

**Declaration:**

***This tender document contains the revised version of earlier issued Tender No. OIL/62/7/ENQ-458, which was addressed to Limited (11) bidders in March, 2010. Accordingly, the earlier Tender has no relevance and the same is treated as cancelled.***

SPECIAL NOTE TO THE TENDER NO. OIL/62/7/ENQ-458(R)

**(A)** The Tender as below have been addressed to the **11(Eleven)** Parties arising out of EOI and pre-bid conference. The other prospective and interested Parties may also participate against this Tender subject to the following:

- (i) To forward their application for issue of Tender document along with documentary proof of meeting 'Bid Rejection Criteria'(SECTION-VIII of this Tender) to reach us within 28.09.2010. The application may also be sent to all e-mail IDs: [pdas5060@gmail.com](mailto:pdas5060@gmail.com), [samir2030@gmail.com](mailto:samir2030@gmail.com) and/or [scmishra1962@gmail.com](mailto:scmishra1962@gmail.com).
- (ii) The application must be complete in respect of meeting the qualifying criterion mentioned under Bid Rejection Criteria (BRC) as stipulated in this Tender.
- (iii) The parties must note that if Oil India Limited (OIL) is satisfied with the documentary evidences (provided by the party) establishing them to be eligible for issuance of the subject tender, the tender documents will be issued to the eligible party(ies). However, if the documentary evidences submitted by the parties are not able to establish the eligibility of the party(ies) to the satisfaction of OIL, no further correspondence will be made/entertained against the subject tender.

**(B)** **Similarly,** there may be cases where some of the eleven(11) Parties to whom this Tender has been issued, do not meet 'Bid Rejection Criteria'(SECTION-VIII of this Tender) of its/their own. In that case if such parties wish to participate in the subject tender through a JV/Consortium, which may be eligible to participate in the subject tender as per the BRC, they have to make fresh applications with their new identity for issue of Tender document along with documentary proof of meeting 'Bid Rejection Criteria'(SECTION-VIII of this Tender) and the same steps will be followed as mentioned above vide (i), (ii) & (iii) under para (A) above.

**(C)** The last date of receipt of applications in above cases, complete in all respect is 28.09.2010. It is to be noted by all concerned that no correspondence against the subject tender will be entertained after expiry of the schedule date i.e. 28/09/2010. As indicated above, parties may send their complete applications (with scanned copies of documentary evidences) through e-mail to the email IDs as mentioned vide (i) under para (A) above. The hardcopies of application must be received by OIL within 03/10/2010, without which their applications will not be considered.

**(D)** OIL will issue the tender documents to the eligible parties after detailed scrutiny of the documents submitted by the parties. The tender documents will be issued through e-mail to the eligible parties and therefore, it is necessary that the parties must mention their valid e-mail IDs. The tender documents will be issued to eligible parties latest by 06/10/2010. No correspondence will be made if the parties are not found to be eligible for the subject tender as per the BRC.

**(E)** No request for extension of the above mentioned dates will be entertained.

## **SECTION-I**

### **FORWARDING LETTER**

#### **As per enclosed list**

**Subject: Invitation of offers for a Package consisting of Design, Supply and commissioning of LNG & Re-gasification Plants, Transportation facilities and accessories for Utilization of Natural Gas (NG) in Remote and stranded Locations as well as Operation & Maintenance for the entire set up of converting NG to LNG and injecting the same after Re-gasification in the oilfields of Oil India Limited (OIL). TENDER NO. OIL/62/7/ENQ-458®.**

Dear Sirs,

1.0 OIL INDIA LIMITED (OIL), 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. OIL intends to hire the services of a competent Turnkey Solution/ Service Provider (TSP) / Technology Provider for tapping its flared gas of volume about 80000-100000 SCMD with an objective to monetize it by converting into LNG, transporting LNG by cryogenic tankers to re-gasification site and finally injecting the same after regasification into a available existing gas grid. OIL has dedicated gas collection and distribution network including compression facilities in order to utilize the gas for various industries like Power Sector, Fertilizer sector, Petrochemicals, Tea Sector, fuel for commercial and domestic uses etc.

2.0 In connection with above, OIL's Draft tender is being forwarded herewith with following few salient points (covered in detail in this Bid Document) :

- (i) TENDER NO. : OIL/62/7/ENQ-458®  
dated 07.09.2010
- (ii) TYPE OF BID : Single Stage-Two Bid under 4(Four) envelope System.
- (iii) BID CLOSING DATE & TIME : 08.11.2010 at 14.30 Hrs.(IST)
- (iv) TECHNICAL BID OPENING DATE & TIME: : 08.11.2010 at 15.00 Hrs.(IST)
- (v) COMMERCIAL BID OPENING DATE & TIME : Will be intimated to the responsive bidders nearer the time
- (vi) BID SUBMISSION PLACE : Bid should be submitted on/or before Bid Closing date & time to:  
OIL INDIA LIMITED  
(A Govt. of India Enterprise)  
Plot No. 19, Sector-16A  
NOIDA – 201 301
- (vii) BID OPENING PLACE : NOIDA
- (viii) QUANTUM OF LIQUIDATED DAMAGE : ½ % per week or part thereof subject to a maximum of 7.5 % of the contract value.
- (ix) PERFORMANCE BANK GUARANTEE : (i) Supply portion : 7.5% of the contract value considering (A) & (B) of the Priced Bid format i.e. supply and civil jobs valid for 21 months from the date of despatch or 15 months from the date of commissioning whichever is earlier.  
  
(ii) O&M portion: 7.5% of one year contract value considering (C) of the Priced Bid format valid for 13 months and to be extended every year till completion of the contract
- (x) BIDS TO BE ADDRESSED TO : Senior Adviser (C&P)  
OIL INDIA LIMITED  
(A Govt. of India Enterprise)  
Plot No. 19, Sector-16A  
NOIDA – 201 301
- (xi) PERIOD OF O&M CONTRACT : 4(Four) Years extendable by 1(One) year
- (xii) BID SECURITY AMOUNT : US\$ 250,000.00 or, Rs. 1.20 Crores
- (xiii) COMPLETION PERIOD FOR SUPPLY AND COMMISSIONING : 24 months
- (xiv) INTEGRITY PACT : Shall be entering into an Integrity Pact with the bidders as per the format enclosed vide Annexure-I of the tender document. Each page of this Integrity Pact Proforma has been duly signed by OIL's

**Competent Signatory. The Proforma has to be returned by the Bidder (along with the Technical Bid) duly signed by the same Signatory who sign the bid. Any bid not accompanied by the Integrity Pact Proforma duly signed by the Bidder shall be rejected straight away. All pages of the Integrity Pact is to be signed by the bidder's authorized signatory who sign the bid.**

- (xv) **NAME OF INDEPENDENT EXTERNAL MONITOR** : (i) **Shri N. Gopalsaswami, IAS(Retd.)  
Phone : 91-44-2834-2444(Res.), 96001 44444 (Mobile). E-mail: gopalswamin@gmail.com**
- (ii) **Shri Ramesh Chandra Agarwal, IPS . Phone : +91-9810787089, 91-11-22752749. E-mail : rcagarwal@rediffmail.com.**

3.0 To submit the Bid document in a competitive manner you need to understand the logistics, site condition and other required parameters. You are therefore requested to visit the site at a suitable date convenient to you and OIL officials before submission of the tender. You can send your itinerary/programme for the site visit through e-mail / fax / courier, addressed to Chief Manager(S&CP) or Chief Engineer (P-Gas). OIL will not be responsible for arrangement of transport, accommodation, etc. for the bidders on their arrival at Dibrugarh / Duliajan for the site visit. However OIL will extend all necessary help and make all arrangement for the bidders for the site visit from Duliajan and back. All costs on account of travel, accommodation, etc. related to site visit except for the visit from Duliajan to site and back shall be to bidder's account.

4.0 OIL now looks forward to your active participation in the tender.

Thanking you,

Yours faithfully,  
OIL INDIA LIMITED

(P Das)  
Chief Manager (Materials]  
for Senior Adviser(C & P)  
for Chairman & Managing Director

## **SECTION-II**

### **INSTRUCTIONS TO BIDDERS**

1.0 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.

#### **A. BIDDING DOCUMENTS**

2.0 The services required, bidding procedures and contract terms are prescribed in the Bidding Documents. This Bidding Document includes the following:

- a) A forwarding letter highlighting the following points (Section-I):
  - i. Company's Tender No.
  - ii. Bid Closing Date and time.
  - iii. Bid Opening Date, Time and Place.
  - iv. Bid Submission Places.
  - v. Bid Opening Place.
  - vi. The amount of Bid Security.
  - vii. The amount of performance guarantee.
  - viii. Quantum of liquidated damages for default in timely completion.
  - ix. Duration of the Contract
  
- b) Instructions to Bidders (Section-II)
- c) General Conditions of Contract (Section-III)
- d) Terms of Reference/Technical Specification (Section-IV)
- e) Schedule of Rates / Price Bid Format (Section-V)
- f) Special Conditions of Contract (Section-VI)
- g) Bid Evaluation Criteria/Bid Rejection Criteria (BEC/BRC)-(Section-VII)
- h) Proforma Letter of Authority (Proforma-I)
- i) Statement of Compliance with respect to BRC (Proforma-II).
- j) Statement of non-compliance (excepting BRC) (Proforma-IIa)
- k) Bid Form (Proforma-IIA).
- l) The Performance Security Form (Proforma-IIB).
- m) The Contract Form (Proforma-IIC).
- n) The Bid Security Form (Proforma-IID).
- o) Integrity Pact Proforma (Annexure-I)
- p) Undertaking from Contractor's personnel(Annexure-II)

2.1 The bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required in the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk & responsibility and may result in the rejection of its bid.

3.0 **AMENDMENT OF BIDDING DOCUMENTS:**

- 3.1 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 Bidding Documents by the issuance of an Addendum.
- 3.2 The Addendum will be sent in writing through post / courier or by Fax or e-mail to all prospective Bidders to whom Company has sent the bid documents. The company may, at its discretion, extend the deadline for bid submission, if the Bidders are expected to require additional time in which to take the Addendum into account in preparation of their bid or for any other reason.

**B. PREPARATION OF BIDS**

4.0 **LANGUAGE OF BIDS:** The bid as well as all correspondence and documents relating to the bid exchanged between the Bidder and the Company shall be in English language, except that any printed literature may be in another language provided it is accompanied by an English translated version, which shall govern for the purpose of bid interpretation.

5.0 **DOCUMENTS COMPRISING THE BID:** The bid submitted by the Bidder shall comprise of the following components under 04(Four) envelopes system:

- (A) Envelope-A : Containing valid and proper Bid Security in Original as per Clause 10.0 below.
- (B) Envelope-B : Containing Statement of Compliance with respect to BRC (Proforma-II).
- (C) Envelope-C : Containing **TECHNICAL** Bid comprising of following:
  - (i) Complete technical details of the services and equipment specifications with catalogue, etc.
  - (ii) Documentary evidence established in accordance with clause 9.0.
  - (iii) Statement of non-compliance (excepting BRC) (Proforma-IIa).
  - (iv) Copy of commercial bid ***without indicating prices***.
  - (v) Integrity Pact duly signed by the bidder's authorized signatory to sign the Bid.
- (D) Envelope-D : Containing Commercial /Priced Bid comprising of following:
  - (i) Bid Form as per Proforma-IIA.
  - (ii) Price-Bid Format as per SECTION-V.

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

6.0 **BID FORM:** The bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the Bid Document.

7.0 **BID PRICE:**

7.1 Unit prices must be quoted by the bidders, both in words and in figures. In case of any discrepancy between the words and in figures, the prices indicated in words only will be considered.

7.2 Price quoted by the successful bidder must remain firm during its performance of the Contract and is not subject to variation on any account.

7.3 All duties (except customs duty which will be borne by the Company) and taxes (excluding service tax) including Corporate Income Taxes and other Cess / levies payable by the successful bidder under the Contract for which this Bidding 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 accordingly. 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 **CURRENCIES OF BID AND PAYMENT:**

8.1 A bidder expecting to incur its expenditures in the performance of the Contract in more than one currency, and wishing to be paid accordingly, shall so indicate in the bid. In such a case, the bid shall be expressed in different currencies and the respective amounts in each currency shall together make up the total price.

8.2 Indian bidders too can submit their bids in any currency (including Indian Rupees) and receive payment in such currencies on par with foreign bidders. However, currency once quoted will not be allowed to be changed.

9.0 **DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATIONS:**  
These are listed in **SECTION-VII**.

10.0 **BID SECURITY:**

10.1 Pursuant to clause 5.0 the Bidder shall furnish as part of its Technical bid, Bid Security in the amount as specified in the "Forwarding Letter".

10.2 The Bid Security is required to protect the Company against the risk of Bidder's conduct, which would warrant the security's forfeiture, pursuant to sub-clause 10.7.

10.3 The Bid Security shall be denominated in the currency of the bid or another freely convertible currency, and shall be in one of the following form:

(a) A bank guarantee or irrevocable Letter of Credit issued by a scheduled Indian bank or by a foreign bank through its Indian branch, in the form provided vide **Proforma-IID** or another form acceptable to the Company and valid for 30 days beyond the validity of the bids.

(b) A cashier's cheque or demand draft drawn on 'Oil India Limited' and payable at Duliajan, Assam.

10.4 Any bid not secured in accordance with sub-clause 10.1 and / or 10.3 shall be rejected by the Company as non-responsive.

10.5 Unsuccessful Bidder's Bid Security will be discharged and/or returned within 30 days after OIL's decision towards rejection of the offer(s).

- 10.6 Successful Bidder's Bid Security will be discharged upon the Bidder's signing of the contract and furnishing the performance security.
- 10.7 The Bid Security may be forfeited:
- (a) If any Bidder withdraws or modifies their bid during the period of bid validity (including any subsequent extension) specified by the Bidder on the Bid Form, or
  - (b) If a successful Bidder fails:
    - i) To sign the contract within reasonable time & within the period of bid validity, and/or
    - ii) To furnish Performance Security.
- 10.8 Bid Security shall not accrue any interest during its period of validity or extended validity.
- 10.9 The bidder shall extend the validity of Bid Security suitably, if and when specifically advised by OIL, at bidder's cost.
- 11.0 **PERIOD OF VALIDITY OF BIDS:**
- 11.1 Bids shall remain **valid for 180** days after the date of bid opening prescribed by the Company.
- 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 (or by Fax). The bid Security provided under para 10.0 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 **FORMAT AND SIGNING OF BID:**
- 12.1 The Bidder shall prepare four copies of the bid clearly marking original "ORIGINAL BID" and rest "COPY OF BID". In the event of any discrepancy between them, the original shall govern.
- 12.2 The original and all copies of the bid shall be typed or written in indelible inks and shall be signed by the Bidder or a person or persons duly authorised to bind the Bidder to the contract. The letter of authorisation (as per **Proforma-I**) shall be indicated by written power of attorney accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 12.3 The bid should 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 signing the bid.

## **C. SUBMISSION OF BIDS**

### **13.0 SEALING AND MARKING OF BIDS:**

- 13.1 The tender is being processed according to a single stage - Two bid – **4(Four) Envelope** system. Offers should be submitted in **4(four) separate envelopes (marked 'A', 'B', 'C' & 'D') containing Bid Security, Statement of Compliance, Technical bid and Commercial bid respectively in each envelope and** in quadruplicate (one Original and 3 copies). **The original bid shall be in bidder's own original letterhead duly signed by authorised signatory.**

- 13.2 The Bidder shall seal the original and each copy of the bid duly marking as "ORIGINAL" and "COPY".
- 13.3 The **Envelope 'A'** containing the 'Bid Security' (Original + 3 copies) should be in one sealed cover superscribing the following on the right hand top corner:
- (i) Envelope No. **'A' : Bid Security**
  - (ii) Tender No. \_\_\_\_\_
  - (iii) Bid Closing Date \_\_\_\_\_
  - (iv) Bidder's Name \_\_\_\_\_
- 13.4 The **Envelope 'B'** containing the 'Certificate of Compliance' (Original + 3 copies) **as per Proforma-II** should be in one sealed cover superscribing the following on the right hand top corner :
- (i) Envelope No. **'B' : Statement of Compliance**
  - (ii) Tender No. \_\_\_\_\_
  - (iii) Bid Closing Date \_\_\_\_\_
  - (iv) Bidder's Name \_\_\_\_\_
- 13.5 The **Envelope 'C'** containing the 'Technical Bid' (Original + 3 copies) only should be in one sealed cover superscribing the following on the right hand top corner :
- (i) Envelope No. **'C' Technical bid**
  - (ii) Tender No. \_\_\_\_\_
  - (iii) Bid Closing Date \_\_\_\_\_
  - (iv) Bidder's Name \_\_\_\_\_
- In this envelope, the bid containing all parts except the priced bid shall be put in. However, a copy of the Priced Bid with price figures blanked out is to be enclosed in this envelope.**
- 13.6 The **Envelope 'D'** containing the 'Priced Bid' (Original + 3 copies) should be in a separate sealed cover superscribing the following on the right hand top corner.
- (i) Envelope No. **'D' Commercial / Priced Bid**
  - (ii) Tender No. \_\_\_\_\_
  - (iii) Bid Closing Date \_\_\_\_\_
  - (iv) Bidder's Name \_\_\_\_\_
- 13.7 The above mentioned **4(four)** separate covers containing **Bid Security, Certificate of Compliance**, Technical and the Commercial bids should then be put together in another envelope superscribing the following details on the top and the envelope should be addressed to the person(s) as mentioned in the "**Forwarding Letter**".
- (i) Tender No. \_\_\_\_\_
  - (ii) Bid Closing Date \_\_\_\_\_
  - (iii) Bidder's Name \_\_\_\_\_
- 13.8 The offer should contain complete specifications, details of services and equipment/accessories offered together with other relevant literature/ catalogues of the equipment offered. The Bid Security mentioned in clause 10.0 should be **put in Envelope 'A' as mentioned in Clause No. 13.3 above. The Price Schedule should not be put in the envelopes containing the Bid Security or Certificate of Compliance or Technical Bid.**

- 13.9 All the conditions of the contract to be made with the successful bidder are given in various Sections of this document. Bidders are requested to state their non-compliance to each clause as per **Proforma-IIa**. This should be enclosed with the technical bid.
- 13.10 Timely delivery of the bids is the responsibility of the Bidder. Bidders should send their bids as far as possible by Registered Post or by Courier Services. **Bids may also be handed over to the Officer in Charge of receiving the bids before the bid closing date and time.** Company shall not be responsible for any postal delay/transit loss.
- 13.11 E-mail/ Fax/ Telex/Telegraphic/Telephonic offers will not be accepted.
- 14.0 **INDIAN AGENTS:** Foreign Bidders are requested to clearly indicate in their quotation whether they have an agent in India. If so, the bidders should furnish the name and address of their agents and state clearly whether these agents are authorized to receive any commission. The rate of the commission included in the quoted rates of bidder should be indicated which would be payable to Agent in non-convertible Indian currency according to Import Trade Regulation of India. Unless otherwise specified, it will be assumed that an agency commission is not involved in the particular bid. Further, Bidders are requested to quote directly and not through their agents in India.
- 15.0 **DEADLINE FOR SUBMISSION OF BIDS:** Bids must be received by the company at the address specified in the "Forwarding Letter" not later than 12-45 Hrs. (Indian Standard Time) on the bid closing date mentioned in the "Forwarding Letter".
- 16.0 **LATE BIDS:** Any Bid received by the Company after the deadline for submission of bids prescribed by the Company shall be rejected.
- 17.0 **MODIFICATION AND WITHDRAWAL OF BIDS:**
- 17.1 The Bidder after submission of bid may modify or withdraw its bid by written notice prior to bid closing.
- 17.2 The Bidder's modification or withdrawal notice shall be prepared sealed, marked and dispatched in accordance with the provisions of clause 13.0. A withdrawal notice may also be sent by fax but followed by a signed confirmation copy, postmarked not later than the deadline for submission of bids.
- 17.3 No bid can be modified / withdrawn subsequent to the deadline for submission of bids.
- 17.4 No bid may 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.
- 18.0 **BID OPENING AND EVALUATION:**
- 18.1 Company will open the Bids, including submission made pursuant to clause 17.0, in the 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-I**) 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 shall sign a register evidencing their attendance. Only one representative against each bid will be allowed to attend.

