Annexure-I

OIL INDIA LIMITED
(A Government of India Enterprise)
P.O. Duliajan - 786602, Assam, India
FAX: 91-0374-2800533; E-mail : material@oilindia.in

A) OIL INDIA LIMITED invites Indigenous Competitive Bid (e-tenders) through its e-Procurement portal - *https://etender.srm.oilindia.in/irj/portal* for following e-tender :

E-Tender No.	B.C Date	Material Description & Quantity
SDI5584P15 DT: 04.12.2014 (SINGLE STAGE TWO BID SYSTEM)	22.01.2015	DOUBLE CAB TRUCK – 04 NOS
SDI5585P15 DT: 04.12.2014 (SINGLE STAGE TWO BID SYSTEM)	05.02.2015	06 NOS MOBILE STEAM GENERATOR

Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 (Excepting PSUs and SSI units registered with NSIC) in favour of M/s Oil India Limited and payable at Duliajan is to be sent to Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602. Application shall be accepted one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO …" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e-`` Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site www.oil-india.com.

NOTE:
(Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).

B) CORRIGENDUM

THE TECHNICAL SPECIFICATION VIDE ANNEXURE – 1A OF E –TENDER NO SDI5363P15 DT: 12.11.2014 FOR 3 NOS TRANSFORMER HAS BEEN AMENDED BY AMENDMENT NO. 1 DATED 05.12.2014 TO ANNEXURE-1A. BIDDERS ARE REQUESTED TO QUOTE AS PER DOCUMENT AMENDMENT NO. 1 DATED 05.12.2014 TO ANNEXURE - 1A ONLY.

Note : All other terms and conditions of the press E- tenders shall remain unchanged.

OIL INDIA LIMITED
(A Government of India Enterprises)
PO : Duliajan – 786602
Assam (India)

TELEPHONE NO. (91-374) 2808719
FAX NO: (91-374) 2800533
Email: ranjanbarman@oilindia.in ; erp_mm@oilindia.in

FORWARDING LETTER

Tender No. : **SDI5585P15 DT: 04.12.2014**

Tender Fee : **Rs 1,000.00**

Bid Security Amount : **Rs 7,80,000.00**

Bidding Type : **SINGLE STAGE TWO BID SYSTEM**

Bid Closing on : **As mentioned in the e-portal**

Bid Opening on : **-do-**

Performance Security : **Applicable**

Integrity Pact : **Applicable**

Date of pre-bid conference : **22.01.2015**

Venue of pre-bid conference: GUWAHATI (TIME AND VENUE WILL BE INTIMATED NEARER THE PRI-BID CONFERENCE)

OIL invites Bids for **06 NOS MOBILE STEAM GENERATOR** through its e-Procurement site under **SINGLE STAGE TWO BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions.. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

NOTES:

(1) A Pre-Bid Conference with the Parties will be held in Guwahati on 22.01.2015 to discuss on the technical specifications and other terms and conditions of the tender. All the Parties who purchase the Tender Document within the Last date of Tender Fee Payment i.e. 19.01.2015 (or amended otherwise) will be eligible to attend the Pre-Bid Conference. The exact venue and time of the Pre-Bid conference will be intimated to the Parties at a later date.

(2) Clarification on the technical specifications and other terms & conditions of the tender shall be provided to the parties during the Pre-bid Conference. Parties should come fully prepared to the Pre-bid Conference and submit their queries to OIL in the Pre-bid Conference for clarification. The set of queries may also be sent to OIL at least 7 (seven) days before the Pre-bid Conference for study by OIL. At the most 2 (Two) representatives

from each party shall be allowed to participate in the pre-bid conference. All costs for attending the pre-bid conference shall be to the bidder's account.

(3) Any changes in the technical specifications and other terms & conditions of the tender arising out of discussion in the Pre-bid Conference shall also form part of the tender document.

(4) Parties, immediately after the purchase of the Tender documents, shall inform OIL at the following address about their participation in the Pre-Bid Conference with details of the persons to enable OIL to make arrangement for the Pre-Bid Conference.

HEAD – MATERIALS
OIL INDIA LIMITED
P.O DULIAJAN, PIN – 786 602
DIST. DIBRUGARH (ASSAM) INDIA
FAX NO. : +91 - 374 – 2800533
E-Mail : ranjanbarman@oilindia.in

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

b) Technical specifications and Quantity as per **Annexure – 1A**.

c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this 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 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 persons contracting through Oil India Limited).

f) Bidder are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) given in MS excel format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the Technical RFX Response.

Special Note:

1.0 General Qualification Criteria:

In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered (**documentary evidence to be provided along with the bid in Technical RFx -> External Area - > Tender Documents**) as on the Bid Closing Date:

Criteria	Complied / Not Complied. Documentary evidence submitted / not submitted
a) Annual financial turnover of the firm in any of the last 3 financial years or current financial year should not be less than **Rs 780.00 Lakhs.**	

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Duliajan is to be sent to Head-Materials, Oil India Limited, P.O. Duliajan, Assam-786602. Application shall be accepted only upto one week prior to the bid closing date (or as amended in e-portal). The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO …" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e- Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site www.oil-india.com.

NOTE:

a) Tender Fee may also be paid online upto one week prior to the bid closing date (or as amended in e-portal).

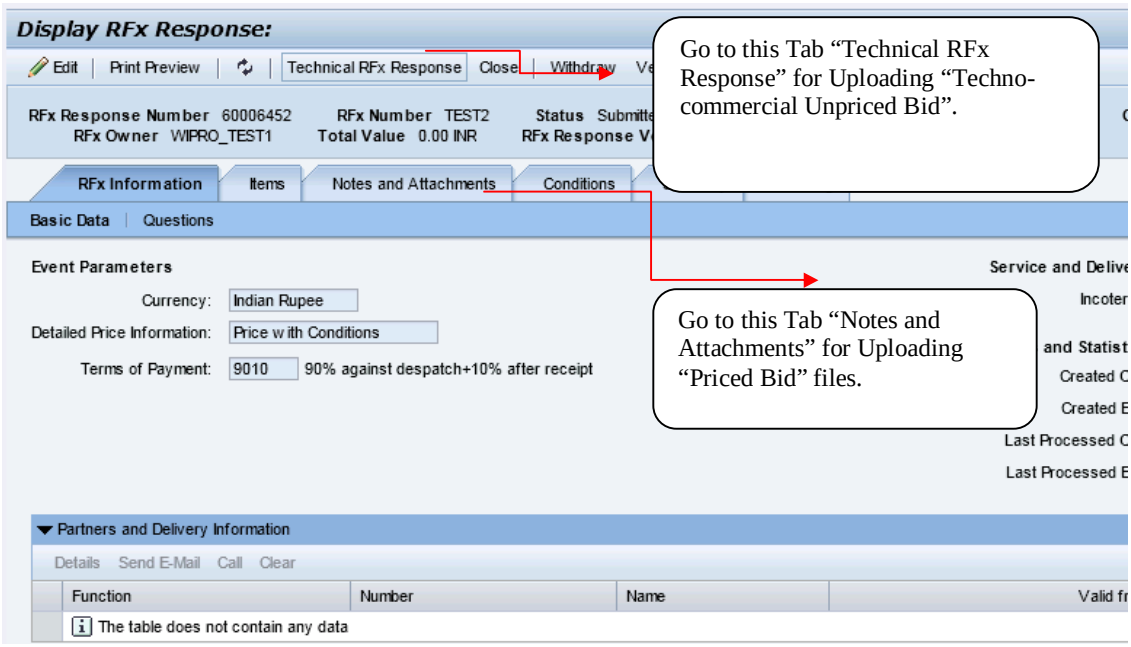
b) PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

