the alleged beginning and ending thereof, giving full particulars and satisfactory evidence in support of its claim.

Should 'force majeure' condition as stated above occurs and should the same be notified within 72 (Seventy-two) hours after its occurrence the 'force majeure' rate (if specified in the SCC of the Contract) shall apply for the first 15 (fifteen) days for each such occasion.

Either party shall have the right to terminate the Contract if such 'force majeure' conditions continue beyond successive 60 (Sixty) days [or exclusively mentioned in the SCC of the Contract] with prior written notice of 15 days, provided termination of the Contract does not result into safety hazard to the life and property on account of withdrawal of operations or the operation is at critical stage. COMPANY shall have the absolute right to decide whether any safety hazard exists or operation is at critical position and decision of the COMPANY shall binding upon the CONTRACTOR.

Should either party decide not to terminate the Contract even under such condition, no payment would apply after expiry of fifteen (15) days force majeure period. [or exclusively mentioned in the SCC of the Contract]

Time for performance of the relative obligation suspended by Force Majeure shall then stand extended by the period for which such cause lasts.

If however, relative obligation of the party affected by such 'Force Majeure' is limited to part of the obligation(s), the contract shall not be terminated and the parties shall continue to perform their respective obligations, which are not affected by the 'force majeure' condition, provided the obligations affected by the 'force majeure' do not preclude the parties in performing the obligations not affected by such conditions.



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32.0 SET-OFF:

Any sum of money due and payable to the CONTRACTOR (including Performance Security refundable to them) under this or any other Contract, whether in progress or in future, may be appropriated by OIL and set-off against any claim of OIL (or such other person or persons contracting through OIL) for payment of a sum of money arising out of this contract or under any other contract made by the CONTRACTOR with OIL (or such other person or persons contracting through OIL).

33.0 WITHHOLDING:

COMPANY may withhold or nullify the whole or any part of the amount due to CONTRACTOR, after informing the CONTRACTOR of the reasons in writing, on account of subsequently discovered evidence in order to protect COMPANY from loss on account of:

33.1 For non-completion of jobs assigned as per Scope of Work/Terms of Reference.

33.2 Defective work not remedied by CONTRACTOR.

33.3 Claims by COMPANY's recognized sub-CONTRACTOR of CONTRACTOR or others filed or on the basis of reasonable evidence indicating probable filing of such claims against CONTRACTOR.

33.4 Failure of CONTRACTOR to pay or provide for the payment of salaries/ wages, contributions, taxes or enforced savings with-held from wages etc with respect to personnel engaged by the CONTRACTOR.

33.5 Failure of CONTRACTOR to pay the cost of removal of unnecessary debris, materials, tools, or machinery.

33.6 Any failure by CONTRACTOR to fully reimburse COMPANY under any of the indemnification provisions of this Contract. If, during the progress of the work CONTRACTOR shall allow any indebtedness to accrue for which CONTRACTOR, under any circumstances in the opinion of COMPANY, may be primarily or contingently liable or ultimately responsible and CONTRACTOR shall, within five days after demand is made by COMPANY, fail to pay and discharge such indebtedness, then COMPANY may during the period for which such indebtedness shall remain unpaid, with-hold from the amounts due to CONTRACTOR, a sum equal to the amount of such unpaid indebtedness.

33.7 Withholding will also be affected on account of the following:



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- i) Order issued by a Court of Law or statutory authority in India.
- ii) Income-tax deductible at source according to law prevalent from time to time in the country.
- iii) Any obligation of CONTRACTOR which by any law prevalent from time to time to be discharged by COMPANY in the event of CONTRACTOR's failure to adhere to such laws.
- iv) Any payment due from CONTRACTOR in respect of unauthorised imports.

When all the above grounds for withholding payments are removed, payment shall thereafter be made for amounts so with-held.

33.8 COMPANY reserves the right to disburse or deposit the amount so withheld to the concerned person(s) or agency or government authority, as the case may be, besides nullifying such amount on account of loss suffered by the COMPANY against **33.2, 33.3, 33.6 & 33.7** above.



34.0 APPLICABLE LAWS:

The Contract shall be deemed to be a Contract made under, governed by and construed in accordance with the laws of India for the time being in force and shall be subject to the sole and exclusive jurisdiction of Courts situated in Dibrugarh (or the Place where the contract is executed) and Principal Bench of Gauhati High Court (or the High Court under whose territorial jurisdiction, the place of execution of contract falls).

This Agreement including all matter connected with this Agreement, shall be governed by the laws of India (both substantive and procedural) for the time being in force and shall be subject to exclusive jurisdiction of Courts, mentioned hereinabove. Foreign companies, operating in India or entering into Joint ventures in India, shall also be governed by the laws of India and shall be subject to sole and exclusive jurisdiction of above Courts.

35.0 LABOUR LAWS:

- i) CONTRACTOR shall comply with the provisions of various labour related laws, including but not limited to the Code of Wages, 2019, Employee Provident Fund and Miscellaneous Provisions Act 1952, COMPANY's Liability Act 1938, Employees' Compensation Act 1923, Industrial Disputes Act 1947, the Maternity Benefit Act 1961 and Contract Labour (Regulation and Abolition) Act 1970, Employment of Children Act 1938, Employees' State Insurance Act, 1948 or any modifications/amendment thereof or any other law relating thereto and rules made there under from time to time.
- ii) No Labour below the age of eighteen [18] years shall be employed on the work.

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- iii) CONTRACTOR shall not pay less than what is provided under law to labourers engaged by him on the work.
- iv) CONTRACTOR shall at his expense comply with all labour laws and keep the COMPANY indemnified in respect thereof.
- v) CONTRACTOR shall pay equal wages for men and women in accordance with applicable Labour laws.
- vi) If the CONTRACTOR is covered under the Contract Labour (Regulation and Abolition) Act, he shall obtain a license from licensing authority [i.e. office of the Labour Commissioner] by payment of necessary prescribed fee and the deposit, if any, before starting the work under the Contract. Such fee/deposit shall be borne by the CONTRACTOR.
- vii) CONTRACTOR must obtain the PF Code from the concerned PF Authority under Employees Provident Fund and Miscellaneous Provisions Act, 1952. Similarly, CONTRACTOR must obtain ESI Code under Employees State Insurance Act.
- viii) CONTRACTOR being the employer of the labours/personnel to be engaged under the contract shall be liable to pay gratuity to the labours/personnel as per the provision of the Payment of Gratuity Act, 1972 and accordingly, shall keep the COMPANY indemnified in respect thereof. If however, COMPANY requires to pay gratuity to such labour(s) as per the direction of the competent authority under the Act, COMPANY shall recover such amount from the outstanding dues payable to the CONTRACTOR under the contract or any other contract(s).
- ix) CONTRACTOR shall furnish to Engineer in Charge the distribution return of the number & description, by trades of the work people employed on the works. CONTRACTOR shall also submit on the 4th & 19th of every month to Engineer in Charge a true statement showing in respect of the 2nd half of the preceding month & the 1st half of the current month (1) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (2) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 on Rules made there under and the amount paid to them
- vi) Engineer in Charge shall on a report having been made by an inspecting officer as defined in Contract Labour (Regulation and Abolition) Act 1970 have the power to deduct from the money due to the CONTRACTOR any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said regulations.
- vii) The CONTRACTOR shall indemnify the COMPANY against any payments to be made



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under and for the observance of the provisions of the aforesaid acts without prejudice to his right to obtain indemnity from his sub-CONTRACTOR.

36.0 STATUTORY REQUIREMENTS:

During the tenure of this CONTRACT nothing shall be done by the CONTRACTOR in contravention of any law, act and/or rules/regulations, thereunder or any amendment

37.0 GENERAL HEALTH, SAFETY & ENVIRONMENT (HSE) GUIDELINES:

37.1 It will be solely the CONTRACTOR's responsibility to fulfil all the legal formalities with respect to the Health, Safety and Environmental aspects of the entire job (namely; the person employed by him, the equipment, the environment, etc.) under the jurisdiction of the district of that state where it is operating. Ensure that all sub-CONTRACTORS hired by CONTRACTOR comply with the same requirement as the CONTRACTOR himself and shall be liable for ensuring compliance all HSE laws

37.2 It will be entirely the responsibility of the Contractor/his Supervisor/representative to ensure strict adherence to all HSE measures and statutory rules during operation in OIL's installations and safety of workers engaged by him. The crew members will not refuse to follow any instruction given by company's Installation Manager/Safety Officer/Engineer/Official/ Supervisor/Junior Engineer for safe operation.

37.3 Any compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be paid by the contractor only.

37.4 Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor.

37.5 When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE Measures Company shall have the right to direct the contractor to cease work until the non-compliance is corrected.

38.0 POLLUTION AND CONTAMINATION:

The CONTRACTOR shall be liable for all surface and sub-surface pollution to the extent caused by CONTRACTOR and resulting from CONTRACTOR's operation/service or spillage or dumping of solvents/additive substances or pollutants, which the CONTRACTOR brings to the Site for use in connection with Work to be performed under this Contract.



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Notwithstanding anything to the contrary contained herein, it is agreed that except on the ground of willful misconduct or criminal misconduct, COMPANY shall release, indemnify and hold CONTRACTOR and its sub-CONTRACTORS harmless from any and all claims, judgments, losses, expenses and any costs related thereto (including but not limited to Court costs and "Attorney's fees") for:

- a) Damage to or loss of any reservoir or producing formation; and/ or
- b) Damage to or loss of any well; and/ or
- c) Any other subsurface damage or loss; and/ or
- d) Any property damage or loss or personal injury or death arising out of or in connection with a blowout, fire explosion and loss of well control regardless of cause.

39.0 STATUTORY VARIATION/ NEWLY ENACTED LAW:

39.1 All duties, taxes except otherwise specified in the Contract as applicable on the closing date of bid submission as per relevant acts and rules shall be in CONTRACTOR's account. Variation in case of custom duty on CIF value declared by the bidder shall be to COMPANY account.

39.2 In the event of introduction of any new legislation or any amendment or enforcement of any Act or Law, rules or regulations of Government of India or State Government(s) or Public Body, which becomes effective after the date of submission of Price Bid or revised price bid, if any, for this CONTRACT and which results in increased/decreased cost of the works under the CONTRACT through increased/decreased liability of taxes and/or duties, required to be paid by the CONTRACTOR, (other than personnel and Corporate taxes), the Parties shall agree to a revision in pricing to reflect such change subject to the production of documentary proof to the satisfaction of the COMPANY/CONTRACTOR as applicable to the extent which directly is attributable to such introduction of new legislation or change or amendment as mentioned above and adjudication by the competent authority (applicable when disputed by COMPANY) & the courts wherever levy of such taxes/duties are disputed by COMPANY/CONTRACTOR.

39.3 Any increase in net amount of the duties and taxes (i.e. the amount of taxes/duties payable minus eligible credit of taxes/duties paid on input services/inputs) after the contractual completion/mobilization date during the extended period will be to the CONTRACTOR's account, where delay in completion /mobilization period is attributable to the CONTRACTOR. However, any decrease in net amount of the duties and taxes (i.e. the amount of taxes/duties payable minus eligible credit of taxes/duties paid on input services/inputs) after the contractual completion/mobilization date will be to COMPANY's account.

39.4 The Contract Price and other prices given in the Schedule of Prices are based on the applicable tariff as indicated by the CONTRACTOR in the Schedule of Prices. In case this



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information subsequently proves to be wrong, incorrect or misleading, COMPANY will have no liability to reimburse/pay to the CONTRACTOR the excess duties, taxes, fees, if any finally levied/imposed by the concerned authorities. However, in such an event, COMPANY will have the right to recover the difference in case the rate of duty/tax finally assessed is on the lower side.

39.5 Notwithstanding the provision contained in Clause-39.1 to 39.4 above, the COMPANY shall not bear any liability in respect of:

- i. Personal taxes on the personnel deployed by CONTRACTOR, his sub-CONTRACTOR/sub-sub-CONTRACTORS and Agents etc.
- ii. Corporate taxes and Fringe benefit tax in respect of CONTRACTOR and all of their sub-CONTRACTORS, agents etc.
- iii. Other taxes & duties including Customs Duty and GST in addition to new taxes etc. in respect of sub-CONTRACTORS, vendors, agents etc. of the CONTRACTOR.
- iv. Any liability on the CONTRACTOR, which was accrued under the old law or contract, which the CONTRACTOR is obligated to pay either to the COMPANY or to the Government Authority.

39.6 In order to ascertain the net impact of the amendment/ revisions/enactment of various provisions of taxes/duties, the CONTRACTOR is liable to provide following disclosure to COMPANY:

- i. Details of each of the input services used in relation to providing service to COMPANY including estimated monthly value of input service and GST tax amount.
- ii. Details of Inputs (material/consumable) used/required for providing service to COMPANY including estimated monthly value of input and GST paid/payable on purchase of inputs.

39.7 The above provisions would be applicable only in case of variation in rate of taxes and duties on supply of services to OIL and not applicable on taxes and duties on input (goods and services) towards such services.

39.8 Any claim or reduction on account of change in law shall be accompanied with undertaking that the provisions of anti- profiteering clause under GST Act have been complied with.

40.0 SEVERABILITY:

Should any provision of this agreement be 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.



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**41.0 COMMISSION OF MISCONDUCT/SUBMISSION OF FRAUDULENT DOCUMENT BY THE
BIDDER/CONTRACTOR AND BANNING THEREOF:**

The information and documents furnished by the bidder/CONTRACTOR in respect of the tender/contract are accepted by COMPANY to be true and genuine. However, if it comes to the notice of the COMPANY anytime either during the pendency of the tender or after award of the contract or after completion the contract that a Bidder/CONTRACTOR furnished fraudulent document/false information in relation to the subject tender/contract or committed any misconduct, appropriate action shall be taken against the Bidder/CONTRACTOR for debarment/banning of the bidder/CONTRACTOR from participating in any future tender of the COMPANY in terms of the COMPANY's Banning Policy, 2017 besides making the CONTRACTOR liable for other penal action including termination of ongoing contract(s) at his/her risk and peril. In such event, the Bid Security/Performance Security in respect of ongoing contract(s) shall be forfeited by the COMPANY.

42.0 SETTLEMENT OF DISPUTES:

42.1 Arbitration (Applicable for Suppliers/CONTRACTORs other than PSU and MSME):

1) Except as otherwise provided elsewhere in the contract, if any dispute, difference, question or disagreement arises between the parties hereto or their respective representatives or assignees, in connection with construction, meaning, operation, effect, interpretation of the contract or breach thereof which parties are unable to settle mutually, the same shall be referred to Arbitration as provided hereunder:

2) A party wishing to commence arbitration proceeding shall invoke Arbitration Clause by giving 30 days notice to the other party. The notice invoking arbitration shall specify all the points of dispute with details of the amount claimed to be referred to arbitration at the time of invocation of arbitration and not thereafter. If the claim is in foreign currency, the claimant shall indicate its value in Indian Rupee for the purpose of constitution of the arbitral tribunal.

3) It is agreed and undertaken by the Parties that irrespective of country of origin of the CONTRACTOR, the arbitration proceedings shall be governed by the Arbitration and Conciliation Act, 1996 and under no circumstances, the proceedings shall be construed as International Arbitration.

4) The number of arbitrators and the appointing authority will be as under:

Claim amount (excluding claim for interest and counter claim, if any)	Number of Arbitrator	Appointing Authority



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Upto Rs.25.00 Lakh	Not applicable	Not applicable
Above Rs.25.00 Lakh	Sole Arbitrator	OIL
Upto Rs.25 Crore		
Above Rs. 25 Crore	3 Arbitrators	One Arbitrator by each party and the 3rd Arbitrator, who shall be the presiding Arbitrator, by the two Arbitrators.

5) The parties agree that they shall appoint only those persons as arbitrators who accept the conditions of the arbitration clause. No person shall be appointed as Arbitrator or Presiding Arbitrator who does not accept the conditions of the arbitration clause.



6) If any of the Arbitrators so appointed dies, resigns, becomes incapacitated or withdraws for any reason from the proceedings, it shall be lawful for the concerned party/arbitrators to appoint another person in his place in the same manner as aforesaid. Such person shall proceed with the reference from the stage where his predecessor had left if both parties consent for the same; otherwise, he shall proceed de novo.

7) Parties agree and undertake that neither shall be entitled for any pre- reference or pendent-lite interest on its claims. Parties agree that any claim for such interest made by any party shall be void.

8) The arbitral tribunal shall complete the proceedings, make and publish the award within time stipulated in the Arbitration and Conciliation Act, 1996(as amended)

9) If after commencement of the arbitration proceedings, the parties agree to settle the dispute mutually or refer the dispute to conciliation, the arbitrators shall put the proceedings in abeyance until such period as requested by the parties. Where the proceedings are put in abeyance or terminated on account of mutual settlement of dispute by the parties, the fees payable to the arbitrators shall be determined as under:

- (i) 20% of the fees if the claimant has not submitted statement of claim.
- (ii) 40% of the fees if the pleadings are complete
- (iii) 60% of the fees if the hearing has commenced.

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(iv) 80% of the fees if the hearing is concluded but the award is yet to be passed.

10) Each party shall be responsible to make arrangements for the travel and stay etc. of the arbitrator appointed by it. Claimant shall also be responsible for making arrangements for travel/stay arrangements of the Presiding Arbitrator and the expenses incurred shall be shared equally by the parties.

In case of sole arbitrator, both parties shall equally share all expenditures that may be required to be incurred.

11) The fees and other administrative/secretarial expenses of the arbitrator(s) shall not exceed the model fee as stipulated in Schedule of the Act and such expenses shall be equally borne by the parties.

12) The Place/Seat of Arbitration shall be Guwahati or the place where the contract is executed. The venue of the arbitration shall be decided by the Arbitrator(s) in discussion with the parties. The cost of arbitration sittings shall be equally borne by the parties.

13) The Arbitrator(s) shall give reasoned and speaking award and it shall be final and binding on the parties.

14) Subject to aforesaid, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof shall apply to the arbitration proceedings under this clause

42.2 Arbitration (applicable in case of Contract awarded on Public Sector Enterprise):

- a) 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) and also between CPSEs and Government Departments/Organizations (excluding disputes -concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.
- b) A party wishing to commence arbitration proceeding shall invoke Arbitration Clause and refer the dispute(s) to AMRCD with a copy to the other party. The notice invoking arbitration shall specify all the points of dispute with details of the amount claimed to be referred to arbitration at the time of invocation of arbitration and not thereafter
- c) Upon such reference, the dispute shall be decided by the Competent Authority appointed under the AMRCD, whose decision shall bind the parties finally and conclusively. The parties in the dispute will share equally the cost of the arbitration as intimated by the Arbitrator.

42.3 Arbitration (Applicable to Micro, Small and Medium Enterprise)



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In the event of any dispute or difference relating to, arising from or connected with the Contract, efforts shall be made to resolve the dispute(s) amicably by mutual consultation and in case such dispute(s) cannot be resolved through mutual consultation, then same shall be resolved through the procedure as prescribed in Section-18 of the Micro, Small and Medium Enterprises Development Act, 2006

42.4 Resolution of disputes through conciliation by OEC

(Not Applicable in cases where value of dispute is less than Rs. 25 Lakhs and more than 2 Crore)

If any dispute, difference, question or disagreement arises between the parties hereto or their respective representatives or assignees, in connection with construction, meaning, operation, effect, interpretation of the contract or breach thereof which parties are unable to settle mutually, Company at its discretion, on its own or on the request of the CONTRACTOR, may refer the dispute to Outside Expert Committee ("OEC") to be constituted by Corporate Business Committee (CBC), OIL as provided hereunder:

- a) The party desirous of resorting to conciliation shall send a notice of 30 (thirty) days to the other party of its intention of referring the dispute for resolution through OEC. The notice invoking conciliation shall specify all the points of disputes with details of the amount claimed to be referred to OEC and the party concerned shall not raise any new issue thereafter.
- b) OIL shall nominate three outside experts, one each from Financial/commercial, Technical and Legal fields from the Panel of Outside Experts maintained by OIL who shall together be referred to as OEC (Outside Experts Committee).
- c) Parties shall not claim any interest on claims/counterclaims from the date of notice invoking conciliation till execution of settlement agreement, if so arrived at. In case, parties are unable to reach a settlement, no interest shall be claimed by either party for the period from the date of notice invoking conciliation till the date of OEC recommendations in any further proceeding.
- d) The Proceedings of the OEC shall be broadly governed by Part III of the Arbitration and Conciliation Act, 1996 including any modifications thereof. Notwithstanding above, the proceedings shall be summary in nature and Parties agree to rely only upon documentary evidence in support of their claims and not to bring any oral evidence in the OEC proceedings.
- e) OEC shall hear both the parties and recommend possible terms of settlement between the parties. The recommendations of OEC shall be non-binding and the parties may decide to accept or not to accept the same. Parties shall be at liberty to accept the OEC recommendation with any modification they may deem fit.
- f) Where recommendations are acceptable to both the parties, a settlement agreement



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will be drawn up in terms of the OEC recommendations or with such modifications as may be agreed upon by the parties. The settlement agreement shall be signed by both the parties and authenticated by all the OEC members either in person or through circulation. This settlement agreement shall have the same legal status and effect as that of an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal under Section 30 of the Arbitration and Conciliation Act, 1996.

g) OIL will share all other guidelines regarding reconciliation through OEC with the CONTRACTOR when it resorts to settlement through OEC. Both parties agree to adhere to these guidelines.

h) All the expenditure incurred in the OEC proceedings shall be shared by the parties in equal proportion. The parties shall maintain account of expenditure and present to the other for the purpose of sharing on conclusion of the OEC proceedings.

i) The OEC proceedings must be completed within a period of 3(three) months from the date of constitution of the OEC with a provision of extension of one months, subject to mutual agreement. The Place of OEC shall be either at New Delhi or Guwahati.

j) If the parties are not able to resolve the dispute through OEC or do not opt for conciliation through OEC, the party may invoke arbitration clause as provided in the contract.

k) The parties shall be represented by their in-house employees/executives. No party shall bring any advocate or outside consultant/advisor/agent. Ex-officers of OIL who have handled the matter in any capacity directly or indirectly shall not be allowed to attend and present the case before OEC on behalf of Contractor. However, ex- employees of parties may represent their respective organizations.

l) Solicitation or any attempt to bring influence of any kind on either OEC Members or OIL is completely prohibited in conciliation proceedings and OIL reserves the absolute right to close the conciliation proceedings at its sole discretion if it apprehends any kind of such attempt made by the Contractor or its representatives.

42.5 Exclusions

Parties agree that following matters shall not be referred to conciliation or arbitration:

- i. Any claim, difference or dispute relating to, connected with or arising out of OIL's decision to initiate any proceedings for suspension or debarment or banning, or decision to suspend or to ban or to debar business dealings with the bidder/CONTRACTOR and/or with any other person involved or connected or dealing with bid/contract/bidder/CONTRACTOR.
- ii. Any claim, difference or dispute relating to, connected with or arising out of OIL's decision under the provisions of Integrity Pact executed between OIL and the Bidder/CONTRACTOR.



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- iii. Any claim, difference or dispute relating to, connected with or arising out of OIL's decision to comply with any order or directive of any statutory or government authority.
- iv. Any claim which is less than Rs. 25 Lakh.

43.0 COMPLETION OF CONTRACT:

Unless otherwise terminated under the provisions of any other relevant Clause or extended through written communication, this Contract shall be deemed to have been completed at the expiry of the Period specified in the contract or period of defect liability, as provided for under the Contract, whichever is later.

44.0 TERMINATION:

44.1 Termination on expiry of the contract: This Agreement shall be deemed to have been automatically terminated on the expiry of the contract period unless OIL has exercised its option to extend this contract in accordance with the provisions, if any, of this contract.



44.2 Termination of contract for death: If the CONTRACTOR is an individual or a proprietary concern and the individual or the proprietor dies or if the CONTRACTOR is a partnership concern and one of the partners dies then unless, the COMPANY is satisfied that the legal heir of the individual or the proprietary concern or the surviving partners are capable of carrying out and completing Contract, the COMPANY is entitled to cancel the Contract for the uncompleted part without being in any way liable for any compensation payment to the estate of the deceased CONTRACTOR and/or to the surviving partners of the CONTRACTOR's firm on account of the cancellation of Contract. The decision of the COMPANY in such assessment shall be final & binding on the parties. In the event of such cancellation, the COMPANY shall not hold the estate of the deceased CONTRACTOR and/or the surviving partners of CONTRACTOR's firm liable for any damages for non-completion of the Contract.

44.3 Termination on account of Force Majeure: Unless the contract provides otherwise, either party shall have the right to terminate this Contract on account of Force Majeure as set forth in Article-31.0 above.

44.4 Termination on account of insolvency: In the event that the CONTRACTOR or its collaborator or its guarantor at any time during the term of the Contract, becomes insolvent or makes a voluntary assignment of its assets for the benefit of creditors or is adjudged bankrupt or under the process of insolvency or liquidation, then the COMPANY shall, by a notice in writing have the right to terminate the Contract and all the CONTRACTOR's rights and privileges hereunder, shall stand terminated forthwith.

However, COMPANY shall be at liberty to give the Receiver or Liquidator or Insolvency Professional Manager, as appointed by the Competent Court/Tribunal, the option of carrying out the Contract subject to its technical & financial competence and his providing a guarantee for due and faithful performance of the Contract.

44.5 Termination for Unsatisfactory Performance: If the COMPANY considers that, the

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performance of the CONTRACTOR is unsatisfactory, or not as per the provision of the Contract, the COMPANY shall notify the CONTRACTOR in writing and specify in details the cause of dissatisfaction. The COMPANY shall have the option to terminate the Contract by giving 15 days notice in writing to the CONTRACTOR, if CONTRACTOR fails to comply with the requisitions contained in the said written notice issued by the COMPANY. In the event CONTRACTOR rectifies its non-performance to the satisfaction of the COMPANY, the option of termination may not be exercised by the COMPANY. If however CONTRACTOR repeats non-performance subsequently, COMPANY shall exercise the option to terminate contract by giving 07 days notice. Such CONTRACTOR shall be put on holiday as per the Banning Policy of OIL [available at www.oil-india.in].



44.6 Termination due to change of ownership and Assignment: In case the CONTRACTOR's rights and /or obligations under this Contract and/or the CONTRACTOR's rights, title and interest to the equipment/ material, are transferred or assigned without the COMPANY's written consent, the COMPANY may at its option, terminate this Contract. COMPANY shall not be however under any obligation to accord consent to the CONTRACTOR for change of ownership & assignment of the contract.

44.7 If at any time during the term of this Contract, breakdown of CONTRACTOR's equipment results in CONTRACTORs being unable to perform their obligations hereunder for a period of 15 successive days, COMPANY at its option, may terminate this Contract in its entirety or partially to the extent non-performance, without any further right or obligation on the part of the COMPANY, except for the payment of money then due. No notice shall be served by the COMPANY under the condition stated above.

44.8 Termination for delay in mobilization: CONTRACTOR is required to mobilize complete equipment alongwith crew for commencement of services at the specified site within the maximum allowed number of days from the date of LOA/Notice for Mobilization as specified in the special conditions of contract. If the CONTRACTOR (successful bidder) fails to complete the mobilization as above, OIL shall have, without prejudice to any other clause of the CONTRACT, the right to terminate the contract.

44.9 Notwithstanding any provisions herein to the contrary, the Contract may be terminated at any time by the COMPANY on giving 30 (thirty) days written notice to the CONTRACTOR due to any other reason not covered under the above Article from 44.1 to 44.8 and in the event of such termination the COMPANY shall not be liable to pay any cost or damage to the CONTRACTOR except for payment of services as per the Contract upto the date of termination.

44.10 Consequence of Termination: In all cases of termination herein set forth, the relative obligations of the parties to the Contract shall be limited to the period up to the date of termination. Notwithstanding the termination of this Contract, the parties shall continue to be bound by the provisions of this Contract that reasonably require some action or forbearance after such termination.

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Upon termination of this Contract, CONTRACTOR shall return to COMPANY all of COMPANY's properties, which are at the time in CONTRACTOR's possession.

In the event of termination of contract, COMPANY will issue Notice of termination of the contract with date or event after which the contract will be terminated. The contract shall then stand terminated and the CONTRACTOR shall demobilize their personnel & materials.

Demobilization charges shall not be payable by COMPANY in case of Article from **44.4 to 44.7**

45.0 TO DETERMINE THE CONTRACT:

In such an event the contract shall stand terminated and shall cease to be in force from the date of such notification by the COMPANY. Thereafter the CONTRACTOR shall stop forthwith any of the work then in progress, except those work which the COMPANY may, in writing, require to be done to safeguard any property or work, or installations from damages, and the COMPANY may take over the remaining unfinished work of the CONTRACTOR and complete the same through a fresh CONTRACTOR or by other means, at the risk and cost of the CONTRACTOR, and any of its sureties if any, shall be liable to the COMPANY for any excess cost occasioned by such work having to be so taken over and completed by the COMPANY over and above the cost at the rate/cost specified in the schedule of quantities and rates/prices.