- 18.2 Bid for which an acceptable notice of withdrawal has been received pursuant to clause 17.0 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 properly signed and whether the bids are generally in order.
- 18.3 Bid opening shall be done in the following manner :
- i) Envelope 'A' containing the Bid Security in original shall be opened first. If proper Bid Security is not furnished in Envelope 'A', the remaining three envelopes shall not be considered for opening and the unopened envelopes shall be returned to the party.**
  - ii) In the event the Bid Security is found in order and the Envelope 'A' is opened, the second Envelope 'B' containing the "Statement of Compliance in respect of BRC of the tender as per Proforma-II" shall be opened. In case of non-conformity and if the 'Statement of Compliance' as per Proforma-II is not furnished in Envelope 'B', the remaining two envelopes shall not be considered for opening and the unopened two envelopes shall be returned to the party.**
  - iii) Envelope 'C' containing the 'Technical Bid' shall be opened only after the Bid Security and the 'Statement of Compliance' are found to be in order and the Envelope 'A' and Envelope 'B' are opened.**
  - iv) Envelope 'D' containing the 'Priced Bid' shall be opened of only those bidders at a later date with prior intimation to them whose bids are found technically acceptable and Bid Security and the 'Certificate of Compliance' are found to be in order.**
- 18.4 Company shall prepare, for its own records, minutes of bid opening including the information disclosed to those present in accordance with the sub-clause 18.3.
- 18.5 To assist in the examination, evaluation and comparison of bids the Company may at its discretion, ask the Bidder for clarifications of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.
- 18.6 Prior to the detailed evaluation, Company will determine the substantial responsiveness of each bid to the requirement of the Bidding Documents. For purpose of these paragraphs, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Document without material deviations or reservation. A material deviation or reservation is one which affects in any way substantial way the scope, quality, or performance of work, or which limits in any substantial way, inconsistent way with the bidding 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.
- 18.7 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.

- 18.8 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.
- 19.0 **OPENING OF COMMERCIAL/PRICED BIDS:**
- 19.1 Company will open the Commercial / Priced Bids of the technically qualified Bidders on a specific date in presence of interested qualified bidders. Technically qualified Bidders will be intimated about the bid opening date in advance.
- 19.2 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.
- 19.3 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 any Bidder does not accept the correction of the errors, their bid will be rejected. If there is a discrepancy between words, and figures, the amount in words will prevail.
- 20.0 **CONVERSION TO SINGLE CURRENCY:** While evaluating the bids, the closing rate of exchange declared by State Bank of India on the day prior to price bid opening will be taken into account for conversion of foreign currency into Indian Rupees. Where the time lag between the opening of the price bids and final decision exceeds three months, the rate of exchange declared by State Bank of India on the date prior to the date of final decision will be adopted for conversion.
- 21.0 **EVALUATION AND COMPARISON OF BIDS:** The Company will evaluate and compare the bids as per **Priced Bid Format (Section-V)** of the bidding documents.
- 21.1 **DISCOUNTS / REBATES : Unconditional discounts/rebates, if any, given in the bid or along with the bid will be considered for evaluation.**
- 21.1.1 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.**
- 22.0 **LOADING OF FOREIGN EXCHANGE:** There would be no loading of foreign exchange for deciding the inter-se-ranking of domestic bidders.
- 22.1 **EXCHANGE RATE RISK:** Since Indian bidders are now permitted to quote in any currency and also receive payments in that currency, company will not be compensating for any exchange rate fluctuations in respect of the services.
- 22.2 **REPATRIATION OF RUPEE COST:** In respect of foreign parties rupee payments made on the basis of the accepted rupee component of their bid, would not be repatriable by them. A condition to this effect would be incorporated by the Company in the contract.

23.0 **CONTACTING THE COMPANY:**

23.1 Except as otherwise provided in Clause 18.0 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 18.5.

23.2 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.

**D. AWARD OF CONTRACT**

24.0 **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.

25.0 **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.

26.0 **NOTIFICATION OF AWARD:**

26.1 Prior to the expiry of the period of bid validity or extended validity, the company will notify the successful Bidder in writing by registered letter or by cable or telex or fax or e-mail (to be confirmed in writing by registered / couriered letter) that its bid has been accepted.

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

26.3 Upon the successful Bidder's furnishing of Performance Security pursuant to clause 28.0 the company will promptly notify each un-successful Bidder and will discharge their Bid Security, pursuant to clause 10.0 hereinabove.

27.0 **SIGNING OF CONTRACT:**

27.1 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 Bidding Documents, along with the General & Special Conditions of Contract, Technical Specifications, Schedule of rates incorporating all agreements between the parties.

27.2 Within 30 days of issue of Letter of Award (LOA), the successful Bidder shall sign and date the contract and return it to the company. **Till the contract is signed, the LOA issued to the successful bidder shall remain binding amongst the two parties.**

27.3 **In the event of failure on the part of the successful bidder to sign the contract within the period specified above or any other time period specified by Company, 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. The party shall also be debarred for a period of 2(two) years from the date of default.**

27.4 **FURNISHING FRAUDULENT INFORMATION/DOCUMENTS :**

**If it found that a bidder/contractor has furnished fraudulent information/documents, the Bid Security/Performance Security shall be forfeited and the party shall be debarred for a period of 3(three) years from the date of detection of such fraudulent act besides the legal action.**

28.0 **PERFORMANCE SECURITY:**

28.1 Within 02(Two) weeks of the receipt of notification of award from the Company the successful Bidder shall furnish the performance security for an amount specified in the Forwarding Letter as per the **Proforma-IIB** or in any other format acceptable to the Company and must be in the form of a bank guarantee or irrevocable Letter of Credit issued by a scheduled Indian bank or by a foreign bank through its Indian Branch. The performance security shall be payable to Company as compensation for any loss resulting from Contractor's failure to fulfill its obligations under the Contract.

28.2 The performance security specified above must be valid as indicated in **Section-I** hereof. The same will be discharged by company not later than 30 days following its expiry.

28.3 The performance security shall be payable to Company as compensation for any loss resulting from Contractor's failure to fulfill its obligations under the Contract.

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

28.5 Failure of the successful Bidder to comply with the requirements of clause 27.0 or 28.0 shall constitute sufficient grounds for annulment of the award and forfeiture of the Bid Security. In such an event the Company may award the contract to the next evaluated Bidder or call for new bid or negotiate with the next lowest bidder as the case may be.

29.0 **BIDDERS' AWARENESS ON THE COMPLETE REQUIREMENT OF THE PROJECT:**

29.1 Bidders in their own interest are advised to visit the site of the works in Duliajan (Assam) to gather information about the site, its surroundings and for preliminary assessment for preparing their bids and for subsequent execution of the contract. However all expenses of the personnel including but not limited to their to and fro fares, boarding, lodging etc. to Duliajan shall be to prospective bidder's account. OIL shall arrange visit to the site from Duliajan at its cost.

29.2 **Local Conditions:**

It is imperative for each Bidder to fully inform 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 Bid Document. The bidders shall be deemed prior to submitting their bids to have satisfied themselves as to the circumstances at the Site, including without limitation, the ground and sub-soil, the form and nature of the Site and the climate and hydrological conditions of the Site and obtained for themselves all necessary information as to the risks, contingencies and all other circumstances, which may influence or affect the Contract price and its 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 his officers or agents 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.

29.3 **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 to be executed under this contract.

30.0 **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.

31.0 **ADVANCE PAYMENT:**

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

31.2 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.

31.3 Bank guarantee shall be valid for 2 months beyond the period of advance and the same may be invoked in the event of Contractor's failure to commence the work as per agreement.

31.4 In the event of any extension to the advance 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.

**&&&&&**

## SECTION-III

### GENERAL CONDITIONS OF CONTRACT

#### **1.0 DEFINITIONS:**

In the contract, the following terms shall be interpreted as indicated:

- (a) "**The Contract**" means agreement entered into between Company and Contractor, as recorded in the contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "**The Contract Price**" means the price payable to Contractor under the contract for the full and proper performance of its contractual obligations;
- (c) "**The Work**" means each and every activity required for the successful performance of the services described in Section II, the Terms of Reference.
- (d) "**Company**" or "OIL" means Oil India Limited;
- (e) "**Contractor**" means the Contractor performing the work under this Contract.
- (f) "**Contractor's Personnel**" mean the personnel to be provided by the Contractor (including their sub contractor's personnel) to provide services as per the contract.
- (g) "**Services**" means the work specified in **Section IV** and all other obligations to be complied with by Contractor pursuant to and in accordance with the terms of this contract
- (h) "**Specification**" means the description of the Equipment and/or Services set out in **Section IV**.

#### **2.0 EFFECTIVE DATE, DATE OF COMMENCEMENT OF CONTRACT AND DURATION OF CONTRACT:**

##### **2.1 EFFECTIVE DATE:**

**FOR SUPPLY:** The contract shall become effective as of the Date Company notifies bidder in writing (through Letter of Intent) that it has been awarded the contract.  
**FOR Operation & Maintenance:** The contract shall become effective as of the Date Company notifies bidder in writing regarding successful commissioning of the plant.

**The Duration of Contract:** The contract for Operation & Maintenance Services shall be for a period of **4(four) years** from the **effective date of the contract for O&M**. The company reserves the right to extend the contract period by 1 (One) year at the discretion of Company at the same rates, terms and conditions.

#### **3.0 GENERAL OBLIGATIONS OF CONTRACTOR:** Contractor shall, in accordance with and subject to the terms and conditions of this Contract:

Perform the work described in the Terms of Reference (Section II) in most economic and cost effective manner.

Except as otherwise provided in the Terms of Reference and the special Conditions of the contract provide all labour as required to perform the work.

Perform all other obligations, work and services which are required by the terms of this contract or which reasonably can be implied from such terms as being necessary for the successful and timely completion of the work.

Bidder shall be deemed to have satisfied himself before submitting his 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.

Contractor will provide all necessary supervision throughout the period of this contract.

The equipment as specified in Section-II will be used exclusively for OIL's operation during the entire contract period of the contract and any extension thereof.

Contractor shall strictly follow all the statutory norms and guidelines issued by the various Government agencies in regards to safety & environmental issues.

**4.0 GENERAL OBLIGATIONS OF THE COMPANY:** Company shall, in accordance with and subject to the terms and conditions of this contract:

4.1 Pay Contractor in accordance with terms and conditions of the contract.

4.1.1 Allow Contractor and his personnel access, subject to normal security and safety procedures, to all areas as required for orderly performance of the work.

4.2 Perform all other obligations required of Company by the terms of the contract.

**5.0 PERSONNEL TO BE DEPLOYED BY CONTRACTOR**

5.1 Contractor will provide competent, qualified and sufficiently experienced personnel to perform the work correctly and efficiently and shall ensure that such personnel observe applicable Company and statutory safety requirement. Upon Company's written request, Contractor, entirely at their own expense, shall remove within Ten (10) days for personnel of Indian origin and Twenty one (21) days for foreign residents, from assignment to the work, any personnel of the Contractor determined by the Company to be unsuitable and shall promptly replace such personnel with personnel acceptable to the Company without affecting Company's work.

5.2 The Contractor shall be solely responsible throughout the period of this contract for providing all requirements of their personnel including but not limited to their transportation to & fro Duliajan/Location, enroute / local boarding, lodging, medical attention etc. Company shall have no liability or responsibility in this regard.

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

**6.0 WARRANTY AND REMEDY OF DEFECTS**

6.1 Bidder warrants that they shall perform the work in a professional manner and in accordance with the highest degree of quality, efficiency and current state of the art technology/oil field practices and in conformity with all specifications and

standards 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 Bidder.

- 6.2 For Supply portion: Goods, materials or plant(s) to be supplied hereunder shall be new, of recent make, of the best quality and workmanship and shall be guaranteed by the seller for a period of 18 months from the date of despatch or 12 months from the date of successful commissioning whichever is earlier against defects arising from faulty materials, workmanship or design. Defective goods/materials or parts notified by OIL to the seller shall be replaced / repaired by the seller on FOR destination basis including payment of all taxes and duties at sellers expense. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.

For Civil construction jobs and O&M: Should Company discover at any time during the tenure of the Contract or within 6 (Six) months after completion of operations 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 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.

## **7.0 CONFIDENTIALITY, USE OF CONTRACT DOCUMENTS AND INFORMATION:**

- 7.1 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 so far, as may be necessary for purposes of such performance.
- 7.2 Contractor shall not, without Company's prior written consent, make use of any document or information provided by the Company except for purposes of performing the contract.
- 7.3 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 Company on completion of Contractor's performance under the Contract if so required by Company. All information obtained by Contractor in the conduct of operations and the information/maps provided to the Contractor shall be considered confidential and shall not be divulged by Contractor or its employees to any one other than the Company's personnel. This obligation of Contractor shall be in force even after the termination of the contract.

## **8.0 TAXES:**

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

- 8.2 Contractor shall be responsible for payment of personal taxes, if any, for all the personnel deployed.
- 8.3 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 this contract for submitting the same to the Tax authorities, on specific request from them. Contractor shall be responsible for preparing and filing the return of income etc. within the prescribed time limit to the appropriate authority.
- 8.4 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.
- 8.5 Tax clearance certificate for personnel and corporate taxes shall be obtained by the Contractor from the appropriate Indian Tax authorities and furnished to Company within 6 months of the expiry of the tenure of the contract or such extended time as the Company may allow in this regard.

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.

- 8.7 Corporate and personnel taxes on Contractor shall be the liability of the Contractor and the Company shall not assume any responsibility on this account.
- 8.8 All local taxes(including Assam Entry Tax), levies and duties, sales tax, octroi, etc. on purchases and sales made by Contractor (except customs duty) shall be borne by the Contractor. Sales tax/Work contracts tax(including VAT) levied, if any, on rental/crew/other charges received by the contractor, under this Agreement shall be to contractor's account.
- 8.9 Service Tax:** Service Tax as applicable shall be on Company's account. However, liability for payment of the service tax in case of Indian Contractor will lie on contractor while in case of the foreign Contractor, the liability shall lie on the Company.
- 9.0 INSURANCE:** Company will arrange requisite insurance for its personnel, materials and equipment, as appropriate.
- 9.1 The Contractor shall arrange insurance to cover all risks in respect of their personnel, materials and equipment belonging to the Contractor or its subcontractor during the currency of the contract.
- 9.2 Contractor shall at all time during the duration of the contract provide, pay for and maintain the following insurance amongst others:
- Workmen compensation insurance as required by the laws of the country of origin of the employee.
  - Employer's Liability Insurance as required by law in the country of origin of employee.
  - General Public Liability Insurance Act 1991 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 fulfill the provisions under this contract.

- Contractor's equipment used for execution of the work hereunder shall have an insurance cover with a suitable limit (as per international standards).
  - 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 as governed by Indian Insurance regulations.
- 9.3 Contractor shall obtain additional insurance or revise the limits of existing insurance as per Company's request in which case additional cost shall be to Contractor's account.
- 9.4 Any deductible set forth in any of the above insurance shall be borne by Contractor.
- 9.5 Contractor shall furnish to Company prior to commencement date, certificates of all its insurance policies covering the risks mentioned above.
- 9.6 If any of the above policies expire or are cancelled during the term of this contract and Contractor fails for any reason to renew such policies, the Company will renew/replace same and charge the cost thereof to Contractor. Should there be a lapse in any insurance required to be carried out by the Contractor for any reason whatsoever, loss/damage claims resulting there from shall be to the sole account of Contractor.
- 9.7 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.
- 9.8 All insurance taken out by Contractor or his sub-Contractor shall be endorsed to provide that the underwriters waive their rights of recourse on the Company.

## **10.0 CHANGES:**

- 10.1 During the performance of the work, Company may make a change in the work mutually agreed within the general scope of this Contract including, but not limited to, changes in methodology, and minor additions to or deletions from the work to be performed. Contractor shall perform the work as changed. Changes of this nature will be effected by written order (Change Order) by the Company.
- 10.2 If any change result in an increase in compensation due to Contractor or in a credit due to Company, Contractor shall submit to Company an estimate of the amount of such compensation or credit in a form prescribed by Company. Such estimates shall be based on the rates shown in the Schedule of Rates (Section IV). Upon review of Contractor's estimate, Contractor shall establish and set forth in the Change Order the amount of the compensation or credit for the change or a basis for determining a reasonable compensation or credit for the change. If Contractor disagrees with compensation or credit set forth in the Change Order, Contractor shall nevertheless perform the work as changed, and the parties will resolve the dispute in accordance with Clause 13 hereunder. Contractor's performance of the work as changed will not prejudice Contractor's request for additional compensation for work performed under the Change Order.