3.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidders are required to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" through electronic format in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

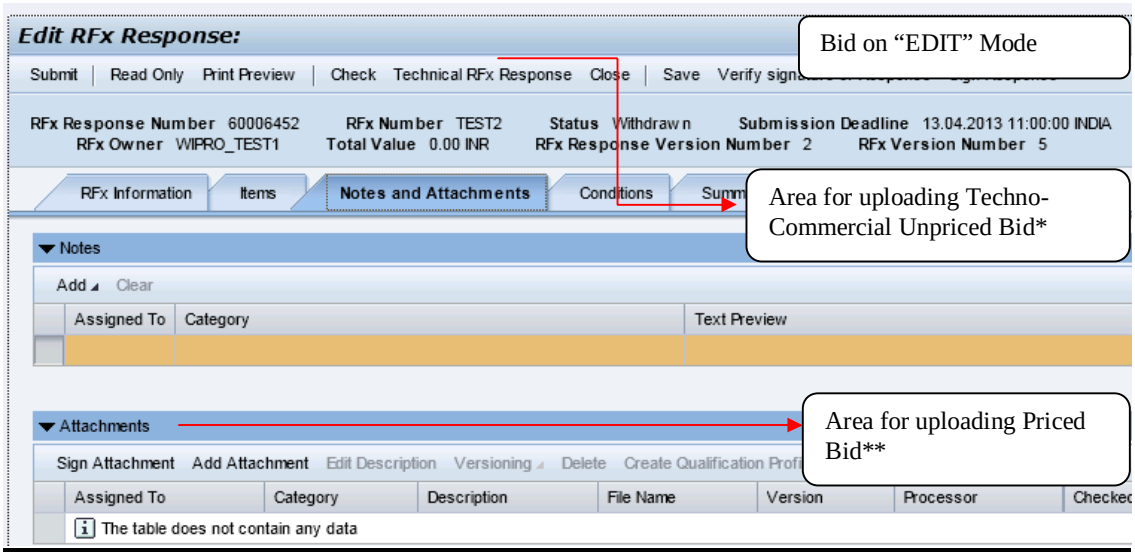
3.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response-> User - > Technical Bid only**.** The "**TECHNO-COMMERCIAL UNPRICED BID**" shall contain all techno-commercial details **except the prices**. **Please note that no price details should be uploaded in** Technical RFx Response**.**

3.2 The "**PRICE BID**" must contain the price schedule and the bidder's commercial terms and conditions.**The prices of the items should be quoted in "Conditions Tab". Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under "Notes & Attachments".**

3.3 A screen shot in this regard is given below. Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in Annexure-CCC.



On "EDIT" Mode- The following screen will appear. Bidders are advised to Upload "Techno-Commercial Unpriced Bid" and "Priced Bid" in the places as indicated above:



Note :

* The "Techno-Commercial Unpriced Bid" shall contain all techno-commercial details **except the prices**.

** The "Price bid" must contain the price schedule and the bidder's commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock on OK to save the File.

4.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to **Head**

Materials, Materials Department, Oil India Limited, Duliajan - 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender.

a) **Original Bid Security**
b) **Detailed Catalogue (if any)**
c) **Any other document required to be submitted in original as per tender requirement**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

5.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

6.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

7.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

8.0 **SINGLE STAGE TWO BID SYSTEM** shall be followed for this tender and only the PRICED-BIDS of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

9.0 **a) The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure-DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.**

b) The name of the OIL's Independent External Monitors at present are as under:

i) SHRI N. GOPLASWAMI, I.A.S. (Retd.),
Former Chief Election Commissioner of India
E-mail Id : gopalaswamin@gmail.com

ii) SHRI RAMESH CHANDRA AGARWAL, IPS (Retd.)
Former Director General of Police
E-mail Id : rcagarwal@rediffmail.com

10.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed **Annexure-CCC**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-CCC**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders) elsewhere, those in the BEC / BRC shall prevail.

11.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

12.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

Yours Faithfully

Sd-
(R BARMAN)
SR. MANAGER MATERIALS (IP)
FOR : HEAD-MATERIALS

Annexure - CCC

Tender No & Date: SDI5585P15 DT: 04.12.2014

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

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the "Bid Rejection Criteria" as stipulated in this document.

Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC / BEC shall prevail.

Criteria	**Complied / Not Complied. (Remarks if any)**
1.0 BID REJECTION CRITERIA (BRC): The bid shall conform generally to the terms and conditions given in this document. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. **TECHNICAL** **1.0 Bidder's Qualification:** 1.1 The bidder shall be an Original Equipment Manufacturer (OEM) of Mobile Steam Generator (MSG). **2.0Bidder'sExperience:** 2.1 The bidder should be. the Original Equipment Manufacturer (OEM)of Mobile Steam Generator (MSG) and shall have the experience of successful execution (including commissioning of the equipment) of at least two (02) nos. of Horizontal Mobile Steam Generators in the last seven (07) years preceding from the original bid closing date of this tender. The OEM must submit copies of Purchase Order together with tax invoice, Inspection Release Note/ Commissioning Report/completion certificate from the clients / any documentary evidence which all combined together confirms that the bidder's past supply has been successfully executed. **Note:** Possession of an order without complete supply or partially completed order shall not be considered as previous experience of the bidder. 2.2 The above clause 2.1 shall not be applicable to bidders successfully supplying horizontal MSG Units in Oil India Limited (OIL) and having Proven	

Track Record (PTR) of continuous field operation for at least two years from the date of supply. However, such bidders shall submit copy of OIL's Purchase Order/ invoice/Commissioning Report/Completion certificate for the order executed by them for reference purpose.

COMMERCIAL:

i). Bids are invited under "Single Stage Two Bid System". Bidders have to submit both the "Techno-commercial Unpriced Bids" and "Priced Bids" through electronic form in the OIL's e-Tender portal within the bid Closing date and time stipulated in the e-tender. The Techno-commercial Unpriced bid is to be submitted as per scope of works and Technical specification of the tender and the priced bid as per the online Commercial bid format. For details of submission procedure, please refer relevant para of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. Any offer not complying with the above shall be rejected straightway.

ii). Bid security:
The bid must be accompanied by Bid Security of **Rs 7,80,000.00** in OIL's prescribed format as Bank Guarantee or a Bank Draft/Cashier cheque in favour of OIL. The Bid Security may be submitted manually in sealed envelope superscribed with Tender no. and Bid Closing date to Head Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender. **The Bank Guarantee towards Bid Security shall be valid for 10 months from Bid closing date. (i.e. upto 22.11.2015).**

Bid Security may also be paid online on or before the Bid Closing Date and Time mentioned in the Tender.