46.0 WITHOUT DETERMINING THE CONTRACT:

To take over the work of the CONTRACTOR or any part thereof and complete the same through a fresh CONTRACTOR or by other means, at the risk and cost of the CONTRACTOR. The CONTRACTOR and any of its sureties are liable to the COMPANY for any excess cost over and above the cost at the rates specified in the schedule of quantities and rates/prices, occasioned by such work having been taken over and completed by the COMPANY.

47.0 ERRING/DEFAULTING AGENCIES:

Erring and defaulting agencies like bidder, CONTRACTOR, supplier, vendor, service provider will be dealt as per OIL's Banning Policy dated 6th January, 2017 available in OIL's website: www.oil-india.com. Moreover, OIL reserves the right to take legal or any other action on the basis of merit of the case.

48.0 MISCELLANEOUS PROVISIONS:

CONTRACTOR shall give notices and pay all fees at their own cost required to be given or paid by any National or State Statute, Ordinance, or other Law or any regulation, or bye-law of any local or other duly constituted authority as may be in force from time to time in India, in relation to the performance of the services and by the rules & regulations of all public bodies



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and companies whose property or rights are affected or may be affected in any way by the services.

CONTRACTOR shall conform in all respects with the provisions of any Statute, Ordinance of Law as aforesaid and the regulations or bye-law of any local or other duly constituted authority which may be applicable to the services and with such rules and regulation, public bodies and Companies as aforesaid and shall keep COMPANY indemnified against all penalties and liability of every kind for breach of any such Statute, Ordinance or Law, regulation or bye-law.

During the tenure of the Contract, CONTRACTOR shall keep the site where the services are being performed reasonably free from all unnecessary obstruction and shall store or dispose of any equipment and surplus materials and clear away and remove from the site any wreckage, rubbish or temporary works no longer required. On the completion of the services, CONTRACTOR shall clear away and remove from the site any surplus materials; rubbish or temporary works of every kind and leave the whole of the site clean and in workmanlike condition to the satisfaction of the COMPANY.

Key personnel cannot be changed during the tenure of the Contract except due to sickness/death/resignation of the personnel or any other justified situation in which case the replaced person should have equal experience and qualification, which will be again subject to prior approval, by the COMPANY.



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VOLUME-1 Part-3
SECTION: II
TERMS OF REFERENCE & SCOPE OF WORK

(Uploaded in Volume –II)



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SECTION: III
SPECIAL CONDITIONS OF CONTRACT



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SPECIAL CONDITIONS OF CONTRACT

SECTION-I: The following Clauses of SCC shall supplement and/or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

1.0 MOBILIZATION

The mobilization of equipment, personnel etc. should be completed by Contractor within 15 (Fifteen) days from date of issuance of Letter of Award (Mobilization deemed to be completed after submission /mobilization of following documents, personnel, and equipment:

1. Submission of Bank Guarantee.
2. Submission of Labour License.
3. Reporting of Site Supervision Team required at initial phase of construction (Initial Site Supervision Team members:
4. HSE Officer, Civil Engineer & Survey Team for all the necessary Survey to establish reference point.
5. Completion of mobilization of the survey related equipment

2.0 DURATION OF CONTRACT

The contract shall be valid for a period of 18 months from the date of issuance of Letter of Award.

In case of non-performance or under performance by the contractor, Liquidated Damages (LD) shall be imposable on Contract values. However, the total value and method of evaluation shall be as per Liquidated Damages clause.

3.0 PERFORMANCE SECURITY:

3.1 On receipt of notification of award from the Company (OIL), the successful Bidder shall furnish to Company (OIL) the Performance Security within 15 days from issue of LOA for an amount specified in the Forwarding Letter (and Letter of Award (LOA) issued by the Company (OIL) to Contractor awarding the contract) as per Proforma-E and must be in the form of a Demand Draft or Bank Guarantee.

3.2 The Performance Security specified above must be valid for 3(three) months beyond Defect Liability period of the project/works. The Performance Security will be discharged by the Company (OIL) not later than 30 days following its expiry. In the event of any extension of the Contract period, Bank Guarantee should be extended by the Contractor by the period equivalent to the extended period.

3.3 The Performance Security shall be payable to the Company (OIL) as compensation for any loss resulting from Contractor's failure to fulfil its obligations under the Contract.

3.4 The Performance Security will not accrue any interest during its period of validity or extended validity.

3.5 Failure of the successful Bidder to comply with the requirements of **clause 3.1 and/or 3.2** shall constitute sufficient grounds for annulment of the award and forfeiture of the Bid



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Security or Performance Security. In such an eventuality, the party shall be debarred for a period of 2(two) years from the date of default.

4.0 MEASUREMENT OF WORKS:

This being a lumpsum Contract, mode of measure of work appearing anywhere in the GCC or elsewhere in the Bidding Documents shall not be applicable. Progress payment will be governed by Terms of Payment

5.0 TERMS OF PAYMENT:

Basis and terms of payment for making "On Account Payment" shall be as set out in Schedule of Rates/Schedule of Payment **Annexure-II to SCC.**

6.0 INSURANCE

The clauses 14.0 of Insurance as mentioned in GCC shall prevail.

7.0 ARBITRATION

The clauses 42.0 of settlement of dispute as mentioned in GCC shall prevail.

8.0 PENALTY

Project Progress will be assessed in every 3 months and if a gap is more that 2 % with the scheduled progress then penalty will be levied @ 0.5 of the Contract Value and will be kept as retention from RA Bills of Contractor. However, if the contractor Completes the project on time then the entire retention amount (As penalty) will be returned to the contractor.

In case the contract period got extended for whatsoever reasons the additional amount required to give contract extension to EPMC/Consultant for monitoring will be recovered from the Contractor's RA Bill.

9.0 Provision of Personnel facilities

The contractor must set up their office at site and a separate room to be provided for OIL/EPMC. Arrangement of toilet facilities, first aid, clean drinking water, canteen for tea and snacks to be made available within 20 days of Award of LOA.

10.0 SUBCONTRACTING

Not Allowed, Clause 24.0 of GCC shall prevail.

11.0 ADDRESS DETAILS FOR SUBMISSION OF INVOICE

All Invoices are to be sent to the following address:

Chief General Manager (Projects)

Oil India Limited,

P.O. Duliajan-786602

Dist. Dibrugarh, Assam



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12.0 FORCE MAJEURE RATE

Not applicable

13.0 GOODS AND SERVICES TAX

- I. In view of GST Implementation from 1st July 2017, all taxes and duties including Excise Duty, CST/VAT, Service tax, Entry Tax and other indirect taxes and duties have been submerged in GST. Accordingly reference of Excise Duty, Service Tax, VAT, Sales Tax, Entry Tax or any other form of indirect tax except of GST mentioned in the bidding document shall be ignored.
- II. Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever GST (CGST & SGST/UTGST or IGST) is applicable. "GST" shall mean Goods and Services Tax charged on the supply of material(s) and services. The term "GST" shall be construed to include the Integrated Goods and Services Tax (hereinafter referred to as "IGST") or Central Goods and Services Tax (hereinafter referred to as "CGST") or State Goods and Services Tax (hereinafter referred to as "SGST") or Union Territory Goods and Services Tax (hereinafter referred to as "UTGST") depending upon the import / interstate or intrastate supplies, as the case may be. It shall also mean GST compensation Cess, if applicable.
- III. Quoted price/rate(s) should be inclusive of all taxes and duties, except GST (i.e. IGST or CGST and SGST/UTGST applicable in case of interstate supply or intra state supply respectively and cess on GST if applicable) on the final service. However, GST rate (including cess) to be provided in the respective places in the Price Bid .Please note that the responsibility of payment of GST (CGST & SGST or IGST or UTGST) lies with the Supplier of Goods/Services (Service Provider) only .Supplier of Goods/Services (Service Provider) providing taxable service shall issue an Invoice/Bill, as the case may be as per rules/regulation of GST. Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods/Services (Service Provider) with requisite details.
- IV. Bidder should also mention the Harmonised System of Nomenclature (HSN) and Service Accounting Codes (SAC) at the designated place in SOR.
- V. Where the OIL is entitled to avail the input tax credit of GST: OIL will reimburse the GST to the Supplier of Goods / Services (Service Provider) at actual against submission of Invoices as per format specified in rules/ regulation of GST to enable OIL to claim input tax credit of GST paid. In case of any variation in the executed quantities, the amount on which the GST is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

The input tax credit of GST quoted shall be considered for evaluation of bids, as per evaluation criteria of tender document.



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- VI. GST payable under reverse charge mechanism for specified services or goods under GST act or rules, if any, shall not be paid to the contractor/Contractor but will be directly deposited to the government by OIL.
- VII. Where OIL has the obligation to discharge GST liability under reverse charge mechanism and OIL has paid or is /liable to pay GST to the Government on which interest or penalties becomes payable as per GST laws for any reason which is not attributable to OIL or ITC with respect to such payments is not available to OIL for any reason which is not attributable to OIL, then OIL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by OIL to Contractor / Supplier.
- VIII. Notwithstanding anything contained anywhere in the Agreement, in the event that the input tax credit of the GST charged by the Contractor / Contractor is denied by the tax authorities to OIL for reasons attributable to Contractor / Contractor, OIL shall be entitled to recover such amount from the Contractor / Contractor by way of adjustment from the next invoice. In addition to the amount of GST, OIL shall also be entitled to recover interest at the rate prescribed under GST Act and penalty, in case any penalty is imposed by the tax authorities on OIL.
- IX. TDS under GST, if applicable, shall be deducted from contractor's/Contractor's bill at applicable rate and a certificate as per rules for tax so deducted shall be provided to the contractor/Contractor.
- X. The Contractor will be under obligation for charging correct rate of tax as prescribed under the respective tax laws. Further the Contractor shall avail and pass on benefits of all exemptions/concessions available under tax laws. Any error of interpretation of applicability of taxes/ duties by the contractor shall be to contractor's account.
- XI. It is the responsibility of the bidder to quote the correct GST rate. The classification of goods/services as per GST (Goods & Service Tax) Act should be correctly done by the contractor to ensure that input tax credit on GST (Goods & Service Tax) is not lost to the OIL on account of any error on the part of the contractor.
- XII. In case, the quoted information related to various taxes, duties & levies subsequently proves wrong, incorrect or misleading, OIL will have no liability to reimburse the difference in the duty/tax, if the finally assessed amount is on the higher side and OIL will have to right to recover the difference and in case the rate of duty/taxes finally assessed is on the lower side.
- XIII. Notwithstanding anything mentioned elsewhere in the Bidding Document the aggregate liability of OIL towards Payment of Taxes & Duties shall be limited to the volume of GST declared by the bidder in its bid & nothing shall be payable extra except for the statutory variation in taxes & duties.
- XIV. Further, it is the responsibility of the bidders to make all possible efforts to make their accounting/IT system GST compliant in order to ensure availability of Input Tax Credit



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- XV. GST liability, if any on account of supply of free samples against any tender shall be to bidder's account.
- XVI. In case of statutory variation in GST, other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods/ Services (Service Provider) shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.
- XVII. Beyond the contract period, in case OIL is not entitled for input tax credit of GST, then any increase in the rate of GST beyond the contractual delivery period shall be to Service provider's account whereas any decrease in the rate GST shall be passed on to the OIL.
- XVIII. Beyond the contract period, in case OIL is entitled for input tax credit of GST, then statutory variation in applicable GST on supply and on incidental services, shall be to OIL's account.
- XIX. Claim for payment of GST/ Statutory variation, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) GST, otherwise claim in respect of above shall not be entertained for payment of arrears.
- XX. The base date for the purpose of applying statutory variation shall be the Bid Opening Date.
- XXI. The contractor will be liable to ensure to have registered with the respective tax authorities, wherever applicable and to submit self-attested copy of such registration certificate(s) and the Contractor will be responsible for procurement of material in its own registration (GSTIN) and also to issue its own Road Permit/ E-way Bill, if applicable etc.
- XXII. In case the bidder is covered under Composition Scheme under GST laws, then bidder should quote the price inclusive of the GST (CGST & SGST/UTGST or IGST). Further, such bidder should mention "Cover under composition system" in column for GST (CGST & SGST/UTGST or IGST) of price schedule.
- XXIII. OIL will prefer to deal with registered supplier of goods/services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet. However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable GST while evaluation of bid. Where OIL is entitled for input credit of GST, the same will be considered for evaluation of bid as per evaluation methodology of tender document.
- XXIV. Procurement of Specific Goods: Earlier, there is no tax incidence in case of import of specified goods (i.e. the goods covered under List-34 of Customs Notification no. 12/2012-Cus dated. 17.03.2012 as amended). Customs duty is not payable as per the policy.



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However, under GST regime, IGST Plus GST compensation cess (if applicable) would be leviable on such imports. Bidders should quote GST as inclusive considering IGST component for the imported Materials portion while quoting their prices on destination basis. However, GST rate to be specified in the price bid format.

XXV. Documentation requirement for GST: The Contractor will be under the obligation for invoicing correct tax rate of tax/duties as prescribed under the GST law to OIL, and pass on the benefits, if any, after availing input tax credit.

Any invoice issued shall contain the following particulars:

- a. Name, address and GSTIN of the supplier;
- b. Serial number of the invoice;
- c. Date of issue;
- d. Name, address and GSTIN or UIN, if registered of the recipient;
Note: OIL GSTIN numbers are as follows:
Assam :18AAACO2352C1ZW
Arunachal Pradesh :12AAACO2352C1Z8
- e. Name and address of the recipient and the address of the delivery, along with the State and its code,
- f. HSN code of goods or Accounting Code of services [SAC];
- g. Description of goods or services;
- h. Quantity in case of goods and unit or Unique Quantity Code thereof;
- i. Total value of supply of goods or services or both;
- j. Taxable value of supply of goods or services or both taking into discount or abatement if any;
- k. Rate of tax (IGST, CGST, SGST/ UTGST, cess);
- l. Amount of tax charged in respect of taxable goods or services (IGST, CGST, SGST/UTGST, cess);
- m. Place of supply along with the name of State, in case of supply in the course of interstate trade or commerce;
- n. Address of the delivery where the same is different from the place of supply and
Signature or digital signature of the supplier or his authorised representative

GST invoice shall be prepared in triplicate, in case of supply of goods, in the following manner:

- i) The original copy being marked as ORIGINAL FOR RECIPIENT;
- ii) The duplicate copy being marked as DUPLICATE FOR TRANSPORTER and
- iii) The triplicate copy being marked as TRIPLICATE FOR SUPPLIER.

In case of any advance given against any supplies contract, the supplier of the goods shall issue Receipt Voucher containing the details of details of advance taken along with particulars as mentioned in clause no. (a), (b), (c), (d), (g), (k), (l), (m) & (o) above.



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Anti-profiteering clause

As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Supplier of Goods / Services may note the above and quote their prices accordingly.

In case the GST rating of Contractor on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by OIL. Further, in case rating of bidder is negative / black listed after award of work for supply of goods / services, then OIL shall not be obligated or liable to pay or reimburse GST to such Contractor and shall also be entitled to deduct / recover such GST along with all penalties / interest, if any, incurred by OIL.

14.0Details of the Service

Construction of Storm & Fire water reservoir, Diversion & Construction of Drain and land filling and site grading of plot for creation of Field Gas Gathering Station at Baghjan.

15.0Area of Operation

Baghjan, Tinsukia District, Assam

16.0HSE Policy:

The Contractor shall ensure the safety of all workmen, materials and equipment either belonging to him or to others working at site. He shall observe safety rules & codes applied by the Owner at site without exception.

Storage of petroleum products & explosives for construction work shall be as per rules and regulations laid down in Petroleum Act, Explosive Act and Petroleum and Carbide of Calcium Manual. Approvals as necessary from Chief Inspector of Explosives or other statutory authorities shall be the responsibility of the Contractor

All requisite tests and inspection of handling equipment, lifting tools & tackle shall be periodically done by the Contractor. Defective equipment shall be removed from service. Any equipment shall not be loaded in excess of its recommended safe working load

All combustible waste and rubbish shall be collected and removed from the work site at least once each day. Use of undercoated canvas, paper, corrugated paper, fabricated carton, plastic or other flammable materials shall be restricted to the minimum and promptly removed.

The Contractor shall provide adequate fire protection and detection equipment in each warehouse, office, and other temporary structures, and in each work area he is occupying. Access to sources of fire water shall be identified and kept open at all times. Suitable fire extinguishers shall be provided in enclosed areas, in areas which are not accessible to fire water, or in areas which may be exposed to fire that cannot be safely extinguished with water

All electrical appliances used in the work shall be in good working condition and shall be properly earthed. No maintenance work shall be carried out on live equipment. The Contractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installation.

All workmen of the Contractor working in construction site shall wear safety helmets, safety boots and safety belts. The Contractor shall take appropriate insurance cover against accidents for his workmen as well as third party.



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A central fully equipped first aid post shall be provided at site by the Contractor. The facilities shall comprise first aid personnel including a registered / qualified male nurse, the provision and manning of an ambulance, and the retention of the services of medical practitioners for advice and attendance where necessary, along with an emergency evacuation plant. These arrangements shall not relieve the Contractor of any legal/ statutory obligations. This facility will be available to the Owner until such time as the permanent facilities are available for the operating plant.

Contractor's HSE policy shall stipulated all HSE norms set by the clients shall be conformed to full spirit in their day to day work activities.

Every reasonable effort shall be made to provide and maintain safe and healthy working Conditions, equipment & system of work for all workmen.

It shall be your endeavour to ensure that surrounding environment is not adversely affected by your contract work activity by reducing various avoidable waste to minimum level.

Prevention of accidents or accident hazards leading to personal injury or damage of Equipment/property is recognized essential and integral part of efficient execution of contract job.

Every workman shall follow safety rules/regulations operating procedures safe work methods designed to protect people and equipment from risk of injury or damage to property.

Every workman shall discharge his personal responsibility and shall co-operate and actively participate in maintaining and improving safety standards.

17.0 Notice:

Any notice given by one party to other, pursuant to this Contract shall be sent in writing or by e-mail to the applicable address specified below:

Company

a) **For contractual matters**

GM (C&P - Projects)

OIL INDIA LIMITED

PO DULIAJAN - 786602

ASSAM, INDIA

Phone No. 91-374-2807207

Email: prroy@oilindia.in

b) **For technical matters**

Chief Engineer (Projects)

Oil India Limited,

P.O. Duliajan-786602

Dist. Dibrugarh, Assam.

Phone No. 91-374- 280720

Email: tridip_baruah@oilindia.in



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Contractor

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

18.0 SCOPE OF WORK:

- a) Diversion of existing Nullah (Natural Drain).
- b) Area Grading and Earth filling of Project Site as per layout.
- c) Construction of Fire water and Storm water reservoir.

In addition, the scope of work in general includes scope of work specified in Technical Documents enclosed and Schedule of Rates enclosed in Commercial Section of the Bidding Document. Further, it includes any other work not specifically mentioned but required to complete the work as per specifications, drawings

Supply of Water, Power & other utilities

Water, construction power and other utilities for the Contractor's Office and site works, Ware house, residential accommodation etc. shall be arranged by the Contractor at no extra cost to the Company and the quoted prices shall be deemed to be inclusive of such expenses, if any. The Company shall provide land free from all encumbrances as per the plot plan enclosed for the scope of work.

19.0 WARRANTY:

THE CONTRACTOR shall provide warranty for the graded site, the diverted Nalla (Natural stream), Reservoirs for a period of 12 months from the date of completion and handing over, hold responsibility for good workmanship and stability to bear the monsoon pressure and plying of heavy construction equipment and trailer lorries. THE CONTRACTOR shall monitor the reservoir for containing the water and remaining stable with no settlement when loaded.

20.0 GUARANTEES FROM THE CONTRACTOR:

THE CONTRACTOR shall guarantee with supporting documents the use of right materials for site grading, construction of Nallah and reservoirs.

21.0 TIME SCHEDULE:

The Work shall be executed strictly as per time schedule. The period of completion given includes the time required for mobilization, de-mobilization and completion of work in all



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respects to the satisfaction of the EPMC/OIL. A joint programme of execution of work will be prepared by the consultant and Contractor. This program will take into account the time schedule as mentioned above. Weekly execution program will be drawn up by the consultant jointly with the Contractor based on priorities and the joint program of execution as referred to above. The Contractor shall scrupulously adhere to the Targets/Programs by deploying adequate personnel, Construction Equipment, Tools and Tackles and also by timely supply of required materials coming within his scope of supply as per the Contract. In all matters concerning the extent of target set out in the weekly/monthly program and the degree of achievement, the decision of the consultant / OIL's Engineer-in-Charge will be final and binding on the Contractor.

The Contractor shall give every day Daily Progress Report which will have category-wise labour and equipment deployment report along with the progress of work done on previous day in the format prescribed by the consultant/ OIL's Engineer-in-charge in both hard and soft copies in daily basis. Within 7 (seven) days of the occurrence of any act, event of omission which, in the opinion of the Contractor, is likely to lead to delay in the commencement or completion of any particular work(s) or operation(s) or the entire work at any job site(s) and is such as would entitle the Contractor to an extension of time specified in this behalf in the Progress Schedule(s), the Contractor shall inform the Company and the Engineer-in-Charge, in writing, of the occurrence of the act, event or omission and the date of commencement of such occurrence. Thereafter, if even upon the cessation of such act or event or the fulfillment of the omission, the Contractor is of the opinion that an extension of the time specified in the Progress Schedule relative to particular operation(s) or item(s) or works or the entire work at the job site(s) is necessary, the Contractor shall, within 7(seven) days after the cessation or fulfillment as aforesaid, make a request to the Engineer-in-Charge for extension of the relative time specified in the Progress Schedule. The Engineer-in-Charge may on such request at any time prior to completion of the works extend the relative time of completion in the Progress Schedule for such period(s) as he considers necessary, if he is of opinion that such act, event or omission constitutes a ground for extension of time in terms of the Contract and that such act, event or omission has in fact resulted in insurmountable delay to the Contractor. The opinion/decision of the Engineer-in-Charge in this behalf and as to the extension necessary shall be final and binding upon the Contractor. Notwithstanding the provisions hereof, the Company may at any time after final completion of the Unit or works in all respects of its own initiative consider a request for extension of time made by the Contractor to the Engineer-in-Charge or at the request of the Contractor made by way of appeal either against the decision of the Engineer-in-Charge taken or against the Engineer-in-Charge's failure to take a decision under the said clause, if satisfied of the existence of any ground(s) justifying the delay, extend the date for completion of the work or any item or operation thereof for such period(s) as the Company may consider necessary, and the decision of the Company as to the existence or otherwise of any grounds justifying the extension and as to the period(s) of extension necessary shall be final and binding upon the Contractor.

The extension of time shall be the sole remedy of the Contractor for any cause or event of delay and the Contractor shall not be entitled in addition to or in lieu of such extension, to claim any damages or compensation for extended stay or otherwise whether under the law governing contracts or quasi-contracts or any other relationship, and the Contractor hereby waives and disclaims any and all contrary rights.

a. DRAWINGS AND DOCUMENTS:

The drawings accompanying the bid document (if any) are of indicative nature and issued for bidding purpose only. Purpose of these Drawing is to enable the bidder to make an offer in line



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with the requirements of the Company. However, no extra claim whatsoever shall be entertained for variation in the "Approved for Construction" and "Bid document drawings" regarding any changes/units. Construction shall be as per drawings/specifications issued/approved by the company/ consultant during the course of execution of work. Detailed construction drawings (wherever required) on the basis of which actual execution of work is to proceed will be prepared by the Contractor.

DCI (Drawing Control Index) will be prepared by Contractor and submitted for Company for approval within **30 days of LOA**. The drawings and documents to be submitted by the Contractor to the Company after award of the work as per agreed DCI shall be for the Company's review, information and record. The Contractor shall ensure that drawings and documents submitted to the Company/consultant are accompanied by relevant calculations, data as required and essential for review of the document/drawings. The Company/consultant shall review the drawings/documents within two weeks from the date of submission provided the same are accompanied by relevant calculations, data as required and essential for review.

All documents and drawings including those of the Contractor, sub-vendors manufacturer etc. shall be submitted to the consultant /Company after having been fully vetted in detail, approved and co-opted by the Contractor & shall bear Contractor's seal/certifications to this effect. All documents/drawings & submissions made to the Company without compliance to this requirement will not be acceptable and the delay & liability owing to this shall be to the Contractor's account.

The review of documents and drawings by the Company shall not absolve the Contractor from his responsibility to meet the requirements of specifications, drawings etc. and liabilities for mistakes and deviations. Upon receiving the comments on the drawings/documents reviewed by the Company/ consultant, the Contractor shall incorporate the comments as required and ensure their compliance.

Copies of all detailed working drawing relating to the works shall be kept at the Contractor's Office at the site and shall be made available to the consultant / Company at any time during execution of the Contract. However, no extra claim whatsoever shall be entertained for any variation in the "approved/issued for construction drawings" and "tender drawings" regarding any changes/units unless otherwise agreed.

The Contractor shall rectify any inaccuracies, errors and non-compliance to contractual requirements. Any delay occurring on this shall not construe a reason for delay/ extension.

b. PROVIDENT FUND ACT:

The Contractor shall strictly comply with the provisions of Employees Provident Fund Act and Miscellaneous Provisions Act, 1952 and register themselves with RPFC before commencing work and follow the relevant statutory provisions including Rules made there- under concerning contractual workers to be engaged by such bidder. The Contractor shall deposit Employees' and Owners' contributions to the RPFC every month. The Contractor shall furnish along with each running bill, the challan/receipt for the payment made to the RPFC for the preceding months failing which OIL will deduct from his bills the amount equivalent to such deductions with penalty as per the provisions of applicable act.

c. CONSTRUCTION EQUIPMENT AND SITE ORGANIZATION:

CONSTRUCTION EQUIPMENT:

The Contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule, progressively deploy construction



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equipments and tools & tackles as and when required augment the same as decided by the Engineer-in-Charge depending on the exigencies of the work so as to complete all works within the contracted time schedule and without any additional cost to the Company. No construction equipment shall be supplied by the Company.

The Company shall supply no Construction Equipment.

The complete list of minimum critical equipment required to be owned/ hired/ leased by the bidder is attached with the Bidding Document.

The deployment of such equipment shall be within 14 days of intimation to the contractor. Non-deployment of the equipment within stipulated time may invite penalty equivalent to daily/hourly rental for the delay period which shall deducted from the bill as deemed by Engineer-In-Charge.

Equipments like hydra/excavator/foclain/dumper etc. of required capacity will be arranged by the Contractor at his own cost. All tools, tackles Equipment shall have required certificates like insurance /pollution/ registration from the competent authority before mobilisation at site and shall be submitted to OIL along with the first RA Bill.

d. SITE ORGANIZATION:

Subject to the provisions in the Contract document and without prejudice to the Contractor's liabilities and responsibilities to provide adequate qualified skilled, semi-skilled and unskilled personnel on the work, the Contractor shall deploy supervisory personnel as specified in this SCC and augment the same as decided by the Engineer-in-Charge depending upon the site requirement & the exigencies of work so as to complete all works within the contracted time schedule and without any additional cost to the Company.

Qualification and experience of Key Supervisory Personnel to be deployed for this work shall be as per schedule below:

1. **Civil Engineer:** Engineering Graduate in Civil Engineering Branch with 2 years or Diploma holder with 5 years' experience-with site experience in the field of civil construction. He should be well versed with QA/QC job.
2. **HSE Officer:** Graduate with 3 years' experience in HSE job/Diploma in HSE having experience of minimum 5 years working as Safety Officer in engineering construction job.
3. **Junior Engineers:** Diploma holder with 3 years' experience with site experience in the field of civil construction. He should be well versed with QA/QC job

The Contractor shall submit bio-data of Key Supervisory Personnel meeting the requirement which will be reviewed and approved by the Consultant/Owner.

e. Royalty and Statutory Approvals:

The Contractor's quoted rate should include the royalty on different applicable items as per the prevailing Government rates. In case, the Company is able to obtain the exemption of Royalty from the State Government, the Contractor shall pass on the same to the Company for all the items involving Royalty. Any increase in prevailing rate of Royalty shall be borne by the Contractor at no extra cost to the Company. The Contractor should indicate the rate of Royalty considered in their offer.