## **11.0 FORCE MAJEURE:**

- 11.1 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 word 'Force Majeure' as employed herein shall mean acts of God, war, revolt, agitation, strikes, riot, fire, flood, sabotage, civil commotion, road barricade (but not due to interference of employment problem of the Contractor) and any other cause, whether of kind herein enumerated or otherwise which are not within the control of the party to the contract and which renders performance of the contract by the said party impossible.
- 11.2 Upon occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing within Seventy Two (72) hours of the alleged beginning and ending thereof, giving full particulars and satisfactory evidence in support of its claim.
- 11.3 Should 'Force Majeure' condition as stated above occur and should the same be notified within seventy two (72) hours after its occurrence the 'Force Majeure rate' shall apply for the first fifteen days. Either party will have the right to terminate the contract if such 'Force Majeure' condition continues beyond fifteen (15) days with prior written notice. Should either party decide not to terminate the contract even under such condition, no payment would apply after expiry of fifteen (15) days period unless otherwise agreed to. Time for performance of the relative obligation suspended by the 'Force Majeure' shall then stand extended by the period for which such cause lasts.

## **12.0 TERMINATION:**

- 12.1 **TERMINATION ON EXPIRY OF THE TERMS (DURATION):** This contract shall be deemed to have been automatically terminated on the expiry of duration of the contract or extension, if any, thereof.
- 12.2 **TERMINATION ON ACCOUNT OF FORCE MAJEURE:** Either party shall have the right to terminate this Contract on account of Force Majeure as set forth in Article 11.0 above.
- 12.3 **TERMINATION ON ACCOUNT OF INSOLVENCY:** In the event that the Contractor at any time during the term of this Contract, becomes insolvent or makes a voluntary assignment of its assets for the benefit of creditors or is adjudged bankrupt, then the Company shall, by a notice in writing have the right to terminate this Contract and all the Contractor's rights and privileges hereunder, shall stand terminated forthwith.
- 12.4 **TERMINATION FOR UNSATISFACTORY PERFORMANCE:** If the Company considers that, the performance of the Contractor is, not as per the scope of the work as specified in the contract, the Company shall notify the Contractor in writing and specify in details the cause. The Company shall have the option to terminate this 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.
- 12.5 **TERMINATION DUE TO NON-AVAILABILITY OF EQUIPMENT:** If at any time during the term of this Contract, breakdown of Contractor's equipment results in Contractor being unable to perform their obligations hereunder for a period of 95 (Ninety five) successive days in a year, Company at its option, may terminate this

Contract in its entirety 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.

12.6 **TERMINATION DUE TO CHANGE OF OWNERSHIP & 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 consent, the Company may at its absolute discretion, terminate this Contract.

12.7 **CONSEQUENCES 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.

12.8 Upon termination of this Contract, Contractor shall return to Company all of Company's items, which are at the time in Contractor's possession.

12.9 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.

**13.0 SETTLEMENT OF DISPUTES AND ARBITRATION:**

13.1 All disputes or differences whatsoever arising between the parties out of or relating to the construction, meaning and operation or effect of this contract or the breach thereof shall be settled by arbitration in accordance with the Rules of Indian Arbitration and Conciliation Act, 1996. The venue of arbitration will be Duliajan, Assam. The award made in pursuance thereof shall be binding on the parties.

**14.0 NOTICES:**

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

**Company**

a) **For contractual matters**

Senior Adviser(C & P)  
**OIL INDIA LIMITED**  
Plot No. 19  
Sector-16 A, NOIDA-201 301  
Fax No. 91-120-2488327  
Email: corp\_c&p@oilindia.in

b) **For Technical matters**

GM Production (Gas)  
**OIL INDIA LIMITED**  
PO : Duliajan - 786 602  
Assam, India  
FAX No. 91-374-2801680  
Email: [prodgas@oilindia.in](mailto:prodgas@oilindia.in)

c) **Contractor**

\_\_\_\_\_

\_\_\_\_\_

Fax No. :

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

**15.0 SUBCONTRACTING:** Contractor shall not subcontract or assign, in whole or in part, its obligations to perform under this contract, except with Company's prior written consent.

**16.0 MISCELLANEOUS PROVISIONS:**

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

16.2 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.

16.3 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 Contractor's surplus materials, rubbish or temporary works of every kind and leave the whole of the site clean to the satisfaction of the Company.

16.4 Key personnel can not be changed during the tenure of the Contract except due to sickness/death/resignation of the personnel in which case the replaced person should have minimum experience and qualification, which will be again subject to approval, by the Company.

**17.0 LIQUIDATED DAMAGES FOR DEFAULT IN TIMELY COMPLETION:**

17.1 Time will be of the essence of the contract.

17.2 In the event of the Seller's default in maintaining the agreed delivery schedule set out in the order, OIL shall have the right to cancel the order at any time after expiry of scheduled delivery date without any reference to the Seller and make alternative arrangement at the discretion of OIL in which case extra expenditure involved, will be recoverable from the Seller and OIL shall not be responsible towards such cancellation or any damage that may be incurred by the Seller. The decision of OIL shall be final and binding on the Seller.

17.3 As an alternative to Clause No. 17.2 above, OIL reserves the right to accept the materials but, the Seller shall be liable to pay liquidated damages @ 0.5% per week or part thereof of the value of the goods in respect of which default in delivery takes place subject to a maximum of 7.5 %. Should there be default on the part of the Seller for more than 15

Weeks from the scheduled date to complete the delivery or to complete the installation/commissioning & Training (wherever applicable) successfully, OIL shall have the right, in addition to the provisions under Clause 17.2 to invoke the Performance Security without causing any notice to the Seller to this effect.

The amount of liquidated damage as stipulated above is a pre-estimated genuine loss as agreed by both the parties and shall be payable without any demur and shall not be open for any dispute whatsoever.

17.4 The liquidated damage as agreed by both the parties as a genuine pre-estimated loss shall be payable on Landed Cost of the materials at Duliajan inclusive of all cost to the extent of default (undelivered portion only in cases where part delivery is acceptable) and commissioning at site is not involved.

17.5 The Company also reserves the right to cancel the Contract without any compensation whatsoever in case of failure by the bidder to commence operation within the stipulated period.

**18.0 PERFORMANCE SECURITY:** The Bidder has furnished to Company a Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ issued by \_\_\_\_\_ for \_\_\_\_\_ (being 7.5% of estimated Contract Price) valid till \_\_\_\_\_ towards performance security. The performance security shall be payable to Company as compensation for any loss resulting from Contractor's failure to fulfill their obligations under the Contract. In the event of extension of the Contract period, the validity of the bank guarantee shall be suitably extended by the Contractor. The bank guarantee will be discharged by Company not later than 30 days following its expiry.

**19.0 ASSOCIATION OF COMPANY'S PERSONNEL:** Company's engineer will be associated with the work through out the operations. The Contractor shall execute the work with professional competence and in an efficient and workman like manner and provide Company with a standard of work customarily provided by reputed international oil companies in the petroleum industry.

**20.0 LABOUR:** The recruitment of the labour shall be met from the areas of operation and wages will be according to the rates prevalent at the time which can be obtained from the District Authorities of the area. The facilities to be given to the labourers should conform to the provisions of labour laws as per contract labour (Regulation and Abolition) Act, 1970.

**21.0 LIABILITY:**

21.1 Except as otherwise expressly provided, 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 Contractor 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, Contractor and sub-Contractors. 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.

- 21.2 Neither Company nor its servants, agents, nominees, assignees, Contractor, 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 Contractor 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, Contractor 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.
- 21.3 The Contractor hereby agrees to waive its right to recourse and further agrees to cause their underwriters to waive their right of subrogation against Company and/or its underwrites, servants, agents, nominees, assignees, Contractor and sub-contractors for loss or damage to the equipment of the Contractor and/or its sub-contractors when such loss or damage or liabilities arises out of or in connection with the performance of the contract.
- 21.4 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 Contractor, sub-contractors and/or their employees when such injury, illness or death arises out of or in connection with the performance of the contract.
- 21.5 Except as otherwise expressly provided, neither Contractor nor its servants, agents, nominees, Contractor 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, Contractor 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.
- 21.6 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.
- 21.7 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, Contractor and sub-contractors for loss or damage to the equipment of Company and/or its Contractor sub-contractors when such loss or damage or liabilities arises out of or in connection with the performance of the contract.
- 21.8 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 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.

**22.0 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.

**23.0 INDEMNITY AGREEMENT:**

23.1 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 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.

23.2 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, Contractor and sub-contractors or their employees 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.

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

**25.0 PAYMENT, MANNER OF PAYMENT, RATES OF PAYMENT & INVOICING PROCEDURE:**

25.1 Company shall pay to 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 Company unless specifically provided for in this contract. All payments will be made in accordance with the terms hereinafter described.

25.2 **MANNER OF PAYMENT** : All payments due by Company to Contractor shall be **made at Contractor's** designated bank. All bank charges will be to Contractor's account.

25.3 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.

- 25.4 The company will issue necessary work-order for individual job(s). The Contractor shall furnish job completion report against each work order. The Format for the job completion report shall be prepared jointly by the Contractors and the Company's representative after signing of the agreement. Contractor shall send invoice along with the job completion reports to Company after completion of individual job.
- 25.5 Contractor will submit 6(six) sets of all invoices to Company address given under **para 14.1 (b)** duly super scribed 'Original' and 'Copy' as applicable for processing of payment. Separate invoices for the charges payable under the contract shall be submitted by the Contractor for foreign currency and Indian currency.
- 25.6 Contractor shall submit invoices to Company on the day following the end of each month for all daily or monthly charges due to the Contractor.
- 25.7 Payment of invoices, if undisputed, shall be made within 30 days following the date of receipt of invoice by Company excepting for the first two (2) invoices where some delay (up to one month) may occur.
- 25.8 Payment of mobilization charges shall be made within 45 days following the date of receipt of undisputed invoices by Company. Mobilization should be complete in all respect before raising invoice.
- 25.9 Company shall within 20 days of receipt of the invoice notify 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. This will not prejudice the Company's right to question the validity of the payment at a later date as envisaged in sub-clause **25.3** above.
- 25.10 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 **respect** of any other billing, the payment of which may then or thereafter be due.
- 25.11 Payment of demobilization charges shall be made when applicable within 45 days following receipt of invoice by Company accompanied by the following documents from the Contractor :
- a) Audited account up to completion of the Contract.
  - b) Tax audit report for the above period as required under the Indian Tax Laws.
  - c) Documentary evidence regarding the submission of returns and payment to taxes for the expatriate personnel engaged by the Contractor or by its sub-contractor.
  - d) Proof of re-export of all items (excepting consumables consumed during the contract period) and also cancellation of re-export bond if any.
  - e) Any other documents as required by applicable Indian Laws.

In case of non-submission of the documents mentioned above by the Contractor before release of the final payment by the company no demobilization charges will be paid.

- 25.12 Contractor shall maintain complete and correct records of all information on which Contractor's invoices are based upto 2(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. Any audit conducted by Company of Contractor's records, as provided herein, shall be limited to Company's

verification (i) of the accuracy of all charges made by Contractor to Company and (ii) that Contractor is otherwise in compliance with the terms and conditions of this Agreement.

**26.0 WITHHOLDING:** Company may withhold 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 :

- a) For non-completion of jobs assigned as per **Section-IV**.
- b) Contractor's indebtedness arising out of execution of this Contract.
- c) Defective work not remedied by Contractor.
- d) Claims by sub-Contractor of Contractor or others filed or on the basis of reasonable evidence indicating probable filing of such claims against Contractor.
- e) Failure of Contractor to pay or provide for the payment of salaries/ wages, contributions, taxes or enforced savings with-held from wages etc.
- f) Failure of Contractor to pay the cost of removal of unnecessary materials, tools, or machinery from the work site.
- g) Damage to another contractor's man and materials working for the Company.
- h) All claims against Contractor for damages and injuries, and/or for non-payment of bills etc.
- i) 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 Company, 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.

Withholding will also be effected on account of the following:-

- i) Order issued by a Court of Law 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 unauthorized imports.

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

Notwithstanding the foregoing, the right of Company to withhold shall be limited to damages, claims and failure on the part of Contractor, which is directly/indirectly related to some negligent act or omission on the part of Contractor.

**27.0 SET OFF:**

27.1 Any sum of money due and payable to the contractor (including Security Deposit) under this contract or any other contract may be appropriated by Oil India Limited and set off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of

this contract or under any other contract made by the contractor with Oil India Limited (or such other person or person contracting through OIL.

**28.0 APPLICABLE LAW:**

28.1 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 exclusive jurisdiction of Courts situated in Dibrugarh/ Guwahati.

28.2 The Contractor shall ensure full compliance of various Indian Laws and Statutory Regulations, to the extent applicable, as stated below, but not limited to, in force from time to time and obtain necessary permits/licenses etc. from appropriate authorities for conducting operations under the Contract:

- a) The Mines Act - as applicable to safety and employment conditions.
- b) The Minimum Wages Act, 1948.
- c) The Oil Mines Regulations, 1984.
- d) The Workmen's Compensation Act, 1923.
- e) The Payment of Wages Act, 1963.
- f) The Payment of Bonus Act., 1965.
- g) The Contract Labour (Regulation & Abolition) Act, 1970 and the rules framed thereunder.
- h) The Employees Pension Scheme, 1995.
- i) The Interstate Migrant Workmen Act., 1979 (Regulation of employment and conditions of service).
- j) The Employees Provident Fund and Miscellaneous Provisions Act, 1952.
- k) The AGST Act., WB & Bihar Tax Act
- l) Service Tax Act.
- m) Customs & Excise Act & Rules
- n) Assam, West Bengal and Bihar Entry Tax Act
- o) Value Added Tax
- p) Environment Protection Act
- q) Public Liability Act

**29.0 RECORDS, REPORTS AND INSPECTION:** The Contractor shall, at all times, permit the Company and its authorised 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 at all reasonable times for inspection by the Company's designated representatives and its authorised employees and representatives. The Contractor shall provide the Company designated representatives with a daily written report, on form prescribed by the Company showing details of operations during the preceding 24 hours. The Contractor shall not, without Company's written consent allow any third person(s) access to the said records, or give out to any third person information in connection therewith.

**30.0 SUBSEQUENTLY ENACTED LAWS:** Subsequent to the date of submission of Contractor's bid, if there is a change in or enactment of any law or interpretation of existing law, which results in additional cost/reduction in cost to Contractor on account of the operation under the Contract, the company/ Contractor shall reimburse/pay Contractor/company for such additional/reduced costs actually incurred.

**31.0 ROYALTY AND 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 or drawings forming part thereof.

**32.0 WAIVER & AMENDMENTS:** It is fully understood and agreed that none of the terms and conditions of the contract shall be deemed waived or amended by either party unless such waiver or amendment is executed in writing by the duly authorized agents or representatives of such party. The failure of either party to execute any right of termination shall not act as a waiver or amendment of any right of such party provided hereunder.

**&&&&**

## **SECTION- IV**

### **TERMS OF REFERENCE / TECHNICAL SPECIFICATIONS**

#### **TERMS OF REFERENCE:**

##### **1.0 Preamble:**

Oil India Limited (OIL), a national oil company in India engaged in exploration, drilling, production & transportation of oil & gas and production of LPG intends to hire the services of a competent Turnkey Solution/ Service Provider (TSP) / Technology Provider for tapping its flared gas of volume about 80000-100000 SCMD with an objective to monetize it by converting into LNG, transporting LNG by cryogenic tankers to re-gasification site and finally injecting the same after regasification into a available existing gas grid. OIL has dedicated gas collection and distribution network including compression facilities in order to utilize the gas for various industries like Power Sector, Fertilizer sector, Petrochemicals, Tea Sector, fuel for commercial and domestic uses etc.

##### **2.0 Background:**

OIL has been carrying out its exploration and development activities in various areas in the state of Assam. The recent discoveries are in remote areas and the quantum of the associated gas produced along with crude oil is in the order of 80,000 to 100,000 SCMD. Due to the non-availability of local consumers as well as pipeline evacuation facilities, alternate arrangements are required to be planned to avoid the flaring of such valuable energy source. Moreover laying of long distance pipeline is not a viable solution in present circumstances for evacuating small quantity of gas. OIL, looking for a suitable solution in order to utilize/monetize the flared gas as well as abatement of harmful effect of greenhouse gas emission, intends to establish commercially viable and proven small scale Liquefied Natural Gas (LNG) plant including related facilities like LNG Storage, LNG Transportation and re-gasification plant. Since there is no market of LNG in the area, the LNG needs to be re-gasified and injected to gas grid.

##### **3.0 Project Overview:**

OIL has recently established a sizeable reservoir of oil and gas in one of its satellite fields namely Mechaki, located at a distance of around 75 kms away from its Field Head Quarters in Duliajan in the state of Assam. The associated gas produced along with crude oil from this field is presently in the order of 80,000 to 1,00,000 SCMD and is being flared. This location is about 3 to 4 kms from the National Highway (NH-37) and about 45 kms from the District Headquarter of Tinsukia. This gas needs to be converted to LNG near the location Mechaki or at a suitable location nearer to the National Highway. The distance from the site to the proposed LNG Plant shall be within a range of 3-4 kms. The LNG, duly loaded in tankers shall be transported for a distance of about 70 to 100 kms and brought to the proposed re-gasification site. The LNG will be offloaded at the re-gasification site and injected in the existing gas grid.

##### **4.0 Scope of Work for the Project:**

Under the Project Scheme, Turnkey Solution/ Service provider / Manufacturer is expected to perform the activities outlined above as per clauses mentioned below.

**4.1 Outright Purchase by OIL, Operation & Maintenance, Transportation of LNG, Injection of regasified LNG into OIL’s gas grid by the party:**

Under the Project Scheme, **the party selected for project** has to submit the design, detailed engineering of the complete package inclusive of LNG plant (as specified), Re-gasification plant, accessories & facilities which shall cover surface facilities like storage tanks with loading/unloading facility at LNG plant site and Regasification plant site as advised, necessary piping, valves, pumps (as required), any other necessary item required for commissioning of the project, etc. for approval of OIL. After necessary approval by OIL the party’s obligation will be to supply the LNG plant along with all auxiliaries & accessories, Storage Tanks at LNG Plant, Regasification Plant, Storage tanks at Regasification plant, along with all requisite safety and control items, take responsibility in getting necessary clearances from statutory bodies for all relevant items, install and commission the plant and related accessories/facilities, operate and maintain the plant and related accessories/facilities, provide LNG transportation service as per the agreed terms and conditions.