If bid security in ORIGINAL of above mentioned Amount and Validity is not received or paid online within bid closing date and time, the bid submitted through electronic form will be rejected without any further consideration.

For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

The format of Bank Guarantee towards Bid Security (Annexure – VII) has been amended to Annexure – VII (Revised) and bidders should submit Bank Guarantee towards Bid Security as per Annexure – VII (Revised) only.

In case of extension of Bid Closing date against the tender where a bidder has already submitted his bid with requisite bid security validity within the original B.C. Date, such bidders will extend validity of bid security covering the extended period of the bid closing date.

iii). Performance Security:

The successful Bidder will have to submit Performance Security @ 10% of the order value after receipt of order. The Performance Security shall be valid for 12 months from the date of despatch. **Bidder must confirm the same in their bid. Offers not complying with this clause will be rejected.**

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.

For exemption for submission of Performance Security, please refer Clause No. 9.12 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders.

iv). *The Bank Guarantee should be allowed to be encashed at all branches within India*.

v). Validity of the bid shall be minimum 120 days from the Bid Closing Date.

vi). 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.

vii). 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.

viii). All the Bids must be Digitally Signed using "Class 3" digital certificate with Organisation's name *(e-commerce application)* as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3 with Organisation's Name" digital certificate, will be rejected.

ix). Technical RFx Response folder is meant for Technical bid only. Therefore, No price should be given in Technical RFx Response folder, otherwise the offer will be rejected.

x). Price should be maintained in the "online price schedule" only. The price submitted other than the "online price schedule" shall not be considered.

xi). Integrity Pact :

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The

proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. **Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway.** Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

2.0 BID EVALUATION CRITERIA (BEC)

The bids conforming to the terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria as well as verification of original of any or all documents/ documentary evidences pertaining to BRC, will be considered for further evaluation as per the Bid Evaluation Criteria given below.

A) TECHNICAL:

1. The manufactured product should be strictly as per OIL's tender specification.

B) COMMERCIAL:

i). To evaluate the inter-se-ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their offer.

ii) Priced bids of only those bidders will be opened whose offers are found technically acceptable. The technically acceptable bidders will be informed before opening of the "priced bid".

iii). To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

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TECHNICAL SPECIFICATIONS WITH QUANTITY

Tender No & Date: SDI5585P15 DT: 04.12.2014

	Complied / Not Complied. (Remarks if any)
ITEM NO. 10 **TRUCK MOUNTED HORIZONTAL MOBILE STEAM GENERATOR (MSG) – QTY = 06 NOS** Clause no / Description 1.0 Design, Manufacture, unitization and supply of a New Modern Truck mounted Horizontal Mobile Steam Generator (MSG) unit as per following specifications: Qty: Six (06) nos. 2.0 SCOPE OF WORK: 2.1 To design and manufacture the Mobile Steam Generator. 2.2 To procure and supply truck chassis as per specification furnished in para 4.0 to 4.2 for mounting the Mobile Steam Generator Unit. 2.3 To unitize and install the steam generator unit on the truck chassis and to construct a weatherproof housing on the truck platform as detailed at para 5.0 below. 2.4 (a) To furnish necessary certificate/documents from competent Government authority and obtain permission from IBR, Assam for operating the boiler in OIL's operational area. (b) To provide chassis documents in Form 21 & 22 (Copy enclosed) for registration of the complete unit in the name of M/S Oil India Limited, Duliajan. 2.5 To commission the unit at site operating at the rated capacity and desired conditions to OIL's satisfaction. 2.6 To furnish five (05) copies of detailed operating and servicing manuals for smooth operation and maintenance of the unit. (Additionally one copy in a CD) 3.0 TECHNICAL SPECIFICATION: Detailed technical specifications of the Mobile Steam Generator are as under. 3.1 BOILER/STEAM GENERATOR: The boiler shall have the following features. 3.1.1 Duty Condition: The boiler shall meet the following duty & working condition. Steam output capacity: 1000 kg/hr dry & saturated Steam at 100 Deg C. Max. Working pressure: 42.2 Kg/sq.cm (600 psig)(Maximum) Max. Steam temperature: 253 Deg C. Max. Time allowed to generate: 3 to 5 minutes. Steam at the rated output & Pressure of 42.2 kg/sq.cm from cold start. Design code : IBR 1950 with latest amendments/ASME. 3.1.2 Type: Fully automatic, Oil fired, once through, water tube, coil type, laterally wound, force circulation, forced draft, 3 pass design horizontal type. 3.1.3 Design code of Pressure parts: The pressure parts must be designed & made as per latest edition of ASME/IBR -1950 code. 3.1.4 Coil Tube design: The boiler has two concentric helical, closed pitch coils fabricated out	

of carbon steel, seamless tubes. The coils are connected to form continuous flow passage. This coil assembly is kept inside a shell assembly. The unit is horizontally mounted on a skid. Removable refractory cover mounted on the jacket covers the front of the unit. The pressure parts including inner and outer coils must be made out of seamless boiler quality alloy steel tube suitable for high temperature & pressure service.

The coil shall be technically wound with closed pitch except at the entrance of each pass. The winding shall be done in cold condition and the ovality of the tubes shall be within tolerable limits. The tubes shall be 100% radiographed at all circumferential welds before winding and the coils are fully stress relieved at elevated temperature as per IBR code requirement. The coil ends shall be flanged joined and independent of the feed water and main steam header. That is, replacement or maintenance of the tube bundle shall be independent of the headers.

3.1.5 Shell Design: The shell assembly comprises of a double shell arrangement containing the pressure parts as described above and to preheat the combustion air between the shells along with suitable radiator to reflect radiant heat to the convection zones. Necessary refractory work at the burner and far end shall be provided, using proper quality materials. The far end shell must be independent of the coil bundle. That is, the far end wall should be easily removable without disturbing the coil for maintenance.

The shell shall be provided with a peephole for visual inspection of fire.

3.1.6 Fuel: The fuel for generating steam should be high-speed diesel (HSD). The bidder shall indicate the gross calorific value of the fuel and fuel consumption per hour at rated output.

3.1.7 Feed water quality: The bidder shall specify the feed water quality for smooth and efficient operation of the unit.

3.1.8 Prime mover: The unit shall be equipped with an air cooled, vertical, naturally aspirated, inline diesel engine of suitable HP for continuous running (24 Hrs.) with an overload capacity of 10% for a period not exceeding One Hour in any 12 hours running when running at 1500 R.P.M. as per site conditions given below and shall conform to specifications IS:10000/BS:5514. The Governing is to be in accordance with Class A-2 specifications to IS: 10000/BS:5514.

Maximum Temperature : 40º C
Minimum Temperature : 5 º C
Maximum Relative Humidity at 35 º C : 95%
Maximum Altitude above mean Sea Level : 150 M
HSD conforming to IS: 1593:1982 and having the following specifications:
Cetane number : 42.5
Gross calorific Value : 19480 BTU/CFT (10000 CAL/GM)

The engine should be of reputed manufacturer like KIRLOSKAR/RUSTON/ CUMMINS/ CATERPILLAR / GREAVES, complete with, charging alternator, electrical self-starter with suitable maintenance free battery,, drive pulley for power take off, air cleaner, fuel filter & speed regulator to run (a) air blower (b) fuel pump, (c) feed water pump and (d) Charging alternator of the Mobile Steam Generator. All the above units shall be direct belt driven. Belt guard shall be provided on all the V-belt assemblies. A suitably selected flexible coupling should be incorporated to transfer power from the engine to the Alternator.