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Royalty Documents of consumables like Earth /sand/aggregate/stone chips etc. to be submitted to OIL before processing of the Last/Final Bill else the Royalty Amount to be deducted from the RA bills during final payment. Supporting Documents like Transit Pass /Challan of consumables to be submitted with RA bills.

Statutory Approval required to be taken by contractor at its own cost.

f. COMPLETION DOCUMENTS:

The following documents shall be submitted in hard binder by the Contractor in 2 (Two) sets, as a part of completion documents. These will be in addition to those mentioned in General Conditions of the Contract.

- (i) Material Inspection/Test Report for supply of all materials.
- (ii) As built drawings.
- (iii) The report of Final topography survey conducted after completion of Site grading and Nallah diversion
- (iv) Soil Compaction report
- (iv) Any other drawing/document/Manuals/report specified elsewhere in the bidding document.
- (v) No Demand Certificate from the Administration Department of OIL regarding vacation of land, housing accommodation if any, recovery of rents, hire charges, return of surplus materials, reconciliation statement for all the material issued etc.

g. RESPONSIBILITY OF CONTRACTOR:

It shall be the responsibility of the Contractor to obtain the approval for any revision and/or modifications decided by the Contractor from the company/consultant before implementation. Also such revisions and/or modifications if accepted/ approved by the company/consultant shall be carried out at no extra cost to the Company. Any changes required during and/or after approval for detailed construction drawings due to functional requirements or for efficient running of system keeping the basic parameters unchanged and which has not been indicated by the Contractor in the data/drawings furnished along with the offer will be carried out by the Contractor at no extra cost to the Company.

All expenses towards mobilisation at site and de-mobilisation including bringing in equipment, clearing the site etc. shall be deemed to be included in the prices quoted and no separate payments on account of such expenses shall be entertained.

It shall be entirely the Contractor's responsibility to provide, operate and maintain all necessary construction equipment, safety gadgets, cranes tools and appliances to perform the work in a workman like and efficient manner and complete all the jobs as per time schedules.

h. Earth Filling:

Land area where the existing level below the finished grade level (FGL) shall be suitably filled with good quality earth or by sand. The material used for earth filling shall consist of material approved by the Consultant/OIL. The material shall be free from lumps and clods, roots and



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vegetation, harmful salt chemicals & Organic materials etc. In certain locations Sand filling may be required as directed by Engineer in charge.

The earth filling to be done in layers not exceeding 250 mm in loose thickness each layer to be watered, rammed and properly compacted to achieve a dry density of not less than 90% of proctor's dry density at optimum moisture content as per IS 2720(Part -VII). Earth shall be crammed with approved mechanized compaction machine. Usually no manual compaction shall be allowed unless specifically permitted by the Engineer In charge. The compaction report to be submitted along with RA bills to certify Earth Filling claims.

i. FAILURE BY THE CONTRACTOR TO COMPLY WITH THE PROVISIONS OF THE CONTRACT:

If the Contractor refuses or fails to execute the work or any separate part thereof with such diligence as will ensure its completion within the time specified in the Contract or extension thereof or fails to perform any of his obligation under the Contract or in any manner commits a breach of any of the provisions of the Contract it shall be open to the Company at its option by written notice to the Contractor:

- a. To determine the Contract in which event the Contract shall stand terminated and shall cease to be in force and effect on and from the date appointed by the Company on that behalf, whereupon the Contractor shall stop forthwith any of the Contractor's work then in progress, except such work as the Company may, in writing, require to be done to safeguard any property or work, or installations from damage, and the Company, for its part, may take over the work remaining unfinished by the Contractor and complete the same through a fresh contractor or by other means, at the risk and cost of the Contractor, and any of his sureties if any, shall be liable to the Company for any excess cost occasioned by such work having to be so taken over and completed by the Company over and above the cost at the rates specified in the schedule of quantities and rate/prices.
- b. Without determining the Contract to take over the work of the Contractor or any part thereof and complete the same through a fresh contractor or by other means at the risk and cost of the Contractor. The Contractor and any of his sureties are liable to the Company for any excess cost over and above the cost at the rates specified in the Schedule of Quantities/Rates, occasioned by such works having been taken over and completed by the Company.
- c. The whole or part of the Contract Performance Security furnished by the Contractor is liable to be forfeited without prejudice to the right of the Company to recover from the Contractor the excess cost referred to in the sub-clause aforesaid, the Company shall also have the right of taking possession and utilizing in completing the works or any part thereof, such as materials equipment and plants available at work site belonging to the Contractor as may be necessary and the Contractor shall not be entitled for any compensation for use or damage to such materials, equipment and plant.
- d. The amount that may have become due to the Contractor on account of work already executed by him shall not be payable to him until after the expiry of Six (6) calendar months reckoned from the date of termination of Contract or from the taking over of the work or part thereof by the Company as the case may be, during which period the responsibility for faulty materials or workmanship in respect of such work shall, under the Contract, rest exclusively with the Contractor. This amount shall be subject to deduction of any amounts due from the Contractor to the Company under the terms of the Contract authorized or required to be reserved or retained by the Company.



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Before determining the Contract provided in the judgement of the Company, the default or defaults committed by the Contractor is/are curable and can be cured by the Contractor if an opportunity given to him, then the Company may issue Notice in writing calling the Contractor to cure the default within such time specified in the Notice.

The Company shall also have the right to proceed or take action in the event that the Contractor becomes bankrupt, insolvent, compounds with his creditors, assigns the Contract in favour of his creditors or any other person or persons, or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the Company to give any prior notice to the Contractor.

Termination of the Contract as provided shall not prejudice or affect their rights of the Company which may have accrued upto the date of such termination.

j. Test of Cement and Structural Steel:

Structural Steel: Steel manufacturers having valid BIS certificate and listed in the BIS website as on date of procurement of steel shall be allowed for supply of steel (Structural steel and TMT bars) and the Contractor shall procure from them with prior intimation to company/consultant.

Test after receipt of TMT bars at Site: In addition to availability of valid BIS license and MTC, sample as specified under shall be drawn and tested in approved laboratory (Preferably NABL). The charges for such testing shall be borne by the Contractor

- Under 10 mm bars, one sample for each 25 MT (or part thereof) for consignment below 100 MT and one sample for each 40 MT (or part thereof) for consignment above 100 MT shall be tested.
- For 10 mm to 16 mm bars, one sample for each 35 MT (or part thereof) for consignment below 100 MT and one sample for each 45 MT (or part thereof) for consignment above 100 MT shall be tested.
- Over 16 mm bars, one sample for each 45 MT (or part thereof) for consignment below 100 MT and one sample for each 50 MT (or part thereof) for consignment above 100 MT shall be tested.

Cement: Cement manufacturers having valid BIS certificate and listed in the BIS website as on date of procurement of cement shall be allowed for supply of cement and the Contractor shall procure cement from them with prior intimation to company/consultant.

Test after receipt of cement at site: Each batch of cement (week wise as mentioned on cement bags) supplied by the contractor after delivery at site shall be subjected to the tests and analysis required by the relevant Indian Standard Codes. The contractor shall carry out and bear the cost of all tests and analysis to ensure quality of cement before using in actual.

k. LABOUR LICENCE:

Before starting of work, the Contractor shall obtain a licence from the concerned authorities under the Contract Labour (Abolition and Regulation) Act, 1970 and shall furnish copy of the same to the Company. The labour licence for the appropriate labours shall be valid for the total contractual period including extended period, if any.

l. LABOUR RELATIONS:

In case of labour unrest/labour dispute arising out of non-implementation of any law the responsibility shall solely lie with the Contractor and he shall remove/resolve the same satisfactorily at his cost and risk.

The Contractor shall deploy workmen with required skill set for carrying out various jobs as assigned by the Engineer in Charge from time to time. The workmen deployment by the Sub-



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Contractor shall also possess the necessary skill set and licence if required under any law, rules and regulations.

m. DEPLOYMENT OF LOCAL LABOUR:

The Contractor shall ensure that local labourers - skilled and/or unskilled, to the extent available shall be deployed in this work. In case of non-availability of suitable labourer in any category out of the above persons, labourers from outside may be deployed.

The Contractor shall not recruit workmen of any category from among those who are already deployed by other agencies working at site, but shall make maximum use of local labour available.

n. PAYMENT AND INVOICING PROCEDURE:

The Company shall pay to the Contractor, during the term of the Contract, the amount due calculated according to the rates of payment set and in accordance with other provisions hereof. No other payments shall be due from the Company unless specifically provided for in this Contract. All payments will be made in accordance with the terms hereinafter described.

The Contractor will require to submit 2 (two) copies of all bills/invoices including the original within 7 (seven) days of the month in which the service is rendered or from the date of completion of specific job under the Contract. The Contractor should submit 2 (two) copies including original of the above bills/invoices to the User Department i.e. Project Department. Monthly RA bills to be regularly raised and only one RA bill in each month will be processed.

The Company shall within 10 days of receipt of the invoice notify the Contractor of any item under dispute, specifying the reasons thereof, in which event, payment of the disputed amount may be withheld until settlement of the dispute, but payment shall be made of any undisputed portion within 30 days subject to RBI's approval. This will not prejudice the Company's right to question the validity of the payment at a later date.

FIRM PRICES :

The quoted price shall remain firm and fixed till the completion of work except for the statutory variations of Taxes & Duties as mentioned elsewhere in the bidding document.

TEMPORARY WORKS :

All Temporary and ancillary works including enabling works connected with the work shall be responsibility of the Contractor and the price quoted by them shall be deemed to have included the cost of such works which shall be removed by the Contractor at his cost, immediately after completion of his work.

TEST CERTIFICATES :

The Contractor shall be required to submit recent Test Certificates for the materials being used in works from the recognized laboratories. These certificates should indicate all properties of the materials as required in relevant IS Standards or International Standards.

The Contractor shall also submit the test certificate with every batch of material supplied which will be approved by Engineer-in-Charge. In case any test is to be carried out, the same shall be got done in the approved laboratory at the cost of the Contractor

QUALITY MANAGEMENT SYSTEM

Bidder shall include in his offer the Quality Assurance Programme containing the overall quality management and procedures, which is required to be adhered to during the execution of



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contract. After the award of the Contract detailed quality assurance programme shall be prepared by the contractor for the execution of the Contract for various works, which will be mutually discussed and agreed to.

The Company or its representative shall reserve the right to inspect/witness, review any or all stages of work at shop/site as deemed necessary for quality assurance.



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ANNEXURE- I TO SCC

VOLUME 1 Part-3

SECTION - III

TIME SCHEDULE

NAME OF WORK	TIME OF COMPLETION
Construction of Strom Water and fire water Reservoirs, Earth Filling and site grading Nallah Diversion for creation of FIELD GAS BAGHJAN, ASSAM BID DOCUMENT NO.	18 MONTHS

Note:

1. The Time of completion shall be reckoned from date of Letter of Award, which shall be the date of completion of mobilization.
2. The Time indicated is for completing all the works in all respects as per specifications, codes, drawings and instructions of Engineer-in-Charge.
3. It should be noted that the period of completion of all works given above includes time required for mobilization at site, carrying out the works as per the requirements Contract Document, demobilization, preparation of all reports in requisite quantities as mentioned in the Bidding document, rectifications, if any, rework etc. complete in all respects to the entire satisfaction of Engineer-in-Charge.
4. Any delay in completion shall be subject to Liquidated Damages as defined in the bidding document.
- 5 **Penalty for delay in mobilization:** The penalty for delay in mobilization attributable to the contractor shall be 1% of the total Contract Value per week or part thereof. However, the same will be reimbursed if the contractor completes the contract to the satisfaction of OIL within the Contract Duration minus the Number of days of Delay in Mobilization.



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OF FGGS AT BAGHJAN, UPPER ASSAM.**

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Volume 1

Part III

Schedule of rates /Price



**TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION
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Sr. No .	Description	Unit	Amount in Indian Rupees (INR) in words
1	Total Cost for Engineering and Surveying, inclusive of all applicable Taxes, duties except GST	Lumps um	
2	Total Cost of Services for entire Work including Fabrication and supply of structural materials, supply of civil bulk materials, supply of qualified structural soil for earth filling & site grading, all other required materials, Construction of storm water and Fire water reservoirs, Land filling and Site grading and Nallah diversion , Erection, installation of structural, transportation of supplied materials ,inclusive of all applicable Taxes & duties except GST	Lumps um	



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Sr. No	Description	Unit	Amount in Indian Rupees (INR) in words
3	Compaction testing of graded site and Water hold testing of Fire water and storm water Reservoirs and settlement verification of loaded reservoirs, cube testing of concrete, water filling of reservoirs for testing and safe draing of water , all the necessary inspection and testing,	Lumpsum	
4	TOTAL: (I+II+III+IV) = 1+2+3+4 Inclusive of all applicable Taxes, duties except GST	Total	



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Volume 1

Part III

Schedule of Work, Unit Quantity



**TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION
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Schedule of Work, Unit, Quantity

	OIL INDIA LIMITED Construction of FGGS PROJECT AT BAGHJAN, UPPER ASSAM						
JPEC	PROJECTS DEPARTMENT Cost Estimate Template						OIL
Sl No	Description	Unit	Quantity	Price	Supply, Pre-Fab, Delivery to site. (Rs.Lakh s) (A)	Site Work (Rs.Lakhs) (B)	TOTAL Value (Rs.Lakh) (C)
1	STROM WATER AND FIRE WATER RESERVOIR						
	100 THICK STONE RUBBLING	m ²					
	PCC	m ³					
	RCCSUBSTRUCTU RE(M30)	m ³					
	REINFORCEMENT	Kg					
	EXCAVATION	m ³					
	Total						
2	EARTH FILLING AND COMPACTION TO 95 PERCENT PROCTOR DENSITY INCLUDING COST OF SOIL WHICH HAS TO BE BOUGHT FROM OUTSIDE	m ³					



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	OIL INDIA LIMITED Construction of FGGS PROJECT AT BAGHJAN,UPPER ASSAM						
JPEC	PROJECTS DEPARTMENT Cost Estimate Template						OIL
Sl No	Description	Unit	Quantity	Price	Supply, Pre-Fab, Delivery to site. (Rs.Lakh s) (A)	Site Work (Rs.Lakhs) (B)	TOTAL Value (Rs.Lakhs)) . (C)
3	DIVERSION OF EXISTING NULLAH						
	PCC(M15)	m3					
	RCC SUBSTRUCTURE (M30)	m3					
	REINFORCEMENT	Kg					
	EXCAVATION	m3					
	BACKFILL	m3					
	HANDRAIL PROTECTION ETC.						
	TOTAL						



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SCHEDULE OF PAYMENTS

Progressive Payments to Contractor shall be made for the activities as stated below to the extent of weightage mentioned against each on basis of price

SL. No.	Description of Work	Wt %	Payment limited to	Remarks
	PROJECT MANAGEMENT and ENGINEERING		10% of Contractor Price	
1	Submission and Approval of Project schedule, WBS breakup (Bar Chart with weighted percentage (breakup upto Level-4), communication matrix, responsibility matrix for the whole project), Project Organograms, all Quality and HSE documents	10%		100% Payment upon completion of the whole activity
2	Construction of Site office, physical mobilization of equipment required for construction and ready to start site work to the entire satisfaction of EPMC/OIL.	10%		100% Payment upon completion of the whole activity
3	Engineering- Submission of documents for approval (IFA), approval under category code-2.	30%		Monthly Progressive payment depending upon progress of the work and as per billing schedule.
4	Engineering- Submission of AFC/IFC documents under category code-1.	20%		
5	Engineering- Submission of As-Built documents, Operation and Maintenance manual.	20%		
6	Engineering-Completion of all works in all respects and against issuance of completion certificate.	10%		



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SL No	Description of Work	Wt %	Payment limited to	Remarks
	CONSTRUCTION		70% of Contractor Price	
7	30% Earth filling	10%		100% Payment upon completion of the whole activity
8	60% Earth Filling	10%		100% Payment upon completion of the whole activity
9	100% Earth Filling	15%		90% Payment upon completion of the whole activity. Rest 10% after issuing of completion certificate.
10	Diversion of Nullah	35%		90% Payment on prorata basis depending upon progress of the work and as per billing schedule. Rest 10% after issuing of completion certificate.
11	Construction of Fire water Reservoir	15%		Upto 90% Payment on prorata basis depending upon progress of the work and as per billing schedule. Rest 10% after issuing of completion certificate.
12	Construction of Storm water Reservoir	15%		Upto 90% Payment on prorata basis depending upon progress of the work and as per billing schedule. Rest 10% after issuing of completion certificate.
13	Completion of all jobs as per Scope of Work		20% of the contract Price	100% payment after issuing of completion certificate

The payment wrt. S.l no. 7, 8 & 9 shall be made only after compaction as described elsewhere in the tender. To certify the volume of compacted earth filling, the contractor shall calculate the same using appropriate earthwork calculation method.

For payment wrt. S.l. no. 10, 11 & 12, the item shall be sub-divided into activities involved against them.



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MANPOWER SCHEDULE

Sl no	Manpower	Nos. (Permanent)	Nos. (Contractual)
Manpower			
1.	Project Manager		XXXX
A.	Design & Engineering		
1.	Engineer (Civil)		
4.	Designer (Draughtsman)		
B.	Construction		
2.	Construction Engineer (Civil)		
3	Junior Engineers (Civil)		
4.	HSE Officer		
5.	Surveyor		
6.	Mason		
7.	Carpenter		
8.	Fitter		
9.	Welder		
10.	Bar Binder		
11.	Foreman		
12.	Scaffolder		
13.	Unskilled labor		
14.			
15.			
16.			

Note: The above list of manpower is indicative only. Additional manpower may require based on project requirement without additional cost implication to OIL.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER: _____

COMPANY SEAL: _____



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SCHEDULE-III

PLANT & MACHINERY SCHEDULE

Sl. no.	Plant, machineries and facilities	Nos. (Own)	Nos. (Hired)
1.	Concrete mixer Machine 1.25 Cu Mtrs		
2	Bull Dozier Caterpillar or other make		
3	Site Grader Caterpillar or other make		
4	Vibration Sieve grader / Yard		
5	10 tone hydraulic compactors		
6	Plate Compactors		
7	Concrete mixing machine 1.2Cub Mtrs		
8.	Concrete Batching Plant		
9	Ready mix concrete transporting Miller		
10	Truck mounted Concrete Pump		
12	Road Roller (Vibrating)		
13	Concrete Vibrator		
14	De-watering Pump		
15	Concrete Pump		
16	Excavator, Porcelain /caterpillar make		
17	Mini Excavator, JCB		
18.	Road Dumper		
19.	Tractor Dumper		
20.	Trailer		
21.	DG Set		
22.	Welding Machine		
23.	Gas Cutting set		
24.	Hydra		
29.	Scaffolding Material		

Note: The above list is indicative only. Actual requirement may vary based on project requirement without additional cost implication to OIL. Bidder to provide the detail list of Plant & Machineries to be used along with the BID.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER: _____

COMPANY SEAL: _____



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PROFORMAS



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PROFORMA-I

BID FORM

To
M/s Oil India Limited,
P.O. Duliajan, Assam, India

Sub: IFB No. CPI5523P21

Gentlemen,

Having examined the General and Special Conditions of Contract and the Terms of Reference including all attachments thereto, the receipt of which is hereby duly acknowledged, we the undersigned offer to perform the work/services in conformity with the said conditions of Contract and Terms of Reference for the sum quoted in the Price Bid Format or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to commence the work as per the terms & conditions set out in the subject tender.

If our Bid is accepted, we will submit the Performance Security Deposit as specified in the tender document for the due performance of the Contract.

We agree to abide by this Bid for a period of 90 days from the original date of Bid closing and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof in your notification of award shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this _____ day of _____ 2020.

Authorised Person's Signature: _____

Name: _____

Designation: _____

Seal of the Bidder:



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PROFORMA-II

STATEMENT OF NON-COMPLIANCE (IF ANY)

(Only exceptions/deviations to be rendered)

1.0 The Bidder shall furnish detailed statement of **exceptions/deviations**, if any, to the IFB stipulations, terms and conditions in respect of each Section of Bid Document in the following format:

Section No.	Clause No. (Page No.)	Non-Compliance	Remarks

Signature of Bidder: _____

Name: _____

NOTE: OIL INDIA LIMITED expects the bidders to fully accept the terms and conditions of the bid document. However, should the bidders still envisage some exceptions/deviations to the terms and conditions of the bid document, the same should be indicated as per above format and submit along with their bids. If the **“Statement of Non-Compliance”** in the above Proforma is left blank (or not submitted along with the Bid), then it would be constructed that the bidder has not taken any exception/deviation to the IFB requirements.



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PROFORMA-III

PROFORMA LETTER OF AUTHORISATION FOR ATTENDING BID OPENING

**TO
CGM- PROJECTS
OIL INDIA LIMITED
P.O. DULIAJAN-786602
Assam, India**

Sir,

SUB: OIL's IFB No. CPI5523P21

I/We _____ confirm that Mr. _____ (Name and address) as authorised to represent us during bid opening on our behalf with you against **TENDER IFB No. CPI5523P21 FOR CIVIL PKG 1 FOR CONSTRUCTION OF STORM WATER AND FIREWATER RESERVOIR, EARTH FILLING AND SITE GRADING AND NALLAH (DRAIN) DIVERSION FOR CREATION OF FGGS AT BAGHJAN, UPPER ASSAM.**

Yours Faithfully,

Authorised Person's Signature: _____

Name: _____

Signature of Bidder: _____

Name: _____

Date: _____



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PROFORMA-IV

PROFORMA LETTER OF AUTHORITY

**TO
CGM-PROJECTS
Projects Department
P.O. DULIAJAN PIN-786602
Dist. Dibrugarh, Assam
India**

Dear Sir,

SUB: OIL's IFB No. CPI5523P21

We _____ of _____
Confirm that Mr. _____
_____ (Name and Address) is authorised to represent us to Bid, negotiate
and conclude the agreement on our behalf with you against **IFB No. CPI5523P21** for
**TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION OF STORM WATER AND
FIREWATER RESERVOIR, EARTH FILLING AND SITE GRADING AND NALLAH
(DRAIN) DIVERSION FOR CREATION OF FGGS AT BAGHJAN, UPPER ASSAM** for
any commercial/Legal purpose etc.

We confirm that we shall be bound by all and whatsoever our said representative
shall commit.

Authorised Person's Signature: _____

Name: _____

Yours faithfully,

Signature: _____

Name & Designation _____

For & on behalf of _____

NOTE: This letter of authority shall be on printed letter head of the bidder, and shall
be signed by a person competent and having the power of attorney (Power of attorney
shall be annexed) to bind such Bidder.



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PROFORMA-V

FORM OF BID SECURITY (BANK GUARANTEE FORMAT)

To

**M/s OIL INDIA LIMITED,
PROJECTS DEPARTMENT,
DULIAJAN, ASSAM, INDIA,
PIN-786602**

WHEREAS, (Name of Bidder) _____ (hereinafter called "the Bidder") has submitted their offer Dated _____ for the provision of certain services (hereinafter called "the Bid") against OIL INDIA LIMITED, Duliajan, Assam, India (hereinafter called the Company's) Tender No. _____ KNOW ALL MEN BY these presents that we (Name of Bank) _____ of (Name of Country) _____ having our registered office at _____ (hereinafter called "Bank") are bound unto the Company in the sum of (*_____) for which payment well and truly to be made to Company, the Bank binds itself, its successors and assignees by these presents.

SEALED with the said Bank this ____ day of _____ 20_____

THE CONDITIONS of these obligations are:

1. If the Bidder withdraws their Bid within its original/extended validity; or
2. The Bidder modifies/revises their bid suomoto; or
3. The Bidder does not accept the contract; or
4. The Bidder does not furnish Performance Security Deposit within the stipulated time as per tender/contract; or
5. If it is established that the Bidder has submitted fraudulent documents or has indulged into corrupt and fraudulent practice.

We undertake to pay to Company up to the above amount upon receipt of its first written demand (by way of letter/fax/cable), without Company having to substantiate its demand provided that in its demand Company will note that the amount claimed by it is due to it owing to the occurrence of any of the conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including the date (**--/--/--) and any demand in respect thereof should reach the Bank not later than the above date.

The details of the Issuing Bank and Controlling Bank are as under:

A. Issuing Bank:

BANK FAX NO:

BANK EMAIL ID:

BANK TELEPHONE NO.:

IFSC CODE OF THE BANK:

B. Controlling Office:

Address of the Controlling Office of the BG issuing Bank:

Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:



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SIGNATURE AND SEAL OF THE GUARANTORS _____

Name of Bank & Address _____

**Contd.... P/2
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PROFORMA-V**

Witness _____

Address _____

(Signature, Name and Address)

Date: _____

Place: _____

* The Bidder should insert the amount of the guarantee in words and figures.

** Date of expiry of Bank Guarantee should be minimum 30 days after the end of the validity period of the Bid/as specified in the Tender.

Note:

The Bank Guarantee issuing bank branch shall ensure the following:

a. The Bank Guarantee issued by the Bank must be routed through SFMS platform as per following details:

- (i) MT 760 / MT 760 COV for issuance of Bank Guarantee
- (ii) MT 760 / MT 767 COV for amendment of Bank Guarantee

The above message / intimation shall be sent through SFMS (indicating the Tender No.) by the BG issuing Bank branch to HDFC Bank, Duliajan Branch, IFS Code – HDFC0002118; SWIFT Code - HDFCINBBCAL. Branch Address: HDFC Bank Limited, Duliajan Branch, Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602.

b. Bank Guarantee issued by a Scheduled Bank in India at the request of some other Non-Scheduled Bank of India shall not be acceptable.



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PROFORMA-VI

**[TO BE FILLED-UP/SUBMITTED BY THE VENDOR ON ITS LETTER HEAD FOR
E-REMITTANCE]**

Name:

FULL Address:

Phone Number:

Mobile Number:

E-mail address:

Fax Number:

Bank Account Number (in which the Bidder wants remittance against invoices):

Bank Name:

Branch:

Address of the Bank:

Bank Code:

IFSC/RTGS Code of the Bank:

NEFT Code of the Bank:

PAN Number:

GST Registration Number:

Signature of Bidder with Official Seal



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PROFORMA-VII

FORM OF PERFORMANCE BANK GUARANTEE

**(TO BE FURNISHED BY THE CONTRACTOR IN CASE OF SUBMITTING
PERFORMANCE SECURITY IN THE FORM OF BANK GUARANTEE AFTER
ISSUE OF LOA)**

**To
M/s OIL INDIA LIMITED,
PROJECTS DEPARTMENT
DULIAJAN, ASSAM, INDIA, PIN-786602**

WHEREAS _____ (Name and address of Contractor)
(hereinafter called "Contractor") had undertaken, in pursuance of Contract No.
_____ to execute _____ (Brief Description of the Work)
(hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee as security for compliance with Contractor's obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee; NOW THEREFORE we hereby affirm that we are Guarantors on behalf of the Contractor, up to a total of (Amount of Guarantee in figures) _____ (in words _____), such amount being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of guarantee sum as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or the work to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way cease us from any liability under this guarantee, and we hereby waive notice of such change, addition or modification.

This guarantee is valid until the _____ day of _____.

The details of the Issuing Bank and Controlling Bank are as under:

A. Issuing Bank:

BANK FAX NO:

BANK EMAIL ID:

BANK TELEPHONE NO:

IFSC CODE OF THE BANK:

B. Controlling Office:



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Address of the Controlling Office of the BG issuing Bank:

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PROFORMA-VII

Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:

SIGNATURE AND SEAL OF THE GUARANTORS _____

Designation _____

Name of Bank _____

Address _____

Witness _____

Address _____

Date: _____

Place: _____

Note:

The Bank Guarantee issuing bank branch shall ensure the following:

a. The Bank Guarantee issued by the Bank must be routed through SFMS platform as per following details:

- (i) MT 760 / MT 760 COV for issuance of Bank Guarantee
- (ii) MT 760 / MT 767 COV for amendment of Bank Guarantee

The above message / intimation shall be sent through SFMS (indicating the Contract No.) by the BG issuing Bank branch to HDFC Bank, Duliajan Branch, IFS Code – HDFC0002118; SWIFT Code - HDFCINBBCAL. Branch Address: HDFC Bank Limited, Duliajan Branch, Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602.

b. Bank Guarantee issued by a Scheduled Bank in India at the request of some other Non-Scheduled Bank of India shall not be acceptable.