OIL will be responsible for purchase of all the units required to commission the project as indicated above. Subsequently party shall carryout installation, commissioning, Operation & Maintenance services on an agreed terms and condition for an agreed period of 4 (four) years.

**5.0 BATTERY LIMIT CONDITIONS:**

**5.1 Gas Composition:**

**Process Design conditions at Site:**

**Quantity of Natural Gas : 90,000 SCMD**

Inlet Gas Pressure : 14 Kg/cm<sup>2</sup> (g)

Inlet Gas Temperature : (+) 40 Deg C

Component	Operating Composition% v/v	Design Composition% v/v
Methane	90-92	91
Ethane	2.19-1.89	2
Propane	0.79-0.60	0.7
Iso-Butane	0.16-0.04	0.1
Normal-Butane	0.23-0.09	0.16
Iso-Pentane	0.14-0.02	0.08
Normal-Pentane	0.13-0.01	0.07
Hexane+	0.36-0.12	0.28
Nitrogen	0.59-0.36	0.2
Oxygen	NIL	nil
Carbon Dioxide	5.41-4.86	5.41
Mercury(Hg)	NIL	nil
Hydrogen Sulfide	NIL	nil

The gas composition indicated is on dry basis.

However, the gas is saturated with water 250 lb/MMSCFD & Oil Rate of 200 Litres/ MMSCFD



- b) All instrumentation, control, hardware, software items along with licenses (if any) for efficient, safe and reliable working of the LNG and LNG re-gasification plant as per the range of duty conditions.
- c) NGL storage tank at LNG plant site- The NGL stored shall be collected by OIL. Suitable loading facilities to be provided by the Contractor.
- d) Fire fighting facilities including ring line, monitors, extinguishers, fire pump etc.- for safety of the plant as well as the regasification site as per statutory rules and regulations.
- e) Control room, modular type, air-conditioned along with operator's console and all necessary fittings and fixtures.
- f) Civil & structural items for safe and efficient operation of the plant including Packaged equipment sheds, walkways, stairways, footpath, drainage systems, Overhead Travelling Crane for maintenance of major equipment etc. inside the LNG and LNG regasification plant area.
- g) Design & construction of necessary civil foundation pads, containment dykes for LNG storage tanks in the LNG and regasification plant.
- h) Piping Stress Analysis
- i) Electrical switchgear, fittings, cables, poles etc., 2(two) nos. high mast at LNG plant and 1 (one) no. at LNG regasification plant.
- j) Suitable water treatment plant for safe and efficient working of the plant and its auxiliaries.
- k) Suitable utilities like Air compressors for instrument air/ starting service etc. to be offered by the Contractor.
- l) Training of OIL's personnel for operation and maintenance of the plant.
- m) Supply of all equipment manuals, operating procedures, plant start-up, shutdown procedures, spare parts list, plant p&id diagram, plant as-built diagram.
- n) Commissioning Spares

## **6.2 Transportation of LNG**

Contractor has to transport the produced LNG from the LNG plant to re-gasification plant by means of contractor's LNG truck tankers for uninterrupted operation of the LNG plant.

The truck tankers shall be road worthy in good condition possessing all statutory certifications and approvals for carrying LNG.

## **6.3 Operation & maintenance of :**

LNG plant, LNG storage tank with loading & unloading facilities along with all auxiliaries & utilities

LNG regasification Plant with loading facilities along with all auxiliaries & utilities.

Injection of Natural Gas into OIL gas distribution network at requisite pressure.

Security, safety shall be contractor's responsibility for the contract period and for which the contractor has to cater as per statutory codes & regulations wherever applicable. Obtaining permissions of all statutory/regulatory bodies shall be 'OIL's responsibility. However Contractor to follow up on the same.

## **6.4 Provision of Utilities:**

Contractor has to arrange/ supply the following:

- a) All consumables/utility like water and power etc.
- b) Fuel gas for the prime mover of compressor and generating set (natural gas engine driven) will be provided at OIL's cost and will be tapped from the inlet gas. However bidder to specify the fuel gas required in the bid.
- c) Transportation of all equipment, instruments, including auxiliary equipments / items including auxiliaries.
- d) Providing adequate firefighting equipment viz. fire extinguishers, sand buckets, portable trolleys etc. as per safety rules and regulations.
- e) Making all necessary arrangements for lodging, boarding and transportation of Contractor's personnel.
- f) Starting air / Pneumatic air / purging gas for start-up and operation of the plant.
- g) Required measurement facilities of LNG at LNG plant site. Facilities shall be integrated to collect the LNG measurement values to the control room.
- h) DGMS approval shall be applied by OIL, however the Contractor to pursue the same with the authorities.
- i) All electrical devices shall meet the requirements for the area classification in which they are installed.

## **6.5 Surface Preparation & Painting:**

The equipment and skids are to be externally painted for environmental protection after thorough cleaning. As a minimum, this is to include zinc rich primer (1 coat) and epoxy based final covering. Vendor to provide the proposed specification with his offer.

Cleaning shall be done through sand blasting as per SSPC # SP6 before painting with spray.

6.6 All electrical and electronic equipment used in hazardous area should have national (DGMS) approval /international (UL, CSA or equivalent European test house) certificates.

6.7 All systems should be designed, constructed and operated for uninterrupted continuous operation.

6.8 The contractor shall have an office at Duliajan with telephone/ fax/ e-mail facilities and an engineer, who shall liaise and report on daily basis.

7.0 **FACILITIES TO BE PROVIDED BY OIL:**

i) Natural Gas shall be made available at one point near to LNG plant site at Mechaki at a pressure of 14 kg/cm<sup>2</sup> (g).

ii) The land required for the proposed Plant shall be made available (approx. 25,000 sq. mtr for LNG plant site which includes installation of all other required facilities such as LNG storage, NGL storage, operators room, walkway, truck way, roads, office setup, godown, weighbridge, firefighting arrangement, other required facilities, etc. and approx. 6,000 sq. mtr for regasification site inclusive of LNG storage, operator's room, small godown, weighbridge, vaporizers, firefighting arrangement, other required facilities, etc.). However bidder may specify the land requirement in the offer in case the requirement is less.

iii) EIA study for both LNG and re-gasification plant shall be done by OIL.

iv) Basic soil test report is provided by Oil India limited for estimation purpose only. However detail soil survey shall be done by the bidder.

Typical Basic soil report is enclosed in Annexure-IV

v) Pipeline from wellsite to LNG plant site shall be OIL's responsibility.

vi) Pipeline from regasification plant to OIL's distribution network shall be OIL's responsibility.

8.0 **Penalty provision:**

8.1 For O&M of the LNG Plant & re-gasification Plant:

a) Contractor has to operate the installation within the specified capacity range for minimum 330 days in a financial year, i.e. they are allowed a scheduled shutdown period of 35 days within a financial year. The shutdown period shall not be carried forward for the next year.

b) In the event the contractor exceeds 35 days shutdown period, then there will be penalty to the tune of 50 % of monthly O&M for the first 15 days

c) Thereafter, for the next 15 days penalty will be at the rate of 75% of monthly O&M charge.

d) Thereafter, penalty shall be 100% of monthly O&M charge.

## 8.2 Penalty for Transportation:

The availability of the truck mounted tankers shall be 100%. The truck mounted tankers shall be available to uplift the product from LNG plant site. In case the same is not available to uplift the daily production from the plant site, penalty will be imposed as below:

- a) Upliftment of less than 100% of daily LNG production, penalty shall be imposed on prorata basis on monthly fixed transportation charges.
- b) Additionally, for non transportation of any quantity of LNG produced from the plant site to regasification site (from 6:00 AM to 6:00 AM ), a penalty of equivalent gas price for the said quantity of LNG shall be levied. The price of the gas will be at the rate prevailing govt. determined price for North East India.

9.0 **Period of Contract:** The period of contract for Operation & Maintenance shall be 4 (four) years extendable by 1 (one) year subject to satisfactory service and mutual consent at the same terms & conditions.

## 10.0 **FIRE FIGHTING AND SAFETY EQUIPMENT/SERVICES:**

- i) Safety: Contractor shall observe such safety regulations in accordance with acceptable oilfield practice and applicable Indian Laws. Contractor shall take all measures reasonably necessary to provide safe working conditions and shall exercise due care and caution in preventing fire, explosion and maintain fire control equipment in sound condition at all times. Contractor shall conduct such safety drills, Tool box meetings, etc. as may be required by company at prescribed intervals.
- ii) Contractor shall provide all necessary fire fighting and safety equipment as per laid down practice as specified under applicable statutory & regulatory rules & regulations.
- iii) Fire protection at plant sites shall be the responsibility of the Contractor.

Documentation, record keeping of all safety practices should be conducted as per international/Indian applicable laws, act, regulations etc, and these records should be made available for inspection at any point of time. The H.S.E (Hygiene Safety and Environment) policy as well as emergency procedure manual should be kept at site. Compliance of these shall be the sole responsibility of the Contractor.

**SECURITY SERVICES:** Contractor shall provide security personnel to safe guard equipment & accessories at plant sites.

## 11.0 **HSE POINTS**

**11.1** It will be solely the Contractor's responsibility to fulfill 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 him comply with the same requirement as the contractor himself and shall be liable for ensuring compliance all HSE laws by the sub or sub-sub contractors.

- 11.2** Every person deployed by the contractor in a mine must wear safety gadgets to be provided by the contractor. The Contractor shall provide proper Personnel Protective Equipment as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule. Safety appliances like protective footwear, Safety Helmet and Full Body harness has to be DGMS approved. Necessary supportive document shall have to be submitted as proof. If the Contractor fails to provide the safety items as mentioned above to the working personnel, the Contractor may apply to the Company (OIL) for providing the same. OIL will provide the safety items, if available. But in turn, OIL will recover the actual cost of the items by deducting from Contractor's Bill. . However , it will be the Contractor's sole responsibility to ensure that the persons engaged by him in the mines use the proper PPE while at work.  
All the safety gears mentioned above are to be provided to the working personnel before commencement of the work.
- 11.3** The Contractor shall prepare written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with it/them. The SOP should clearly state the risk arising to men, machineries & material from the mining operation / operations to be done by the contractor and how it is to be managed.
- 11.4** The contractor shall provide a copy of the SOP to the person designated by the mine owner who shall be supervising the contractor's work.
- 11.5** Keep an up to date SOP and provide a copy of changes to a person designated by the Mine Owner/Agent/Manager.
- 11.6** Contractor has to ensure that all work is carried out in accordance with the Statute and SOP and for the purpose he may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a safe manner. For work of a specified scope/nature, he should develop and provide to the mine owner a site specific code of practice in line .
- 11.7** All persons deployed by the contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards stating the name of the contractor and the work and its validity period, indicating status of MVT,IME & PME.
- 11.8** The contractor shall submit to DGMS returns indicating – Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons
- 11.9** The return shall be submitted quarterly (by 10<sup>th</sup> of April, July, October & January) for contracts of more than one year. However, for contracts of less than one year, returns shall be submitted monthly.
- 11.10** 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.

- 11.11.** 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.
- 11.12.** Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor.
- 11.13** The contractor shall have to report all incidents including near miss to Installation Manager / departmental representative of the concerned department of OIL.
- 11.14.**The contractor has to keep a register of the persons employed by him/her. The contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.
- 11.15** If the company arranges any safety class / training for the working personnel at site (company employee, contractor worker, etc) the contractor will not have any objection to any such training.
- 11.16** The health check up of contractor's personnel is to be done by the contractor in authorized Health Centers as per OIL's requirement & proof of such test(s) is to be submitted to OIL. The frequency of periodic medical examinations should be every five years for the employees below 45 years of age and every three years for employees of 45 years of age and above.
- 11.17** To arrange daily tool box meeting and regular site safety meetings and maintain records.
- 11.18** Records of daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the contractor.
- 11.19** A contractor employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.
- 11.20** A contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.
- 11.21** Contractor's arrangements for health and safety management shall be consistent with those for the mine owner.
- 11.22** In case Contractor is found non-compliant of HSE laws as required company will have the right for directing the contractor to take action to comply with the requirements, and for further non-compliance, the contractor will be penalized prevailing relevant Acts/Rules/Regulations.
- 11.23** 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 will have the right to direct the contractor to cease work until the non-compliance is corrected.

**11.24** The contractor should prevent the frequent change of his contractual employees as far as practicable.

**11.25** The contractor should frame a mutually agreed bridging document between OIL & the contractor with roles and responsibilities clearly defined.

**11.26** For any HSE matters not specified in the contract document, the contractor will abide by the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.

## **12.0 PERSONNEL TO BE DEPLOYED**

i) The Contractor will provide competent, qualified and adequately experienced personnel for carrying out jobs as mentioned in scope of work correctly and efficiently. Personnel provided by the Contractor must observe all safety and statutory norms applicable to the Company. Their performance must be to the satisfaction of the Company and the Contractor must be willing and ready to replace, at their own expenses, any of their personnel who are not found suitable by the Company.

ii) Maintain a highly skilled technical staff to render the services and capable of making the best use of the equipment so as to ensure the highest degree of accuracy and reliability of the works/data gathered.

iii) **KEY PERSONNEL:** The qualification and experience of the key personnel are to be as under:

**CONTRACTOR shall submit CVs of the personnel to the COMPANY for approval prior to the commencement of the Operations.**

- The foreign personnel of the Contractor shall possess a MHA (Ministry of Home Affairs) clearance and the Contractor shall ensure that the MHA clearance is obtained at his own responsibility and cost prior to any expatriate personnel mobilized to the field.
- Personnel provided by the Contractor must observe all safety and statutory norms applicable to the Company.
- Personnel deployed by the Contractor should be fluent in English/local language.
- The following skilled personnel, required for execution of the contract shall have to be deployed by the Contractor.

## **13.0 NOTES:**

- a. An undertaking from all the personnel as per Performa (Annexure-II) should be forwarded after deployment of manpower prior to mobilization.
- b. Regarding educational qualification and experience of the key personnel, the Contractor shall substantiate their claim with valid educational and experience certificates.
- c. For degree/ diploma/certificate/ standards awarded by any Educational Institutes other than Indian Institutes, the Contractor shall furnish a brief description about the educational system of that country.

- d. The personnel deployed by the Contractor should comply with all the safety norms applicable during operation.
- e. For driving the vehicles/units on road, the Contractor shall ensure that the driver possesses necessary valid and proper licenses conforming to Indian Motor Vehicle Act.
- f. **Medical Fitness:**
  - ❖ The Contractor shall ensure that all of the Personnel deployed under the contract shall have had a full medical examination from qualified and registered doctor in accordance with accepted medical standards prior to commencement of Operation.
- g. **Training Courses:**
  - ❖ The Contractor shall ensure that all of the Contractor Personnel performing services hereunder shall have attended all safety and operational training courses such as mines vocational training or equivalent required by applicable law and as is generally consistent with international industry practice and/or as otherwise required by the Company.
  - ❖ The Contractor shall, if requested, forthwith produce valid and current certificates of completion or attendance for the Company's inspection.
- h. Personnel should be versed in fire fighting, gas testing etc.
  - i. Overall Supervisor shall co-ordinate day to day operations smoothly and in professional manner.
  - j. Contractor should deploy other personnel which shall include drivers, security men, and services of unskilled labour.
  - k. Employment of personnel other than key persons shall be at the discretion of the contractor to run all operations at work site successfully.
  - l. The Contractor shall forward the list of personnel deployed along with bio-data / qualification/ experience / track record of the personnel prior to mobilization of the equipment with all supporting documents. Any additional manpower deployed by the Contractor shall be at the expense of the Contractor.
  - m. The Contractor shall be responsible for arranging relief of personnel during vacation, statutory off days, sickness etc. entirely at their cost. However, the relief personnel also must have the experience as indicated above. Moreover, the Contractor will have to obtain prior approval from the Company for the relief personnel of the Contractor at least 2 (two) days in advance.
  - n. Company reserves the right to instruct for removal of any Contractor's personnel who in the opinion of company is technically not competent or not rendering the services faithfully, or due to other reasons. The replacement of such personnel will also be fully at cost of the Contractor and the Contractor shall have to replace within Ten (10) days for personnel of Indian origin and Twenty one (21) days for foreign residents. The deported personnel shall be allowed to continue the job till the replacement arrives with the discretion of the Company.

## **TECHNICAL SPECIFICATIONS**

### 1.0 GENERAL REQUIREMENT:

1.1 LNG plant, Regaification Plant, Storage and other auxiliaries including vessels and pipings shall be designed, constructed to the international codes and standards as well as regulatory requirements, as stated below but not limited to, for reliable safe operation of the plant:

- i. NFPA 59a
- ii. EN1473
- iii. OISD 194,118
- iv. PESO
- v. NFPA 15,1996 etc.
- vi. TEMA etc.
- vii. ASME Code Section IX (including Addenda)
- viii. ASME Code Section VIII (including Addenda)
- ix. ANSI B 16.5: Pipe Flanges, and Flange Fittings

#### 1.1.1 ANSI B 16.5 :

This standard shall apply to nozzles and manhole flanges 24" and under in nominal size. Flanges larger than nominal size of 24" shall be per API 605 Standard and if required, calculated for strength as per ASME Code Sec. VIII, Div. 1, Appendix 2. Special flanges according to ASME Code Sec. VIII, Div. 1, Appendix 2 can be used. Impact test required by ASME Code Section VIII, Div. 1 shall be also applied for equipment with design temperature less than or equal to -20°C.

#### 1.1.2 TEMA

The structural design of shell and tube type heat exchangers in the process shall be in accordance with class "R" of this standard. But class "C" of TEMA, may be applied for other auxiliary heat exchangers.

Other type heat exchanger except shell-tube type can be designed, fabricated and inspection according to manufacturer's standards, which shall be submitted to OIL for confirmation, i.e., strength, installations, fabrication and inspection of heat exchangers shall be in accordance ASME Code Sec. VIII, Div. 1. Calculation of tube sheets shall be in accordance with TEMA.

#### 1.1.3 Design Pressure and Temperature

The design pressure and temperature shall take account of the highest pressure and temperature or lowest temperature during operation.

\_\_The following will be addressed during the design phase:

- i. Wind and Seismic Load
- ii. Wind Deflection
- iii. Stress
- iv. Corrosion Allowance
- v. Material Selection

#### 1.1.4 Special Heat Exchangers

Heat exchangers not covered by TEMA can be designed and constructed according to manufacturer's standards.