Suitable spark arrestor with silencer along with necessary piping covered with exhaust lagging shall be provided at the engine exhaust and the engine exhaust shall be provided outside the boiler hut and it shall be suitably insulated.

The engine shall have minimum 20% reserve HP. Power balance for the unit i.e. generation and consumption of power shall be clearly indicated in the bid. Alternative arrangement shall be provided for manual starting of the engine. The engine shall be firmly anchored to the skid, using vibration isolator of reputed make like DUNLOP.

The minimum requirements for the engine shall be as below –

a. Suitable air cooled diesel engine of adequate power and conforming to min EURO-III emission norms. (Engine emission norms certificate shall be submitted along with documents as mentioned in 7.0 (iii) by the supplier.

b. The engine shall be complete with Digital / manual Tachometer & Hour meter in addition to all standard Lub oil pressure gauges & meters, starting switch, ignition switch , ammeter, filters, spark arrestor etc. Emergency/Safety engine shutdown system in case of Low lubricating oil pressure & Over speed should be provided. Anti-vibration mountings and Engine "Low Lube Oil Pressure" indication display red lamp should also be provided.

c. 12 V engine electric starter (Lucas or Delco Remy make) with heavy duty maintenance free battery enclosed in a safety enclosure, engine mounted Battery charging Alternator (Make: LUCAS TVS) and Starting ring fitted to the Engine Flywheel should be provided.

d. The Fuel System should comprise of Mechanical Governor, Fuel Injectors, Fuel Pump, Fuel Filter Assembly, Fuel lines and Fuel Tank having storage capacity to meet the Fuel requirements of 12 hours of full load operations.

e. The engine with all other accessories, tanks, etc. shall be installed on a suitable skid with removable type steel protective frame cage equipped with lifting lugs for lifting of the complete unit. The skid shall have provision to facilitate installation of the same on a truck platform.

f. Lubricating System: The Lubricating System should comprise of Gear driven lubricating Oil Pump. Lubricating Oil Filter with a replaceable Filter Element, Lubricating Oil Cooler, Lubricating Oil Pan, Oil level dipstick and Crankcase breather.

g. Engine to be supplied with standard painting and it should have SAE standard rotation.

NOTE: The bidder should submit the following information along with relevant performance rating curves and engine product catalogues.

i) Gross HP developed at rated RPM
ii) Deduction of blower fan, charging alternator and other ancillary equipment
iii) Net HP developed at rated RPM
iv) Fuel consumption at rated power as 110%, 75%, and 50% of rated load.

In case of above system the alternator, its control panel, lighting scheme, earthing scheme, electrical works & cabling etc. will be as per clause (3.1.9) – A/B//E/F/G below.

3.1.9 ELECTRICAL SYSTEM

All pumps & blower will be electrical motor driven. The details of electrical system & devices are as under:

A Alternator:

Power for all electrical equipment shall be provided by an air cooled diesel engine driven (as mentioned in 3.1.8 above) acoustically enclosed 3 – phase alternator. Air blower, fuel pump, feed water pump shall be driven by directly coupled electric motors. The alternator prime mover/engine shall have all the features of the engine stated above. The continuous alternator KVA output at 40 deg C ambient shall be more than the sum of starting KVA of the biggest motor and the maximum running KVA of other electrical equipment. The engine shall be able to provide the required KW during motor starting & running. The engine output rating shall be on continuous basis at 40 deg C ambient and at rated alternator output KW. The engine & alternator rated output on continuous basis shall be at least 20% more than the continuous running electrical load. The bidder shall submit detail calculations for KVA rating of alternator & KW rating of the engine along with the bid.

Alternator shall conform to IS: 13364.

The alternator shall meet the following technical specifications and conform to relevant BIS

1. Rated voltage: 415V (+/-) 6% AC.
2. Rated frequency: 50 Hz (+/-) 3%, 1500 RPM

3. Phase system: 3 phase, 4 wires.
4. Power factor: 0.8 lagging.
5. Class of insulation for stator, rotor: F/H.
6. Phase sequence: UVW.
7. Rating: Continuous.
8. Connection: Star.
9. All windings should be made from electrolytic grade virgin copper.
10. Alternator Internal protection (enclosure) : IP 23
11. Alternator cable terminal box protection: IP 54.
12. Excitation system: Brushless Self excited & auto regulated.
13. The automatic voltage regulator shall ensure that voltage dip during starting of highest size motor with other electrical loads running at rated output shall not be more than 10% of the alternator rated voltage.
14. Mounting: Foot mounted.
15. Suitable cable termination box for four core, copper conductor, steel armoured PVC insulated cable connection.
16. Alternator is to be mounted on anti-vibration pads.
17. Alternator shall have two external grounding terminals.
18. The following information in respect of the alternator shall also be provided: (i) Rated output, (ii) Motor starting ability (iii) Voltage swing when rated load is suddenly switched on (iv) Overload capacity (v) Short circuit withstand capacity (vi) Automatic voltage regulation (vii) Unbalanced current withstand capacity (viii) efficiency of alternator at 25%, 50%, 75% & 100% load (0.8 PF)
19. Alternator make shall be Stamford/ Kirloskar/ NGEF/Crompton Greaves. Alternative make if offered will be subject to OIL's approval.
20. Alternator shall be guaranteed for a period of one year from the date commissioning of the unit.
21. The alternator along with the Prime mover shall be housed in an acoustic enclosure.

B CONTROL PANEL

Suitable Industrial type PLC based (Non redundant, Non compartmentalized and Non Draw type) CONTROL PANEL shall be provided for the alternator. The panel shall comprise of the following:

i)Four pole, 415V MCCB, minimum 25 kA breaking capacity, continuous current rating (AC23 duty) 25% higher than the genset full load current, adjustable (in both current and time)microprocessor controlled overload, short circuit and ground fault release, with shunt trip coil, qty – 1 no. Make: Schneider (NSX series)/Legrand (DPX3 series)/Siemens (3VT series)/ABB (Tmax series)/Indo-Asian

ii)Earth leakage relay with core balance current transformer. Range – 0.3 Amp to 3.0 Amp with adjustable time delay, indication LEDs, test and reset push button: Qty – 1 no. ELR shall trip the MCCB in case of an earth leakage. Make: Schneider/Legrand.

iii) 1 No. 3 phase, 4 wire, Microprocessor based, Over and Under Voltage Monitoring Relay for the following protections (Make: Schneider (Model RM3 TR114VS7)/ProkDvs(Model-LVM11-34-2CF)/ABB ltd