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PROFORMA-VIII

AGREEMENT FORM

This Agreement is made on ____ day of _____ between Oil India Limited, a Government of India Enterprise, incorporated under the Companies Act 1956, having its registered office at Duliajan in the State of Assam, hereinafter called the "Company" which expression unless repugnant to the context shall include executors, administrators and assignees on the one part, and M/s. _____ (Name and address of Contractor) hereinafter called the "Contractor" which expression unless repugnant to the context shall include executors, administrators and assignees on the other part,

WHEREAS the Company desires that Services _____ (brief description of services) should be provided by the Contractor as detailed hereinafter or as Company may requires;

WHEREAS, Contractor engaged themselves in the business of offering such services represents that they have adequate resources and equipment, material etc. in good working order and fully trained personnel capable of efficiently undertaking the operations and is ready, willing and able to carry out the said services for the Company as per Section-II attached herewith for this purpose and

WHEREAS, Company had issued a firm Letter of Award No. _____ dated _____ based on Offer No. _____ dated _____ submitted by the Contractor against Company's IFB No. _____ and the Contractor accepted the same vide Letter No. _____ dated _____.

WHEREAS, the Contractor has furnished to Company the performance security in the form of DD/BC/BG for Rs. _____ (being 10% of Annualized Contract value) with validity of 90 (Ninety) days beyond the contract period.

All these aforesaid documents shall be deemed to form and be read and construed as part of this agreement/contract. However, should there be any dispute arising out of interpretation of this contract in regard to the terms and conditions with those mentioned in Company's tender document and subsequent letters including the Letter of Intent and Contractor's offer and their subsequent letters, the terms and conditions attached hereto shall prevail. Changes, additions or deletions to the terms of the contract shall be authorized solely by an amendment to the contract executed in the same manner as this contract.

NOW WHEREAS, in consideration of the mutual covenants and agreements hereinafter contained, it is hereby agreed as follows –



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1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. In addition to documents herein above, the following Sections and Annexures attached herewith shall be deemed to form and be read and construed as part of this agreement viz.:

- (a) PART-I indicating the General Conditions of this Contract;
- (b) PART-II indicating the Schedule of work, unit, quantities & rates;
- (c) PART-III indicating the Special Conditions of Contract;
- (d) PART-V indicating the Safety Measures.

3. In consideration of the payments to be made by the Company to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Company to provide the Services and to remedy defects therein in conformity in all respect with the provisions of this Contract.

4. The Company hereby covenants to pay the Contractor in consideration of the provision of the Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of this Contract at the times and in the manner prescribed by this Contract.

IN WITNESS thereof, each party has executed this contract at Duliajan, Assam as of the date shown above.

Signed, Sealed and Delivered,

For and on behalf of
Company (Oil India Limited)

for and on behalf of Contractor
(M/s. _____)

Name:

Name:

Status:

Status:

In presence of

In presence of

1.

1.

2.

2.



**TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION
OF STORM WATER AND FIREWATER
RESERVOIR, EARTH FILLING AND SITE GRADING
AND NALLAH (DRAIN) DIVERSION FOR CREATION
OF FGGS AT BAGHJAN, UPPER ASSAM.**

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PROFORMA-IX

Format of undertaking by Bidders towards submission of authentic information/documents (To be typed on the letter head of the bidder)

Ref. No _____

Date _____

Sub: Undertaking of authenticity of information/documents submitted

Ref: Your Tender No. CDO5084P21

**To,
The CGM-Projects
Projects Department,
OIL, Duliajan**

Sir,

With reference to our quotation against your above-referred tender, we hereby undertake that no fraudulent information/documents have been submitted by us.

We take full responsibility for the submission of authentic information/documents against the above cited bid.

We also agree that, during any stage of the tender/contract agreement, in case any of the information/documents submitted by us are found to be false/forged/ fraudulent, OIL has right to reject our bid at any stage including forfeiture of our EMD and/or PBG and/or cancel the award of contract and/or carry out any other penal action on us, as deemed fit.

Yours faithfully,

For (type name of the firm here)

Signature of Authorized Signatory

Name :

Designation :

Phone No.

Place :

Date :

(Affix Seal of the Organization here, if applicable)



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PROFORMA-X

**(TO BE EXECUTED BY THE AUTHORIZED SIGNATORY OF THE BIDDER ON THE OFFICIAL LETTER
HEAD OF THE BIDDER)**

CERTIFICATE OF COMPLIANCE TO FINANCIAL CRITERIA

**Ref: Note 'b.' under Clause 1.1 Financial Criteria of BEC/BRC of
Tender No. CPI5523P21**

I _____ the authorized signatory(s) of
_____ (Company or Firm name with address) do hereby solemnly affirm
and declare/ undertake as under:

**The balance sheet/Financial Statements for the financial year _____ have actually not
been audited as on the Original Bid Closing Date.**

Yours faithfully,

For (type name of the firm here)

Signature of Authorized Signatory

Name:

Designation:

Phone No.

Place:

Date:

(Affix Seal of the Organization here, if applicable)

Note: This certificate is to be issued only considering the time required for preparation of Financial Statements i.e. if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the Original Bid Closing Date.



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PROFORMA-XI

COMMERCIAL CHECK LIST

Bidder's Name: _____

TENDER NO. CPI5523P21

This Questionnaire duly filled in should be returned along with each copy of Un-priced Bid. Clauses confirmed hereunder should not be repeated in the Bid.

Sl. No.	Description	Bidder's Confirmation
1.	Bidding structure	
2.	Bidder's name and address:	
3.	It is noted that deviations to Terms & Conditions shall lead to rejection of offer, as specified in the Tender.	
4.	Ensure and confirm that prices quoted in 'Schedule of Rates', are for complete scope of work as defined in the tender	
5.	Indicate SAC Code Indicate rate of GST applicable.	SAC Code: GST%
6.	EMD Details: EMD No., Issuing bank, amount with currency and Validity	
7.	Confirm to Submit PBG as per Tender requirement	
8.	Confirm that the offer shall remain valid for acceptance up to 90 (Ninety) days from original Bid Due Date/Date of opening of bids.	
9.	Whether Mobilization and Completion period of contract is complied?	
10.	Whether Integrity Pact Submitted (if applicable)?	
11.	Confirm that quoted prices shall remain firm and fixed until completion of the contract, except	



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	as otherwise mentioned in the bid document.	
12.	Confirm that you have submitted all documents as mentioned in the Tender/Annexures	
13.	Confirm acceptance to all terms & conditions of the Tender.	
14.	Confirm that all correspondence must be in English Language only.	
15.	Indicate Name & Contact No. (Telephone/Fax/E-mail) of person signing the bid.	Name: Contact No.: Fax: Email:
16.	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.	
17.	Please indicate the following: (i) PAN No. (ii) GST Regn. No.	

Bidder confirms that in case of conflicting version of various terms & conditions at different places, the confirmation furnished as above shall be considered over-riding and final and any other deviation indicated elsewhere shall be treated as redundant.

Signature _____

Name _____

Designation _____

Office Stamp _____



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PROFORMA-XII

PROFORMA-XIIA

**PROFORMA FOR SUBMISSION OF DETAILS OF SPECIFIC EXPERIENCE AND
ANNUAL TURNOVER DETAILS AS CALLED IN "QUALIFICATION CRITERIA" OF
INVITATION FOR BID**

SL.No. Description Details

1. Name of the Bidder :
2. Bidder to specify the details of work(s) executed by the Bidder complying the requirement of IFB No. Experience details as below:

SL. NO.	SUBJECT	DETAILS	
2A.	Name of Work		
2B.	Details of Client/ Consultant	CLIENT	CONSULTANT
2B1	Name		
2B2	Postal Address		
SL.No.	SUBJECT	DETAILS	
2C	Work Details		
2C1	Basis of Execution		
2C2	Contract Value (exclusive of taxes)	Awarded - Executed -	
2C3	Time Schedule	Date of Award of Work - Time Schedule - Schedule Date of Completion - Actual Date of Completion - Reasons for delay, if any -	

3. Submission of Documentary Evidence:



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I. Copy of Purchase/ Work Order Submitted/ Not Submitted

II. Copy of Completion Certificate Submitted/ Not Submitted

Bidder must ensure that all details filled at Sr. No. 3 above are covered in work order / completion certificate. In case certain detailed are not covered, bidder may submit additional authenticated document/certificate of the same.

4. Annual turnover for the last three financial years:

i) Year 1 :

ii) Year 2 :

iii) Year 3 :

5. Submission of Documentary Proof:

(i) Audited Balance Sheet including Profit Loss Accounts Statement for the last three years of the Bidder YES / NO

NOTE:

Bidder shall furnish the experience details as above only of those projects which they consider suitable for meeting the Qualification Criteria. OIL reserves the right not to evaluate any other project details. Details of more projects may be furnished in the same format, if desired.

(i) Bidder to note that non-submission of relevant supporting documents may lead to rejection of their bid. It shall be ensured that all relevant supporting documents are submitted along with their bid in the first instance itself. Evaluation may be completed based on the details so furnished without seeking any subsequent additional information.

(ii) Bidder to note that non-submission of relevant supporting documents may lead to rejection of their bid. It shall be ensured that all relevant supporting documents are submitted along with their bid in the first instance itself. Evaluation may be completed based on the details so furnished without seeking any subsequent additional information.

SIGNATURE OF THE BIDDER :

NAME OF THE BIDDER :

COMPANY SEAL :



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SUB-PROFORMA **PROFORMA-XIIB**

ANNUAL TURNOVER STATEMENT

The bidder shall indicate herein his Annual Turnover during preceding 3 years based on the audited balance sheet/profit & loss account statement.

FINANCIAL YEAR	ANNUAL TURNOVER (RS.)
Year 1	
Year 2	
Year 3	

NOTE:

1. Copies of audited balance sheets with Profit & Loss account statement for last 3 years are enclosed along with the bid.
2. A brief note should be appended describing thereby details of turnover as per audited results.

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____



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Sub Proforma **PROFORMA-XIIC**

**FORMAT FOR CHARTERED ACCOUNTANT /
STATUTORY AUDITOR CERTIFICATE FOR FINANCIAL
CAPABILITY OF THE BIDDER**

We have verified the Annual Accounts and other relevant records of M/s.....(Name of the bidder) and certify the following:

A. ANNUAL TURNOVER OF LAST 3 YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	

B. FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR :

Description	Year.....
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital	
4. Net Worth	
5. RETURN ON EQUITY	

Name of Audit Firm:
Signatory]
Chartered Accountant
Date:

[Signature of Authorized

Name:
Designation:
Seal:
Membership no.

Instructions:

1. The financial year would be the same as one normally followed by the bidder for its Annual Report.
2. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non-responsive.

This certificate is to be submitted on the letter head of Chartered Accountant.



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PROFORMA-XIII

DETAILS OF SIMILAR WORK COMPLETED DURING LAST FIVE YEARS.



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PROFORMA-XIV

DETAILS REGARDING ESI & PF AS PER FORM-F REGISTRATION (as applicable)

DETAILS OF P.F. & ESI REGISTRATION

Bidder to furnish details of Provident Fund Registration and ESI Number:

PF REGISTRATION NO. :
DISTRICT & STATE :
ESI NO. :

We hereby confirm that the above PF Account is under operation presently and shall be used for all PF related activities for the labour engaged by us in the present work (if awarded to us).

SIGNATURE OF BIDDER:_____

NAME OF BIDDER : _____

COMPANY SEAL : _____



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PROFORMA-XV

**INCOME TAX, PAN NUMBER, PF REGISTRATION NUMBER, ESIC REGISTRATION NO.,
GST REGISTRATION NOS. INCLUDING COPIES OF REGISTRATION CERTIFICATES**

**TO BE PROVIDED BY
THE BIDDER**



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PROFORMA-XVI

CHECKLIST FOR SUBMISSION OF BID

Bidder is requested to fill this check list and ensure that all details/documents have been furnished as called for in the Bidding Document along with duly filled in, signed & stamped checklist **with each copy of the "Techno-Commercial bid"**.

Please tick the box and ensure compliance:

- | | | |
|--------|--|--------------------------|
| (1.0) | Pro-Forma of Acknowledgement Letter & Intention to Bid Submitted | <input type="checkbox"/> |
| (2.0) | Pro-Forma of Declaration of blacklisting / holiday listing Submitted | <input type="checkbox"/> |
| (3.0) | Power of Attorney in Favour of the person who has signed the bid on stamp paper of Appropriate value | <input type="checkbox"/> |
| | Submitted <input type="checkbox"/> Not Applicable | <input type="checkbox"/> |
| (4.0) | Submission of documents to establish conformity with Bidder's Qualification Criteria as per Instruction to bidder (ITB) | <input type="checkbox"/> |
| | Submitted <input type="checkbox"/> Not Applicable | <input type="checkbox"/> |
| (5.0) | Partnership Deed in case of partnership firm and Article of Association (AOA) / Memorandum of Association (MOA) in case of limited company | <input type="checkbox"/> |
| | Submitted <input type="checkbox"/> Not Applicable | <input type="checkbox"/> |
| (6.0) | Present/ Concurrent Commitments as per ITB | <input type="checkbox"/> |
| | Submitted | <input type="checkbox"/> |
| (7.0) | Schedule of Deviations to General & Commercial conditions as per ITB | <input type="checkbox"/> |
| | Submitted | <input type="checkbox"/> |
| (8.0) | Schedule of Deviations to technical specifications as per ITB | <input type="checkbox"/> |
| | Submitted | <input type="checkbox"/> |
| (9.0) | Overall schedule for completion of work in the form of Bar Chart | <input type="checkbox"/> |
| | Submitted | <input type="checkbox"/> |
| (10.0) | Commercial Details/ Documents specified in part – I: Commercial | <input type="checkbox"/> |
| | Submitted <input type="checkbox"/> Not Applicable | <input type="checkbox"/> |



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(11.0) Technical Details/ Documents specified in part – II: Technical
Submitted

☐

Not Applicable

☐

(12.0) Blank copy (without price) of schedule of Price indicating “Quoted” duly signed and stamped on
each page

Submitted

☐

(13.0) Copy of GST registration certificate

Submitted

☐

(14.0) PAN Details EPF, ESI, Schedule Bar chart, income tax clearance certificate, solvency certificate

Submitted

☐

(15.0) MSME registration certificate

Submitted

☐

Not Applicable

☐

(16.0) Financial balance sheet, profit and loss account, Assets / Liability sheet as per ITB

Submitted

☐

Not Applicable

☐

(17.0) Complete tender document duly signed and stamped by the Bidder in token of having received
and read all the parts of the Bidding documents and having accepted and considered the same
in preparing and submitting the Bid and submission of an undertaking that no pages have been
altered / changed with respect to the tender documents and all subsequent amendments.

Submitted

☐

(18.0) Earnest Money Deposit (EMD) as per ITB section

Submitted

☐

Not Applicable

☐

(19.0) Integrity pact duly signed and stamped

Submitted

☐

(20.0) Quality manual, sample audit report as per QMS section and safety assurance plan

Submitted

☐

(21.0) Information about Tenderer and details of similar work done



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Submitted

☐

(22.0) Certificate of approval for compliance to ISO: 9001 standard submitted by contractor

Submitted

☐

CONFIRM THE FOLLOWING:

(1.0) All pages of the bid have been page numbered in sequential manner.

YES

☐

(2.0) Bidding Document marked "ORIGINAL" along with Original offer, Compliance Letter for Addendum/ Amendment, if any, has been submitted duly signed and stamped on each page.

YES

☐

CONFIRM & ENSURE COMPLIANCE:

DESCRIPTION	YES / NO
Cover Envelope containing submission of Physical documents	
a. Original Bid Security b. Printed catalogue and Literature, if any c. Power of Attorney for signing the bid. d. Any other document required to be submitted in original as per tender.	

SIGNATURE OF BIDDER : _____

NAME OF BIDDER : _____

COMPANY SEAL : _____



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PROFORMA-XVII

**INFORMATION ABOUT ANY CURRENT LITIGATION / ARBITRATION, IF ANY, IN
WHICH BIDDER IS INVOLVED OR DETAILS REGARDING HOLIDAY/BANNING AND
LIQUIDATION, COURT RECEIVERSHIP**

(On your company's letter head duly signed & stamped)

The litigation history shall include:

Sl. No.	DESCRIPTION	DETAILS
a.	Arbitration cases pending	
b.	Disputed incomplete works	
c.	Pending civil cases against the firm and/or its Proprietor / Partner(s) / Director(s) involving moral turpitude in relation to business dealings	
d.	Pending criminal cases against the firm and / or its Proprietor / Partner(s) / Director(s) involving moral turpitude in relation to business dealings.	
e.	Punishments awarded under civil cases and/or criminal cases involving moral turpitude in relation to business dealings to the firm and/or its Proprietor/ Partner(s)/ Director(s)	

STAMP AND SIGNATURE OF BIDDER



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PROFORMA-XVIII

DECLARATION OF BIDDER REGARDING
LIQUIDATION, COURT RECEIVERSHIP OR SIMILAR PROCEEDINGS
BIDDER SHALL PROVIDE SELF DECLARATION



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VOLUME-1 Part-3
SECTION: II
TERMS OF REFERENCE & SCOPE OF WORK



TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION OF STORM WATER AND FIREWATER RESERVOIR, EARTH FILLING AND SITE GRADING AND NALLAH (DRAIN) DIVERSION FOR CREATION OF FGGS AT BAGHJAN, UPPER ASSAM.



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OIL INDIA LIMITED

1.0 INTRODUCTION:

OIL INDIA LIMITED (OIL), a “Navaratna” Category, Government of India Enterprise, is a premier oil Company engaged in exploration, production and transportation of crude oil & natural gas with its Headquarters at Duliajan, Assam.

1.1. DEFINITION OF WORK: OIL is in the process of development of producing field in Baghjan area. As a part of this development scheme, OIL desires to construct Field Gas Gathering Station (FGGS) setup comprising of natural gas production facility at Baghjan field in Upper Assam, India.

1.2. BRIEF DESCRIPTION OF THE FIELDS

Baghjan oilfield is nearly 45 KM from Tinsukia and was discovered in 2000. The production from the field is reasonable with ample reserve of crude oil and natural gas. Presently, production is carried out through an Early Production Setup from this field.

1.3. SITE DETAIL: BAGHJAN

Location: Baghjan is in Upper Assam and about 22KM from Doom Dooma town 45 KM from Tinsukia town



Railway Station: Nearest railway station Doom Dooma is 22KM by road from the Baghjan site.

Doom Dooma falls in Tinsukia – Dangari Branch line of Northeast Frontier Railway.

Airport: Nearest airport Dibrugarh is about 65KM from the site

1.4. FIELD DETAIL

The Baghjan oilfield, located about 25 KMs to the northwest of Makum oilfield, was discovered in year 2000. The field is producing from 6 Nos. of wells through an EPS (Early Production Setup). Associated Gas is expected to be around 0.5 MMSCMD. The Baghjan field also having huge amount of non-associated gas potential and it is expected to produce about 7.5 MMSCMD of non-associated natural gas from this area. To explore the resources, one Field Gas Gathering Station having the facilities for the production of natural gas is to be created.

	TENDER FOR CIVIL PKG 1 FOR CONSTRUCTION OF STORM WATER AND FIREWATER RESERVOIR, EARTH FILLING AND SITE GRADING AND NALLAH (DRAIN) DIVERSION FOR CREATION OF FGGS AT BAGHJAN, UPPER ASSAM.			
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2.0 OBJECTIVE:

Oil India Limited requires the services of a suitably qualified CONTRACTOR for **Construction of Storm & Fire water reservoir, Diversion & Construction of Nullah (Natural Drain) and land filling of plot for creation of** Field Gas Gathering Station at Baghjan. This section establishes the scope and schedule for the work to be performed by the CONTRACTOR and describes the guidelines, instructions etc., which CONTRACTOR shall satisfy or adhere to in the performance of the work.

Basic Engineering for the above facility to establish the system requirements considering entire life of the field including the process description, basic scheme of the system, PFD's, P&ID's, Soil Investigation, Topographical survey etc have already been developed by EPMC/OIL for reference of the contractor/bidder. THE CONTRACTOR/bidder shall verify and endorse the Basic Engineering documentation pretains to stated scope of work, provided along with the Tender and deviations if any, shall be brought out in writing with reasons/justifications in the bid. Variation claims due to changes from Basic engineering shall not be accepted after award of Contract.

Basic Engineering documents are attached to this tender.

2.0 GENERAL

The Scope of Work of package 1 shall include,

Detailed Engineering for Nalla diversion, Landfilling, Fire water and Strom water reservoir shall be carried out based on the FEED documents. Contractor shall prepare detailed drawings /documents and get approved prior to the start of activities.

Contractor shall establish reference points through necessary surveys under the supervision of OIL/PMC. Prior approval of survey report necessary before proceeding with further activities.

Diversion /rerouting of nalla should be within OIL concession area. Rerouted nalla should be taken to no other place other than downstream of the concerned stream. Diversion of nalla to any other place other than downstream of the concern nalla should strictly be avoided.

Land filling should be carried out using structural soil approved by OIL/PMC.



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PROCUREMENT

Scope shall include supply of materials and consumables as per approved specification, drawings. Quality documents, MTC should be presented for verification prior to its use.

HANDING OVER

Final topography survey under the supervision of OIL/PMC will be carried out upon completion of land filling to establish diversion of Nalla and level of graded land. Dossier of all approved drawings, specification, MTC, Compaction test report must be available prior to handing over of the site back to OIL.

3.0 SCOPE OF WORK

3.1 Site preparation

The CONTRACTOR shall carry out earthwork in filling (and cutting, if any) to make up levels in general site grading to bring the tripped areas up to the required finished levels (FGL) as per specification with approved good quality earth. Expansive black cotton soil shall not be used. The earth for filling shall be free of clods, grass, vegetation etc. The earth and borrow pits shall be arranged by the CONTRACTOR of approved quality on his own cost for all leads / lifts.

-CONTRACTOR to carryout contour survey, soil investigation, geotechnical surveys and other investigation to obtain design engineering data required for the plot assigned for the project.

- CONTRACTOR shall assess, earth work quantity based on the survey carried out by himself, extent of number of trees to be cut, shrubs, bushes, vegetation etc. himself before bidding, by visiting the site. The complete work shall be carried out as per standards, specification.

Disposal of surplus / excavated/rejected earth & debris outside OIL campus as per directions of PMC Site Engineer for all leads and lifts keeping OIL indemnified from any claim from any person / authority / agency etc. whatsoever.

3.2 Earth filling, Site grading, Leveling

The ground shall be compacted in layers to achieve minimum 95% proctor density and to bring complete newly filled areas up to the required finished levels of the plant with approved good earth, free of clods, grass, vegetation etc. The CONTRACTOR, at his own cost, from anywhere outside OIL area shall arrange the earth.

The lowest level of the FGL will be 0.5m above the existing well plinth of Location TP (BGN#2). The FGL will have a uniform Gradient from the middle of the site and it will be 1:500 in longer direction and 1:400 in shorter direction. The Final FGL of



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the whole plot is to be shown in the contour map in a 5.0m x 5.0m grid. (Refer annexure 2)

3.3 Diversion of Nalla

One natural canal is of dimension 5m (W) X 2m (D) is flowing across the plot of the land. The canal is to be diverted outside the boundary of the wall. RCC canal walls to be provided for stability on both sides. Proposed RCC canal shall be sized to match the existing canal dimensions and levels. . Diverted stream shall be provided with appropriate safety provision with heavy concrete cover (upto 100 mtrs length) and heavy duty MS grating (remaining length), grating, handrails, etc. All necessary approval from statutory authority should be available before start of diversion of nalla.

3.4 Storm water reservoir

Design, supply and construction of storm water reservoir to accumulate all surface water of the project site. Capacity of storm water reservoir shall be minimum 6550cu.m. Size of the reservoir shall be finalized by the CONTRACTOR during detailed engineering considering the data given in the contract.

The storage capacity of the reservoir shall be calculated based on the rainfall data, surface runoff of the project site collected by the CONTRACTOR. While designing the following points shall be considered for the reservoir:

- Suitable angle of repose as per geotechnical data.
Storm water reservoir shall be excavated with sloping sides for self-stability. In addition, bottom & sloping sides shall be provided with a layer of 100 mm thick rubble soling. A layer of PCC shall be laid above that. Top layer of 100 mm thick RCC (with minimum reinforcement) shall also be provided. Minimum two numbers of brick steps over RCC with safety hand rails shall be constructed as per site requirement.
- Construction of 1m walkways of thickness 100mm (PCC M10) underneath brick soling all around the reservoir.
- Safety hand railing as per standard all around the reservoir.
- Kerb wall of PCC (M15) having height 300mm all around the pond. Hand railing should be embedded in the kerb wall with sufficient depth.

3.5 Fire water reservoir

Capacity of fire water reservoir shall be minimum 450cu.m. Size of the reservoir shall be finalized by the CONTRACTOR during detailed engineering considering the data given in the contract.

While designing the following points shall be considered for the reservoir:



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- Suitable angle of repose as per geotechnical data.
Fire water reservoir shall be excavated with sloping sides for self-stability. In addition, bottom & sloping sides shall be provided with a layer of 100 mm thick rubble soling. A layer of PCC shall be laid above that. Top layer of 100 mm thick RCC (with minimum reinforcement) shall also be provided. Minimum two numbers of brick steps over RCC with safety hand rails shall be constructed as per site requirement.
- Construction of 1m walkways of thickness 100mm (PCC M10) underneath brick soling all around the reservoir.
- Safety hand railing as per standard all around the reservoir.
- Kerb wall of PCC (M15) having height 300mm all around the pond. Hand railing should be embedded in the kerb wall with sufficient depth.
- Fire water reservoir shall be connected to storm water reservoir to allow water to flow from the storm water reservoir. The interconnection shall have sufficient cross sectional area to meet the flow rate of the fire water pump.



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ANNEXURE I

MATERIAL & CONSTRUCTION SPECIFICATIONS

1.0 GENERAL

1.1 These specifications establish and define the Material and Constructional requirements for Civil & Structural Works.



1.2 CONTRACTOR's scope of Supply includes all the materials (consumables and non-consumables), tools, tackles, labour etc. to complete the work in all respect as per scope of work, specifications, codes, standards and statutory requirements.

1.3 All materials shall be of standard quality and manufactured by renowned concerns conforming to Indian Standards and shall be "ISI" mark as far as possible unless otherwise approved by the PMC site engineer. The CONTRACTOR shall get samples of all materials approved by the PMC site engineer prior to their bulk procurement and use. Contractor shall furnish manufacturer's certificates, for the materials supplied by him when asked for. Further to that he shall get the materials tested from an approved laboratory, if asked for by the PMC site engineer. The cost of all tests shall be borne by the CONTRACTOR. Materials not conforming to specifications or considered defective by the PMC site engineer shall not be used and shall be promptly removed from the site by the CONTRACTOR at his own expense.

1.4 Whenever any reference to BIS Code is made, the same shall be taken as the latest revision (with all amendments issued thereto) at the time of execution.

1.5 The lump sum price quoted by the CONTRACTOR shall be inclusive of all incidental charges such as carriage, loading, unloading, storing, safe custody, watch & ward, returning back surplus materials to go down of issue (where applicable) etc.

1.6 Providing and operating necessary measuring and testing devices and materials (including all consumables) are included in the CONTRACTORs scope of work. The lump sum quoted price shall be inclusive of the cost of all such tests, which are required to ensure achievement of specified quality. No separate payment for testing shall be made.

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2.0 MATERIALS / CONSUMABLES

A. General

The minimum requirements of various materials to be used in Civil and Structural works are as below:

2.1 Water

2.1.1 Water used in construction for all civil & structural works shall be clean and free from injurious amounts of oil, acids, alkalis, organic matters or other harmful substances which may be deleterious to concrete, masonry or steel. The pH value of water sample shall be not less than 6. Potable water will be considered satisfactory. All requirements of IS: 456, have to be met.

2.1.2 Tests on water samples shall be carried out in accordance with IS: 3025 and these shall fulfill all the guidelines and requirements given in IS: 456.

2.1.3 Water for curing shall be of the same quality as used for concreting and masonry works.

2.2 Aggregate (For Concrete)

A. General

- a) Coarse and fine aggregates for Civil and Structural Works shall conform in all respects to IS: 383 (Specification for coarse and fine aggregates from natural sources for concrete). Aggregates shall be obtained from an approved source known to produce the same satisfactorily. Aggregates shall consist of naturally occurring (crushed or uncrushed) stones, gravel and sand or a combination thereof. These shall be chemically inert, hard, strong, dense durable, clean and free from veins, adherent coatings, injurious amounts of alkalis, vegetable matter and other deleterious substances such as iron pyrites, coal, lignite, mica, shale, sea shells etc.
- b) Aggregates which may chemically react with alkalis of cement or might cause corrosion of the reinforcement shall not be used.
- c) The maximum quantities of deleterious materials in the aggregates as determined in accordance with IS: 2386 - Part II (Methods of Test for aggregates for concrete), shall not exceed the limits defined in IS: 383.