#### 1.1.5 Loads Combination in Tower Design

The loads combination in tower design shall be taken into account as follows:

- i. Erected ;
- ii. Hydraulic test (in vertical position) ;
- iii. Design conditions (normal operating) ;
- iv. Shut down ;
- v. Other conditions (e.g. regeneration)。

#### 1.2 Plot Plan:

The arrangement chosen for the plot plan shall meet the legal and design standards' requirements for fire fighting, anti-explosion safety and sanitary. The bidder shall be responsible for internal arrangement of the process area and shall provide the applicable engineering design specifications. These shall be confirmed by OIL.

The road arrangement within the plant will in general be circular to allow easy access for first aid and fire fighting as well as easy evacuation. The layout of the plant will provide space for pipe racks and position for underground piping. Drainage requirements will be considered in selecting plant and piping elevations.

Adequate access to the plant and individual equipment for erection, maintenance and safe operation will be considered in the layout.

The Detail Engineering Layout will be done per guidelines agreed between OIL , Bidder and as per statutory rules and regulations.

#### 1.3 Noise :

Noise abatement measure by acoustic insulation or silencers shall be taken for critical equipment, if necessary to meet specified noise emission criteria. Bidder to specify the applicable codes and standards for individual equipment along with the bid.

All high pressure above 10 kg/cm<sup>2</sup>(g) natural gas handling pressure vessels shall be ASME "U" stamped.

## **2.0 Specification of the LNG Plant:**

The technology of the LNG plant offered shall be reliable, techno-commercially proven and the bidder shall have to provide detail documentary evidence including performance certificate from the owner of the plants running with the offered technology in the range of 50 to 200 tpd LNG production.

The complete plant shall be modular in nature for safe and quick transportation by tractor trailer unit as well as for onsite assembly/ dismantling at site.

Generally following individual skid dimension parameters are being followed for transportation of equipment by OIL.

- a) 10 m x 2.75m x 2.75m (Length x Breadth x Height).
- b) Allowable unit load : 30 MT
- c) overhead clearance: 4.25 m (14 feet)

The philosophy of design shall consider quick start up time, simplicity, efficiency, turndown ratio and operational reliability of the offered plant. Bidder shall submit the following along with the bid:

- a) Offered Technology along with detail justification and references
- b) Energy Efficiency along with references
- c) Product yield for the specified design conditions (LNG & NGL)
- d) Plot area requirement (LNG and regasification Plant)
- e) Detail equipment list along with make, model duty condition, specification, datasheet etc.
- f) Utility consumption rate

The LNG plant shall typically consist but not limited to the following modules:

- a. Natural Gas Pre-treatment system
- b. Natural gas compression system (if any)
- c. Turboexpander System (if any)
- d. Cold box / Heat Exchangers
- e. Refrigeration system
- f. Process Control & Instrumentation system
- g. Tank Storage system
- h. All interconnecting piping
- i. All valves, safety systems, etc.
- j. Complete electrical system
- k. Complete mechanical packages
- l. Utilities
- m. All wiring, cabling, conduits, trays, supports, etc.

## **2.1 LNG product Specification:**

The LNG plant shall be designed to remove components to a level where no substances will solidify during gas liquefaction.

### **3.0 CO2 Removal System:**

A CO<sub>2</sub> removal system shall be designed and supplied to remove the CO<sub>2</sub> component from the feed gas to minimum 50 ppmv.

Detail specification of the CO<sub>2</sub> removal system along with technology offered, technology references with performance certificates, heat & material balance, P&ID, flow sheet, datasheet to be provided with the bid.

The plant to be designed as per international standards keeping design philosophy such as plant efficiency, emission levels and proper human engineering for proper, safe and easy operation and maintenance.

Bidder to provide all the detail including pressure vessel datasheet, piping layout, process, instrumentation and control design.

### **4.0 H2O removal by mol. Sieves:**

The purpose of the H<sub>2</sub>O removal system is to reduce H<sub>2</sub>O concentration down to the required level of 1 ppmv to avoid freeze-out in the liquefaction process. The water removal process shall be Temperature Swing process (TSA). The separation principle is adsorption of H<sub>2</sub>O molecules on molecular sieve pellets. Two vessels will work in sequential mode. One will be adsorbing water and drying the process gas, while the other will be regenerated in two steps: A) Heating to reject H<sub>2</sub>O and B) cooling to reach adequate operational temperature. A slip stream or a portion of the dried gas will be used for this purpose. Bidder to design the plant and submit the detail specification along with references, heat & material balance, datasheet with bid. The plant to be designed as per international standards keeping design philosophy such as plant efficiency, emission levels and proper human engineering for proper, safe and easy operation and maintenance.

Bidder to provide all the detail including pressure vessel datasheet, piping layout, process, instrumentation and control design.

### **5.0 Cooling & subcooling Process:**

Bidder to provide detail specification about the heat exchanger/ cold box offered along with material of construction, type of heat exchanger, temperature approaches, references and datasheet with the bid document.

### **6.0 Storage Tanks & Tanker filling station:**

The storage tank

- a) LNG storage facility for total capacity of 250 m<sup>3</sup> shall be catered for storing of LNG in the LNG plant site using number of modular type LNG storage tanks (preferably 50 Cu.mtr capacities for easy movements).
- b) 1 no. NGL storage tank at LNG plant of capacity of 50 KL with related safety accessories, pump loading facility.
- c) LNG storage facility for total capacity of 100 m<sup>3</sup> shall be catered for storing of LNG in the re-gasification plant using number of modular type LNG storage tanks (preferably 50 Cu.mtr capacity for easy movements).
- d) Necessary measurement system for measurement of LNG shall be provided at loading facility at LNG plant site and regasification plant.

## 6.1 Storage tank specification:

### I. **INNER VESSEL**

- i. Material X5 crni 18-10 (SS304)
- ii. Design & manufacturing code AD -2000 MERKBLATTER
- iii. Maximum operating pressure :16 KG/CM<sup>2</sup> (g)
- iv. Design pressure(corrected for vacuum): 17 KG/CM<sup>2</sup> (G)
- v. Hydro test pressure KG/CM<sup>2</sup> (G) PER CODE
- vi. Design temperature DEG OC -196 TO +40
- vii. Insulation: VAC + PERLITE

### II. **OUTER VESSEL**

- i. Material CARBON STEEL
- ii. Design code CGA 341
- iii. Operating pressure VACUUM
- iv. External surface mech. Cleaning
- v. Primer two coats
- vi. Final paint (polyurethane) two coats

## 7.0 Re-gasification Unit:

The regasification plant shall consist of 100 m<sup>3</sup> capacity tanks (preferably each 50 m<sup>3</sup> capacity) and connected to have the facility to load the tanks with a single truck tanker bay with measuring system.

The LNG shall be taken through a hose (with quick release coupling type used for LNG transfer) and stored in the tanks.

Bidder to design the loading system such that minimum thermal stress is developed in the regasification equipment.

The re-gasification unit shall be natural draft Ambient Vaporizer type, with one bank operating and another standby/ defrosting cycle with each bank of capacity 4,000 M<sup>3</sup>/hr. Defrosting cycle for one bank should not be more than 8 hours under site conditions. Changeover shall be automatic with required process instrumentation for safe and reliable operation.

Bidder to provide detail specifications, datasheet with the bid.

Defrosting and changeover philosophy for the vaporizers shall be provided by the bidder.

Shall meet severe thermal cycling load as per ANSI B31.3 and shall be able take up frost load as per operating conditions.

Bidder to note that the land available at the LNG regasification site is approx. 6,000 sq. mtr. Hence bidder to design the regasification site within the available area including storage tanks and other facilities.

The regasification site shall be complete with operator's room along with process control console, all safety items including gas detectors, flame detectors, utilities, fire

hydrant system, civil items, including foundation, electrical items and electrification illumination jobs (1no. high mast to adequately illuminate the plant site as per regulatory standards).

The regasification site shall contain numbers of fire hydrant, fire monitors, fire fighting pump as per OISD standard.

## **8.0 Process Control and Instrumentation:**

The design philosophy behind the instrumentation and the process system shall be such that the system shall be fail-safe, user-friendly, and operationally reliable. The control system operator station shall give an overview over the complete plant, including the pretreatment plant. The system displays will be systematic and logical, such that the operator easily can see the process structure, as well as the conditions of field instruments and components. The display will show temperatures, pressures, flow and conditions of rotating machinery like compressors, fans and pumps etc.. There will also be a display for indication and reset of alarms. The plant should have emergency shutdown system.

Process control of the liquefaction plant will be provided by a DCS system together with a Safety Instrument System (SIS). This DCS and SIS system may also be also used for LNG storage and Loading system. Safety is the prime concern of any Bidder and their plants should have an excellent safety record. Process control is key component of a failsafe plant design. These objectives must be achieved by the following:

The Integrated Distributed Control System (DCS) and PLC based Safety Instrumented System (SIS) will provide process variable control, monitor all process parameters involved here to assure high plant safety integrity and process performance.

To take adequate measures in case of an abnormal situation, the emergency shutdown must be performed by the SIS. The SIS is independent of the DCS. The SIS shall be designed in accordance with the Safety Integrated Level (SIL) defined by IEC61508 and IEC61511 standards. The SIS is designed as "fail-safe" infrastructure. The SIS is to be implemented by Triple Modular Redundant (TMR) Programmable Logic Controller (PLC).

The Safety Instrumented System (SIS) shall be able to communicate with the DCS via the redundant serial links. The alarm and trip status can be displayed and printed out from the DCS operator stations. The SIS also has the capabilities of Sequence Events Recording (SER).

The system must also has a redundant communication network and, in the event of failure of one system, there is automatic transfer to the other without interruption of the process.

The distributed control system (DCS) shall be based on centralized control philosophy has the main function to gather all the various type of signals from field transmitters and sensors and display the important data to the operator and perform the logics/ control for the plant operation.

Online analyzers provide on line analysis and are also integrated or communicated with DCS/SIS to monitor the process. The sample loops consist of a fast loop from each of the process points that is vented back to the process so there is no loss of sample in this loop. Only a small portion of each sample stream is then directly sampled.

Local control panels will be used for those areas/equipment where local operations have to be performed by operators.

All rotating equipment will be started and stopped by the operator from the local control station for the equipment. Rotating equipment that is required to be stopped immediately during an emergency will be automatically stopped by the PLC system.

## **9.0 Operating Range / Turndown ratio**

The turndown ratio of the plant shall be at least 40 % of the design rated plant capacity.

## **10.0 Gas Analyzer**

An analyzer for measuring of the produced LNG quality shall be installed. This equipment shall measure CO<sub>2</sub> content upstream of the cold box /heat exchanger as well as LNG composition downstream the cold box.

Online hydrocarbon gas leak detection system shall be installed in the plant area and necessary alarm system shall be integrated into the control system of the plant.

## **11.0 Land Area Requirement & Plant Arrangement**

**11.1** Contractor to note that the area of land available for the LNG plant shall be approx.25,000 sq mtrs. Contractor to design, fabricate, install, commission, operate and maintain the plant taking into consideration all statutory rules and regulations. Arrangement drawings shall be made in accordance with the selected area for total plant taking into consideration all the safety factors and other statutory rules and regulations. The LNG & NGL storage including loading /unloading facilities, office space, operators room, godown, walkways, roadways, greenbelt, weigh bridge, dyke wall, including all other required facilities must be planned within the aforesaid area.

Land area available for regasification plant shall be approx. 6000 sq. mtrs. The pipeline into which the LNG shall be injected is within the regasification plant site. The LNG storage including loading /unloading facilities, vaporizers, operators room, godown, walkways, roadways, greenbelt, weigh bridge, dyke wall, including all other required facilities must be planned within the aforesaid area.

The vendor lists for the Major Equipment/ components are enclosed as ANNEXURE-III

Any other reputed vendor for the main equipment may be offered, however bidder to submit detail reference list including performance certificate for the same from LNG plant owner/ operator and propose for OIL's approval.

### **11.1 Plant Drawings:**

Bidder shall have to provide Plot plan taking into consideration all points of statutory rules & regulations including human engineering factors for smooth and safe operation and maintenance of the plant.

Both soft copies and hard copies containing the following shall be provided along with the bid for OIL's approval:

- a. GAD ( General Arrangement Drawing)
- b. Block diagram including safety distances as per statutory rules & regulations.
- c. Proposed Plot Plan to facilitate OIL's acquisition of land.
- d. Process Flow Diagram
  
- e) Proposed 3D drawing of the plant including plant layout, preferably in AutoCAD format.
- f) Utilities flow sheet
- g) Fire and other safety facilities plot plan

**12.0 HAZOP, EIA study:**

The contractor shall carry out

- a) Hazop study for the LNG and LNG regasification plant.

**13.0 QAP (Quality Assurance Plan) & Stage Inspection Plan:**

QAP along with stage inspection plan shall be submitted along with bid for OIL's approval.

Third Party Inspection will be required for all pressure vessels handling LNG and for which following OIL's approved parties may be engaged:

- a) Lloyds
- b) BV
- c) RITES
- d) Tuboscope Vetco
- e) DNV
- f) IRS

If the bidder wants to engage some other parties besides the above, the bidder shall have to take prior approval from OIL.

Scope of Third Party Inspection:

Third Party inspection shall include the following for all the pressure vessels:

- a) Material Test Certificate
- b) Heat Chart for pressure vessels (Inner & outer vessel) including heat no
- c) Hydrostatic test as per relevant standards
- d) Radiography test for weld joints (100% for LNG tanks)
- e) Test Certificate for Safety Valve, Pressure Gauge, Level Gauge and other instruments
- f) Any other tests for reliable and safe operation of the plant. Bidder to justify the tests required as per the relevant standards.

**14.0 Process Plant Simulation:**

Process simulation including heat & material balance diagram shall be submitted along with the bid.

**15.0 Process Guarantee:**

Contractor has to provide workmanship as well as process guarantee for safe and successful operation of the plant as per the conditions mentioned above.

The process guarantee shall include:

- a) LNG yield for the specified gas quantity, composition and site conditions minimum 55 tpd of LNG
- b) Natural Gas internal consumption max. 15% of inlet gas quantity and composition as above.

16.0 Bidder to provide the following along with the bid for technical evaluation

<b>Description</b>	<b>With bid</b>	<b>For approval after order</b>
Technical specification	√	
Process flow diagram	√	
General Arrangement Diagram with dimension	√	
Flow sheet with quantity (fluids) and parameters.	√	
HYSYS Simulation results HYSYS flow diagram	√	
Material Balance data sheet	√	
Heat Load Calculation	√	
HP requirement calculation	√	
Plot Plan	√	
Pressure Vessel / equipment specification/ datasheet	√	
Details of Instruments / Valves	√	
Instrument Data Sheets	√	
Utilities consumption	√	
Electrical equipment & Instrument details and single line diagram	√	
Performance certificate from clients	√	
Spare parts list for two years operation & Maintenance	√	
Manufacturer's Test certificate for instruments and electrical items		√
As built Drawing 3d format		√
P&ID and P&ID hard copies as well as soft copies.	√	
Piping Stress Analysis		√
Operation and maintenance manual (6 copies for each unit) & 2 copies in Electronic Format (CD-ROM)		√

Manufacturing Schedule (Bar chart)	√	
Quality Assurance Plan Proposed	√	√
Instrumentation Control System philosophy for fail-safe operation	√	
Electrical drawings and makes/specification of electrical items and other ancillaries.	√	
Foundation Pad design & drawing		√
Shed Civil Drawing		√
DGMS, CMRI certificates		√
P&ID		√

## **SECTION-V**

### **SCHEDULE OF RATES/PRICE BID FORMAT**

#### **SCHEDULE OF RATES**

The bidder shall quote the following rates in their priced bid as per the Price Bid Format

#### **1.0 TOTAL LUMP SUM COST:**

Total lump sum price inclusive of all taxes and duties for design, engineering, manufacturing, testing at Manufacturers Works of complete LNG plant, Re-gasification unit, weighbridge/ measurement system , instrumentation, control and electrical items etc., Packing for transport, Ocean transportation and Marine Insurance, Customs Clearance, Inland transportation up to site, complete services of erection, testing and commissioning at site, transportation of LNG from LNG plant to regasification unit, Supply of materials and construction of civil items like foundation for equipment , road inside the installations, sheds for equipment, Control room, toilets etc including electrical items, training of OIL's personnel at manufacturers works of Liquefaction Plant (excluding cost of engineers to and fro travel and daily expenses), training of OIL's personnel at site for Operation & Maintenance.

#### **2.0 FIXED O&M CHARGES:**

Fixed O&M charges shall be paid to the contractor on monthly basis after satisfactory production of LNG in the LNG plant as per the contract. Both quantity (weight/ volume) and quality of LNG produced shall be taken into account. Shutdown taken by the contractor during the month shall be calculated and the same shall be calculated yearly basis by the company for calculation of penalty (if any). Shutdown period shall be calculated from the day of operation of the LNG plant and Regasification plant for production of LNG as well as regasification of LNG to gas in each location.

Contractor shall submit the monthly fixed operation & maintenance charges bill to the Engineer –in charge along with the daily running report.

#### **3.0 FIXED AND VARIABLE TRANSPORTATION COST:**

Fixed O&M cost shall be paid to the contractor on the basis of maintenance of truck mounted tankers. Contractor to submit bills against the same along with O&M charges for the maintaining the LNG plant, re-gasification plant, surface facilities like storage tanks, other facilities, etc.

Variable Transportation cost for each of the Category shall be quoted separately as indicated in the price schedule as the truck mounted tankers shall be used on the basis of production of LNG in the plant.

**Note:** In the event of any change of price of H.S.D by the Govt. of India, (from the tendered price of Rs.----- / litre of Diesel based on Duliajan price) RATES will stand revised. For every 1% (one percent) increase or decrease of H.S.D price at

Duliajan, the Company will be liable to increase or decrease the TONNAGE RATES by 0.30% (decimal three zero percent).