1) Over voltage - 110 %
2) Under voltage - 85 % with 1- 10 seconds time setting
3) Incorrect phase rotation

iv) 1No. Over and Under frequency monitoring relay from 40 to 60 HZ with accuracy 0.1%, suitable for 415V Trip time 0-10Sec with LED indication, 2NO+ 2NC contact, Make: ProkDvs (Model –HILO-2C-F)/ Minilec (FCS D2)

v)Multifunction Digital meter for V, I,KW, Freq., KWH shall be provided. Current

Transformer, type BPL, 5 amp output at rated primary current. Burden – 15 VA, Class-I; Qty – 3 nos; Make of meter: HPL-Socomec (Diris A40)/Schneider (EM 6400 series). Make of CT: Kappa/A.E/L&T.
vi)Control fuses for protection of meters and earth leakage relay.
vii)LED indication lamp for indication of incoming 3 phase power supply; Qty – 3 nos.
viii) Other components like CT, selector switch, pushbuttons as required
Sub Notes for Panel:

N1.The generator control panel shall be industrial type, self-supporting, floor mounting, built with rigid framework of suitable size MS Angle/Channel of sufficient strength with vibration dampers, dust & vermin proof made of 14SWG CRCA sheet steel, cubicle type conforming to IP54, having front and rear hinged doors with locking arrangement, danger plate fitted on both sides, lifting lugs on top, ventilation louvers with perforated sheet on both sides, detachable gland plates for easy & safe entry of cables, double earthing studs on two sides complete with suitably sized zinc plated & passivated double nuts and spring washers.
N.2 Control panel shall be thoroughly cleaned before applying 2 coats of rust preventing primer followed by 3 coats of light gray paint as per BIS code.
N.3 All control wiring shall be done with 1100V grade, single core 1.5 sq mm, ISI, FIA, TAC approved and marked, PVC insulated, flexible copper cable. CT and Ammeter wiring shall be done with 2.5 sq mm copper cable. CT wires shall be terminated with ring type lugs. All wires shall be numbered with ferrule for Identification. Make: Finolex/Havell's.
N.4 All power connections inside the panel shall be made with copper wire or straps of current rating as per MCCB rating. Generator output terminals shall be connected to the control panel input at heavy duty terminals with 1100V grade, heavy duty, ISI approved and marked, PVC insulated, flexible copper conductor cables in heavy duty metallic flexible conduit.
N.5 The overall dimensions of the panel shall be sufficient for safe and comfortable working inside the panel. Panel shall conform to IS: 8623.
N.6 Control panel shall be guaranteed against manufacturing defects for a period of 12 months from the date of commissioning.
C ELECTRIC MOTOR:
Induction motors of suitable rating (with adequate reserve HP) & RPM shall be provided for running the air blower, fuel pump and feed water pump. The motors shall have the following minimum specification:
a) Voltage: 415V (+/-) 6% AC.
b) Frequency : 50 Hz (+/-) 3%
c) Duty: S-1 (Continuous)
d) Enclosure : Totally enclosed Fan cooled (TEFC)
e) Class of insulation: F but limited to temperature rise of B class insulation.
f) Degree of protection: IP: 55.
g) Suitable cable termination box.
h) 2 nos suitable earth terminals shall be provided.
i) Standard: Motor should confirm to IS-325 for performance.
j) Motor shall be guaranteed for one year from date of commissioning of the unit.
k) Make: Kirloskar/Crompton Greaves/Bharat Bijlee/ABB.
The motors shall be directly coupled through direct, flexible couplings & complete with coupling guards.
D MOTOR CONTROL CENTER:
A suitable MCC panel shall be provided for starting the above motors. As the MCC panel also will house the boiler controls (with sensitive PLCs and other instrumentation), sufficient and proper isolation/space shall be provided for instrumentation items and high voltage interference generating items like contactors/MCCBs etc. of motor starters.

The MCC panel shall have the minimum technical specification as under:
(a) INCOMER: Qty – 1 no. It shall be supplied from the output of the generator control panel. It shall comprise the following:
(a1) MCCB, 4 pole minimum 25 kA breaking capacity, continuous current rating (AC23 duty) as per design of control panel, adjustable (in both current and time)microprocessor controlled overload, short circuit and ground fault release, with shunt trip coil, qty – 1 no. Make: Schneider (NSX series)/Legrand (DPX3 series)/Siemens (3VT series)/ABB (Tmax series)/Indo-Asian
(a2) Earth leakage relay with core balance current transformer. Range – 0.3 Amp to 3.0 Amp with adjustable time delay, indication LEDs, test and reset push button: Qty – 1 no. ELR shall trip the MCCB in case of an earth leakage. Make: Schneider/Legrand.
(a3) Multifunction Digital meter for V, I, KW, Freq, KWH shall be provided. Current Transformer, type BPL, 5 amp output at rated primary current. Burden – 15 VA, Class-I; Qty – 3 nos; Make of meter: HPL-Socomec/ Schneider. Make of CT:Kappa/A.E./L&T.
(b) (a4) Control fuses for protection of meter – 3 nos.INCOMER: Qty – 1 no. It shall comprise of the following:
(a1) TPN combination switch fuse unit with current rating as per CFS unit of control panel. Make: Siemens/GEPC/L&T.
(a2) Multifunction Digital meter for V, I, KW, Freq, KWH shall be provided. Current Transformer, type BPL, 5 amp output at rated primary current. Burden – 15 VA, Class-I; Qty – 3 nos; Make of meter: HPL-Socomac/ Merlin Gerin. Make of CT:Kappa/A.E./L&T.
(a7) Control fuses for protection of meter – 3 nos.
(a) BUSBAR: A suitable length of 4 nos (Three phases and one neutral) electrolyte grade high conductivity tinned copper busbar shall be provided. Continuous current rating of the busbar shall be two times the current rating of the panel incomer MCCB. Busbarinsulation support material shall be non-hygroscopic SMC/GRP. Busbar shall be insulated with colour coded heat shrinkable PVC sleeves.
(b) OUTGOING MOTOR & LIGHTING FEEDERS:

Direct on line (DOL) starters for motors up to 5 HP and star/delta starters for motors above 5 HP shall be provided along with one no. spare starter for highest sized motor.

Besides starters one no. lighting feeder (Fitted with MCB and switch) and one no. spare feeder (Fitted with 25 amp 4 pole MCCB) shall be provided. Starters shall have following components
(c1) Incomer MCCB, 4 pole, microprocessor controlled overload and short circuit release, Make: Schneider/Siemens/ABB/Legrand/Indo-Asian.
(c2) TP power contactor with auxiliary contacts. Make: Schneider/ABB/Siemens/Indo-Asian.
(c3) Thermal overload relay within built single phasing preventer. Qty – 1 No: Make: Same as contactor.
(c4) Timer for star/delta starter, make: Schneider/ABB/Siemens
(c5) Start & Stop push button; Qty – 1 set; Make: Siemens/L&T.
(c5) ON/OFF/Trip LED Indication: Qty – 1 set; Make: Siemens/L&T.
(c) (c6) 2 nos. control fuses for control circuit.OUTGOING MOTOR & LIGHTING FEEDER:

(c7) 2 nos control fuses for control circuit.