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2.2.1 Coarse Aggregates

- a) Coarse aggregates are the aggregates, which are retained on 4.75mm IS Sieve. It shall have a specific gravity not less than 2.6 (saturated surface dry basis).
- b) These may be obtained from crushed or uncrushed gravel or stone and may be supplied as single sized or graded. The grading of the aggregates shall be as per IS: 383.

2.2.2 Fine Aggregates

- a) Fine aggregates are the aggregates which pass through 4.75mm IS sieve but not more than ten percent (10%) pass through 150 micron IS sieve. These shall comply with the requirements of grading zones I, II, III and IV of IS: 383. It is recommended that fine aggregate conforming to grading zone 4 should not be used in reinforced concrete unless test have been made to ascertain the suitability of proposed mixed proportions.
- b) Fine aggregates shall consist of material resulting from natural disintegration of rock and which has been deposited by streams or glacial agencies, or crushed stone sand or gravel sand.

2.2.3 Sampling and Testing

The CONTRACTOR shall carry out all tests including mix designs of concrete, at the start of work as well as during any stage of construction as per the requirement. Tests shall be carried out in accordance with IS: 516-Methods of test for strength of concrete and IS: 2386-Methods of test for aggregates for concrete. The method of sampling shall be in accordance with the requirements given in IS: 2430.

2.2.4 Storage of Aggregates

- a) Storage of all types of aggregates at the site of work shall be as specified in IS: 4082. Aggregates shall in no case be stored near excavated earth or directly over ground surface.
- b) Fine aggregates delivered at the site in wet condition or becoming wet due to rain or any other means, shall not be used for at least 24 hours. For the use of such aggregates the CONTRACTOR shall adjust the water content in accordance with IS: 2386 to achieve the desired mix.

2.3 Sand

2.3.1 Sand for Masonry Mortars

- a) The sand shall consist of natural sand, crushed stone sand or crushed gravel sand or a combination of any of these. The sand shall be hard, durable, clean and free from adherent coatings and organic matter and



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shall not contain the amount of clay, silt and fine dust more than specified in IS: 2116.

- b) The sand shall not contain any harmful impurities such as iron pyrites, alkalis, salts, and coal or other organic impurities, mica, shale or similar laminated materials, soft fragments, sea shells in such form or in such quantities as to affect adversely the hardening, strength or durability of the mortar.
- c) The maximum quantities of clay, fine silt, fine dust and organic impurities in the sand, when tested in accordance with IS:2386, shall not be more than 5% by mass in natural sand, or crushed gravel sand or crushed stone sand. For organic impurities, when determined in accordance with IS:2386, colour of the liquid shall be lighter than that indicated by the standard solution specified in IS:2386.

2.3.2 Grading of Sand

The particle size grading of sand for use in mortars shall be within the limits as specified in IS: 2386 (Part-I)

2.4 Cement

Ordinary Portland cement 43 Grade conforming to IS: 8112 shall be used for all concrete works. For masonry application, the use of masonry cement (IS: 3466) may be used.

2.5 Reinforcement Bars

High Strength Thermo mechanically treated (TMT) Steel bars of minimum grade Fe 500, conforming to IS: 1786 shall be used.

2.6 Brick

Brick shall be of class 7.5

2.6.1 General

Bricks for masonry works shall conform to IS: 1077 - Specification for common burnt clay building bricks and shall be of class 7.5 (with minimum compressive strength of 5.0 N/mm²). Physical requirements, quality, dimensions, tolerances etc. of common burnt clay building bricks shall conform to the requirements of IS: 1077. Bricks shall be hand-moulded or machine-moulded and shall be made from suitable soils. The bricks shall have smooth rectangular faces with sharp corners and shall be well burnt, sound, hard, tough and uniform in colour. These shall be free from cracks, chips, flaws, stone or humps of any kind.

Testing of the bricks shall be done as per IS: 5454 and IS: 3495. Water absorption shall not be more than 20% by its dry weight when soaked in cold water for 24 hours. Locally available bricks of non modular size (230x115x75mm) in place of bricks of modular size (190x90x90mm) can be



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used in case the bricks satisfy the other requirements of IS: 1077 (corresponding class as defined above).

2.7 Stone

2.7.1 General

All Stones used for masonry works shall conform to the requirements of following BIS codes.

IS :1123 - Method of identification of natural building stones.

IS :1127 -Recommendations for dimensions and workmanship of natural building stones for masonry work.

IS :1129 -Recommendations for dressing of natural building stones.

2.7.2 Quality of Stones

Stones shall be hard, dense, strong, sound, durable, clean and uniform in colour. They shall also be free from veins, adherent coatings, injurious

amounts of alkalis, vegetable matters and other deleterious substances such as iron pyrites, coal, lignite, mica, sea shells etc. As far as possible stones from one single quarry shall be used for anyone work. The strength of stones should be adequate to carry the imposed load and shall meet all the requirements of IS: 1905, taking into account the appropriate crushing strength of stone and type of the mortar used. The percentage of water absorption, when tested in accordance with IS: 1124, shall not exceed 5 percent.

The length of the stone shall not exceed 3 times the height. Width of stone on base shall not be less than 150mm and in no case exceed 3/4th thickness of the wall. Height of the stone shall not be more than 300mm.

2.8 Admixtures

2.8.1 General Requirements for Admixtures

- a) All concrete admixtures shall comply with the following Indian standards: Specification for integral cement water proofing compounds. IS: 2645 Specification for other admixtures for concrete. IS: 9103 In case of non-availability of any IS code for testing and acceptability criteria, relevant American, British or German Code shall be applicable.
- b) No admixture shall impair the durability of the concrete nor combine with the ingredients neither to form harmful compounds nor increase the risk of corrosion of reinforcement. Use of admixtures shall not reduce the dry density of concrete. Once the proportion of admixtures has been established, strict check shall be maintained not to alter the proportions of ingredients and water-cement ratio of the Design Mix during execution.
- c) The chloride contents in admixtures shall not exceed 2% by mass of the admixture or 0.03% by mass of the cement.



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- d) Admixtures which do not meet the requirements stipulated in this document shall not be used.

2.8.2 Water Proofing Compounds

- a) The permeability of the specimen with the admixture shall be less than half of the permeability with a similar specimen without the use of these compounds. These compounds shall be used in such proportion as recommended by manufacturer but in no case it shall exceed 3% by weight of cement.
- b) The initial setting time of the cement with the use of these compounds shall not be less than 30 minutes and final setting time shall not be more than 10 hours. Tests shall be carried out in accordance with IS: 4031.
- c) Compressive strength of the specimen at 3 days shall not be less than 160kg/cm² nor 80% of the 3 days compressive strength of mortar cubes prepared with same cement and sand only, whichever is higher. Similarly compressive strength at 7 days shall not be less than 220 kg/cm² nor less than 80% of the 7 days compressive strength prepared with the same cement and sand only, whichever is higher. The test to determine the compressive strength shall conform to IS: 4031.

2.9 Water Bars (Water Stops)

2.9.1 PVC water bars shall be used in reinforced concrete construction of liquid retaining structures or any other structure to safeguard them from hydrostatic pressure and water leakage and any relative movement between two parts of the structure due to thermal loading shrinkage or differential movement of foundations. These shall be preformed and shall provide a permanent water tight seal along the entire joint in the poured concrete structures. These shall also be flexible enough to withstand deflection/ displacements at joints arising due to variation of temperatures or settlement of foundations.

2.9.2 Performance requirements of PVC water bars shall meet the requirements of IS: 12200. These shall be of an approved make and of ribbed/serrated/plane type with a bulb at the centre. The thickness and width of water bars shall in no case be less than 5mm and 150mm respectively. However, for concrete sections greater than 300mm thick, the width of water bars shall not be less than 230mm.

2.10 Wood/timber/plywood

2.10.1 Timber required to be used for form work shall be fairly dry before use. It should maintain its shape during the use and even when it comes into contact with moisture from the concrete. For proper identification and



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selection of suitable timber for form work, following codes shall be referred.
Classification of commercial timbers and their zonal distribution IS: 399
Specification for ballies for general purposes IS: 3337

2.10.2 Specification for Ply wood for concrete shuttering work IS: 4990

2.10.3 Wood recommended for platforms of cold vessels or below cold vessels/ exchangers shall be hard and shall be of group A, grade I, and shall have safe permissible stress of 7N/mm² in compression, perpendicular to grains on outside location as per IS:883. General characteristics like durability, treatability etc. shall conform to IS: 883 and IS: 3629.

2.11 Reinforced concrete works

Design of reinforced concrete work shall be as per IS:456-2000 .Reinforced concrete conforming to IS:456-2000 shall be used 20mm and down size graded crushed stone aggregate.

2.11.1 Grade of concrete

The grade of concrete to be used for various types of structural elements shall be as follows:
considering environmental exposure condition as severe as per CL.No.8.2.2 of IS:456-2000

For all structures and foundations except Grade slabs/paving M30($F_{ck}=30\text{N/mm}^2$)

Concrete of ground floor/non –suspended M30($F_{ck}=30\text{N/mm}^2$)

Concrete for encasing(10mm down aggregate) M30($F_{ck}=30\text{N/mm}^2$)

Where F_{ck} is the characteristic compressive strength at 28 days of concrete cube specimens as per IS:456-2000.

Below all RCC foundations, 75mm thick lean concrete of grade 7.5 (nominal mix 1:4:8) shall be provided. Below RCC foundations of liquid retaining structures, 100mm thick concrete of mix M10(nominal mix 1:3:6) shall be provided. The lean concrete shall extend 50mm beyond the foundation for normal foundations and 75mm under liquid retaining structures

Plain cement concrete (PCC) of grade M 7.5 (nominal mix 1:4:8) of minimum 150mm thickness shall be provided under all masonry wall foundations.



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1. DRAWING

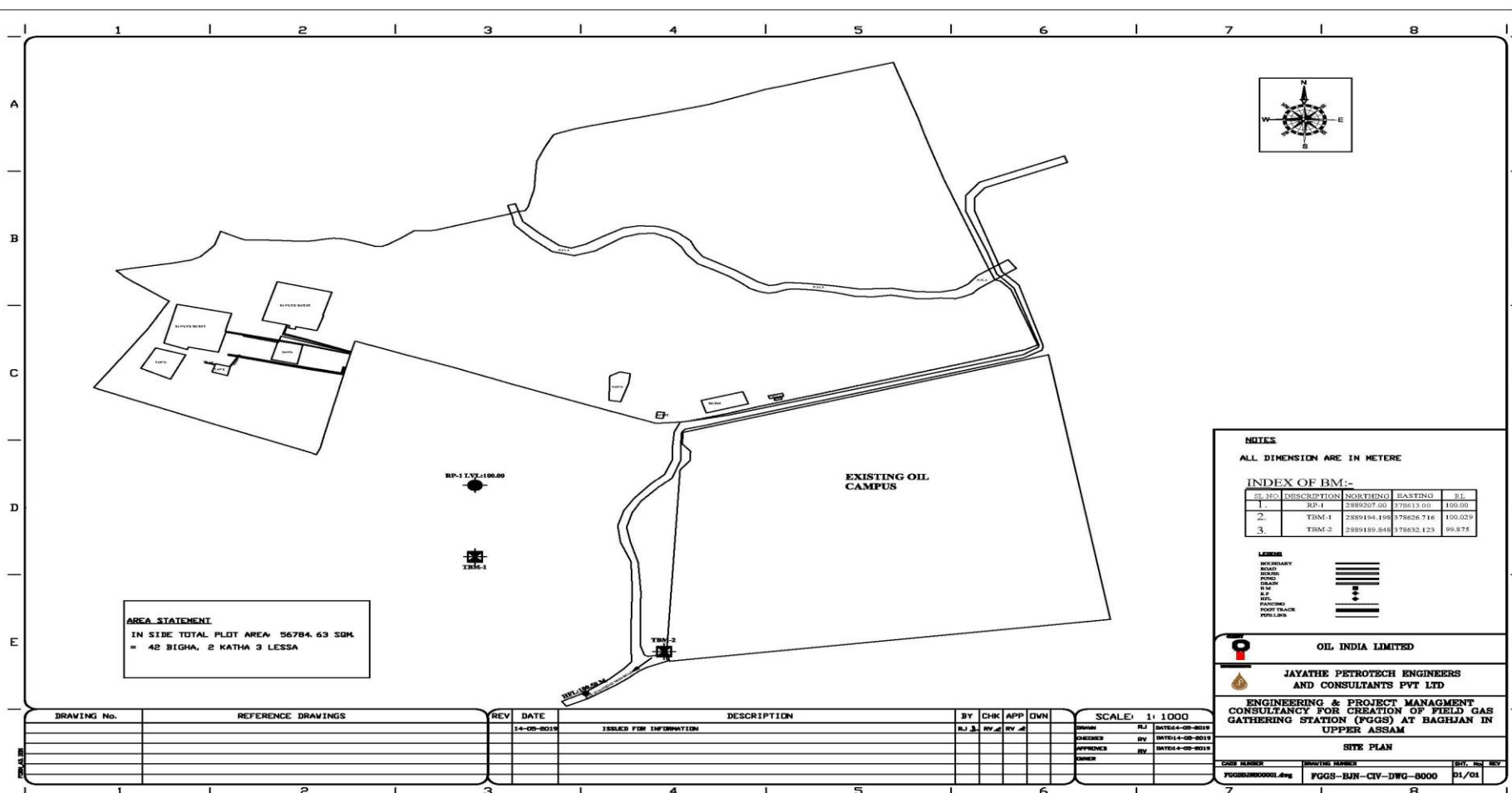


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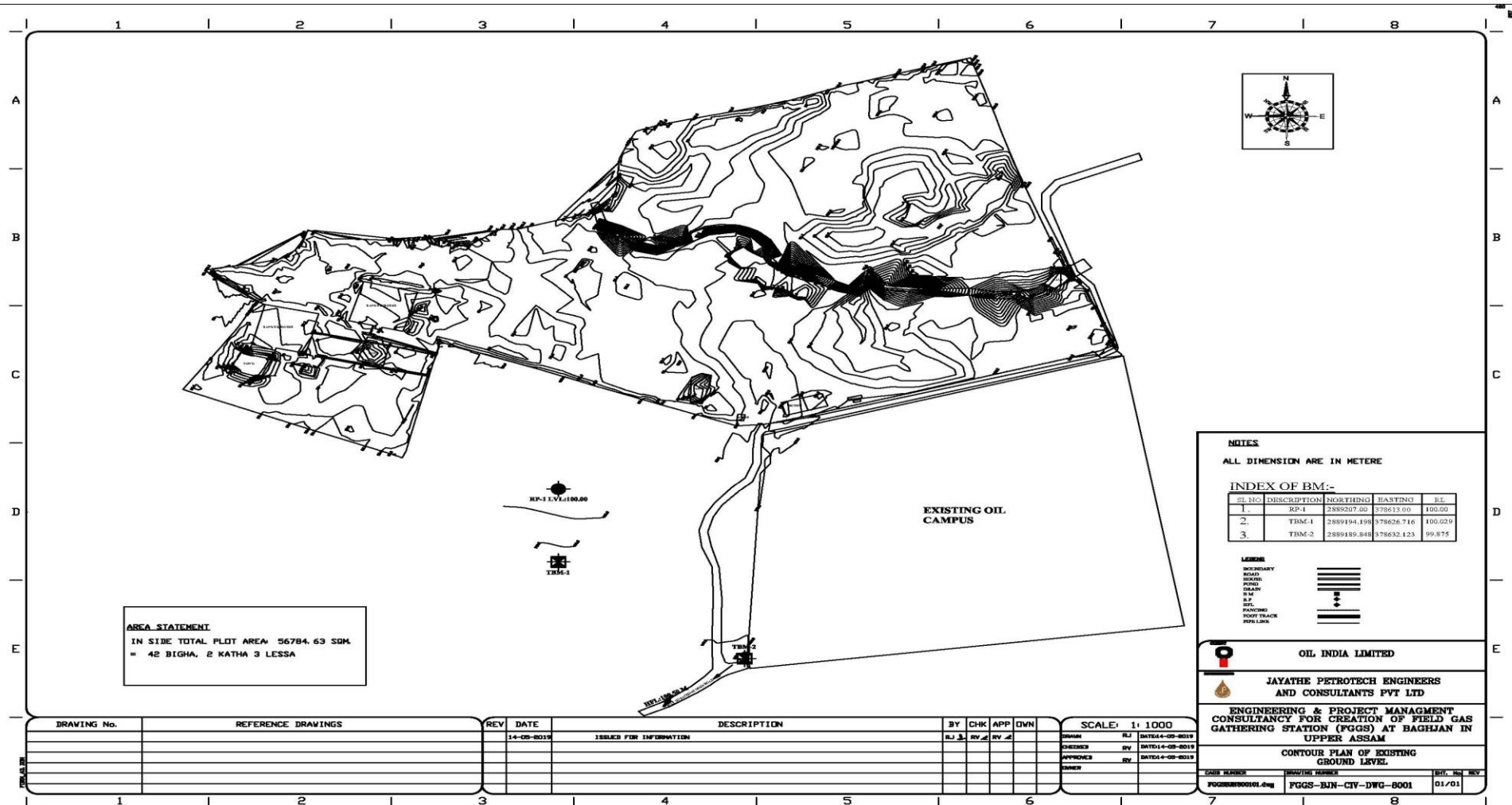
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2. GEOTECHNICAL
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KAVIN ENGINEERING AND SERVICE PRIVATE LIMITED

**4th Floor, Singapore Plaza, 333 Cross Cut Road,
Gandhipuram, Coimbatore**

**GEOTECHNICAL INVESTIGATION WORKS FOR
GROUP GATHERING STATION (GGS) PROJECT OF,
OIL INDIA LIMITED (OIL) NEAR BAGHJAN, ASSAM**

KEASPL/009/2014-2015 on 11th March 2016



REPORT

JUNE 2016

GEO-TECHNICAL INVESTIGATIONS



BPC CONSULTANT INDIA PRIVATE LIMITED

**Corporate Office: Concept Building,
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KOLKATA – 700099**



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DOCUMENT RELEASE SHEET

Rev.	Date	Description	Rev.	Date
R0	18.06.2016	Volume I & Volume II :Geotechnical Report for the proposed GGS, Baghjan, Assam		
Client:				
KAVIN ENGINEERING AND SERVICE PRIVATE LIMITED 4 th Floor, Singapore Plaza, 333 Cross Cut Road, Gandhipuram, Coimbatore				
Project:				
GEOTECHNICAL INVESTIGATION WORKS FOR GROUP GATHERING STATION (GGS) PROJECT OF, OIL INDIA LIMITED (OIL), BAGHJAN, ASSAM.				



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I INTRODUCTION

1.0 Project Information

M/s OIL INDIA Limited (OIL), a Government of India 'Navaratna' company is a Premier Oil Company engaged in exploration, production and transportation of crude oil & Natural gas, with its headquarters at Duliajan, Assam. Duliajan is well connected by Air with nearest Airport being at Dibrugarh, 45 km away. It is bounded on the east by Arunachal Pradesh, on the west by Dibrugarh district, on the north by Lakhimpur district and south by the Dibrugarh district and part of Arunachal Pradesh.

As a part of its operations, Geotechnical investigation has been carried out onshore to provide the designer with sufficiently accurate information both general and specific about the substrata profile and relevant soil parameters at site on the basis of which the foundation for various structures and equipments of the Group Gathering Station (GGS) could be designed rationally. Such structures would include, substation and administration building, power utilities structures, fire fighting pump house, security building, storage tanks, pump house, flare stack, foundation for equipments, deep pits, reservoir, pipe supports and all other related structures of the group gathering Station etc. at Baghjan, Tinsukia, Assam.



Fig. 1: Location of the Group Gathering Station (GGS) at Baghjan, Assam



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GRADING AND NALLAH (DRAIN) DIVERSION FOR
CREATION OF FGGS AT BAGHJAN, UPPER
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M/s BPC CONSULTANT INDIA PVT LTD was entrusted by **M/s Kavin Engineering and Services Pvt. Ltd.**, to conduct field investigation, sampling and laboratory testing for the for "Construction of proposed Group Gathering Station (GGS) at Baghjan, Assam. The overall objectives of the exploration was to obtain specific information about sub-soil characteristics and to obtain Geotechnical parameters of the subsurface formations for design and construction of foundations for different units coming up as a part of this prestigious project. The site is bounded by latitude from 27°36'25"N to 27°36'12"N and longitude 95°24'7"E to 95°24'.24"E. The total area envisage for this complex is 39110 m².

1.1 Scope of Work

A comprehensive & detailed Geotechnical investigation program comprising Exploring Boreholes, Installation of standpipe, Field Permeability test, Trial Pits & Field California Bearing Ratio Test with Field Density Test (Core cutter method), Electrical Resistivity Test, and Laboratory tests on recovered disturbed and undisturbed soil samples from boreholes was implemented for understanding the sub-surface strata for various units covering proposed GGS project.

Details of final scope of work implemented are also summarized in the table below:

Summary of field work implementation

Field test Component	Total no of tests carried out
Exploratory boreholes along with SPT	20
Installation of standpipe	20
Field Permeability Test (Falling Head Method)	20
Trial pits,	15
Field CBR ,	7
Electrical Resistivity Test- Wenner's method 4 Direction Testing	6

This Project is divided into four Volumes as follows:

Volume No.	Field test Component	Total no of tests carried out
Volume-I	Exploratory boreholes along with SPT	20
	Installation of standpipe	1
	Field Permeability Test (Falling Head Method)	20
Annexure	Annexure of Volume -I	-
Volume-II	Trial pits,	15
	Field CBR	7
	Electrical Resistivity Test- Wenner's method 8 Direction Testing	6
Annexure	Annexure of Volume- II	-

Note: This Report Consists of Geotechnical Report covering field test laying in volume -I



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1.2 Abstract of findings and recommendations

Field Work

The scope of works was carried out by Exploring boreholes with the help of Auger and shell/mud rotary drilling and standard penetration test and standpipe installation as well as field permeability test. The boreholes were terminated on reaching the requisite depths as per the termination criteria specified by client. Details of bore hole are also summarized in the table below:

Sl. No.	Unit No.	BH No.	Structure	CO-ORDINATE	ELEVATION
1	9	BH1	Fire Fighting System	X=737285.810 Y=3055898.846	118.919
2	33	BH2	Watch Tower	X=737421.744 Y=3055931.027	120.448
3	8	BH4	Treated Water Storage Tank/Booster & Disposal Pump	X=737423.994 Y=3055866.220	119.068
4	22	BH5	Off-Spec Crude Storage Tank & Pumps	X=737437.218 Y=3055834.174	119.994
5	8A	BH6	Off-Spec PW Storage Tank & PW Circulation Pump	X=737410.828 Y=3055801.535	119.813
6	30	BH7	Security Barrack	X=737420.946 Y=3055769.919	119.979
7	31/27	BH8	Muster Station /Parking Area	X=737360.514 Y=3055759.202	119.347
8	13	BH9	Chemical Injunction System	X=737345.400 Y=3055799.422	119.834
9	25	BH10	Substation & Control Room	X=737315.117 Y=3055793.831	120.021
10	7 15	BH11	Produced Water treatment System-Train A & B/Hot Oil Treatment System	X=737274.737 Y=3055802.696	119.08
11	2 5	BH12	Multi Phase Flow Meter &Test Separator/Flash Gas Compression System	X=737230.744 Y=3055783.177	119.554
12	16	BH13	HP Flare System	X=737222.665 Y=3055821.303	119.212
13	11 9	BH14	Captive Power Plant/Fire Fighting System	X=737305.002 Y=3055865.552	119.17
14	23	BH15	Treated Crude Storage Tank and Pumps	X=737326.995 Y=3055887.478	119.828
15	23	BH-16/SWL	Treated Crude Storage Tank and Pumps	X=737389.222 Y=3055891.481	119.911
16	14	BH19	Industrial/ Potable Water Supply System	X=737369.650 Y=3055816.381	118.15
17	11	BH20	Instrument Air/ Utility Air System & Captive Power Plant	X=737313.500 Y=3055828.183	119.778
18	6	BH21	Trunk Line Cod & Gas metering System	X=737269.410 Y=3055827.391	119.326
19	23	BH22	Treated Crude Storage Tank and Pumps	X=737335.817 Y=3055850.846	118.29
20	8	BH24	Treated Water Storage Tank/Booster & Disposal Pump	X=737369.324 Y=3055853.169	118.648



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1.3 Terrain conditions / Topography during Soil Investigations

The Proposed Project comprises of an open site earmarked for Group Gathering Station (GGS). Ground levels vary from RL+ **118.15 m** to RL+ **120.448 m** indicating flat terrain. Land is generally barren and comprises of grasses/shrubs and, there are no plantations or trees, which are of economic importance.

2.0 SUB-SOIL PROFILE STRATIFICATION (Based on borehole investigations)

Consistent with established Geo-technical practices, longitudinal/cross sections covering group of boreholes were drawn and sub-soil profile established. Based on extensive sub-soil profile analysis following major four layered profile is noticed in this Project site

✓ Layer I : Top soil , 1.50 m to 6.00 comprising Silty Clay with traces of fine sand & mica

✓ Layer II; Silty Sand with clay traces /binder /Clayey Sand

✓ Layer III; Clayey Silt

✓ Layer IV: Dense to very dense/compacted silty sand (Final Layer)

Refer ensuing paragraph below for specific details.

2.1 ANALYSIS FOLLOWS

FIRE FIGHTING SYSTEM (TAG No. 9): BH-1

One borehole was drilled at BH-01. Borehole was terminated at 35.0m depth. Top stratum of subsoil is Stiff to Very Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine sand & mica (CI) 4.50m depth below ground level. This is underlain by Dense to Very Dense, Yellowish / Brownish grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed (SC-SM) upto a depth 15.00m below ground level. This is followed by Stiff to Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods (CH-OH) upto depth 18.00 m below ground level. Thereafter, Very Stiff to Hard, Deep Grey, Silty Clay / Clayey Silt with traces of fine Sand (MI-OI) overlain by 1.50 m thick Compacted, Grey, Clayey Sandy Silt with traces of mica. (ML) was found upto 21.00 m depth below ground level. Finally borehole was terminated in Very Dense to Compacted, Greyish, Medium to fine grained Silty Sand with traces of Mica (SM) after penetrating 14.30 m in it. N Values in this layer ranges from 72 to greater than 100 which indicates very dense /compacted cohesionless stratum.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED FIRE FIGHTING SYSTEM (TAG No. 9), BH-1:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff to Very Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine sand & mica. (CI)	c	118.919	114.419	4.50	22	-	6.0	0	0.87	1.96
2	Dense to Very Dense, Yellowish / Brownish grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed. (SC-SM)	phi	114.419	103.919	10.50	35	30	0.3	27	0.87	8.48



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
3	Stiff to Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods. (CH-OH)	c	103.919	100.919	3.00	12	-	5.0	0	0.85	14.33
4	Very Stiff to Hard, Deep Grey, Silty Clay / Clayey Silt with traces of fine Sand. (MI-OI) overlain by 1.50 m thick Compacted, Grey, Clayey Sandy Silt with traces of mica. (ML)	c	100.919	97.919	3.00	21	-	10.0	0	0.88	16.92
5	Very Dense to Compacted, Greyish, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	97.919	83.619	14.30	72	31	0.0	32	0.96	25.10

WATCH TOWER (TAG No. 33), BH-2:

One borehole was drilled at BH-02. Borehole was terminated at 35.0m depth. The subsoil starts with stratum of Medium Stiff, Yellowish / Brownish Grey, Silty Clay with traces of fine sand (CI-MI-OI) 4.50m depth below ground level. This is underlain by Very Dense, Light Yellowish / Brownish grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & gravels observed (SC-SM) upto a depth 16.50m below ground level. This is followed by Very Stiff to Hard, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods (CH-OH) upto depth 19.50m below ground level. Thereafter, Hard / Compacted, Grey, Clayey Sandy Silt with traces of mica with Variable Sand Content (ML) was encountered upto 25.00 m depth below ground level. Finally borehole is terminated in Compacted, Deep grey, Medium to fine grained Silty Sand with traces of Mica, Clay & Gravels observed Occasionally (SC-SM) after penetrating 9.65 m in it. N Values in this layer was greater than 100 which indicates very dense /compacted cohesionless stratum.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED WATCH TOWER (TAG No. 33), BH-2:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Yellowish / Brownish Grey, Silty Clay with traces of fine sand. (CI-MI-OI)	c	120.448	115.948	4.50	8	-	4.0	0	0.85	1.91
2	Very Dense, Light Yellowish / Brownish grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & gravels observed. (SC-SM)	phi	115.948	103.948	12.00	73	54	0.1	30	0.93	9.41



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
3	Very Stiff to Hard, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods. (CH-OH)	c	103.948	100.948	3.00	27	-	10.0	0	0.89	16.32
4	Hard / Compacted, Grey, Clayey Sandy Silt with traces of mica, Variable of Sand Content. (ML)	c	100.948	94.948	6.00	35	-	15.0	0	0.88	20.30
5	Compacted, Deep grey, Medium to fine grained Silty Sand with traces of Mica, Clay & Gravels observed Occasionally. (SC-SM)	phi	94.948	85.298	9.65	100	-	0.0	32	0.95	27.52

TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP (TAG No. 8): BH-4 & BH-24

Two boreholes were drilled at the location. Borehole was terminated at 35.0m depth. The top layer of sub-soil consists of Stiff, Yellowish / Brownish Grey, Silty Clay with traces of fine sand. (CI-MI-OI) 4.50m depth below ground level was observed in BH-4 and Medium Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine Sand layer(CI) of 3.00m thickness was observed in BH-24. This was underlain by Very Dense / Compacted, Light Yellowish Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed (SC-SM) upto a depth 18.00m below ground level in BH--4 and 13.50m in BH-24. This was followed by Very Stiff to Hard, Deep Grey / Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content (CL-ML-OL) upto depth 27.00m below ground level. Stiff to Very Stiff, Deep grey, Silty Clay with traces of Sand to Very Stiff, Grey, Clayey Sandy Silt with traces of mica followed by Medium Stiff to Hard, Deep Grey, Silty Clay with traces of fine Sand was observed in BH-24 upto depth 25.50 m.The borehole was finally terminated in Compacted, very dense Deep Grey / Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally(SM) up explored depth of 35.0m. This is very dense compactness cohesionless stratum with N Values consistently >100.