**PRICE BID FORMAT**

Sl.	Item description	Unit	Qty	Rate	Total Foreign currency	Total Indian Currency
1	Total lump sum price inclusive of all taxes and duties for design, engineering, manufacturing, testing, at Manufacturers Works of complete LNG plant, Re-gasification unit, Packing for transport, Ocean transportation and Marine Insurance, Customs Clearance, Inland transportation upto site, complete services of erection, testing and commissioning at site, transportation of LNG from LNG plant to regasification unit, injection of LNG into OIL's gas grid at LNG regasification plant site, training of OIL's personnel at manufacturers works of Liquefaction Plant (excluding cost of engineers to and fro travel and daily expenses), training of OIL's personnel at site for O&M, O & M for 4 years with year wise breakup including all civil and electrical works mentioned as below:	Lump sum	1			
	Break up of total lump sum price indicated above					
<b>A</b>	<b>Supply of all items mentioned above (FOR Despatching Station price):</b>					
1a	Liquefaction plant Module capable of processing 90,000 standard Cubic Feet Per day (SCMD) of natural gas as per the given composition with	No	1			

	complete accessories					
1b	Storage Tank for LNG of capacity 250 m <sup>3</sup> Of Cryogenic Liquid with loading /unloading facility at LNG plant (preferably 50 cu mtr each tank i.e 5 tanks meaning 1 set)	Set	1			
1c	Storage Tank for NGL of capacity 50 Cu. Mtr with loading/unloading facility at LNG plant site (preferably the size of the tank shall be of 50 cu mtr capacity)	set	1			
1d	Storage Tank for LNG of capacity 100 Cu. Mtr of Cryogenic Liquid with loading/unloading facility at LNG regasification plant (preferably 50 cu mtr each tank)	Set	1			
1e	Regasification unit having capacity of 80000 Cu. Mtr per day	Sets	2			
1f	Commissioning spares	Lot	1			
1g	Supply of any other items not covered above but essentially required for completion of the Plant	Lot	1			
1h	Other charges on above(Item 1a through Item 1g-to indicate item-wise) as per following:	Lot	1			
i	Packing and forwarding charges					
ii	Marine transportation if applicable					
iii	Marine Insurance if applicable					
iv	Port clearance if applicable					
v	Inland transportation to Destination from port of clearance /dispatching station					
vi	Inland Insurance if applicable					
vii	Sales Tax,if applicable					
viii	Assam Entry Tax if applicable					

ix	All other taxes and duties,if any					
<b>B</b>	<b>Civil Jobs</b>					
i	Soil Survey	Lumpsum	1			
ii	Design and preparation of all the drawings for sheds, structures, RCC building, roads and drainage, hard-standing & cement matressing, dyke wall, green belt, landscaping, and approval of the same.	Lumpsum	1			
iii	Supply of all related materials and Construction of foundations for equipment, tanks etc	Lumpsum	1			
iv	Supply of all related materials and Construction of sheds for equipment, Control room, Operator's office , toilets etc.	Lumpsum	1			
v	Supply of all related ,materials and Construction of cement mattress, dyke wall etc.	Lumpsum	1			
vi	Electrication of Control room, Operatotr's office and area lighting of the LNG plant area and reagsification plant site	Lumpsum	1			
Vii	Design , supply , packaging, installation and commissioning of instrumentation items with PLC system alongwith all hardware , software costs etc.	Lumpsum	1			
<b>C</b>	<b>Services</b>					
i	O&M charges for 4 years with year-wise break up	month	48			
ii	Transportation Charges (Fixed Charge) from LNG plant to re-gasification unit	Month	48			
iii	Transportation Charges (Variable charges) from LNG plant to re-gasification unit	per ton km				
iv	Third Party Inspection Charges	Lumpsum	1			
v	Approval , licensing charges(if any)	Lumpsum	1			
vi	Any other Services	Lumpsum	1			

vii	Training at manufacturer's works	Lumpsum	1			
viii	Training of OIL's personnel for O&M at site	Lumpsum	1			
ix	Installation and commissioning	Lumpsum	1			
x	All taxes/duties on above charges	Lumpsum	1			

## **SECTION VI**

### **SPECIAL TERMS & CONDITIONS OF CONTRACT**

**1.0 DEFINITIONS:** Following terms and expression shall have the meaning hereby assigned to them unless the context otherwise requires:

1.1 "**Company**" or "OIL" means Oil India Limited;

1.2 "**Contractor**" means the Contractor performing the work under this Contract.

1.3 "Equipment" means the items and machinery for LNG Plant, regasification plant and other accessories and equipment.

1.4 "Base Location" means where the Bidder will establish camp for their equipment and personnel. The Bidder has to carry out maintenance for the equipment in the base camp.

1.5 "Operating Area" 100 KM radial distance from Duliajan in Assam.

1.6 "Site" means the land and other places, on/under/in or through which the works are to be executed by the Bidder and any other land and places provided by the company for working space or any other purpose as designated hereinafter as forming part of the Site.

1.7 "Company's items" means the equipment, materials and services, which are to be provided by company at the expense of company.

1.8 "Contractor's items" means the Well Servicing Equipment; materials and services, which are to be provided by Bidder to carryout the job satisfactorily which, are listed in section under terms of reference and technical specifications.

1.9 "Commencement Date" means the date on which the contractor commenced Production of LNG at the location..

1.10 "Contractor's personnel" means the personnel as mentioned under section terms of reference and technical specification, to be provided by Bidder to conduct operations hereunder.

1.11 "Contractor's representatives" means such persons duly appointed by the Bidder to act on Bidder's behalf and notified in writing to the company.

- 1.12 "Day" means a calendar day of twenty-four (24) consecutive hours beginning at 06:00 hrs. and ending at 06:00 hrs. next day.
- 1.13 "Approval" as it relates to Company, means written approval.
- 1.14 "Facility" means and includes all property of Company owned or hired, to be made available for services under this Contract and as described in this agreement which is or will be a part of the Company.
- 1.15 "Certificate of Completion" means certificate issued by the Company to the Contractor stating that he has successfully completed the jobs/works assigned to him and submitted all necessary reports as required by the Company.

## **2.0 CONTRACTOR'S PERSONNEL**

- 2.1 Except as otherwise hereinafter provided the selection, replacement, and engagement; Bidder shall determine remuneration of bidder's personnel. Such employees shall be solely of Bidder's employees. Bidder shall ensure that its personnel will be competent and efficient. However, the bidder shall provide details of experience, qualification and other relevant data of the personnel to be deployed for scrutiny and clearance by the company before the actual deployment. The bidder shall not deploy its personnel unless cleared by the company.

The Contractor shall have a base office at Base camp at Duliajan to be manned by competent personnel, who shall act for the Contractor in all matters relating to Contractor's obligations under the contract.

Contractor's Personnel: Contractor shall provide all manpower for necessary supervision and execution of all work under this contract to company's satisfaction except where otherwise stated. The minimum number of key personnel to be deployed is mentioned in this document.

- 2.4 Replacement of Contractor's Personnel: Contractor will remove and replace any Contractor's personnel, who in the opinion of company, is incompetent, or negligent or of unacceptable behavior or whose employment is otherwise considered by company to be undesirable.
- 2.5 Contractor shall deploy on regular basis, all category of their employee required for economic and efficient work servicing operations.

## **3.0 COMPANY'S REQUISITES**

- 3.1 Contractor shall, prior to mobilization, furnish to Company a list of all personnel who are to perform the Services. The list shall show each person's qualifications, details of work history and previous employment with dates, training courses attended, and copies of all pertinent certifications. Personnel must be fluent in written and spoken English.
- 3.2 If the Contractor plans to change any personnel from the list, the Contractor shall notify Company in advance of the intended change and give Company the above mentioned particulars of the new person.
- 3.3 Company reserves the right to reject any person on such list, and any subsequent changes to the list.

#### **4.0 FOOD, ACCOMMODATION, TRANSPORTATION AND MEDICAL FACILITY AT SITE :**

4.1 Contractor shall provide food & services for all its own & its sub-contractor's personnel.

Transportation of Contractor's personnel from base camp to work place will be arranged by Contractor.

Medical Facilities: The Contractor shall arrange for medical facilities for their personnel. However, OIL may provide services of OIL Hospital as far as possible in emergency on payment.

#### **5.0 CONTRACTOR'S ITEMS**

5.1 Contractor shall provide equipment and personnel to perform the services under the contract as specified in this document.

5.2 Contractor shall be responsible for maintaining at its own cost adequate stock levels of items including spares and replenishing them as necessary

5.3 Contractor shall be responsible for the maintenance and repair of all equipment and will provide all spare parts, materials, consumables etc. during the entire period of the contractual period.

5.4 Contractor will provide all POL for operation of Contractor's equipment both at location and campsite at Contractor's cost. There shall be **no changes** in the rates and other charges throughout the duration of the contract including extension, if any, on account of **any price change of lubricants**.

5.5. Contractor will provide necessary electricity at campsite and location.

#### **CONTRACTOR'S SPECIAL OBLIGATIONS**

It is expressly understood that Contractor is an independent Contractor and that neither it nor its employees and its subcontractors are employees or agents of company provided, however, company is authorized to designate its representative, who shall at all times have access to the LNG and re-gasification plants, including Truck tankers, related equipment and materials and all records, for the purposes of observing, inspecting and designating the work to be performed hereunder by Contractor. The Contractor may treat company's representative at well site as being in charge of company's designated personnel at well site. The company's representative may, amongst other duties, observe, test, check and control implementation of well servicing operations, equipment and inspect works performed by contractor or examine records kept at well site by Contractor.

**6.2 Compliance with Company's Instructions:** Contractor shall comply with all instructions of Company consistent with the provision of this Contract, but not limited to well servicing programme, safety instructions, confidential nature of information, etc. Such instructions shall, if Contractor request, be confirmed in writing by company's representative.

Contractor should provide the list of items to be imported in the format specified in Proforma-A for issuance of recommendatory letter to Directorate General of Hydrocarbons (DGH), New Delhi for clearance of equipment from Indian customs at concessional (nil) rate of customs duty.

Contractor shall arrange for inland transportation of all equipment, etc. from the port to the place of work and back at the end of the work at their own expense. Arrangement of Road Permits and payment of Assam Entry Tax for bringing equipment/material to Work place shall be Contractor's responsibility.

In case the Contractor imports the equipment etc. on re-export basis, the Contractor shall ensure for re-export of the equipment and all consumables and spares (except those consumed during the contract period) and complete all documentation required. Company will issue necessary certificates etc. as required. The Contractor should arrange for re-export of equipment within 60 days of notice of demobilization issued by the Company. If the re-export is not completed within the specified period, customs duty, penalty etc. levied by customs authorities for such delay shall be to Contractor's account and same will be deducted by the Company from Contractor's bills and security deposit.

**7.0 Pollution and contamination:** Notwithstanding anything to the contrary contained herein, it is agreed that the responsibility and liability for pollution or contamination shall be as follows:

- a) Contractor shall assume all responsibility and liability for cleaning up and removal of pollution or contamination which originates above the surface from spills of fuels, lubricants etc. wholly in Contractor's possession and control and/or directly associated with Contractor's equipment and facilities.
- b) Contractor shall assume all responsibility and liability for all other pollution or contamination, howsoever caused including control and removal of same, which may occur during the term of or arising out of this contract and shall indemnify company from and against all claims, demands and causes of action of every kind and character arising from said pollution or contamination, including but not limited to that which may result from fire, seepage or any other uncontrolled flow of gas, water or other substance.
- c) In the event of a third party commits an act of omission which results in pollution or contamination for which either the Contractor or Company, by whom such party is performing work is held to be legally liable, the responsibility shall be considered as between Contractor and company, regardless of the party for whom the job was performed and liability as set forth in (a) and (b) above would be specifically applied.

**8.0 CONFIDENTIALITY:** Contractor agrees to be bound by professional secrecy and undertake to keep confidential any information obtained during the conduct of operations, take all-reasonable steps to ensure the contractor's personnel likewise keep such information confidential.

8.1 This obligation shall keep in force even after the termination date and until such information will be disclosed by company.

- 8.2 Contractor shall handover to company all company's documents or drafts concerning operations carried out and which are still in its possession before transferring the equipments /Unit to another sphere.
- 8.3 Contractor shall forbid access to the equipments /Unit to any people not involved in the well operations or not authorized by the company to have access to the equipments /Unit, however, this provision is not applicable to any Government and/or police representative on duty.

**9.0 RIGHTS AND PRIVILEGES OF COMPANY:**

Company shall be entitled –

- 9.1 To check the LNG plant and regasification plant inclusive of all accessories/ facilities and other items before the commencement of operation. If they are not found in good order or do not meet specifications or in case of non-availability of some of the items required for operation of whole set up, the contractor may not be allowed for commencement until the contractor has remedied such default.

- 9.2 To check, at all times, Contractor's stock level, to inspect Contractor's equipment and request for renovation or replacement thereof, if found in unsatisfactory condition or not conforming to regulations or specifications.

To order suspension of operations while and whenever:

- a) Contractor's personnel is deemed by company to be not satisfactory, or
- b) Contractor's equipment does not conform to regulations or to the specifications laid down in the Contract.
- c) Contractor's insurance in connection with the operations hereunder is found by company not to conform to the requirements set forth in the contract.
- d) Contractor fails to meet any of the provisions in the contract.
- e) Any shortage in key/additional (compulsory) personnel and inadequacy of other personnel.

To reduce the rates reasonably, at which payments shall be made if the contractor is allowed to continue the operation despite having certain deficiency in meeting the requirements as per provision in the contract.

- 9.5 HEADINGS:** The headings of the clauses of the contract are for convenience only and shall not be used to interpret the provisions hereof.

- 9.6** The Contractor shall not make Company liable to reimburse the Contractor to the statutory increase in the wage rates of the contract labour appointed by the Contractor. Such statutory or any other increase in the wage rates of the contract labour shall be borne by the Contractor.

- 10.0** Any permission from the Mines Directorate in connection with working in excess of 8 (eight) hours per day shift pattern by the Contractor shall have to be arranged by the Contractor before commencement of the Contract, in consultation with the Company. Moreover, since the Contractor's personnel engaged shall be working under the Mines Act and Oil Mines Regulations, the Contractor shall have to obtain any other relevant permission from the Mines Directorate to engage their employees in compliance with various procedures as per Mines Act. In case of any breach of procedures under Mines Act, the Contractor shall be held responsible and they shall bear all expenses arising as a result thereof.

- 11.0** The Contractor shall not engage labour below 18 (eighteen) years of age under any circumstances. Persons above 60 years age also shall not be deployed.
- 12.0** Moreover, the Contractor should obtain and produce in advance before commencement of work, the following certificate / approvals:
- (i) Approval from DGMS/ DDMS for shift patterns in excess of 8 hours.
  - (ii) Total manpower list.
  - (iii) All certificates as per applicable laws including Mines Acts.
  - (iv) Regional Labour certificate, if required.

### **13.0 ASSOCIATION OF COMPANY'S PERSONNEL:**

Company may depute one or more than one representative (s) / engineer (s) to act on its behalf for overall co-ordination and operational management at location. He shall liaise with the Contractor and monitor progress to ensure timely completion of the jobs. He shall also have the authority to oversee the execution of jobs by the Contractor and to ensure compliance of provisions of the contract.

- ii) Company's representatives shall have free access to all the equipment of the Contractor during operations as well as idle time for the purpose of observing / inspecting the operations performed by the Contractor in order to judge whether, in Company's opinion, the Contractor is complying with the provisions of the contract.

The Contractor should maintained sufficient stock of the critical spare part to avoid any major shut down. Contractor must observe all safety and statutory norms applicable to the Company to prevent surface pollution and injury to personnel working in the area.

### **14.0 Payment Terms :**

#### **Against supply portions:**

Keeping in view the turnkey project completion requirement and since OIL is opting for this technology for the first time, the payment schedule against this tender is as under:

-70% against dispatch of equipments, facilities and accessories

-10% after successful commissioning of all equipment, facilities & accessories (alongwith training charges at supplier's works, installation/commissioning charges of complete package)

-10% after successful operations of the entire set up for the first year (alongwith training charges at site)

-5% after successful operations of the entire set up for the second year

-5% after successful operations of the entire set up for the third year

In the event of bidders' non-acceptance of above phase payments, the same will be considered as interest bearing advance and will be governed as per clause 31 of Section-II besides loading of the offer .

**Against O&M:** Monthly

Bidder must confirm the same in their Technical Bid.

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## **SECTION-VII**

### **BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)**

#### **BID REJECTION CRITERIA (BRC)**

The bids must conform to the specifications and terms and conditions given in the enquiry. Bids shall be rejected in case the item(s) offered do not conform to the required minimum/maximum parameters stipulated in the technical specifications and to the respective international / national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected:

#### **A) TECHNICAL**

(i) EXPERIENCE/PERFORMANCE OF VENDOR:

(a) The bidder should have experience of manufacturing or packaging followed by supply, installation and commissioning of minimum 3(three) nos. of LNG plants in last 7 (seven) years before bid closing date. Documentary evidence for the same shall be submitted along with the bid.

Out of above at least 1 (one) unit of capacity range within 50 tpd to 200 tpd with the offered technology should be in operation clocking at least minimum 8000 hours before the date of bid closing of this tender.

(b) Additionally one of such plant should be supplied to countries other than the country of origin of the bidder in the last 5 (five) years before the date of bid closing of this tender. The bidder shall furnish copies of supply order, current performance certificate (means the plant is in operation at the time of bid submission) in support of the same.

The bidder shall furnish copies of supply order, current performance certificate (means the plant is in operation at the time of bid submission) in support of the above.

(c) Average Annual financial turnover as per audited annual reports for the last 3 years should be at least INR. 35 Crores. Additionally,

The bidder should have executed at least one project of value not less than the amount of INR. 80 Crores during the last 7 years, ending on 30.06.2010..

Or

the bidder should have executed at least two projects, each costing not less than INR 50.00 Crores during the last 7 years, ending on 30.06.2010.

Or

the bidder should have executed at least three projects costing not less than INR. 40.00 Crores during the last 7 years, ending on 30.06.2010.

- d) In case the Indian bidder who has at least 05 years experience of operation and maintenance of cryogenic plants or designing and manufacturing cryogenic plants and equipments or providing natural gas compression services but does not meet the experience criteria as per A(i)a), A (i)(b) above, the bidder can quote on the strength of one principal party, who fulfills the criteria as indicated in A(i)(a) and A(i)(b) above and are in a tie-up with each other in the form of MoU for this project on an exclusive basis.

Or

In case the bidder who has at least 05 years experience of providing Front End Engineering and Design (FEED) services in upstream or downstream petroleum industry or executing any project involving Engineering, Procurement and Construction in upstream or downstream petroleum industry but does not meet the experience criteria as per A(i)a) and A (i)(b) above, the bidder can quote on the strength of one principal party, who fulfills the criteria as indicated in A(i)(a) and A(i)(b) above and are in a tie-up with each other in the form of MoU for this project on an exclusive basis.