Sub-Note for MCC Panel:
N1. The MCC panel shall be industrial type, self-supporting, floor mounting, built with rigid framework of suitable size MS Angle/Channel of sufficient strength with vibration dampers, dust and vermin proof made of 14SWG CRCA sheet steel, cubicle type conforming to IP54, having front and rear hinged doors with locking arrangement, danger plate fitted on both sides,

lifting lugs on top, ventilation louvers with perforated sheet on both sides, bottom detachable gland plates at suitable height from skid floor (min 450 mm) for easy & safe entry of cables, double earthing studs on two sides complete with suitably sized zinc plated & passivated double nuts and spring washers.

N2.MCC shall be thoroughly cleaned before applying 2 coats of rust preventing primer followed by 3 coats of light gray paint as per IS code.

N3. All control wiring shall be done with 1100V grade, single core 1.5 sq.mm, ISI, FIA,TAC approved and marked, PVC insulated, flexible copper cable, CT and ammeter wiring shall done with 2.5 sq.mm copper cable. All wires shall be numbered with ferrule for identification. Make: Finolex/ Havell's.

N4. All power connections inside the panel shall be made with copper wire or copper straps of current rating as per individual MCCB rating. Motors should be connected to the respective panel at heavy duty brought out terminals with 1100 V grade, Heavy duty, ISI approved and marked, PVC insulated, PVC sheathed, Galvanized steel armoured, stranded copper conductor cables. Heavy duty single compression cable glands shall be used for all cable entries. Make of Cable: Finolex/Havell's/L&T.

N5. The overall dimensions of the panel shall be sufficient for safe and comfortable working inside the panel. Panel shall conform to IS: 8623.

N6. Panel shall be guaranteed against manufacturing defects for a period of 12 months from the date of commissioning.

E EARTHING DETAILS:

The entire earthing work shall conform to IS: 3043. Two nos 25x5 mm galvanized GI straps shall be mounted suitably inside the unit, which will act as parallel earth bus bars. Two nos. earth connections (either with suitable size GI straps or GI wire rope, suitably terminated with crimp type lug) from alternator, motors, control panel & MCC shall be connected to these straps so as to ensure two earth connections for each device. The generator neutral shall be earthed to the earth straps with suitable sized insulated copper cables. Bidder shall specify the neutral cable size. Earthing scheme shall be as per IS: 3043.

F ELECTRICAL WORKS & CABLES

Entire electrical installation work will be as per BIS, CEA Regulations& NEC codes. All items used shall conform to relevant IS. The layout plan & electrification work shall be planned considering safety of operating staff, equipment & maintenance aspect

All cables will be terminated through suitably sized Heavy duty single compression glands and connections will be made through properly rated terminal strips and tinned copper sockets crimped rigidly to the copper conductors.

G ILLUMINATION AND LIGHTING DETAILS:

Interior of the unit shall have sufficient illumination with minimum 3 nos. of industrial type, 240V, IP: 55 bulkhead/well glass fittings with mercury vapour (125 w) /CFL (23 w) lamps. These shall be wired with metallic conduit wiring/armoured cable wiring using stranded copper conductor cables approved by ISI. Make of light fittings: Philips/Bajaj/Crompton/GE.

MCB shall be used as switches for illumination system and shall be housed in metallic enclosure, properly earthed. One no Industrial type socket outlet of 10 amps with 10 amps MCB shall be provided inside the unit. Make: Schneider/Siemens/ABB/Legrand.

H DOCUMENTS:

Complete scheme (with schematic drawings, component details and bill of materials) for details of electrical system including genset, control panel, earthing, illumination, MCC, Motor, wiring scheme shall be submitted with the offer. Three sets of above scheme along with test report, inspection report and all drawings of electrical system and guarantee certificate for electrical items shall be submitted with the unit.

3.1.10 FUEL BURNING COMBUSTION SYSTEM:

The fuel burning system of the boiler shall comprise of the following:
(a) BURNER: The burner shall be pressure jet, direct electric spark ignition type using spark electrodes/plugs and high tension power supply from inverter/magneto of a well proven design comprising of burner gun, electrode, air fuel mixing devices, ignition transformer and other accessories if any, all rated for continous duty service. The burning system shall be adequate to produce heat required for generating steam at the desired rate within 3 to 5 minutes of cold start. Make – Monarch. Manual describing combustion principle for steam generation is to be submitted.
(b) COMBUSTION AIR BLOWER:
Centrifugal type air blower of suitable capacity is to be driven directly either by the diesel engine through belt drive or by directly coupled electric motor complete with all the accessories for power transmission. It shall also be provided with an over pressure relief valve.
(c) FUEL PUMP:
Gear type fuel pump suitable for pumping HSD or any second grade fuel oil, either mounted on the same shaft as that of the air blower driven by the diesel engine through belt drive or by directly coupled suitable electric motor. The fuel pump shall be complete with all accessories required for power transmission. It shall also be equipped with internal over pressure relief arrangement / automatic by-pass control valve. Make - Sofag, Sun strand or Neel. The position of the pump should be easily accessible for maintenance.
(d) DIESEL OIL TANK:
HSD tank of suitable capacity, based on the feed water tank capacity and fuel consumption rate, for continuous full load operating time made of MS sheet, complete with inlet and drain nozzles fitted with valves, graduated level gauge shall be firmly anchored to the skid to withstand severe wrenching and shocks. Necessary MS piping up to the diesel engine and boiler fuel pump should be provided.

(e) MANUAL HSD FILLING PUMP:
One (1) no hand operated HSD filling pump (gear type) complete with suction and discharge flexible rubber hoses for filling HSD tank shall be mounted near the tank. While the length of the discharge hose shall be as per assembly requirement, the length of the suction hose shall not be less than 40 ft.
3.1.11 FEED WATER PUMP:
Triplex reciprocating plunger type positive displacement pumps of suitable capacity of a reputed manufacturer like SPECK etc. to be driven either by the diesel engine through belt drive or by directly coupled suitable electric motor complete with all accessories for power transmission. The pump shall be complete with fluid over pressure relief valve, suction stabilizer and pulsation dampener. The bidder shall clearly specify volumetric capacity, pump HP and other technical details. Piping shall be provided for connecting the water pump to the coil inlet. A suitable strainer shall be provided at the suction of the pump to remove foreign materials. The position of the pump should be easily accessible for maintenance.
3.1.12 FEED WATER TANK:
Tank/s made of MS sheets (Plate thickness min. 5 mm) with suitable anti-corrosive paint of capacity not less than 6000 litre, fitted with inlet, outlet, drain and vent nozzles (in each tank) fitted with valves, level indicator/gauges shall be provided. The tank shall be properly designed to reduce water surging on turns and withstand violent wrenching and shocks. It shall be firmly anchored to a skid mounted above the chassis as shown in the attached layout diagram. The tanks shall be easily detachable from main unit for cleaning and maintenance without dismantling other units. If the tanks are made in several sections, then each section shall have isolating valve and individual tank drainage facility. Suitable air vent nozzle shall be provided in each tank to eliminate air pockets while filling up. Proper care shall be taken that the tanks are suitably connected to the feed water pump and there is no starvation of water to the pumps.

Suitable provision shall be made to reduce metal to metal friction for longevity of the tanks.