**DESIGNED SOIL PARAMETERS FOR THE PROPOSED TREATED WATER STORAGE
TANK/BOOSTER & DISPOSAL PUMP (TAG No. 8), BH-4 & 24:**

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine Sand.	c	118.648	115.648	3.00	-	-	4.0	0	0.89	1.34



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
2	Dense to Very Dense, Yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica & Clay.	phi	115.648	105.148	10.50	75	47	0.0	29	0.95	7.66
3	Stiff to Very Stiff, Deep grey, Silty Clay with traces of Sand, Variable of Clay Content./Very Stiff, Grey, Clayey Sandy Silt with traces of mica. / Medium Stiff to Hard, Deep Grey, Silty Clay with traces of fine Sand.	c	105.148	93.148	12.00	27	-	10.0	0	0.89	17.99
4	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels occasionally (SM)	phi	93.148	83.348	9.80	100	-	0.0	32	0.88	27.64

OFF-SPEC CRUDE STORAGE TANK & PUMPS (TAG NO. 22) BH-5

One borehole was drilled at borehole location (BH-5). Borehole was terminated at 35.0m depth below ground level. Top stratum comprising of Medium Stiff to Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand & mica (CI-MI-OI) was encountered upto 5.00m depth below ground level. This was underlain by 10.50 m thick Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & Gravel observed (SC-SM). This was followed by 1.50 thick Stiff, Deep grey / Dark grey, Silty Clay (CH)). Thereafter it underlain by 9.00 m thick layer of Very Stiff, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand & Clay Content (CL-ML-CI). Finally, borehole was terminated in Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally (SM) after penetrating 8.21 m in this compacted cohesion less stratum having N value greater than 100.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED OFF-SPEC CRUDE STORAGE TANK & PUMPS

(TAG NO. 22) BH-5

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff to Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand & mica. (CI-MI-OI)	c	119.994	113.994	6.00	7	-	5.6	0	0.9	2.70
2	Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & Gravel observed. (SC-SM)	phi	113.994	103.494	10.50	69	44	0.0	31	0.92	10.23



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			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
3	Stiff, Deep grey / Dark grey, Silty Clay. (CH)	c	103.494	101.994	1.50	10	-	5.0	0	0.85	15.70
4	Very Stiff, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand & Clay Content. (CL-ML-CI)	c	101.994	92.994	9.00	19	-	10.0	0	0.88	20.30
5	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally. (SM)	phi	92.994	84.784	8.21	100	41	0.2	32	0.96	28.20

OFF-SPACE PW STORAGE TANK & PW CIRCULATION PUMP (UNIT 8A), BH-6

One borehole was drilled here (BH-6). Borehole was terminated at 35.0m depth. Top stratum consists of Medium Stiff to Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand encountered upto 3.00m depth below ground level. This was underlain by Very Dense / Compacted, Grey / Light Brownish, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed upto a depth 11.30m below ground level. This was followed by Stiff to Very Stiff, Dark grey, Silty Clay with traces of Decomposed Woods. Thereafter a layer of Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica with Variable Content of Sand, followed by Very Stiff to Hard, Grey, Silty Clay / Clayey Silt with traces of fine Sand. Finally borehole was terminated in Compacted, Greyish, and Medium to fine grained Silty Sand with traces of mica at 35.25m depth below ground level. N value of this layer was greater than 100 i.e. rebound of hammer.

**DESIGNED SOIL PARAMETERS FOR THE PROPOSED OFF-SPACE PW STORAGE TANK & PW
CIRCULATION PUMP (UNIT 8A), BH-6:**

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff to Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand. (CI-MI-OI)	c	119.813	116.813	3.00	10	-	5.0	0	0.85	1.28
2	Very Dense / Compacted, Grey / Light Brownish, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed. (SC-SM)	phi	116.813	104.813	12.00	88	63	0.0	31	0.90	7.95
3	Stiff to Very Stiff, Dark grey, Silty Clay with traces of Decomposed Woods. (CH-OH)	c	104.813	101.813	3.00	12	-	5.0	0	0.85	14.63



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	Φ	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
4	Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (CL-ML)	c	101.813	97.313	4.50	34	-	13.0	0	0.88	17.88
5	Very Stiff to Hard, Grey, Silty Clay / Clayey Silt with traces of fine Sand. (CI)	c	97.313	94.313	3.00	27	-	10.0	0	0.88	21.18
6	Compacted, Greyish, Medium to fine grained Silty Sand with traces of mica. (SM)	phi	94.313	84.563	9.75	78	35	0.0	31	0.95	27.13

SECURITY BARRACK & LIVING QUARTERS (TAG No. 29, 30): BH-7

One borehole was drilled here covering BH-07. Borehole was terminated at 35.0m depth. The top soil cover comprises of medium stiff, yellowish / brownish grey, silty clay with traces of fine sand & mica upto 4.50m depth. This was underlain by dense to very dense, grey, and medium to fine grained silty sand with traces of mica & occasionally clay observed layer upto a depth 10.00m. This was followed by stiff to very stiff, deep grey / dark grey, silty clay with traces of decomposed woods. Subsequently a layer of hard / compacted, grey, clayey sandy silt with traces of mica, variable of sand content, followed by very stiff to hard, deep grey, silty clay / clayey silt with traces of fine sand. This was finally underlain by very dense to compacted, greyish, and medium to fine grained silty sand with traces of mica & gravels occasionally upto the maximum explored depth of 35.25m. Beyond 27.0 m, layer progressively becomes very dense with N Values consistently >100.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED SECURITY BARRACK & LIVING QUARTERS (TAG

No. 29, 30), BH-7:

Sr. No.	Description	From	To	Thickness	N	N _{corr}	c _u	Φ	γ _{bulk} / γ _{sub}	σ _o
		m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Yellowish / Brownish Grey, Silty Clay with traces of fine sand & mica (CI-MI-OI)	119.979	115.479	4.50	-	-	4.0	0	0.86	1.94
2	Dense to Very Dense, Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed. (SC-SM)	115.479	104.979	10.50	49	39	0.0	29.38	0.90	8.60



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Sr. No.	Description	From	To	Thickness	N	N _{corr}	C _u	Φ	Y _{bulk} / Y _{sub}	σ _o
		m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
3	Stiff to Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods. (CH-OH)	104.979	101.979	3.00	12	-	5.0	0	0.88	14.64
4	Hard / Compacted, Grey, Clayey Sandy Silt with traces of mica, Variable of Sand Content. (CL-ML)	101.979	98.979	3.00	89	44	10.0	0	0.95	17.39
5	Very Stiff to Hard, Deep Grey, Silty Clay / Clayey Silt with traces of fine Sand. (CI-MI-OI)	98.979	94.479	4.50	27	-	10.0	0	0.95	20.95
6	Very Dense to Compacted, Greyish, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally.	94.479	84.729	9.75	78	35	0.0	30	0.96	27.77

MUSTER STATION /PARKING AREA (TAG No. 31/27), BH-8

One borehole was drilled at location BH-08. Borehole was terminated at 35.0m depth. The top soil cover encountered up depth of 4.50 m below ground level was Medium Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine sand & mica (CI-MI-OI) which was followed by 3.00m thick Very Stiff to Hard, Grey, Clayey Silt with traces of fine sand & mica (CL-ML) layer. Thereafter 9.00 m thick Very Dense / Compacted, Light Yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed. (SC-SM) followed by 7.50 m thick Hard / Compacted, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content (ML-OL) was seen. Afterwards 1.50 thick Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods (CH-OH) was overlain by Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally (SM). The borehole was terminated in this Compacted, Grey, Medium to fine grained Silty Sand. N value of this cohesionless stratum was greater than 100 i.e. rebound of hammer.



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31/27), BH-8:**

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Light Yellowish / Brownish Grey, Silty Clay with traces of fine sand & mica (CI-MI-OL)	c	119.347	114.847	4.50	4	-	6.0	0	0.87	1.96
2	Very Stiff to Hard, Grey, Clayey Silt with traces of fine sand & mica (CL-ML)	c	114.847	111.847	3.00	28	-	10.0	0	0.88	5.24
3	Very Dense / Compacted, Light Yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay observed (SC-SM)	phi	111.847	102.847	9.00	77	50	0.1	31	0.95	10.83
4	Hard / Compacted, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (ML-OL)	c	102.847	95.347	7.50	48	-	15.0	0	0.9	18.48
5	Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods (CH-OH)	c	95.347	93.847	1.50	19	-	12.0	0	0.88	22.52
6	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally (SM)	phi	93.847	84.077	9.77	100	39	0.0	32	0.95	27.82

CHEMICAL INJUNCTION SYSTEM (TAG No. 13): BH-9

One borehole was drilled at borehole location BH-09. Borehole was terminated at 35.0m depth. The top soil cover encountered up depth of 4.50 m below ground level was Medium Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand & mica. (CI-MI-OL) which was followed by 10.50m thick Very Dense / Compacted, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & Gravel observed from 9.00 m depth below ground level (SC-SM). Thereafter 3.00 m thick Stiff to Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods(CH-OH) followed by 7.50 m thick Very Stiff to Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand & Clay Content (CL-ML-CI) was seen. Finally, the borehole was terminated in Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally(SM) after penetrating 9.65 m in this cohesionless stratum. SPT "N" values are greater than 100 i.e. rebound of hammer.



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Yellowish / Brownish Grey, Silty Clay / Clayey Silt with traces of fine sand & mica. (CI-MI-OI)	c	119.834	115.334	4.50	7	-	4.0	0	0.85	1.91
2	Very Dense / Compacted, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Occasionally Clay & Gravel observed from 9.00 m. (SC-SM)	phi	115.334	104.834	10.50	85	61	0.1	31	0.92	8.66
3	Stiff to Very Stiff, Deep grey / Dark grey, Silty Clay with traces of Decomposed Woods. (CH-OH)	c	104.834	101.834	3.00	12	-	5.0	0	0.85	14.76
4	Very Stiff to Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand & Clay Content. (CL-ML-CI)	c	101.834	94.334	7.50	28	-	10.0	0	0.88	19.34
5	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & Gravels Occasionally. (SM)	phi	94.334	84.684	9.65	100	41	0.1	32	0.97	27.32

SUBSTATION & CONTROL ROOM (TAG No. 25): BH-10

One borehole was drilled at borehole location BH-10. Borehole was terminated at 35.0m depth below ground level. The top soil cover encountered up depth of 4.50 m below ground level was Stiff to Very Stiff, Light Yellowish / Deep Grey, Silty Clay with traces of fine sand (CI-MI-OI) which was followed by 9.00m thick Very Dense, Deep Grey / Grey, Medium to fine grained Silty Sand with traces of mica (SM). Thereafter 3.00 m thick Hard, Deep grey / Dark grey, Silty Clay with traces of fine Sand (CI) which was followed by 4.50 m thick Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content (CL-ML-OL). Successively, 4.50m thick Very Stiff, Deep Grey, Silty Clay / Clayey Silt with traces of fine Sand (CI-MI-OI) is also seen. Finally, the borehole was terminated in Very Dense to Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica (SM) after penetrating 9.80 m in this cohesionless stratum. N values ranges from 77 to greater than 100 i.e. rebound of hammer indicating very dense/compacted cohesionless stratum.



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Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff to Very Stiff, Light Yellowish / Deep Grey, Silty Clay with traces of fine sand. (CI-MI-OI)	c	120.021	115.521	4.50	19	-	5.8	0	0.88	1.98
2	Very Dense, Deep Grey / Grey, Medium to fine grained Silty Sand with traces of mica. (SM)	phi	115.521	106.521	9.00	77	53	0.0	32	0.95	8.24
3	Hard, Deep grey / Dark grey, Silty Clay with traces of fine Sand. (CI)	c	106.521	103.521	3.00	79	-	20.0	0	0.89	13.85
4	Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (CL-ML-OL)	c	103.521	99.021	4.50	72	-	20.0	0	0.89	17.18
5	Very Stiff, Deep Grey, Silty Clay / Clayey Silt with traces of fine Sand. (CI-MI-OI)	c	99.021	94.521	4.50	19	-	5.0	0	0.88	21.17
6	Very Dense to Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	94.521	84.721	9.80	77	35	0.0	33	0.96	27.85

PRODUCED WATER TREATMENT SYSTEM-TRAIN A & B/ HOT OIL TREATMENT SYSTEM (TAG NO. 7/15).

BH-11

One borehole was drilled here (BH-11). Borehole was terminated at 35.0m depth. Top stratum consists of Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand. encountered upto 4.50m depth below ground level. This was underlain by Very Dense / Compacted, yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica, this stratum was extended upto 18.00m depth below the ground level. This is followed by Hard, Grey, Silty Clay / Clayey Silt with traces of fine Sand & mica, this layer was extended upto 21.0 m below ground level. Thereafter another clay layer was encountered i.e. Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand, this layer was extended upto 24.00m below ground level. Finally borehole was terminated in Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica.at 35.15m depth below ground level. N value of this layer was greater than 100 i.e. rebound of hammer.



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**DESIGNED SOIL PARAMETERS FOR THE PROPOSED PRODUCED WATER TREATMENT SYSTEM-
TRAIN A & B/ HOT OIL TREATMENT SYSTEM (TAG NO. 7/15), BH-11**

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand. (CI-MI-OI)	c	119.080	114.580	4.50	10	10	5.3	0	0.87	1.96
2	Very Dense / Compacted, yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica. (SM)	phi	114.580	101.080	13.50	>100	-	0.1	32.29	0.95	10.33
3	Hard, Grey, Silty Clay / Clayey Silt with traces of fine Sand & mica. (CI)	c	101.080	98.080	3.00	69	-	-	-	0.88	18.06
4	Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (CL-ML-OL)	c	98.080	95.080	3.00	49	26	-	-	0.89	20.72
5	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	95.080	83.930	11.15	>100	-	0.0	32.54	0.96	27.40

**MULTI PHASE FLOW METER & TEST SEPARATOR/ FLASH GAS COMPRESSION SYSTEM (TAG
NO. 2/5),BH-12**

One borehole was drilled here (BH-12). Borehole was terminated at 35.00m depth. First stratum consists Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand & mica. Inorganic clay, organic silts was observed in this layer. This layer encountered upto 4.50m depth below ground level. This was underlain by Very Dense / Compacted, Light Yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica & Clay observed occasionally, silty sand, poorly graded sand silt mixture was observed in this layer. This stratum was extended upto 16.50m depth below the ground level. This is followed by Stiff to Very Stiff, Dark Grey, Silty Clay with traces of fine Sand & mica. High plasticity was observed upto the depth is 19.50 m below ground level. Thereafter another clay layer was encountered i.e. Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. Inorganic silt with low plasticity was observed. This layer was extended upto 25.50m below ground level. Finally borehole was terminated in Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica at 35.12m depth below ground level. N value of this layer was greater than 100 i.e. rebound of hammer.



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**DESIGNED SOIL PARAMETERS FOR THE PROPOSED MULTI PHASE FLOW METER & TEST
SEPARATOR/ FLASH GAS COMPRESSION SYSTEM (TAG NO. 2/5, BH-12:**

Sr. No	Description	Type of Soil	From	To	Thicknes s	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ₂	Deg.	T/m ³	T/m ²
1	Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand & mica. (CI-MI-OI)	c	119.554	115.05 ₄	4.50	7	7	7.2	0	0.88	1.98
2	Very Dense / Compacted, Light Yellowish / Brownish Grey, Medium to fine grained Silty Sand with traces of mica & Clay observed Occasionally. (SC-SM)	phi	115.054	103.05 ₄	12.00	83	49	0.1	32.29	0.95	9.66
3	Stiff to Very Stiff, Dark Grey, Silty Clay with traces of fine Sand & mica. (CH)	c	103.054	100.05 ₄	3.00	17	17	-	-	0.88	16.68
4	Hard, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (CL-ML-OL)	c	100.054	94.054	6.00	63	31	-	-	0.89	20.67
5	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	94.054	84.434	9.62	>100	-	0.1	32.33	0.96	27.96

HP FLARE SYSTEM (TAG NO. 16) BH-13

One borehole was drilled here (BH-13). Borehole was terminated at 35.00m depth. Top stratum consists of Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand & mica. In organic clays encountered upto 4.50m depth below ground level. This was underlain by Very Dense / Compacted, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay observed occasionally. Silty sand poorly graded sand silt mixture was observed in this layer. This stratum was extended upto 15.0m depth below the ground level. This was followed by Hard / Compacted, Grey, Clayey Sandy Silt with traces of mica. Organic silt and organic silty clays was observed in this layer. this layer was extended upto 18.00 m below ground level Thereafter another clay layer was encountered i.e. Very Stiff, Dark Grey, Silty Clay with traces of fine Sand. This layer was extended upto 19.50m below ground level. High plasticity was observed. This was followed by Hard / Compacted, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. This layer was extended upto 27.00m below ground level. Finally borehole was terminated in Compacted, Grey, Medium to fine



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grained Silty Sand with traces of Mica & gravels at 35.30m depth below ground level. N value of this layer was greater than 100 i.e. rebound of hammer.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED HP FLARE SYSTEM (TAG NO. 16) BH-13

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff, Light Yellowish / Brownish, Silty Clay with traces of fine sand & mica. (CI-MI-OL)	c	119.212	114.712	4.50	11	11	6.0	0	0.89	2.00
2	Very Dense / Compacted, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay observed Occasionally. (SC-SM)	phi	114.712	104.212	10.50	72	40	0.2	30.96	0.94	8.94
3	Hard / Compacted, Grey, Clayey Sandy Silt with traces of mica. (ML-OL)	c	104.212	101.212	3.00	71	-	20.0	0	0.88	15.20
4	Very Stiff, Dark Grey, Silty Clay with traces of fine Sand. (CH)	c	101.212	99.712	1.50	23	-	10.0	0	0.87	17.17
5	Hard / Compacted, Grey, Clayey Sandy Silt / Sandy Clayey Silt with traces of mica, Variable of Sand Content. (CL-ML-OL)	c	99.712	92.212	7.50	77	36	18.0	0	0.86	21.05
6	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels. (SM)	phi	92.212	83.912	8.30	>100	-	0.1	31.63	0.96	11.74

INSTRUMENT AIR/ UTILITY AIR SYSTEM & CAPTIVE POWER PLANT (TAG No. 10 & 11): BH- 14 & 20

Two boreholes were drilled at the location. Borehole was terminated at 35.0m depth.

Top stratum of subsoil was Stiff to Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand 4.00 to 4.50m depth below ground level. It consists of inorganic silty clay to clayey silt of medium plasticity with organic silt and silty clay content. This was underlain by Dense to Very Dense, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay observed occasionally of depth 11.00 to 11.50m. It consists of a silty sand, clayey sand of poorly graded sand silt and sand clay mixtures. This was followed by Hard, Grey, Sandy Clayey Silt with traces of mica. It was observed at depth 15.0 m for BH-14 and at depth 24.0m at BH-20.

Its depth ranges from 1.50m to 4.50m. It consists of inorganic clayey sandy silt and organic clayey silt of low



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plasticity. Thereafter strata was Very Stiff, Dark Grey, Silty Clay with traces of fine Sand of thickness 2.00 - 3.50m. Organic clay of medium plasticity was observed in BH-20. Following strata observed was Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. Depth of the strata varies from 3.50 to 7.0m. Hard, Grey / Deep grey, Clayey Silt with traces of Sand & mica was observed in BH-14 of thickness 6.00m. Finally borehole was terminated in Compacted, Grey, and Medium to fine grained Silty Sand with traces of Mica after penetrating 28.50 m. N Values in this layer ranges from 86 to greater than 100 which indicates very dense / compacted cohesionless stratum.

**DESIGNED SOIL PARAMETERS FOR THE PROPOSED INSTRUMENT AIR/ UTILITY AIR SYSTEM &
CAPTIVE POWER PLANT (TAG No. 10 & 11), BH- 14 & 20:**

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. (CI-MI-OI)	c	119.778	115.278	4.50	14	-	4.0	0	0.87	1.96
2	Very Dense / Compacted, Light Brownish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay. (SC-SM)	phi	115.278	104.778	10.50	92	58	0.0	31	0.93	8.80
3	Stiff to Very Stiff, Deep grey, Silty Clay with traces of Sand & decomposed wood. (CH-OH)	c	104.778	101.778	3.00	19	19	5.0	0	0.88	15.00
4	Very Dense / Compacted, Grey, Fine grained Silty Sand with traces of Mica. (SM)	phi	101.778	95.778	6.00	96	46	0.0	32	0.95	19.17
5	Hard, Grey, Clayey Sandy Silt with traces of mica. (ML-OL)	c	95.778	91.278	4.50	88	88	8.0	0	0.9	24.05
6	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels. (SM)	phi	91.278	84.478	6.80	100	40	0.0	32	0.96	29.33

TREATED CRUDE STORAGE TANK AND PUMPS (TAG No. 23): BH-15

One borehole was drilled at borehole location BH-15. Borehole was terminated at 35.0m depth below ground level. The top soil cover encountered up depth of 4.50 m below ground level was Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand (CI-MI-OI) which was followed by 9.00m thick Very Dense, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay / Gravels observed Occasionally (SC-SM). Thereafter 6.00 m thick Stiff to Very Stiff, Grey / Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, variable of Clay Content (CI-CH). Finally, the borehole was terminated in Very Dense /



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Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica(SM) after penetrating 15.60 m in this cohesionless stratum. N values ranges from 92 to greater than 100 i.e. rebound of hammer indicating very dense/compacted cohesionless stratum.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED TREATED CRUDE STORAGE TANK AND PUMPS

(TAG No. 23), BH-15:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. (CI-MI-OI)	c	119.828	115.328	4.50	17	-	9.0	0	0.9	2.03
2	Very Dense, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay / Gravels observed Occasionally. (SC-SM)	phi	115.328	106.328	9.00	57	44	0.2	30.5	0.92	8.19
3	Stiff to Very Stiff, Grey / Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, variable of Clay Content. (CI-CH)	c	106.328	100.328	6.00	10	-	5.0	0	0.85	14.88
4	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	100.328	84.728	15.60	92	41	0.0	32	0.96	24.92

TREATED CRUDE STORAGE TANK & PUMPS (TAG No. 23): BH- 16/SWL

One borehole was drilled at the location. Borehole was terminated at 35.0m depth.

Top stratum of subsoil was Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. The thickness of the strata is 4.50m. This is underlain by Dense to Very Dense, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay / Gravels observed occasionally. It consists of silty sand, poorly graded sand silt mixtures with non plasticity. This layer was extended upto 13.50 m below ground level. This is followed by Stiff to Very Stiff, Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, variable of Clay Content. The stratum was extended upto 18.0 m below ground level. It consists of inorganic clayey silt and organic clayey silt of medium to high plasticity. Thereafter strata was Very Dense / Compacted, Grey, Fine grained Silty Sand with traces of Mica. (SM) was extended upto 22.5 m below ground level. This was followed by the stratum Very Stiff, Grey, Clayey Sandy Silt with traces of mica, plasticity of this layer was very low. From ground level this strata was extended upto 25.50m. Finally borehole was terminated in Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels at depth 35.15m below ground level. SPT N Values in this layer was greater than 100 which indicates compacted cohesionless stratum.



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DESIGNED SOIL PARAMETERS FOR THE PROPOSED TREATED CRUDE STORAGE TANK & PUMPS

(TAG No. 23), BH- 16/SWL:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. (CI)	c	119.911	115.411	4.50	21	21	6.2	0	0.9	2.03
2	Dense to Very Dense, Light Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay / Gravels observed Occasionally. (SC-SM)	phi	115.411	106.411	9.00	64	41	0.1	31.47	0.89	8.06
3	Stiff to Very Stiff, Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, variable of Clay Content. (CI-CH)	c	106.411	101.911	4.50	20	20	10.0	-	0.9	14.09
4	Very Dense / Compacted, Grey, Fine grained Silty Sand with traces of Mica. (SM)	phi	101.911	97.411	4.50	86	42	0.1	31.88	0.94	18.23
5	Very Stiff, Grey, Clayey Sandy Silt with traces of mica. (ML-OL)	c	97.411	94.411	3.00	19	14	7.0	-	0.88	21.66
6	Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels. (SM)	phi	94.411	84.761	9.65	>100	-	0.1	32.33	0.96	11.50

INDUSTRIAL/POTABLE WATER SUPPLY SYSTEM, (TAG NO. 6), BH-19

One borehole was drilled here (BH-19). Borehole was terminated at 35.30m depth.

Top stratum consists of Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. In organic clays encountered upto 3.00m depth below ground level. This was underlain by Dense to Very Dense, Light Yellowish / Grey, Fine grained Silty Sand with traces of mica & Clay / Gravels observed occasionally. Silty sand poorly graded sand silt mixture was observed in this layer. This stratum was extended upto 13.50m depth below ground level. This was followed by Stiff to Very Stiff, Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, variable of Clay Content. This layer was extended upto 18.0 m below ground level. Thereafter Dense to Very Dense, Deep Grey, Fine grained Silty Sand with traces of Mica layer was encountered; this layer was extended upto 21.00m below ground level.

~~This was followed by Hard, Grey, Clayey Sandy Silt with traces of mica. Inorganic clay & organic silts~~
was observed. This layer was extended upto 25.50m below ground level. Finally borehole was



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terminated in Compacted, Grey, Medium to fine grained Silty Sand with traces Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica at 35.30m depth below ground level. N value of this layer was ranges from 55 to greater than 100 i.e. rebound of hammer.

**DESIGNED SOIL PARAMETERS FOR THE PROPOSED INDUSTRIAL/POTABLE WATER SUPPLY
SYSTEM, (TAG NO. 6), BH-19**

Sr. No.	Description	Type of Soil	From	To	Thick ness	N	N _{corr}	C _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos	T/m ₂	Deg.	T/m ₃	T/m ²
1	Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine sand. (CI-MI-OI)	c	118.150	115.150	3.00	24	24	8.0	0	0.89	1.34
2	Dense to Very Dense, Light Yellowish / Grey, Fine grained Silty Sand with traces of mica & Clay / Gravels observed Occasionally. (SC-SM)	phi	115.150	104.650	10.50	75	49	0.2	30.28	0.90	7.40
3	Stiff to Very Stiff, Deep grey, Clayey Silt / Silty Clay with traces of Sand & mica, varriable of Clay Content. (CI-CH)	c	104.650	100.150	4.50	17	17	7.5	0	0.9	14.15
4	Dense to Very Dense, Deep Grey, Fine grained Silty Sand with traces of Mica. (SM)	c	100.150	97.150	3.00	54	29	0.1	30.5	0.95	17.60
5	Hard, Grey, Clayey Sandy Silt with traces of mica. (CL-ML-OL)	c	97.150	92.650	4.50	43	-	20.0	0	0.88	21.00
6	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	92.650	82.850	9.80	86	35	0.1	32.78	0.96	11.51

TRUNK LINE KOD & GAS METERING SYSTEM (TAG No. 6), BH- 21:

One borehole was drilled at the location. Borehole was terminated at 35.0m depth.

Top stratum of subsoil was Stiff to Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine Sand, 4.00m depth below ground level. It consists of inorganic silty clay to clayey silt of medium plasticity with organic silt and silty clay content. This was underlain by Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica of depth 9.00 m. It consists of a silty sand, poorly graded sand silt mixtures with non plastic fines. This was followed by Stiff to Very Stiff, Deep grey, Silty Clay with traces of Sand & decomposed wood.