However, in both the above scenario, the following have to be met:

1. They must have a MOU/agreement on exclusive basis for this specific project with one principal party who meets the experience criteria of the plant as in A(i) (a) and A(i) (b) above.
2. The above MOU should also clearly indicate It the offered equipment shall be designed, detailed engineered by the Principal and also the execution i.e. manufacture, packaging, testing, erection and commissioning are all done under the direct supervision of the Principal [Direct supervision means under the physical presence of the principal's representative(s)].
3. The Principal party furnishes a process guarantee for safe and satisfactory operation of the complete LNG plant including re-gasification unit etc. and other utilities and accessories.
4. The Principal party undertakes to provide necessary technical backup support to the bidder for uninterrupted and safe working of the LNG plant after erection and commissioning at least for 10 years.
5. Bidder to provide experience details along with the offer i.e. copies of purchase orders, performance certificate etc. to establish the requisite experience.
6. Documentary evidence for the tie-up & agreement with the Principal party for all points as in 1, 2, 3, 4 & 5 above, are to be furnished at the time of submitting their Bid, without which the Bid will be rejected.

- e) Experience criteria in case the bidder is a 100% Subsidiary Company:-

Offers of those bidders who themselves do not meet the experience criteria as stipulated in para A(i) (a) , A(i)(b) & A(i) (c) can also be considered provided the bidder is a 100% subsidiary company of the parent company which itself meets the experience criteria as stipulated in para A(i) (a), A(i)(b) and A(i) (c) . In that case as the subsidiary company is dependent upon the experience of the parent company with a view to ensure commitment and involvement of the parent company for successful execution of the contract, the participating bidder should enclose an Agreement between the parent company and the subsidiary company and Corporate Guarantee from the parent company to OIL for fulfilling the obligation under the Agent.

f) In case the bidder is a consortium of companies:

In case the bidder is a consortium of companies, each one of the member companies required to be from the field of oil & gas who can add value to the project by way of either providing O&M services or designing & supplying the LNG plant and Regasification plant along with accessories Or carrying out engineering work for establishing all other related facilities at site apart from supply of cryogenic tankers mounted on truck trailers, cryogenic storage facilities for LNG plant and Re-gasification etc. The consortium of companies as a bidder shall satisfy following requirements:

(i) One of the member of the consortium should satisfy the minimum experience requirement as per para A (i)a) & A(i)b) as above.

(ii) One of the member of the consortium should satisfy the minimum experience requirement as per para A i) c) above.

(iii) One of the consortium partner should confirm unconditional acceptance of full responsibility of executing the 'Scope of work' of this tender. This confirmation should be submitted along with the techno-combid.

iv) All the members of the consortium must undertake in their MOU that each party shall be jointly and severally liable to OIL for any and all obligations and responsibilities arising out of this contract. MoU / Agreement shall clearly specify the role and responsibility matrix of each members of the consortium. No member can be a part of the consortium until his role is clearly defined in the MoU/ Agreement. The MoU/ Agreement entered into by each members of the consortium shall be binding on them on exclusive basis for this specific project and will be valid till the completion of the contract period which includes operation and maintenance also.

v) The bidder must submit a consolidated bid including all the works mentioned in the Technical specification of the tender (Scope of Work). Installation, commissioning as well as testing of Plant along with the re-gasification unit etc. shall have to be carried out b' the Supplier's competentnel.

vi) The bidder shall submit a detail responsibility matrix between the bidder and the principal party or vice versa duly signed by both arties.

vii) The Bidder shall warrant that in the event of an order, all product(s) supplied shall be free from all defects & fault in material, workmanship &

manufacture and shall be in full conformity with the applicable codes and Specification.

(v) OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure-I of the tender document. Each page of this Integrity Pact proforma has been duly signed by OIL's competent signatory. The proforma has to 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. Any bid, not accompanied by the Integrity Pact proforma duly signed by the bidder shall be rejected straightway. All pages of the Integrity Pact to be signed by the bidder's authorized signatory who signbid.

### **(B) COMMERCIAL:**

Bids are invited under Single Stage Two Bid System. Bidders shall quote accordingly under Single Stage Two Bid System. The "TECHNICAL" and "COMMERCIAL" bids shall be prepared separately in triplicate and the same should be kept in two separate envelopes superscribing the Enquiry No., Brief Material Description & Bid Closing Date and clearly writing on the cover of the two envelopes as "TECHNICAL" and "COMMERCIAL". Both the envelopes should then be kept in one envelope, duly sealed, superscribing the Enquiry No., Brief Material Description and Bid Closing Date on the cover. The Technical Bid should contain all the techno-commercial details of the offer including the commercial terms and conditions excepting the prices which should be kept blank.

- 1.0 Bid security of US \$250,000.00 or Rs.1.20 crores shall be furnished as a part of the TECHNICAL BID. Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration. The Bid Security shall be valid for 240 days from the date of bid opening.
- 2.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.
- 3.0 Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of eighteen months from the date of shipment/dispatch or twelve months from the date of successful commissioning whichever is earlier against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced immediately by the supplier at the supplier's expenses at no extra cost to OIL.
- 4.0 Successful bidder will be required to furnish a Performance Bank Guarantee @7.5% of the order value after receipt of order copy. The Performance Bank Guarantee must be valid for a period till one year from the date of successful commissioning of the equipment. Bidder must confirm the same in their Technical Bid. Offers not complying with this clause will be rejected.
- 5.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

- 6.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.
- 7.0 Original signed offer should be submitted in sealed envelope. No offers should be sent by Telex, Cable, E-mail or Fax unless otherwise asked by OIL. Such offers will not be accepted.
- 8.0 Validity of the bid shall be minimum 180 days. Bids with lesser validity will be rejected.
- 9.0 Bids containing incorrect statement will be rejected.
- 10.0 Bids shall have no inter-lineation, erasures or overwriting except as necessary to correct the errors made by the bidder, in which case, such corrections shall be initialed by the person signing the bid. Any bid not meeting this requirement shall be rejected.
- 11.0 Bidders are required to submit the prices in their commercial bids as per Price Schedule enclosed as Appendix-A, otherwise, their offer will be straight way rejected.

NOTE : 1. The Commissioning Spares should be quoted separately indicating the unit price and quantity quoted.

2. The items covered under this enquiry will be used by OIL in the PEL/ML areas issued/renewed after 01/04/99, applicable Customs Duty for import of goods shall be ZERO. Indigenous bidders shall be eligible for Deemed Export and should quote Deemed Export prices. Excise Duty under Deemed Export is exd.

12.0 Installation/Commissioning should include amongst others to and fro fares, boarding/lodging, local transport at Duliajan and other expenses of supplier's commissioning personnel during their stay at Duliajan, Assam (India). All Income, Service, Corporate Taxes etc. towards the services provided under installation / commissioning shall be borne by the supplier and will be deducted at source at the time of releasing the payment. Bidder should also confirm about providing all these services in the Technical Bid.

13.0 **Default in Delivery / LIQUIDATED DAMAGES:**

13.1 Time is of the essence of this contract.

13.2 In the event of the Seller's default in maintaining the agreed delivery schedule set out in the order, OIL shall have the right to cancel the order at any time after expiry of scheduled delivery date without any reference to the Seller and make alternative arrangement at the discretion of OIL in which case extra expenditure involved, will be recoverable from the Seller and OIL shall not be responsible towards such cancellation or any damage that may be incurred by the Seller. The decision of OIL shall be final and binding on the Seller.

13.3 As an alternative to Clause No. 13.2 above, OIL reserve the right to accept the materials but, the Seller shall be liable to pay liquidated damages @ 0.5% per week or part thereof of the value of the contract subject to a maximum of 7.5 %. Should there be default on the part of the Seller for more than 15 Weeks from the scheduled date to complete the delivery or to complete the installation/commissioning & Training (wherever applicable) successfully, OIL shall have the right, in addition to the

provisions under Clause 13.2 to invoke the Performance Security without causing any notice to the Seller to this effect.

The amount of liquidated damage as stipulated above is a pre-estimated genuine loss as agreed by both the parties and shall be payable without any demur and shall not be open for any dispute whatsoever.

- 13.4 The liquidated damage as agreed by both the parties as a genuine pre-estimated loss shall be payable on Landed Cost of the materials at Duliajan inclusive of all cost to the extent of default (undelivered portion only in cases where part delivery is acceptable) and commissioning at site is not involved.

**(II) Bid Evaluation Criteria (BEC) :**

The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria g below:

**(A) TECHNICAL:**

- a) Spare parts for two years operation and Insurance Spares shall not be considered for bid evaluation. However, the bidder to furnish detailed list of the spare part and their cost along with the cost of the Insurance Spares for stock provisioning.
- b) The Bidder's must mention in the bid at least two locations where they have supplied/established small scale LNG plant which is similar to the plant offered to OIL. A team of OIL officials will visit the site as indicated by the bidders to physically verify the successful running of the plant. Bidders must extend necessary help and support in coordinating the OIL officials visit.

**(B) COMMERCIAL:**

- 1.0 The evaluation of bids will be done as per the Price Schedule detailed vide Para 11.0 of BRC.
- 2.0 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.
- 3.0 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.
- 4.0 To ascertain the inter-se-ranking, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein:

Comparison of offers will be made on total cost basis (i.e. Total cost in foreign currency converted as per para B.3.0 above plus Total cost in Indian currency) as per Price Schedule.

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**PROFORMA - I**

**LETTER OF AUTHORITY**

To,

Senior Adviser(C & P)  
**OIL INDIA LIMITED**  
Plot No. 19  
Sector-16 A, NOIDA  
Fax No. 91-120-2488327

Sir,

Sub : OIL's Tender No. \_\_\_\_\_

We \_\_\_\_\_ confirm that Mr. \_\_\_\_\_ (Name and address) as authorized to represent us to Bid, negotiate and conclude the agreement on our behalf with you against Tender Invitation No. \_\_\_\_\_ for hiring of services for \_\_\_\_\_.

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

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.

**PROFORMA - II**

**STATEMENT OF COMPLIANCE WITH RESPECT TO BRC**

<b>SL. NO.</b>	<b>SECTION/ CLAUSE NO.</b>	<b>BRIEF STATEMENT</b>	<b>COMPLIANCE</b>	<b>REMARKS</b>

We undertake that all the clauses of BRC as entered in the tender document shall be fully complied with.

Signature and seal of the Bidder :

Name of Bidder:

=

**PROFORMA - IIa**

**STATEMENT OF NON-COMPLIANCE (EXCEPTING BRC)**

<b>SL. NO.</b>	<b>SECTION/ CLAUSE NO.</b>	<b>BRIEF STATEMENT</b>	<b>NONCOMPLIANCE</b>	<b>REMARKS</b>

We undertake that excepting above deviations all the terms and conditions in the tender document shall be fully complied with.

Signature and seal of the Bidder :

Name of Bidder:

=

**PROFORMA - II A**

**BID FORM**

To

Senior Adviser(C & P)  
**OIL INDIA LIMITED**  
Plot No. 19  
Sector-16 A, NOIDA  
Fax No. 91-120-2488327

ub : Tender No. : \_\_\_\_\_

Dear Sir,

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 services in conformity with the said conditions of Contract and Terms of Reference for the sums stated below against each work as defined or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

Sl. No.	Subject	Total Bid Amount	
		Rupees in word	Rupees in figure
1	<b>LNG Package consisting of Supply and commissioning of LNG &amp; Re-gasification Plants, Transportation facilities and accessories for Utilization of Natural Gas (NG) in Remote and stranded Locations as well as Operation &amp; Maintenance for the entire set up of converting NG to LNG and injecting the same after Re-gasification in the oilfields of Oil India Limited (OIL).</b>		

We undertake, if our Bid is accepted, to commence the work within (.....) days calculated from the date of issue of Company's LOA.

If our Bid is accepted, we will obtain the guarantee of a bank in a sum not exceeding \_\_\_\_\_ for the due performance of the Contract.

We agree to abide by this Bid for a period of 180 days from the date fixed for Bid opening 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 \_\_\_\_\_ 20\_\_.

Signature and seal of the Bidder : \_\_\_\_\_  
(In the capacity of) : \_\_\_\_\_  
Name of Bidder : \_\_\_\_\_

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**PROFORMA -II B**

**FORM OF PERFORMANCE BANK GUARANTEE**

To: Senior Adviser(C & P)  
**OIL INDIA LIMITED**  
Plot No. 19  
Sector-16 A, NOIDA  
Fax No. 91-120-2488327

WHEREAS \_\_\_\_\_(Name and address of Contractor) (hereinafter called "Contractor") had undertaken, in pursuance of Contract No. \_\_\_\_\_ to execute (Name of Contract and 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 amount of (Amount of Guarantee in figure) Rs. \_\_\_\_\_ (Amount of Guarantee in word \_\_\_\_\_), 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 date \_\_\_\_\_ (calculated at 12 months after Contract completion date).

SIGNATURE AND SEAL OF THE GUARANTORS: \_\_\_\_\_

Designation : \_\_\_\_\_

Name of Bank : \_\_\_\_\_

Address : \_\_\_\_\_

Witness : \_\_\_\_\_

Address : \_\_\_\_\_

Date : \_\_\_\_\_

Place : \_\_\_\_\_

## **PROFORMA – IIC**

### **CONTRACT FORM**

This Contract 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- \_\_\_ attached herewith for this purpose and

WHEREAS, Company issued a firm Letter of Award (LOA) No. \_\_\_\_\_ based on Offer No. \_\_\_\_\_ submitted by the Contractor against Company's Tender No. \_\_\_\_\_ and Contractor \_\_\_\_\_ accepted Company's LOA vide their letter No. \_\_\_\_\_. All these aforesaid documents shall be deemed to form and be read and construed \_\_\_\_\_ as part of this 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 Award 'nd 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 authorized be \_\_\_\_\_ authorised 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 -

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract referred to.
- 6.6** 2. In addition to documents hereinabove, the following Sections and Annexures attached herewith shall be deemed to form and be read and construed as part of this Contract
- (a) Section-III indicating the General Conditions of the Contract
  - (b) Section-IV indicating the Terms of Reference / Technical Specifications;
- 6.7** (c) Section-V indicating the Schedule of Rates.
- (d) Section-VI indicating the Special Conditions of contract.
- 6.8** 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

1.

2.

**PROFORMA - II D**

**FORM OF BID SECURITY (BANK GUARANTEE)**

To : Senior Adviser(C & P)  
**OIL INDIA LIMITED**  
Plot No. 19  
Sector-16 A, NOIDA  
Fax No. 91-120-2488327

WHEREAS, (Name of Bidder) \_\_\_\_\_ (hereinafter called "the Bidder") has submitted their offer Dated\_\_\_\_\_ for the provision of certain oilfield 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 common seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_.

THE CONDITIONS of this obligations are :

- (1) If the Bidder withdraws/modifies their Bid during the period of Bid validity specified by the Bidder; or
- (2) If the Bidder, having been notified of acceptance of their Bid by the Company during the period of Bid validity:
  - (a) Fails or refuses to execute the form of agreement in accordance with the Instructions to Bidders; or
  - (b) Fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

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 one or both of the two 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.

SIGNATURE AND SEAL OF THE GUARANTORS : \_\_\_\_\_

Name of Bank & Address : \_\_\_\_\_

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.

**INTEGRITY PACT**

Between

Oil India Limited (OIL) hereinafter referred to as "The Principal"

And

..... hereinafter referred to as "The Bidder/Contractor"

**Preamble**

The Principal intends to award, under laid down organizational procedures, contract/s for . The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organisation "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1 – Commitments of the Principal**

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
3. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a

substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

### **Section 2 – Commitments of the Bidder/Contractor**

- (1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
1. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
  2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.
  3. The Bidder/Contractor will not commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

### **Section 3 – Disqualification from tender process and exclusion from future contracts**

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
2. The Bidder accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
3. If the Bidder/Contractor can prove that he has restored/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.
4. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

#### **Section 4 – Compensation for Damages**

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3 % of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.
3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

#### **Section 5 – Previous transgression**

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any

other Public Sector Enterprise in India that could justify his exclusion from the tender process.

2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

### **Section 6 – Equal treatment of all Bidders/Contractor/Subcontractors**

1. The Bidder/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

### **Section 7 – Criminal charges against violating Bidders/Contractors/Subcontractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

### **Section 8 – External Independent Monitor/Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal)**

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.

4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
7. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
8. The word 'Monitor' would include both singular and plural.

#### **Section 9 – Pact Duration**

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

#### **Section 10 – Other provisions**

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.

4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

-----  
For the Principal

-----  
For the Bidder/Contractor

Place ..... Witness 1 : .....

Date ..... Witness 2 : .....

**UNDERTAKING FROM CONTRACTOR'S PERSONNEL**

I \_\_\_\_\_ S/o \_\_\_\_\_ having permanent residence at \_\_\_\_\_ Dist \_\_\_\_\_ am working with M/s. \_\_\_\_\_ as their employee. Now, I have been transferred by M/s. \_\_\_\_\_ for carrying out the contract job under Contract No. \_\_\_\_\_ which has been awarded in favour of my employer M/s. \_\_\_\_\_.

I hereby declare that I will not have any claim for employment or any service benefit from OIL by virtue of my deployment for carrying our contract job in OIL by M/s. \_\_\_\_\_.

I am an employee of \_\_\_\_\_ for all practical purposes and there is no privity of Contract between OIL and me.