3.1.13 STEAM HEADER:

The steam header for mounting safety relief valves, steam pressure indicator, high steam pressure switch, coil blow down valves including steam stop, auxiliary and check valves. The steam header shall have flanged ends for mounting all the valves. It should be placed at the Right hand side of the Unit.

3.1.14 DUCTING:

Ducting shall be provided for the flue gases from outlet of the boiler complete with a rain head outside the boiler housing.

3.2 PIPING:

Piping to connect water pump, boiler as well as steam outlet shall be of boiler quality duly certified by the competent authority. Suitable insulation shall be done up to the rear of the boiler housing. Drain piping for fuel, feed water and steam coil shall be suitably provided.

3.3 STEAM HOSE/PIPE:

25mm (1") NB 12 meter long flexible metal braided high pressure hose (Four nos.) of steam working pressure of 70 kg/sq.cm (1000 Psig) at 100 Deg C. complete with quick release coupling at each end shall be provided.

Or Alternatively: Two sets of 25mm (1") NB pipes of 70 kg/sq.cm (1000 Psig) working pressure duly insulated with quick release couplings at each end shall be provided. The far end of the pipe shall be 12 m away from the steam outlet of the boiler along the ground. Accordingly, necessary elbows/bends and short joints with quick release couplings shall be provided. Additionally, provision should be made to keep at least 4 Nos. of steam hose suitable coiled adjacent to the boiler housing.

3.4 VALVES:

The boiler shall be equipped with 2 nos each of coil blow down valves (at suitable position for easy operation), safety relief valves, steam stop valves (suitably covered for safe operation) and feedback (non-return) valves for coil blow down, over pressure release, steam shut off and preventing reverse flow respectively. These valves are minimum requirement for the unit.

All the valves shall be IBR quality flanged type valves. The bidder has to provide necessary document in support of this along with the quotation.

3.5 MSG CONTROL PANEL AND INSTRUMENTATION:

A control panel shall be designed based on microprocessor based state of the art technology Programmable Logic Controller (PLC)/Sequence Logic Controller (SLC) system suitable for Mobile Steam Generation (MSG) operation and control. The fault functions shall be both visually and audibly indicated on the unit's control panel and shall remain 'ON' until manually reset. It will have sequence starting system to ensure that all functions associated with starting operation are performed in correct sequence. The initiation shall be by means of a switch of push type, on the unit control panel. Provision shall also be incorporated for emergency shutdown of the MSG unit. The MSG units shall be provided with automatic safety shutdown devices and annunciation system with fuel cut-off.

SHUTDOWN DEVICES WITH AUDIO-VISUAL ALARM FOR THE FOLLOWING CONDITIONS SHOULD BE OFFERED

i. Flame failure.
ii. Steam pressure high.
iii. Steam temperature high.
iv. Low feed water pressure.
v. Low fuel oil pressure.
vi. Blow down valve open.

SEQUENCE AND CONTROL FOR THE FOLLOWING CONDITIONS SHOULD BE

OFFERED i. Primary safety checks. ii. Start of blower fan and fuel pump. iii. Secondary safety checks. iv. Start ignition and fuel supply. v. Prove pilot flame establishment. vi. Continue operation till high steam pressure reached. vii. On-off operation set pressure failure. viii. Safety lock out for flame or any other safety shutdown condition as mentioned above. B Field and panel mounted indicating instruments shall also be available to monitor various process parameters. Panel mounted indicating meter i. Steam temperature. (Analog type input, preferably 4-20 Ma) Panel mounted indicating lamp & switches: Indicating lamp: ii. 230 V AC ON. iii. Safety Lockout Internal. iv. Start. v. Flame ON. vi. Water pump ON. vii. Water pump OFF. viii. Water pump Trip. ix. Fuel Pump ON. x. Fuel pump OFF. xi. Fuel pump trip. xii. Air blower ON. xiii. Air blower OFF. xiv. Air blower trip. xv. Steam Temperature high. xvi. Steam pressure high. xvii. Low steam pressure. xviii. Low air pressure. xix. Low fuel pressure. xx. Low fuel oil level. xxi. Low feed water level. xxii. Blow down valve open status. Switches (Push Buttons): xxiii. Start push button. xxiv. Stop push button. xxv. Alarm Test push button. xxvi. Alarms accept PB. xxvii. Alarm reset PB. xxviii. Start PB for water pump. xxix. Stop PB for water pump. xxx. Start PB for fuel pump. xxxi. Stop PB for fuel pump. xxxii. Start PB for air blower. xxxiii. Stop PB for air blower.	

xxxiv. Auto/Manual water pump selector switch.
xxxv. Auto/Manual fuel pump selector switch.
xxxvi. Auto/Manual air blower selector switch.
xxxvii. 230 V AC power ON/OFF switch.

Field mounted instruments (Analog type)
xxxviii. Steam pressure gauges.
xxxix. Feed water pressure gauge.
xl. Steam temperature gauge.
xli. Indicating thermostat or temperature switch for steam temperature, with a set point for high temperature (superheat alarm)
xlii. Steam pressure switch for both high & low.
xliii. Air pressure switch.
xliv. Pressure switch for fuel oil.
xlv. Pressure switch for feed water.
xlvi. Level switch for fuel oil level.
xlvii. Level switch for feed water level.
xlviii. Limit switch for blow down valve.
xlix. Alarm rest, engine start and main switch.
l. Tachometer, lube oil pressure indicator, temperature indicator for the diesel engine.

C Ignition of burner should be carried out using ignition transformer and ignition electrodes operating at 230 V AC, 50 Hz.

D Steam temperature controller function shall be incorporated in the control programme.

E A low voltage/under voltage (less than < 180 V AC) indication of instrument Panel incoming power (230 V AC, 50 Hz) to be provided.

F All three phase (415 V, 3 PH, 50 Hz) motor starter relays, overload relays, current transformers etc. should be placed in the control panel in such a way that no high voltage interference will occur in the PLC side. Therefore, the control panel should be designed like that upper half of the panel should include all instrumentation items and lower half of the panel should include all three phase electrical component including ignition transformer with proper isolation.

G The control panel shall be mounted in such a way that it can absorb maximum shock/vibration since the panel is truck mounted and truck is required to move very frequently, sometimes on bad road condition also.

H The control panel shall have an entry for easy access and shall be suitable for use in IP-65 environment. The control system shall be designed in such a way that failure of portion of the system shall not jeopardize the health of the MSG unit i.e. the health of various auxiliaries as well as the steam generation availability shall be always ensured.

I All the indication as well as sequence, interlock, startup and safety shutdown through PLC using analog / digital I/O cards. Also preferred analog / digital indication in the panel as mentioned .

J The control panel shall include a programmable logic controller (PLC)/SLC with the following features to cater the operational need of the boiler.
i. Indication of status of inputs and outputs for easy debugging.
ii. Expandable inputs/outputs.
iii. Program memory held in EPROM.
iv. Communication port for connection to PC or laptop computer.
v. Designed to work in boiler environment.
vi. Battery backup for retaining memory in case of power failure.