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Depth of the stratum observed was 7.0 m. It consist of inorganic clayey sandy silt and organic clayey silt of high plasticity. Thereafter strata was Very Stiff, Grey, Clayey Sandy Silt with traces of mica of thickness 4.0 m. Organic clay of medium plasticity is observed. Finally borehole was terminated in Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. Thickness of the strata observed was 11.25 m. SPT N Values in this layer ranges from 93 to greater than 100 which indicates very dense /compacted cohesionless stratum.

DESIGNED SOIL PARAMETERS FOR THE PROPOSED TRUNK LINE KOD & GAS METERING SYSTEM

(TAG No. 6), BH- 21:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Stiff to Very Stiff, Light Yellowish / Brownish grey, Silty Clay with traces of fine Sand. (CI-MI-OL)	c	119.326	114.826	4.50	17	-	6.0	0	0.87	1.96
2	Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica.(SM)	phi	114.826	105.826	9.00	83	42	0.0	30	0.92	8.06
3	Stiff to Very Stiff, Deep grey, Silty Clay with traces of Sand & decomposed wood. (CH-OH)	c	105.826	98.326	7.50	14	-	-	-	0.9	15.57
4	Very Stiff, Grey, Clayey Sandy Silt with traces of mica(ML-OL)	c	98.326	95.326	3.00	24	-	-	-	0.9	20.30
5	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica. (SM)	phi	95.326	84.326	11.00	99	41	0.0	32	0.96	26.93

TREATED CRUDE STORAGE TANK & PUMPS (TAG No. 23), BH- 22:

One borehole was drilled at the location. Borehole was terminated at 35.0m depth.

Top stratum of subsoil was Medium Stiff, Light Yellowish / Grey, Silty Clay with traces of fine Sand. It consists of inorganic Sandy clayey silt of medium plasticity. The thickness of the strata is 2.80m. This was underlain by Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay of depth 10.20 m. It consists of silty sand, poorly graded sand silt mixtures with non plastic fines. This was followed by Hard, Grey, and Clayey Sandy Silt with traces of mica underlain by Medium Stiff, Deep grey, Silty Clay with traces of Sand. Depth of the stratum observed was 5.0 m. It consists of inorganic clayey sandy silt and organic clayey silt of medium to high plasticity. Finally borehole was terminated in Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels occasionally. Thickness of the strata observed was 17.15 m. SPT N Values in this layer ranges from 46 to greater than 100 which indicates very dense /compacted cohesionless stratum.



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DESIGNED SOIL PARAMETERS FOR THE PROPOSED TREATED CRUDE STORAGE TANK & PUMPS

(TAG No. 23), BH- 22:

Sr. No.	Description	Type of Soil	From	To	Thickness	N	N _{corr}	c _u	φ _u	γ _{bulk} / γ _{sub}	σ _o
			m	m	m	Nos.	Nos.	T/m ²	Deg.	T/m ³	T/m ²
1	Medium Stiff, Light Yellowish / Grey, Silty Clay with traces of fine Sand. (CI)	c	118.290	115.290	3.00	8	-	4.0	0	0.87	1.31
2	Very Dense, Yellowish / Grey, Medium to fine grained Silty Sand with traces of mica & Clay. (SC-SM)	phi	115.290	104.790	10.50	87	42	0.0	30	0.94	7.55
3	Hard, Grey, Clayey Sandy Silt with traces of mica. (ML-OL)	c	104.790	101.790	3.00	36	-	-	-	0.93	13.88
4	Medium Stiff, Deep grey, Silty Clay with traces of Sand. (CH)	c	101.790	100.290	1.50	8	-	-	-	0.93	15.97
5	Very Dense / Compacted, Grey, Medium to fine grained Silty Sand with traces of Mica & gravels occasionally. (SM)	phi	100.290	83.290	17.00	87	41	0.0	32	0.95	24.74

3.0 Recommendations for design of shallow /open foundations

- Prior to placement of foundations; stratum shall be thoroughly checked for loose soil pockets.
- Same if found shall be replaced with good quality soil, properly compacted to minimum 90% of Laboratory Standard Proctor Density or as directed by Engineer-in-charge. In addition, prior to placement of foundations, a mud mat (lean concrete) layer of suitable thickness shall be provided to counteract uplift pressures.
- For foundations placed in natural /virgin soil, over-excavation and loosening of strata at the founding level shall be avoided
- Backfilling after casting foundations shall be done in layers not exceeding 150mm loose thickness.
- Suitable drainage measures shall be provided so that water such as rainfall run off /seepage flows do not stagnate at the founding level
- Backfilling around underground liquid storage structures shall be allowed only after successful hydro-testing and when so certified by the Engineer-in-charge

3.1 Shallow foundations - Approach methodology

For shallow foundations, supporting capacity of soil at the founding level (below existing ground level) considered is based on both shear and settlement.



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Shear failure criteria recommended by IS-6403

The calculations are based on "TERZAGHI" bearing capacity equation as recommended by IS: 6403 as under for type of shear failure, purely cohesive soil, $\phi = 0$

$$\text{Net UBC} = c * N_c * S_c * d_c + \gamma * D * (N_q - 1) * S_q * d_q + 0.5 * \gamma * B * N_\gamma * S_\gamma * d_\gamma$$

Where,

N_c , N_q & N_γ : Bearing Capacity Factors for Shear Failure depending on void ratio

s_c , s_q & s_γ : Shape Factor, d_c , d_q & d_γ : Depth Factor

i_c , i_q & i_γ : Inclination Factor, W : Water Table Correction

Net Safe bearing capacity (SBC) is the maximum intensity of loading that the foundation will safely carry without the risk of shear failure of soil irrespective of any settlement that may occur. Net Safe bearing capacity can be obtained by dividing the Net UBC with a factor of safety generally 2.5.

$$\text{Net SBC} = \text{Net UBC} / 2.5$$

Settlement Criteria

The calculations are based on Immediate and long term Settlement using Standard Soil Mechanics formulae. In settlement calculations (Bowles), Influence zone below foundation has been considered as 2B.

Specimen calculations are given in **Annexure**.

4.0 Recommendations for deep foundations

It is obvious from previous paragraph that in case of tanks/ heavy load structure, load transfer envisaged is much higher than SBC derived from shear criteria even upto 3m or 5m depth. As well as considering the presence of high water, deep excavations may not be feasible; hence deep foundations may be necessary

4.1 Pile foundations

Considering sub-soil characteristics, presence of adjacent facilities Bored Cast-In-Situ appears to be most feasible type of deep foundation compared to driven piles. Pile bearing capacity in axial compression is arrived based on the static approach. Separate evaluation of shaft friction and end bearing forms the basis of this approach.

The following design parameters have been adopted

- Type: Bored cast-in-situ
- Diameter of the pile: 450, 500, 600, 750, 900 & 1000mm respectively
- Load transfer: Friction cum end bearing
- Design Pile cut off level: Adopted as 1.80 m below existing ground level
- Concreted length below cut off: Refer Summary
- Calculations: Are as per Static approach suggested in IS-2911, revised



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4.2 Methodology for Axial Load from Geotechnical Criteria

Safe Axial capacity

$$Q_{\text{ultimate}} = Q_{\text{skin friction}} + Q_{\text{end bearing}} \quad (\text{i.e.}) \quad Q_{\text{ultimate}} = f_s A_s + F_b A_b$$

Pile Foundation in Granular soils

The ultimate load capacity (Q_u) of piles, in granular soils is given by the following formula:

$$Q_u = A_p(1/2D\gamma N_\gamma + P_D N_q) + \sum_{i=1}^n K_i P_{Di} \tan \delta_i A_{si}$$

The first term gives end-bearing resistance and the second term given skin friction resistance. In first term, Term involving $1/2 D\gamma N_\gamma$ is generally ignored as value is quite small compared to $P_D N_q$

Where

A_p = cross-sectional area of pile tip, in m^2 ;

D = diameter of pile shaft, in m;

γ = effective unit weight of the soil, in KN/m^3 or t/m^3

N_γ and N_q = bearing capacity factors depending upon the angle of internal friction, ϕ at pile tip and from curve of IS-2911, Part 1 -Sec 2

P_D = effective overburden pressure at pile tip in KN/m^2 or t/m^2

$\sum_{i=1}^n$ = Summation for layers 1 to n in which pile is installed and which contribute to positive skin friction;

K_i = coefficient of earth pressure applicable for the i^{th} layer

P_{Di} = effective overburden pressure for the i^{th} layer, in KN/m^2 or t/m^2 satisfying critical depth concept

δ_i = angle of wall friction between pile and soil for the i^{th} layer; and

A_{si} = surface area of pile shaft in i^{th} layer, in m^2

Pile Foundation in Cohesive soils

The ultimate load capacity (Q_u) of piles, in cohesive soil is given by the following formula:

$$Q_u = A_p N_c C_p + \sum_{i=1}^n \alpha_i C_i A_{si}$$

The first term gives the end the second term gives the skin friction resistance.

Where

A_p = cross-sectional area of pile tip, in m^2 ;

N_c = bearing capacity factor, may be taken as 9;

C_p = average cohesion at pile tip, in kN/m^2 or t/m^2

$\sum_{i=1}^n$ = summation for layers 1 to n in which the pile is installed and which contribute to positive skin friction;

α_i = adhesion factor for the i^{th} layer depending on the consistency of soil,

C_i = average cohesive for i^{th} layer, in kN/m^2 ; and

A_{si} = surface area of pile shaft in the i^{th} layer,

The recommended factor of safety is 2.5 for safe axial load



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4.3 Axial Capacity-Concrete strength criteria

The axial capacity of a pile is given by the cross-sectional area of pile multiplied by stress in direct compression (σ_{cc}) which depends on grade of concrete (From IS: 456-2000). For design calculations, grade of concrete is assumed as M25

4.4 Uplift Capacity-Geotechnical Criteria

The uplift capacity of a pile is given by sum of frictional resistance and the self weight of the pile (buoyant). The recommended factor of safety is 3.0.

4.5 Uplift Capacity-Concrete strength criteria

The uplift capacity of a pile is given by cross-sectional area of pile multiplied by stress in tension (σ_t) which depends on grade of concrete (From IS: 456-2000). For design calculations, grade of concrete is assumed as M25

4.6 Increase in Pile capacities

As per clause 6.9 of IS-2911 (Part 1-Sec 2), maximum permissible safe load of a pile as arising out of wind loading is 25%. In case of loads arising out of earthquake effects, the increase of safe load on a single pile shall be limited to the provisions contained in IS 1893 (Part 1). For transient loading arising out of superimposed loads, no increase is permitted.

4.7 Consideration of negative skin friction

SPT 'N' value of the top layer generally has a consistency of medium stiff to very stiff and negative skin friction is not anticipated.

4.8 Spacing and group action

Decision regarding opting the type of foundation open/pile, size of foundation /diameter of pile' shall be taken by the structural designer depending upon magnitude of load transfer envisaged.

4.9 Load test requirements

Initial load tests shall be carried out as per IS-2911 guidelines to reconfirm the safe loads recommended above. Pile load tests shall be carried out as per the guidelines of IS: 2911- Part IV to reconfirm the safe load recommended for axial compression, lateral and uplift capacity in this report.

4.10 Lateral Load Capacity

Approach recommended in IS-2911, Part-1, Sec 2, is followed. Capacities have been recommended for a deflection of 5mm for **fixed Head** and assuming M25 grade concrete.

Specimen Calculations are enclosed in separate Annexure.

Decision regarding the 'diameter and configuration' of the pile thereof shall be taken by the designer depending upon magnitude of load transfer.



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Safe bearing capacities have been recommended for foundations placed at 1.50m, 3.00m & 5.00m depth below existing ground level. Net safe bearing pressures for square/ raft/rectangle type foundations have been computed based on shear & 50mm total settlement, findings of which are presented below:

Boreholes covered	Depth below EGL (m)	Width of foundation (m)	Net SBC (t/m ²) based on shear & settlement failure for square / strip*, regardless of shape
BH-1 (TAG NO. 9)	1.5	≥6m	7
	3.0	≥6m	10
BH-2 (TAG NO. 33)	1.5	1-2	10
		2-5	9
		≥6m	9
	3.0	1-2	11
		2-5	10
		≥6m	10
BH-4 & 24 (TAG NO. 8)	1.5	1-2	15
		2-5	13
		≥6m	12
	3.0	1-2	17
		2-5	15
		≥6m	15
BH-5 (TAG NO. 22)	1.5	1-2	16
		2-5	6
		≥6m	8
	3.0	1-2	18
		2-5	9
		≥6m	8.5
BH-6 (TAG NO.) 8 A)	1.5	1-2	13
		2-5	12
		≥6m	11
	3.0	1-2	34
		2-5	36
		≥6m	36
BH-7 (TAG NO. 29,30)	1.5	1-2	11
		2-5	9
		≥6m	8
	3.0	1-2	14
		2-5	10
		≥6m	10
BH-8 (Tag No. 27/31)	1.5	≥6m	4
	3.0	≥6m	6
	5.0	≥6m	9
BH-9 (TAG NO. 13)	1.5	≥6m	7
	5.0	≥6m	25
BH-10 (TAG NO.25)	1.50	1-2	14
	3.00	2-5	8.5



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Boreholes covered	Depth below EGL (m)	Width of foundation (m)	Net SBC (t/m ²) based on shear & settlement failure for square / strip*, regardless of shape
		≥6m	8
	5.00	≥6m	24
BH-11 (TAG NO. 7/15)	1.50	1-2	4.00
		2-5	13.0
		≥6m	13.0
	3.0	1-2	15.0
		2-5	13.0
		≥6m	4.00
	5.0	≥6m	18.00
BH-12 (TAG NO. 2/5)	1.50	1-2	18.40
		2-5	17.60
		≥6m	13.00
	3.00	1-2	21.20
		2-5	18.70
		≥6m	17.60
	5.00	≥6m	25.00
BH-13 (TAG NO. 16)	1.50	1-2	15.0
		2-5	14.0
		≥6m	6.0
	3.00	1-2	17.0
		2-5	15.0



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Boreholes covered	Depth below EGL (m)	Width of foundation (m)	Net SBC (t/m ²) based on shear & settlement failure for square / strip*, regardless of shape
		≥6m	6.0
	5.00	≥6m	7.0
BH-14 & 20 (TAG NO. 10,11)	1.5	1-2	8
	3.0		11
	5.0		69
	1.5	2-5	10
	3.0		11
	5.0		50
	1.5	≥6m	7
	3.0		8
	5.0		11
BH-15 (TAG NO.23)	1.50	1-2	27
	3.00	2-5	23
		≥6m	15
	5.00	≥6m	24
BH-16/SWL (TAG NO. 23)	1.50	1-2	16.0
		2-5	15.0
	3.00	1-2	18.0
		2-5	16.0
		≥6	1.5



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Boreholes covered	Depth below EGL (m)	Width of foundation (m)	Net SBC (t/m ²) based on shear & settlement failure for square / strip*, regardless of shape
	5.00	≥6	4.5
BH-19 (Tag No. 14)	1.50	1-2	20.0
		2-5	19.0
	3.00	2-5	34
		≥6	5.0
	5.00	≥6	5.0
BH-21 (TAG NO.6)	1.5	1-2	12
	3.0		18
	5.0		55
	1.5	2-6	8
	3.0		15
	5.0		50
	1.5	>6m	7
	3.0		14
	5.0		19
BH-22 (TAG NO.23)	1.5	1-2	8
	3.0		27
	5.0		48



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Boreholes covered	Depth below EGL (m)	Width of foundation (m)	Net SBC (t/m^2) based on shear & settlement failure for square / strip*, regardless of shape
	1.5	2-6	10
	3.0		30
	5.0		50
	1.5	>6m	11
	3.0		12
	5.0		13

Note: In net SBC calculations, ground water table is considered at existing ground level.

As can be seen, bearing characteristics is in-sufficient to sustain the heavy load transfer expected at 1.50, 3.00m & 5.00 m depth. Considering site conditions, taking the foundations beyond 3.00 m may not be feasible due to the presence of shallow water as excavations will involve dewatering.

Hence alternatives such as deep foundations may be necessary to ensure the effective load transfer without excessive settlements. Accordingly, alternatives have been considered (i.e.) Bored Cast-in-situ Pile foundations. The following pile capacity can be considered for the pile foundations **embedded in very dense/compacted sand layer ($N > 100$ consistently)**. While working out capacity, design parameter covering all tank boreholes /heavy loaded structures has been used and recommendations will be valid accordingly for respective locations. Capacities in Axial & Uplift are based on Geo-technical and Concrete strength considerations assuming M25 Grade concrete. Lateral Load capacity is based on deflection of 5mm at pile head assuming fixed head conditions.

Initial load tests shall be carried out as per IS-2911 guidelines to reconfirm the safe loads recommended above. Specimen Calculations are enclosed in separate **Annexure**. *Decision regarding the opting open/pile foundation and 'size of footing or diameter and configuration' of the pile thereof shall be taken by the designer depending upon magnitude of load transfer.*



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Borehole Location	Pile Diameter (mm)	Ground level RL(m)	Assumed Pile Cut-off below Ground level (m)	Concreted Length below I Cut-off (M)	Recommended Vertical Pile Capacity (t)	Recommended Uplift Pile Capacity (t)	Recommended Lateral Pile Capacity (t) for 5mm deflection, Fixed Head condition
BH- 1 FIRE FIGHTING SYSTEM (TAG NO. 9)	450	118.919	1.8	24.00	40	25	4.50
	500		1.8	24.00	45	29	5.00
	600		1.8	24.00	60	36	6.00
	750		1.8	24.00	100	47	7.50
	900		1.8	24.00	150	59	8.99
	1000		1.8	24.00	180	68	9.99
BH- 2 WATCH TOWER (TAG NO. 33)	450	120.448	1.8	25.50	40	28	3.32
	500		1.8	25.50	45	32	3.69
	600		1.8	25.50	60	42	4.42
	750		1.8	25.50	90	54	5.53
	900		1.8	25.50	135	67	6.64
	1000		1.8	25.50	165	77	7.37
BH- 4 OFF-SPACE PW STORAGE TANK & PW CIRCULATION PUMP (TAG NO. 8)	450	119.068	1.8	27.00	40	30	3.92
	500		1.8	27.00	50	36	4.36
	600		1.8	27.00	70	48	5.23
	750		1.8	27.00	110	62	6.54
	900		1.8	27.00	145	77	7.84
	1000		1.8	27.00	180	88	8.72
BH- 5 OFF-SPEC CRUDE STORAGE TANK & PUMPS (TAG NO.22)	450	119.994	1.8	26.00	40	31	2.37
	500		1.8	26.00	50	36	2.63
	600		1.8	26.00	75	47	3.15
	750		1.8	26.00	115	61	3.94
	900		1.8	26.00	150	76	4.73
	1000		1.8	26.00	200	88	5.26
BH- 6 OFF-SPACE PW STORAGE TANK & PW CIRCULATION PUMP (TAG NO. 8A)	450	119.813	1.8	25.50	40	30	2.37
	500		1.8	25.50	50	34	2.63
	600		1.8	25.50	65	42	3.15
	750		1.8	25.50	100	55	3.94
	900		1.8	25.50	140	68	4.73
	1000		1.8	25.50	170	78	5.26
BH- 7 (SECURITY BARRACK & LIVING QUARTERS) (TAG NO. 29, 30)	450	119.979	1.8	25.50	40	30	2.37
	500		1.8	25.50	50	33	2.63
	600		1.8	25.50	65	40	3.15
	750		1.8	25.50	100	53	3.94



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Borehole Location	Pile Diameter (mm)	Ground level RL(m)	Assumed Pile Cut-off below Ground level (m)	Concreted Length below I Cut-off (M)	Recommended Vertical Pile Capacity (t)	Recommended Uplift Pile Capacity (t)	Recommended Lateral Pile Capacity (t) for 5mm deflection, Fixed Head condition
	900		1.8	25.50	150	66	4.73
	1000		1.8	25.50	180	75	5.26
BH-11 PRODUCED WATER TREATMENT SYSTEM- TRAIN A & B/ HOTS IL (TAG NO. 7/15)	450	119.08	1.8	24.0	50.0	35	2.37
	500		1.8	24.0	60.0	42	2.63
	600		1.8	24.0	90.0	58	3.15
	750		1.8	24.0	120.0	75	3.94
	900		1.8	24.0	190.0	94	4.73
	1000		1.8	24.0	230.0	105	5.26
BH-12 MULTI PHASE FLOW METER & TEST SEPARATOR/ FLASH GAS COMPRESSION SYSTEM (TAG NO. 2/5)	450	119.554	1.8	26.0	60	40	2.93
	500		1.8	26.0	70	47	3.26
	600		1.8	26.0	95	60	3.91
	750		1.8	26.0	140	80	4.88
	900		1.8	26.0	200	98	5.86
	1000		1.8	26.0	240	100	6.51
BH- 13 HP FLARE SYSTEM (TAG NO.23)	450	119.212	1.8	27.0	65	50	2.67
	500		1.8	27.0	75	55	2.97
	600		1.8	27.0	100	70	3.57
	750		1.8	27.0	140	90	4.46
	900		1.8	27.0	190	110	5.35
	1000		1.8	27.0	240	120	5.94
BH-14 CAPTIVE POWER PLANT (TAG NO.11)	450	119.170	1.8	30.0	60	44	3.92
	500		1.8	30.0	70	51	4.36
	600		1.8	30.0	95	64	5.23
	750		1.8	30.0	150	84	6.54
	900		1.8	30.0	210	106	7.84
	1000		1.8	30.0	250	122	8.72
BH-20 INSTRUMENT AIR/ UTILITY AIR SYSTEM (TAG NO.10)	450	119.778	1.8	30.0	55	40	3.92
	500		1.8	30.0	65	46	4.36
	600		1.8	30.0	90	59	5.23
	750		1.8	30.0	140	80	6.54
	900		1.8	30.0	200	100	7.84
	1000		1.8	30.0	250	119	8.72
BH- 15 (TREATED CRUDE STORAGE TANK AND	450	119.828	1.8	20.00	35	20	6.60
	500		1.8	20.00	40	23	7.33



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Borehole Location	Pile Diameter (mm)	Ground level RL(m)	Assumed Pile Cut-off below Ground level (m)	Concreted Length below I Cut-off (M)	Recommended Vertical Pile Capacity (t)	Recommended Uplift Pile Capacity (t)	Recommended Lateral Pile Capacity (t) for 5mm deflection, Fixed Head condition
	600		1.8	20.00	60	29	8.80
	750		1.8	20.00	90	38	10.99
	900		1.8	20.00	140	47	13.19
	1000		1.8	20.00	180	54	14.66
BH- 16/SWL (TREATED CRUDE STORAGE TANK AND PUMPS) (TAG NO. 23)	450	119.911	1.8	26.0	50	35	2.67
	500		1.8	26.0	60	40	2.97
	600		1.8	26.0	80	50	3.57
	750		1.8	26.0	130	70	4.46
	900		1.8	26.0	190	90	5.35
	1000		1.8	26.0	240	100	5.94
BH-19 INDUSTRIAL/POTABLE WATER SUPPLY SYSTEM (TAG NO. 14)	450	118.150	1.8	26.0	40	30	3.35
	500		1.8	26.0	50	32	3.72
	600		1.8	26.0	70	42	4.47
	750		1.8	26.0	100	58	5.59
	900		1.8	26.0	160	75	6.70
	1000		1.8	26.0	200	88	7.45
BH-21 TRUNK LINE KOD & GAS METERING SYSTEM (TAG No. 6):	450	119.326	1.8	26.0	55	41	2.89
	500		1.8	26.0	65	47	3.22
	600		1.8	26.0	90	58	3.86
	750		1.8	26.0	120	76	4.82
	900		1.8	26.0	180	95	5.79
	1000		1.8	26.0	220	108	6.43
BH-22 TREATED CRUDE STORAGE TANK/PUMPS (TAG NO.23)	450	119.326	1.8	22.0	40	26	2.52
	500		1.8	22.0	50	30	2.80
	600		1.8	22.0	70	38	3.37
	750		1.8	22.0	100	52	4.21
	900		1.8	22.0	150	67	5.05
	1000		1.8	22.0	210	78	5.61
BH-24 TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP (TAG NO.8)	450	119.326	1.8	28.0	50	39	2.37
	500		1.8	28.0	60	45	2.63
	600		1.8	28.0	80	56	3.15
	750		1.8	28.0	100	73	3.94
	900		1.8	28.0	140	91	4.73
	1000		1.8	28.0	180	104	5.26



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4.11 Susceptibility of Subsoil to Liquefaction:

(N1) = CNCECBCSCR

1) CN = Correction for Overburden pressure limited to 1.70

$CN = (Pa/\sigma) 0.5$

$Pa = 1$ Atmospheric pressure = 10t/sqm

σ = Vertical effective stress at the depth of SPT

2) CE = Correction for Level of energy divided by SPT hammer

3) CB = Correction for Borehole Diameter

Table: Borehole Diameter Correction Factor

Borehole Diameter	Term	Correction Factor
65	CB	1
115	CB	1
150	CB	1.05
200	CB	1.15

4) CS = Correction for SPT sampler use

5) CR = Correction for short of drill rod

Table: Rod Length Correction Factor

Rod length (m)	Correction Factor (CR)
<3	0.75
3-<4	0.8
4-<6	0.85
6-<10	0.95
10.-30	1

Corrected (N1) = $\alpha + \beta(N1)$

For Fine Content ≤ 5 , $\alpha = 0$ and $\beta = 1$

For (Fine Content > 5 and < 35), $\alpha = \text{EXP}((1.76 - (190/FC2)))$ and $\beta = (0.99 + (FC1.5/1000))$

For Fine Content > 35 , $\alpha = 5$ and $\beta = 1.2$

$CSR = 0.65 * (a_{max}/g) * \text{Total Overburden pressure} * rd / \text{Effective Overburden pressure}$

$rd = (1 - 0.4113 * d^{0.5} + 0.04052 * d + 0.001753 * d^{1.5}) / (1 - 0.4177 * d^{0.5} + 0.05729 * d - 0.006205 * d^{1.5} + 0.00121 * d^2)$

Table: Seismic Zone Factor

Seismic Zone	a_{max}/g
1	0
2	0.1
3	0.16
4	0.24
5	0.36

$CRR = 1 / (34 - \text{Final } (N1)60/135 + 50 / (10 * \text{Final } (N1)60 + 45)^2 - 1/200$



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FOS = CRR/CSR

FOS<1 – Soil is Liquefiable

For calculation of CSR & CRR, water level is considered at ground level.

As per H.B. Seed and I.M. Idriss (1982) a soil is said to be non-liquefiable if any one of the following three criteria is satisfied.

A) The soil contains fine grained soils with clay contents greater than 15%.

B) Liquid limit greater than 35% or

C) Moisture contents less than 90% of the liquid limit.

As per IS: 1893 for Seismic Zone III to V if SPT "N" value is greater than 25 then the soil is considered as non- liquefiable.

At lower depth all the "N" values are greater than 25, therefore the soil is non-liquefiable for the entire borehole.

Considering that Project site comes under zone V which is considered 'vulnerable' it shall be ensured that construction shall comply with guidelines laid down by Bureau of Indian Standards for seismically vulnerable areas. Liquefaction calculation is provided in the **annexure**.

Precautions

Considering that Project site comes under **zone V** which is considered 'vulnerable' it shall be ensured that construction shall comply with guidelines laid down by Bureau of Indian Standards for seismically vulnerable areas.

5.0 Water Level monitoring in Standpipe

Water level monitoring studies were carried out over a period of 7 days subsequent to completion of borehole BH-16. Records are enclosed separately. Water level recorded on day 1 after insertion of UPVC casing (properly protected at top with a cap so as to prevent rain water entering) was 0.625m and after 7 days was 0.925m below ground level.

The final design option to be implemented (Piles/open) depends on a number of factors like feasibility of method, magnitude of load transfer, availability of locally available implementation agencies and other techno-economic considerations. Decision in this regard is left to the client

6.0 Site Conditions

6.1 Site Geology - General description

The Site is situated near Baghjan village in Hapjan Tehsil in Tinsukia District (27° 14' 03" and 27° 48' 05" North Latitudes and 95° 13' 30" and 96° 00' 00" East Longitudes). It is located 15 KM towards North from District head quarters of Tinsukia, 13 KM from Hapjan and 468 KM from the State capital Dispur. Varieties of flora and fauna grow there balancing the toxic effects of crude oil, heavy metals and other components of nature. The area experiences a mean annual rainfall of 2679mm, mean relative humidity of 79% and minimum temperature of 11°C and maximum temperature of 31°C. The study area is drained by mighty River Brahmaputra flowing NE-SW direction and its tributaries Dibru and Burhi-Dihing flowing from Naga-



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Patkai hill range in the south. All the rivers are ephemeral in nature and carry huge quantities of water and sediment during rainy season and cause submergence of low lying areas. Average elevation of the site is 116 m of the mean sea level (MSL).