Signature

Pe :

Date :

1. Name :

Designation

Date :

2. Name :

Designation :

Date :

**ANNEXURE: III**

Vendor list:

EQUIPMENT TYPE	VENDOR/MANUFACTURER				
Refrigeration Compressors	Mayakawa	Howden	Mafi Trench		
Prime Mover/ Gas Engines	Caterpillar	Waukesha			
Heat Exchangers	Chilcon	CIT	Smithco		
Storage Tanks	Chart	Inox,	Cimc	Air Products.	
Cold Box	Chart	Linde	Black & Veatch		
Natural Gas Compressors	Atlas Copco	Dresser-Rand	Cryostar	GE	Kobe
Process Control	Emerson	Allen Bradley	Siemens		
Refrigerant Pumps	Flow Serve	Gould			
Componders	Cryostar				
Vaporizer	Chart	INOX	Linde	Cryoquip	
LNG transfer Hose	US Hose Corporation.	Smart Hose Technologies			
LNG transfer Pumps	ACD	Cryostar			
Cryogenic Globe Valves ( Long / Short Stem Globe Valves, Check Valves )	Herose, Germany	Ireland SA,France			
Flow Diverter Valve	Baldota, India	Aptek, India			
Safety Valve	Rockwood Swendeman LLC, USA	Sebim France, India JV	Herose, germany		
Thermal Relief Valves	Baldota, India	Herose, Germany			
Needle / Instrument Isolation valves	Baldota, India	Aptek, India	Arya, India		
Vacuum Probe Valves(Non bellows type)	Vaktek, India				
Vacuum Probe Valves( bellows type)	Hoke	Swagelock			
Evacuation port/valve	Inox				
Vacuum Gauge Tubes	Teledyne Hasting				

Individual Cryogenic Pressure Regulators /- Economizer	Tyco -USA	Cashco, USA	Samson, Germany	Bestobell, UK	
3 way Cryoregulator	Samson, Germany	Bestobell, UK			
Pressure Gauge	WIKA Germany India	Waree, India			
Level Gauge	Samson Germany, India JV	WIKA Germany, India JV			
Transmitters	Fisher Rosemount (Emerson), India JV	Yokogawa Blue Star, India JV	Honeywell India	Siemens India JV	
Control valve	Fisher , India JV	Samson Germany, India JV	Flow Serve (Val tek), India	Metso Automation India (Butterfly Valve only)	Herose
Control panel assembly	Measurement & Control,India (Honeywell)	Positronics, India (Siemens)	Hem Automation (G Fanuk)	Servilink,India (Alan Bradley)	SSM Infotech (Schnider)/ Fisher , India JV
Junction Box	Baliga, India	FEPL India	Stahl,Germany	Rittal, Germany	Ex protecta ,India / Flexpro
Instrument fitting / Compression fittings	Baldota, India	Arya, India	Swagelock		
Temp element RTD	GIC, India	Temp tech, India	Pyro electric Goa, India		
Limit Switch	P&F, India	Honeywell India			
Solenoid Valve for Control Valve	ASCO	Heron India	Maxsealal, India		
Air Filter Regulator	Plaka, India	Fisher, India	Shavo Norgeen India	ABB, India	

Basic Typical soil report:

Data contained under is only for guidance of the bidders.

Soil upto a depth of 2.0 m is loose to medium silt/silty clay with sand. From 2.0 m to 3.0 m it is medium to very dense fine to medium sand. Safe bearing capacity of soil is calculated from footing foundation at depths 2.0 , 2.5 and 3.0 m for different sizes of footing as shown in the table-1 below:

Minimum N value observed at 3.0 m depth is 21. Since  $N > 15$ , according to IS 1893-2001 the sand is not susceptible to liquefaction.

Since soil is predominantly sand uniform dia bored cast in situ RCC Pile may be used for higher loading. Safe load carrying capacity of Pile is shown in Table -2 below:

Table:-1

Depth from EGL (m)	Width of foundation (m)	Safe Bearing capacity shear criteria (tone/metre <sup>2</sup> )	Safe bearing pressure (settlement criteria (tone/metre <sup>2</sup> ))	Allowable bearing capacity (tonne/metre <sup>2</sup> )
2.0	2.0	32.9	25	25
	3.0	33.9	22	22
	4.0	35.6	22	22
	5.0	37.5	22	22
2.5	2.0	41.4	28	28
	3.0	41.5	28	28
	4.0	41.9	28	28
	5.0	44.1	27	27
3.0	2.0	52.4	28	28
	3.0	51.0	28	28
	4.0	50.0	28	28
	5.0	52.0	28	28

Table-2 Safe Load carrying capacity of bored cast in situ uniform dia RCC pile

Pile stem dia	Length of pile from E.G.L.	Pile cutoff Length (m)	Recommended Safe Load Carrying Capacity (tonne)	
			Compression	Uplift
30	8.0	1	10.86	5.5
40		1	18.88	7.3
50		1	31.19	9.2
30	10.0	1	15.29	9.1
40		1	24.91	12.1
50		1	38.4	15.2

E.G.L.: Existing Ground Level

**ANNEXURE-V**

Weather data for last one year is enclosed in the MS excel format.

**TECHNICAL CHECKLIST :**

sl. No.	Description	Yes	No	Comments
1	Detail of Experience provided			
2	Detail of plant supplied with references provided			
3	Detail of plant supplied with the technology provided			
4	Performance certificate from client with running hours provided			
5	Detail regarding supply to country other than country of origin			
6	If other than manufacturer/packager provided MOU/ agreement			
7	If other than manufacturer/packager provided references about their experience			
8	Provided financial detail to meet BRC criteria			
9	Provided job done to meet BRC criteria			
10	Specified Technology offered			
11	Provided heat & mass balance sheets			
12	Provided datasheet of major equipment			
13	Provided plot plan layout			
14	Provided P&I diagram			
15	Provided the land required for LNG & LNG regasification plant			
16	Provided detail technical process description about gas pre-treatment			
17	Provided detail technical process description about LNG plant			
18	Provided detail technical process description about regasification plant			
19	Provided detail about storage tanks			
20	Provided detail about LNG measurement system			
21	Provided detail about process control and instrumentation system			
22	Provided equipment as per vendor list of NIT			

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.06.2010	28.5	24	24	23	91	4.52
	29.5	22.5	23.5	22.5	91	0.6
	27	24	24	23	91	
	26	22.5	23	22.5	96	0.34
	28	24	24	23	91	1.48
	24.5	22.5	23	22.5	96	0.6
	27.5	21	23	22.5	96	0.18
	23.5	21.5	22.5	21.5	91	2.98
	22.5	21	22	21	91	1.5
	24	21	22	21	91	1.54
	28	21	26	25	92	0.02
	29	26	26	24.5	88	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.05.10	30	21	22	21	91	
	34	23	26	25	91	
	29.5	23	24.5	23.5	91	
	32	23	24	23	91	4.9
	24	21.5	23.5	22.5	91	1.24
	28.5	21.5	26	25	92	
	30	23.5	25	24	92	
	33.5	23.5	25	24	92	0.1
	31.5	22	23	22.5	96	1.56
	28.5	20.5	21	20	92	2.9
	24	21.5	22	21.5	95	5.6
	24	21	22	21	91	4.3
	28	21	22	21	91	9.2
	27.5	21	21.5	20.5	91	0.14
	27	21	22.5	22	95	0.02
	28	20	21	20	92	1.5
	23	21	23.5	22	91	0.84
	28	21	22	21	91	
	34	23	24	23	91	0.03
	23	22	23	22	91	2
	27	23	24.5	23.5	91	
	28	21.5	22	21.5	95	1.62
	29	22	26	24	84	
	29.5	21.5	22	21	91	
	28	23	23	22	91	5.58
	29	22	24	23	91	0.24
	28	23.5	26	25	92	
	28	22	24	23	91	0.22
	32.5	26.5	27.5	25.5	84	
	34	25	25	24	92	0.08
	29	24	25.5	24.5	92	0.14

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.04.10	20	17	18	17	90	1.8
	21	19	18.5	17.5	90	2.02
	25.5	17.5	19	18	90	1.85
	27	18.5	18	17.5	95	3.44
	22	19	20	19	91	0.03
	21	19	20	19	91	1.28
	26	18	19	18	90	4.1
	28	21	22	21	91	
	31.5	18.5	25	24	92	
	29	20	20.5	19.5	91	0.26
	27	20	20	19.5	95	2.62
	28.5	21	20.5	19.5	91	2.28
	27	21	22	21	91	0.1
	27	21	21.5	21	95	3.22
	25.5	21.5	21.5	20.5	91	
	29	20	21	20.5	95	1.34
	30	19.5	23.5	22.5	91	
	28.5	20.5	21	20.5	95	1.32
	28	21	22	21	91	1.8
	28	20	21	20	91	4.2
	22	20	21	20	91	1.86
	21	20	20	19.5	95	5.86
	22	20	21	20	91	2.2
	21.5	20.5	21	20	91	0.66
	24.5	20	20	19	91	1.44
	27.5	18.5	18.5	18	95	1.24
	28	19	20	19	91	0.35
	26.5	19.5	21.5	20.5	91	
	29	20	22	21	91	
	28.5	20.5	22.5	21.5	91	0.24

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.03.10	26	15	17	16.5	95	
	26	16	16.5	15.5	89	1.08
	25	13	14	13	89	1.86
	23	15	15.5	14.5	89	0.72
	19.5	15.5	16	15	89	2
	21	16	16.5	15.5	89	2.9
	22	15	17	16	90	0.53
	26	16	17	16	90	
	24.5	18	18	17	90	
	25	16	17	16	90	
	28	15	18	17	90	
	27.5	18	17.5	16.5	90	
	28	18	19	18	90	0.1
	27	15	16.5	15.5	89	
	27.5	17.5	17.5	16.5	90	
	28	17	18	17	90	0.05
	29	16.5	18	17	90	
	32	18	17.5	16.5	90	
	31	17.5	19.5	18.5	90	
	31.5	18	18.5	17.5	90	
	29	20	20	19	91	
	32	21	22	21	91	
	26.5	19	19.5	18.5	90	0.1
	20	19	20.5	19.5	91	
	27.5	19.5	20	19.5	95	0.06
	27	19	19	18.5	90	0.06
	21	19	19	18.5	95	1.2
	27.5	19	18.5	17.5	90	1.76
	25	17	18	17	90	0.02
	24	18	20	19	91	0.01
	20	18	18	17	90	1.56

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.02.10	24	12.5	12.5	12	94	
	24.5	13	13	12	88	
	24	13	13	12.5	94	
	23.5	13	13	12	88	
	23.5	12	13.5	12.5	88	
	22.5	12.5	12.5	11.5	88	
	23.5	12.5	13	12.5	94	
	24	13	13	12	88	
	24.5	11.5	13.5	13	94	
	25	12	16	15	89	
	24	13	15	14	89	
	24.5	13.5	14.5	13.5	89	
	26	14	17	15.5	85	
	23.5	13.5	14	13	89	0.01
	23	13	14	13	89	
	24.5	14.5	14.5	13.5	89	
	24.5	14.5	14	13	89	
	25	15	15.5	14.5	89	
	26	12	13.5	12.5	88	
	26	13	14	13	89	
	25	14	15	14	89	
	26	14	15	14	89	
	27	15	16	15	89	
	27	15	16	15	89	
	26	15	16	15	89	0.01
	21	14	14	13	89	0.23
	26	14	16	15	89	
	27	15	15.5	14.5	89	2.06

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.01.10	20.5	10	14.5	14	94	0.55
	20	10	10.5	10	94	
	21	10	11	10	87	
	22	10	11	10	87	
	21	11	12	11	88	
	21.5	11	12	11	88	
	21	11	12	11	88	
	23	12	11	11	88	
	23.5	12	12.5	11.5	88	
	22.5	11	11	10.5	94	
	23	10.5	11.5	10.5	87	
	22	10.5	12	11	88	
	21	11	12	11	88	
	22	12	12.5	12	94	
	18	11	14.5	14	94	
	21.5	13	13.5	13	94	
	21.5	11.5	12	11	88	
	20	10	11	10	87	
	22.5	12	12.5	11.5	88	
	23	12.5	13	12.5	94	
	22.5	13	12.5	11.5	88	
	24	10	12	11	88	
	23	12	12	11	88	
	23	12	12	11	88	
	24	10.5	12.5	11.54	88	
	22	13	13	12.5	94	
	24	12.5	13.5	12.5	88	
	24	12	13	12	88	
	24.5	11.5	12	11	88	
	22.5	12	12	11.5	94	
	23	13	12.5	11.5	88	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.12.09	24	15	16	15	89	
	23	15	15	14	89	
	24	15	15	14	89	
	25	14.5	17	16	90	
	24	16	17	16	90	
	23	15	18	17	90	0.2
	23	16	18	17.5	95	0.3
	21.5	14.5	16	15.5	95	
	20.5	15.5	17	16.5	95	0.2
	21	14.5	15	14.5	94	
	21	15	16	15.5	95	
	21.5	14	15	14	89	
	22	14	15	14	89	
	22.5	14.5	16	15.5	95	
	23.5	15	16	15	89	
	23	16	16	15	89	
	22	15	16	15	89	0.1
	21	17	17	16	90	
	21	14	15	14	89	
	21	13	14	13	89	0.3
	21	12	13	12	88	
	21	12	15	14	89	
	21	12.5	15	14	89	
	20.5	12	13	12	88	
	21	11.5	12	11	88	
	19.5	11.5	12	11	88	
	19.5	10	11	10	87	
	21.5	9.5	10.5	10	87	
	21.5	9.5	11.5	11	88	
	20.5	10	11	10	87	
	21.5	10.5	14.5	13.5	89	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.11.09	28	20	20.5	20	95	
	28	20	21	20	91	
	27	20	21	20	91	
	28	19	19	18	90	
	28	20	20	19.5	95	
	26.5	20	20	19	91	
	26.5	18	18.5	18	95	
	26	18	19	18	90	
	27	18	19	18	90	
	27	19	19.5	18.5	90	
	26	18	20	19	91	
	26	18	18.5	17.5	90	
	25	17.5	18.5	17.5	90	
	25.5	18.5	19	18	90	
	25	17	21	20.5	95	0.25
	26	20	20.5	19.5	91	2.2
	22	20	20	19.5	95	0.1
	21.5	19	20	19.5	95	0.14
	24	19	20	19.5	95	0.78
	24	15	17.5	16.5	90	
	24	15	16	15	89	
	22.5	14.5	16	15	89	
	24	15	16	15	89	
	22	14.5	16.5	15.5	89	
	23	14	15	14	89	
	24	15	16	15	89	
	24	15	16	15	89	
	22	14	15	14	89	
	24	15.5	16.5	15.5	89	
	24	15	17	16	90	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.10.09	34.5	26.5	27.5	26.5	92	
	34	26.5	27	25.5	88	
	32	26	26	25	92	0.01
	30	26.5	27	25.5	88	
	27.5	25	25	24	92	0.56
	29	24	25.5	24.5	92	0.05
	29	25	26	25	92	0.3
	29	24	25	24	92	4.6
	27.5	25	25.5	24.5	92	2.56
	27	24	24.5	24	96	2.1
	27.5	25.5	25	24	91	0.02
	29	23.5	24	23	91	
	29	26.5	24	23	91	
	29.5	23.5	24	23	91	
	28	26	24.5	23.5	91	
	29.5	23.5	24.5	24	96	
	28	25	25	24	92	
	29	23	23	22.5	96	1.95
	27.5	23.5	24	23	91	1.04
	27.5	21	21	20.5	95	1.85
	26.5	21	21.5	21	95	0.02
	28	21	22.5	21.5	91	
	28	21	22	21	91	
	29	21	22	21.5	91	
	29.5	21	23	22	91	
	29	21	23.5	21.5	83	
	28.5	21	23	22	91	
	29	21	22.5	21	87	
	28	21	22	21	91	
	28.5	20.5	21.5	20.5	91	
	28	20.5	21.5	20.5	91	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.09.09	35	27	28	27	92	
	37	24	25	24	92	2
	34	24	25	24	92	
	37	25	25	24	92	7.5
	34.5	26.5	27	26	92	0.32
	35	26	29	28	92	
	35	26	29	28	92	
	36	27	28	27	92	
	37	27	28	27	92	
	35	24	24	23	91	12.26
	33	26	27	26	92	0.28
	35	26	27	26	92	
	34.5	27	28.5	27.5	92	
	34.5	27	27	26	92	
	35	26	26.5	25.5	92	
	33	27	28	27	92	
	34.5	26.5	27.5	26.5	92	
	32.5	25.5	24.5	24	96	0.01
	28	25	25	24	92	3.2
	29	24	25.5	24.5	93	3.8
	27.5	24	24	23	91	0.48
	27	23	24	23	91	0.04
	28	24	25	24	92	0.04
	33	25	26	25	92	
	29	24	24.5	24	96	0.6
	35	26	26	25	92	0.8
	36	26.5	27	26	92	
	37	27	28	27	92	
	34.5	27	28	27	92	
	35	27	28	27	92	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
01.08.09	32	26.5	27	26.5	96	0.05
	34	26	27	26	92	3.56
	31.5	27	27	26	92	
	32.5	26.5	27.5	26.5	92	
	31.5	26.5	26.5	26	96	2.5
	31	26	26	25	92	2.2
	32.5	27	29	28	92	
	34	26.5	27	26	92	4.12
	35	25	25	24.5	96	0.45
	34	26	28	27	92	0.02
	34.5	25.5	25.5	25	96	3.8
	34.5	25.5	26	25.5	96	4.7
	27	25	25	24	92	6.1
	27.5	26	26.5	25.5	92	0.18
	32	24.5	25	24.5	96	0.4
	33.5	26	27	26	92	
	30	26	26.5	25.5	92	1.7
	32.5	26.5	26.5	25.5	92.5	1.14
	31	25.5	25.5	25	95	0.56
	28	26	26	25	92	9.16
	30	25	25.5	25	96	2.3
	28.5	25	25.5	24.5	92	0.66
	30	25	25	24	92	1.06
	29	26.5	27	26	92	0.3
	29	27	27	26	92	
	34	26	27	26	92	1.4
	35	26	27	26	92	1.54
	34	26	26	25	92	
	33.5	24	25.5	25	96	1.3
	32.5	26	27	26	92	4.46
	33	26.5	27.5	26.5	92	

Date	Temp		humidity			Rainfall(cm)
	max	Min	dry	wet	%	daily
1.07.09	28.5	25.5	26	25	92	0.5
	29	25	25	24.5	96	3.1
	28	26	26	25.5	96	0.86
	31.5	26	25.5	25	96	1.95
	33	25	25.5	25	96	2.64
	30	26	25.5	25	96	3.8
	32	26	26	25	92	0.16
	33	26	27	26	92	
	33.5	25	26	25	92	1.56
	31	26	27	26	92	0.1
	34	27	27.5	26.5	92	1.04
	31.5	26	28	27	92	
	35	27	29	28	92	
	37	27	28	27	92	
	34	26.5	29	28	92	1.4
	37	26	27	26	92	1.2
	35	27	27.5	26.5	92	0.28
	33	26	27.5	26.5	92	
	33.5	27	28	27	92	0.7
	35	27	30	28.5	89	
	39.5	28	28	26.5	88	
	37	26	26	25.5	96	0.35
	34.5	26.5	26.5	25.5	92	3.16
	36	26.5	27	26.5	96	0.55
	34	27	28	27	92	1.26
	31	26	26.5	26	96	0.1
	30	26	26	25	92	0.2
	32	26	27	26	92	
	28	26	26	25	92	1.2
	28	26	26	25	92	2
	33.5	26	26.5	26	96	2.16