The soil in the area may be grouped into three broad categories depending upon the origin and occurrence. These are given below:

(a) **Newer alluvial Soil:** Flood plain areas of River Brahmaputra and the tributaries in the northern part are characterized by light grey clay with sand and silt.

(b) **Older alluvial Soil:** It occurs mainly in the central part with limonite yellow to reddish yellow clay.

(c) **Soil cover in forest and hilly areas:** It is deep reddish in colour and occurs over the older geological formation in the southern most part of the district.

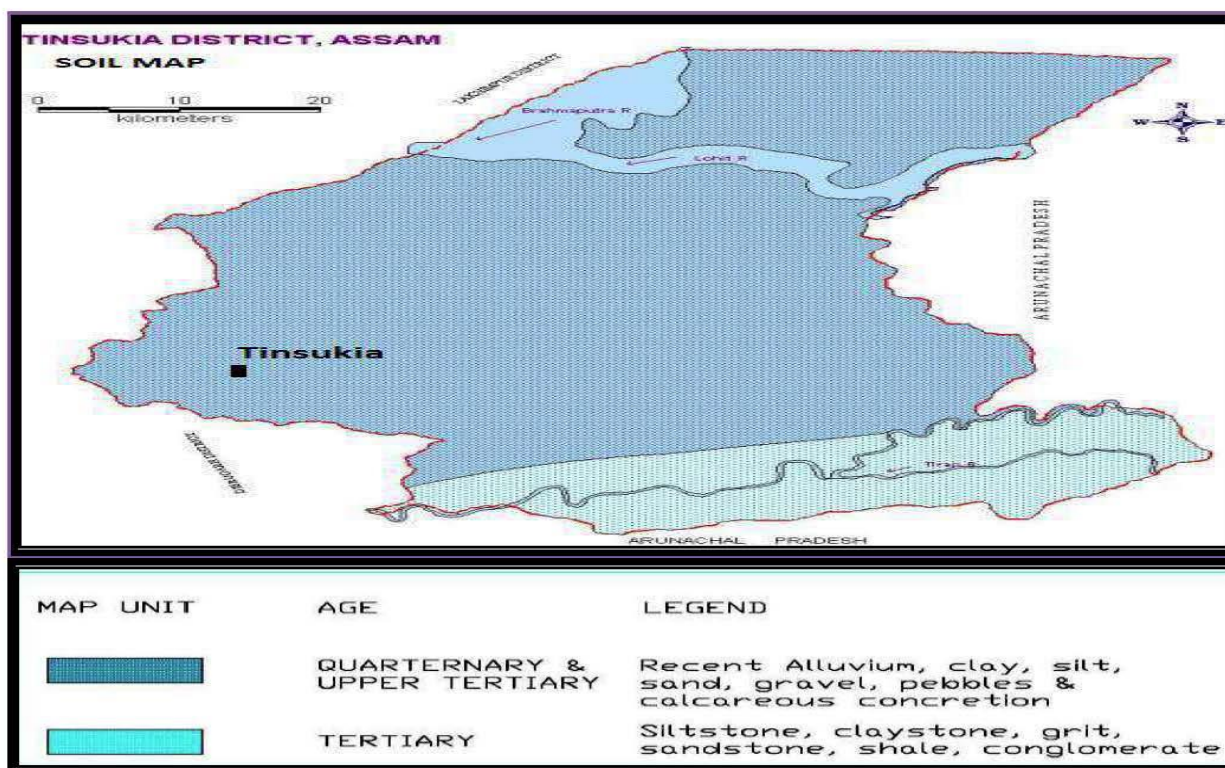


Fig. 2: Geological map of project Area at Baghjan, Tinsukia, Assam

6.2 Potential Geological /other hazards

6.2.1 Seismic hazard

North East India is located in an Earthquake prone zone (**zone V**) of the Indian subcontinent. In this region earthquake comes with landslides, flood prone and along series of smaller magnitude earthquakes. Much of Assam lies in the Brahmaputra River Valley, except for a few southern districts. The northern and eastern parts of this valley are bounded by the Himalayan Frontal Thrust (HFT).



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Among the large earthquakes in this region were the events in 1897 and 1950 with magnitude M_s of 8.7.

6.3 Ground water elevations and expected variations

Refer table below

SI No.	BH No	Depth of Water level in Borehole after 24 hours of completion (m)	Existing Ground level / (EGL above MSL) (m)
1	BH1	1.10	118.919
2	BH2		120.448
3	BH4	1.10	119.068
4	BH5	1.65	119.994
5	BH6	3.2	119.813
6	BH7	1.10	119.979
7	BH8	0.95	119.347
8	BH9	1.46	119.834
9	BH10	1.20	120.021
10	BH11	0.20	119.08
11	BH12	0.30	119.554
12	BH13	0.70	119.212
13	BH14	2.30	119.17
14	BH15	1.10	119.828
15	** BH- 16/SWL	0.30	119.911
16	BH19	2.20	118.15
17	BH20	1.35	119.778
18	BH21	0.90	119.326
19	BH22	1.30	118.29
20	BH24	0.10	118.648

** Standpipe data -7 Day monitoring after installation, Refer **Annexure** record.

6.4 Description of underground obstructions

Generally, no underground obstructions either in form of boulder formations /localized gravel pockets were observed in all boreholes that were drilled. Hard rock was not encountered within explored depth of 35.0m.

6.5 Chemical attack potential for concrete and underground facilities

Refer section on chemical tests and electrical resistivity tests.



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7.0 Field Investigations

7.1 Description of sampling procedures

7.1.1 Boring /drilling

All 20 boreholes were bored/drilled using mud rotary drilling rigs capable of drilling upto-required depth. Casing / bentonite slurry was used to stabilize side of boreholes and avoid caving, while drilling. Size of borehole was 150mm. Methodology of boring conformed to stipulations of **IS: 1892**. Refer **Annexure** for bore logs

All boreholes were terminated as instructed by Client's Engineer-in-charge at site. All the boreholes were drilled upto minimum 35m depth regardless of sub-soil stratification encountered.

7.1.2 Collection of Disturbed samples

Disturbed samples were collected using SPT split spoon sampler at 3.00 intervals upto 6m depth, thereafter 1.5m intervals upto 33m depth and from thereon, 2m intervals upto termination depth.

7.1.3 Collection of Undisturbed samples

UDS Samples were procured in clay layer alternately with SPT in every borehole excepting BH-6,19 &22

7.2 Description of field tests

7.2.1 Standard Penetration test (SPT)

This is a field test used to determine 'penetration resistance of soil'. The methodology adopted conformed to **IS: 2131**. In this test driving bit (50.8mm OD and 35mm ID) is replaced with split spoon sampler. Sampler is then driven by dropping 63.5 kg hammer through a 15cm 'initial seating drive'. Number of blows required for driving the sampler 30 cm beyond seating drive is termed as 'penetration resistance' 'N'. Where full 30cm penetration was not possible, number of blows and corresponding penetration was recorded and same is shown in borelogs (Annexure I).



Fig. 3: Soil Exploration in progress at location BH-12 & BH-6 for the Proposed Group Gathering Station (GGS) at Baghjan, Tinsukia Assam



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Field SPT "N" value further corrected by following two methods

1. Due to Overburden-The N value for cohesionless soil shall be corrected for overburden as per Fig. 3 N').

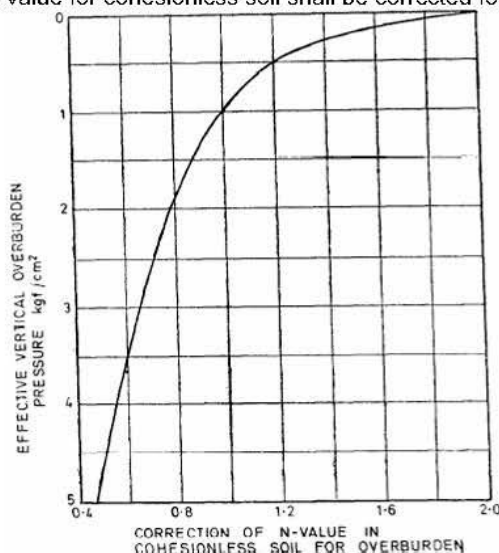


Fig: 4 SPT "N" Corrections Due To Overburden

2. Due to Dilatancy - The value obtained in Overburden correction shall be corrected for dilatancy if the stratum consists of fine sand and silt below water table for values of N' greater than 15, as under (N").

$$N'' = 15 + 0.5 (N' - 15)$$

Corrected SPT "N" values are given in Bore logs at Annexure – 2.

7.2.2 Field permeability test

The field permeability test was conducted in all the 20 explored boreholes generally between 0.0 to 3.00m due to presence of shallow water levels. However in select boreholes, permeability tests were conducted at deeper depths also in clayey silt layer as per client instruction. The test was conducted as per IS 5529 part I by "falling head method" in order to ascertain the "permeability characteristics" of the stratum. Refer Annexure II for field records

Permeability Computations

The coefficient of permeability (k) is calculated as follows.

$$k = \frac{(d)^2}{8L} \log_e \left(\frac{L/R}{(h_1/h_0) / (h_2/h_0)} \right) / (t_2 - t_1), \text{ where}$$

k = coefficient of permeability in cm /sec.

d = diameter of intake/ stand pipe in cm.

L = length of the test zone in cm.

h1 = head of water in the stand pipe at time t1 sec, in cm

h2 = head of water in the stand pipe at time t2 sec, in cm

h0 = head of water in the stand pipe at time t0 sec, in cm

R = radius of the hole in cm.

Table shows field permeability values at tested depths in boreholes



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SI No	Conducted in BH No.	Existing ground level (elevation above MSL) in m	Test section below EGL (m)	k (cm/sec)
1	BH1	118.919	0.0-3.00	5.25×10^{-7}
2	BH2	120.448	0.0-3.00	4.81×10^{-7}
3	BH4	119.068	0.0-3.00	3.79×10^{-7}
4	BH5	119.994	0.0-3.00	4.59×10^{-7}
5	BH6	119.813	0.0-3.00	1.64×10^{-7}
6	BH7	119.979	0.0-3.00	1.95×10^{-7}
7	BH8	119.347	0.0-3.00	7.27×10^{-7}
8	BH9	119.834	0.0-3.00	9.49×10^{-8}
9	BH10	120.021	0.0-3.00	8.42×10^{-7}
10	BH11	119.08	0.0-3.00	4.14×10^{-7}
11	BH12	119.554	0.0-3.00	3.71×10^{-7}
12	BH13	119.212	0.0-3.00	4.93×10^{-7}
13	BH14	119.17	0.0-3.00	6.88×10^{-7}
14	BH15	119.828	0.0-3.00	6.19×10^{-7}
15	BH-16/SWL	119.911	0.0-3.00	1.78×10^{-7}
16	BH19	118.15	0.0-3.00	8.52×10^{-7}
17	BH20	119.778	0.0-3.00	2.05×10^{-7}
18	BH21	119.326	0.0-3.00	2.03×10^{-7}
19	BH22	118.29	0.0-3.00	1.06×10^{-6}
20	BH24	118.648	0.0-3.00	5.18×10^{-7}

Based on permeability, the layer is classified as "**Low Permeability**" soil (Degree of Permeability based classification -Terzaghi & Peck, 1948)

7.2.3 Installation of Standpipe and water level monitoring

Standpipe was installed in BH-16. Salient details are tabulated below

SL No.	TAG No	Installed in BH No	Existing Ground level (m)	Depth of installation below EGL (m)	Water level below EGL (m) after 7 days
1	23	BH-16	119.911	35.00	0.925

Procedure for installation

In the 150mm borehole drilled, 75mm PVC jointed pipes glued with special PVC adhesive and having vertical hand cut slots (<2mm width) were installed in final 1.5m. The gap between the PVC pipe and surrounding sides of borehole was filled with sand. The last 1.5m (below the existing ground level) was filled sequentially, first 0.5m using bentonite pellets and the final 1.3 (1+0.3m projection above ground level) using rich cement –sand mix. All round base support to the PVC casing was provided in form of thick PCC platform. The free projected portion of the casing is approximately 500mm. The end was sealed with a bore cap.



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Ground water level monitoring post installation

On completion of installation, water levels were recorded on daily basis upto 7 days. Observation Records are enclosed separately as an **Annexure**. A Point to be noted is flushing was done on the day of installation and covered by cap at the top.

7.3 Logs of borings

7.3.1 Exploratory boreholes

Borelog Records are enclosed separately as Annexure the following necessary information is included.

- Description and thickness of each stratum encountered
- Locations referenced to coordinates (Northing and Easting)
- Ground surface elevation at test location (referenced to MSL Datum)
- Standard penetration test values per 15cm (150mm) and 'N' value
- Water level after 24 hours of borehole completion

8.0 LABORATORY TESTS

Following laboratory tests were carried out on representative soil samples

Geo-technical Properties (Borehole soil samples)

- Natural Moisture content, bulk and dry density (for UDS /Core cutter samples/SPT Samples)
- Sieve and hydrometer analysis
- Engineering classification of soil as per IS:1498
- Atterberg's limits - liquid limit, plastic limit
- Specific gravity for soil
- Shear strength (Triaxial/Direct/UCS depending on soil type)
- Consolidation tests for UDS clayey silt samples
- Differential free swell index tests

Chemical analysis for soil and water samples

Following chemical tests on selected soil samples and water samples from boreholes were conducted.

Soil samples

- pH
- Chloride content in percentage
- Sulphate as SO₄ and SO₃ in percentage

Ground water samples collected from borehole locations

- pH
- Chloride content in mg/lit
- Sulphate as SO₄ and SO₃ in mg/lit



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8.1 Standards adopted

8.1.1 Geo-technical Properties

Laboratory Test Parameter	IS Standard
Grain size analysis of soil	IS - 2720 Part - 4
LL & PL of soil	IS - 2720 Part - 5
Specific Gravity of soil	IS - 2720 Part - 3
Natural moisture content (Soil)	IS - 2720 Part - 2
Free Swelling Index	IS - 2720 Part - 40
Direct Shear Test	IS - 2720 Part - 13
Triaxial Test (UU)	IS - 2720 Part - 11
Consolidation	IS - 2720 Part - 15

Results are furnished as an **Annexure**

8.1.2 Chemical Properties

Laboratory Test Parameter (Soil Sample in aqueous extract)	Testing Protocol
pH	As per Standard Chemical Testing Protocol
Chloride as Cl in mg/l	
Sulphate as SO ₄ and SO ₃ in %	

Laboratory Test Parameter (Water sample from borehole)	Testing Protocol
pH	As per Standard Chemical Testing Protocol
Chloride content in mg/lit	
Sulphate as SO ₄ and SO ₃ in mg/lit	

Results are as follow:



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CHEMICAL TESTS ON WATER SAMPLES FROM SOIL EXPLORATORY BOREHOLES

Location	BH No.	pH	Sulphate		Chloride mg/l
			SO ₄ mg/l	SO ₃ mg/l	
FIRE FIGHTING SYSTEM	BH1	6.77	2.73	2.499	9.167
WATCH TOWER	BH2	6.85	2.619	2.153	6.743
TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP	BH4	6.73	2.328	1.916	7.247
OFF-SPEC CRUDE STORAGE TANK & PUMPS	BH5	6.63	1.814	1.623	8.111
OFF-SPEC PW STORAGE TANK & PW CIRCULATION PUMP	BH6	6.08	2.632	2.473	7.498
SECURITY BARRACK	BH7	6.35	1.316	1.032	6.408
MUSTER STATION /PARKING AREA	BH8	6.43	1.966	1.927	6.750
CHEMICAL INJUNCTION SYSTEM	BH9	6.20	2.504	2.369	5.441
SUBSTATION & CONTROL ROOM	BH10	6.12	2.034	1.412	7.290
PRODUCED WATER TREATMENT SYSTEM-TRAIN A & B/HOT OIL TREATMENT SYSTEM	BH11	6.17	2.017	1.524	7.532
MULTI PHASE FLOW METER & TEST SEPARATOR/FLASH GAS COMPRESSION SYSTEM	BH12	6.66	1.591	1.252	6.69
HP FLARE SYSTEM	BH13	6.41	2.788	2.466	5.021
CAPTIVE POWER PLANT/FIRE FIGHTING SYSTEM	BH14	6.48	2.542	2.337	6.92
TREATED CRUDE STORAGE TANK AND PUMPS	BH15	6.59	1.463	1.322	6.577
TREATED CRUDE STORAGE TANK AND PUMPS	BH-16/SWL	6.69	2.73	2.499	9.167
INDUSTRIAL/ POTABLE WATER SUPPLY SYSTEM	BH19	6.58	2.619	2.153	6.743



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Location	BH No.	pH	Sulphate		Chloride mg/l
			SO ₄	SO ₃	
			mg/l	mg/l	
INSTRUMENT AIR/ UTILITY AIR SYSTEM & CAPTIVE POWER PLANT	BH20	6.18	1.3058	1.237	4.805
TRUNK LINE COD & GAS METERING SYSTEM	BH21	6.80	2.328	1.916	7.247
TREATED CRUDE STORAGE TANK AND PUMPS	BH22	6.75	1.814	1.623	8.111
TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP	BH24	6.66	1.591	1.252	6.69
Limits as per IS:456-2000, Table 1		>6	Not defined	400 mg/l	500mg/l for PCC Works and 2000 for RCC Works

CHEMICAL TESTS ON UDS SOIL SAMPLES EXTRACT

Location	BH No.	Sample No.	Depth (m)	pH	Sulphate		Chloride mg/l
					SO ₄	SO ₃	
					mg/l	mg/l	
FIRE FIGHTING SYSTEM	BH1	UDS-1	3.00	7.07	0.0027	0.0019	0.008
WATCH TOWER	BH2	UDS-1	3.00	6.94	0.0045	0.0031	0.013
TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP	BH4	UDS-1	3.00	6.60	0.0040	0.0033	0.009
OFF-SPEC CRUDE STORAGE TANK & PUMPS	BH5	UDS-1	3.00	7.13	0.0017	0.0012	0.006
SECURITY BARRACK	BH7	UDS-1	1.50	6.26	0.0034	0.0024	0.009
MUSTER STATION /PARKING AREA	BH8	UDS-1	3.00	7.05	0.0016	0.0010	0.013
CHEMICAL INJUNCTION SYSTEM	BH9	UDS-1	3.00	7.13	0.0042	0.0033	0.011
SUBSTATION & CONTROL ROOM	BH10	UDS-1	1.50	6.82	0.0041	0.0038	0.010



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Location	BH No.	Sample No.	Depth (m)	pH	Sulphate		Chloride
					SO ₄	SO ₃	
					mg/l	mg/l	mg/l
PRODUCED WATER TREATMENT SYSTEM-TRAIN A & B/HOT OIL TREATMENT SYSTEM	BH11	UDS-1	3.00	7.03	0.0041	0.0028	0.014
MULTI PHASE FLOW METER & TEST SEPARATOR/FLASH GAS COMPRESSION SYSTEM	BH12	UDS-1	3.00	6.85	0.0020	0.0027	0.011
HP FLARE SYSTEM	BH13	UDS-1	3.00	7.15	0.0033	0.0025	0.006
CAPTIVE POWER PLANT/FIRE FIGHTING SYSTEM	BH14	UDS-1	3.00	7.07	0.0027	0.0019	0.008
TREATED CRUDE STORAGE TANK AND PUMPS	BH15	UDS-1	3.00	6.94	0.0045	0.0031	0.013
TREATED CRUDE STORAGE TANK AND PUMPS	BH-16/SWL	UDS-1	1.50	6.60	0.0040	0.0033	0.009
INSTRUMENT AIR/ UTILITY AIR SYSTEM & CAPTIVE POWER PLANT	BH20	UDS-1	2.00	7.13	0.0017	0.0012	0.006
TRUNK LINE COD & GAS METERING SYSTEM	BH21	UDS-1	3.00	7.03	0.0041	0.0028	0.014
TREATED WATER STORAGE TANK/BOOSTER & DISPOSAL PUMP	BH24	UDS-1	3.00	6.85	0.0020	0.0027	0.011

CONCLUSION

From the above chemical test results, it can be seen clearly that all the three parameters (i.e.) pH, chlorides and sulphates are well within permissible limits in soil samples. Sulphate content as SO₃ is < 1.9% permitted by IS 456, Table 4 for OPC. To conclude Ordinary Portland cement can be used. No Special measures are necessary.



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CONCLUDING REMARKS

This Geotechnical report is valid for site conditions that prevailed at time of Geo-technical investigations. The entire scope of field work was executed in accordance with soil test locations by the client. Data derived from investigations have been necessarily used to arrive at the necessary design recommendations. There is a possibility that strata variations could occur between test locations. If any variations indicate significant deviations from the findings of this report, same shall be brought to our notice for appropriate design review.



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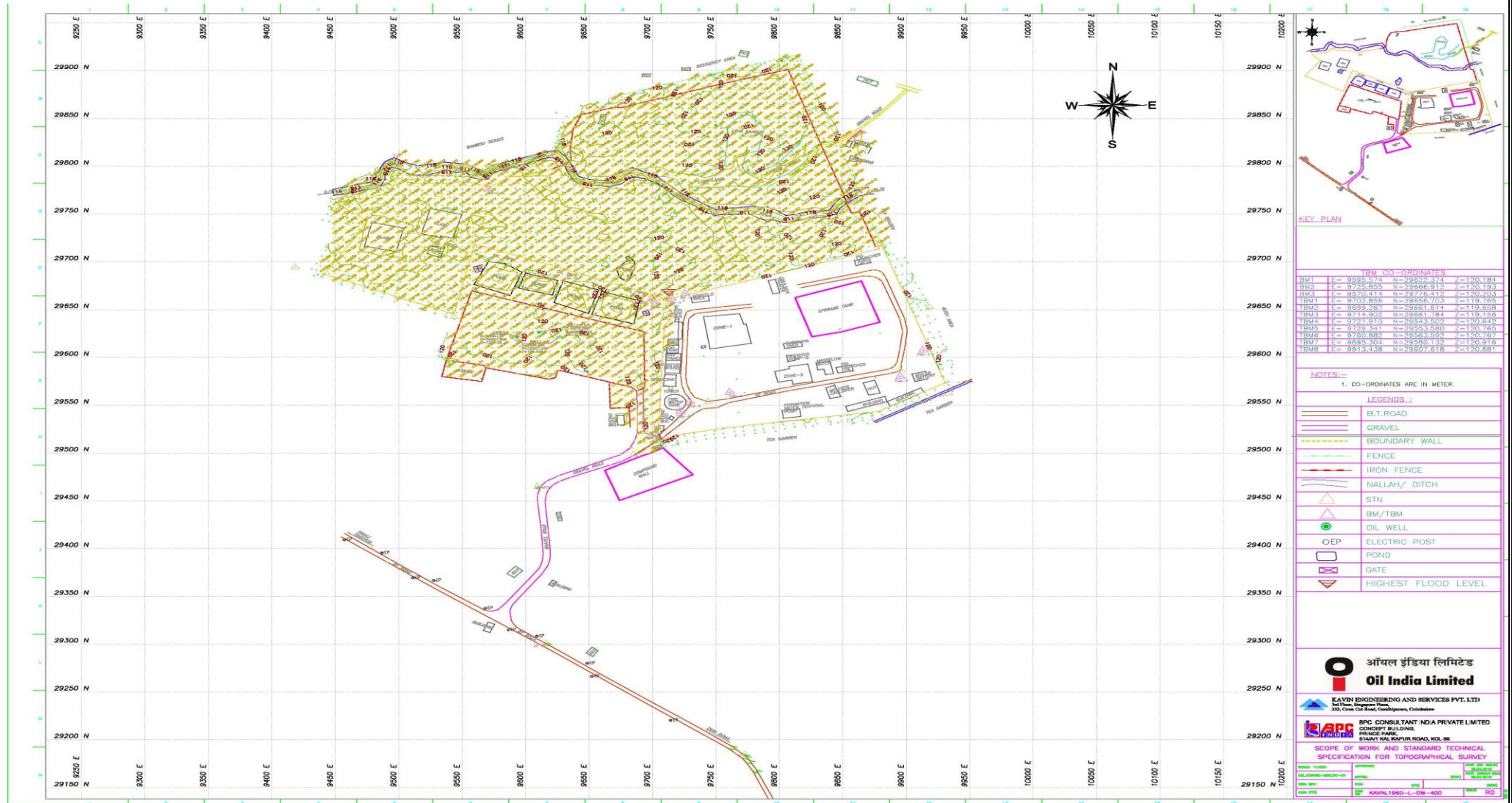
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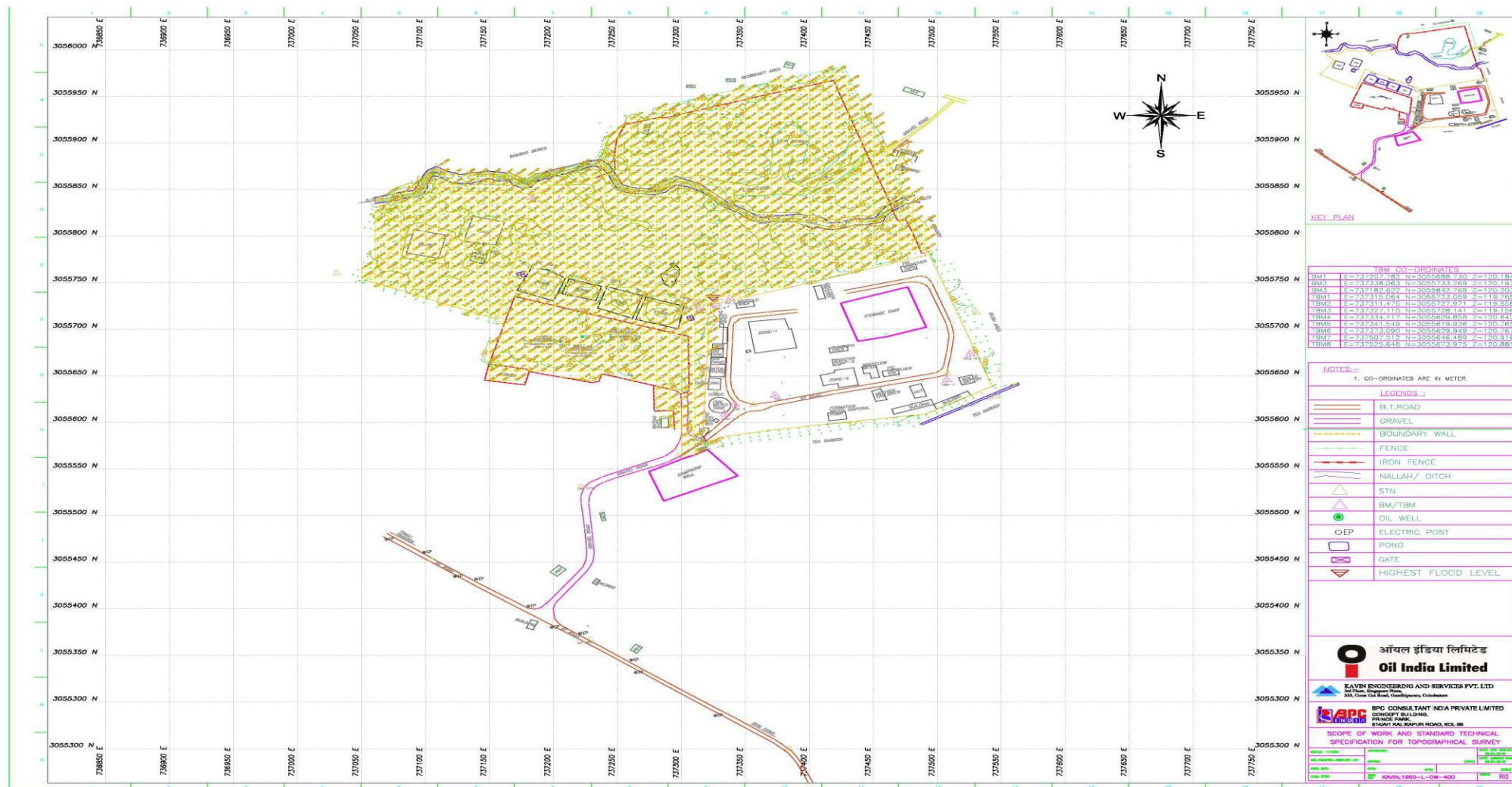
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