K Control cabinets shall be industrial grade, enclosed type and shall be designed for bottom

entry for cable connection and cabinet structure shall be rigid. Cabinets shall be equipped with easy access door and door shall be equipped with lockable handles and concealed hinges. All cable entry to the cabinet shall be properly rooted through conceal tray/conduit. Proper illumination shall be provided with operating door switch inside the cabinet.
L One (1) laptop/handheld programmer for interfacing with PLC/SLC.

4.0 TRUCK UNIT
Brand new Truck chassis of Make: Tata/Ashok Leyland or equivalent as per the following specifications, Fitments & Accessories, Terms & conditions, etc. The make and model of the truck chassis offered is to be clearly indicated in the bid. Bidder should provide technical leaflet of the offered truck chassis along with the bid.
(A) CHASSIS
i. Drive : 6x4 Drive with power steering system. (One single non powered front axle & two Powered rear axles.)
ii. Cowl: Full forward Control.
Iii Engine: Suitable water cooled diesel engine of adequate HP.
iii. Emission norms: Latest applicable emission norms.
iv. Gearbox - Minimum 5 forward speeds & 1 reverse speed.
vi. Steering - Hydraulic Power Assisted Steering system.
vii. Wheelbase – In the range of 4800 mm -4910 mm.
viii. Overall length – As per OEM design.
ix. Maximum width – As per OEM design. (As per Indian MV Acts.).
x. Suspension –As per OEM design.
xi. Maximum permissible GVW not less than 25,000 kg. (note para 4.1 b).
xii. Rear overhang (ROH): ROH should be as per original chassis. Extension of chassis to accommodate Steam Generator unit/rear housing is not acceptable.
xiii. Brake: Duel circuit Full Air Service Brake and spring Actuated Parking Brake acting on rear wheels.
xiv. Wheels & Tyres: Tyre size- min. 10.00x20. (with tube)
xv. Electrical system: 12/24 volt as per OEM design.
xvi. Ground clearance: - As per OEM Design.
(B) DRIVER'S CABIN

Driver's cab (Dual) suitable for accommodating minimum four co-workers excluding the driver should be complete with the following:

i. All steel structure construction with non-slippery chequered plate flooring.
ii. 2(two) lockable doors with glass window (moving up & down).
iii. Side windows on both sides with lockable sliding glass. 1 (one) No. rear peeping window with sliding lockable glass and steel wire mesh guard.
iv. Adjustable driver's seat (as per OEM design).
v. 1 (One) no co-driver's seat on the left side of the driver's seat. Additional 1 (one) bench type seat made of foam rubber cushion with full backrest suitable for minimum 3 (three) persons at the back of driver's seat. Total seating capacity of the cabin is to be for minimum 5 persons.(including driver)
vi. Suitable roof lamps and minimum 2 Nos. cabin fan.
vii. Windscreen of laminated non-splinter glass. Sliding window glasses of toughen type.
viii. The roof of the driver cabin (from inside) should have proper upholstery with heat resistance insulation to prevent heat radiation.

(C) OTHER FITMENTS & ACCESSORIES

a. All standard equipment, gauges and meters, air horn, lightings, reflectors, sunshades, lockable fuel tank with strainer, standard tool kit, lockable toolbox (inside the cabin), hydraulic jack of capacity min 30 MT, handle & wheel wrench, mud flaps etc.

b. One additional lockable toolbox of size min 1.00m x 0.50 m x 0.50 m under the truck platform at suitable location.

c. 2 (two) nos large rectangular rear view mirrors on each side of the cabin.

d. Well covered lockable Battery Box preferably outside the driver's cabin, suitable mounting arrangement for the spare wheel and towing hooks at rear and front.

e. Audio visual alarm (Reversing horn with blinking light) while reversing of the vehicle.

f. First aid box, Glove box, Fire extinguisher(s) of adequate size and all other statutory fittings/accessories as per Indian MV Act.

(D) PLATFORM

a. A suitable platform is to be constructed on the truck chassis to mount the skid(s) with all the items of the Steam Generator Unit (SGU) described at para 3.0 to 3.5 above and to construct a weatherproof housing as detailed at para 5.0 below. The skid shall be properly mounted and for the same, adequate number of cross members in the skid is to be provided. Width and length of the platform should be as per original width of cowl/driver's cabin and length of chassis. Extension of chassis to accommodate the skid(s)/housing of SGU or any additional overhang of the housing is not acceptable.

b. The platform is to be made out of MS channels with min. 5 (five) mm thick MS chequered plate flooring.

c. It should be strong enough to carry the load of all the equipment and should withstand shock loads during movement.

d. For aesthetic look, extended paneling of the canopy housing is to be made to cover the tank portion of the unit. This extended portion shall either be screwed with the main paneling or is to be fixed with hinge with the main housing frame. In case of hinge, proper anchoring is to be made to hold the lifted panel.

e. The mounting of all equipment/machineries etc. on the rear platform should be of uniform load distribution for proper balancing of the vehicle.

4.1 SELECTION OF TRUCK CHASSIS

a. The total weight of the Steam Generator Unit with full capacity water, housing (rear cabin of SGU), all fittings etc., as described at para 3.0 to 3.5 above & 5.0 below is to be indicated in the bid. Approx. weight of the truck with driver's cabin & platform is also to be indicated.

b. The Laden Weight of the unit shall be within the maximum Permissible Gross Vehicle Weight (i.e. sum of Axle Capacities of all axles i.e. GVWR)of the unit.{ Laden Weight means- Weight of the complete unit with all equipment & fittings i.e. weight of the chassis with driver's cabin +weight of the all equipment permanently mounted on the unit + weight of the other tools, accessories, etc. generally being carried/kept in the unit, spare wheels, oil, etc. Accordingly, Laden Weight is the sum of actual loading on each individual axles.} Accordingly, the truck chassis specifically with respect to GVW, Engine HP & Wheelbase is to be selected and offered/quoted.

c. Positioning of the items of the SGU on the platform should be such that the load is distributed evenly on the platform.

4.2 PAINTING

Exterior of Driver's cabin - Deluxe Imperial Crimson.

Interior of Driver's cabin - Light shade as per standard.

Chassis & undercarriage - Rustproof painting.

5.0 UNITISATION & SPECIFICATIONS OF HOUSING:

a. The mobile steam generator shall be generally fabricated on the basis of the supplied layout

drawing as shown in Annexure II. The bidders are also to note that the supplied drawing is only a reference drawing and in no case it should be considered as the final drawing. However, the successful bidder shall have to make their own detailed lay out drawing, P&I drawing etc. and the same shall have to be submitted within 4 weeks from the date receipt of formal order for OIL's approval prior to starting actual fabrication of the unit.

b. All the items of the Steam Generator detailed at para 3.0 to 3.5 above are to be installed on suitable individual skids of preferably on a single skid and the skid(s) is to be mounted on the truck platform through bolts extended up to the underneath cross members of the platform as well as chassis, as applicable. Mounting of the skid(s) either by the bolts or welding to the platform sheet (floor sheet) it should be avoided to the extent possible.

c. The skid(s) is to be covered with suitable chequered plate flooring at areas where people will generally stand to operate different items of the steam generator unit.

d. Positioning of different items of steam generator unit should be such that load is evenly distributed on the truck and does not create any problem in operating the truck as already mentioned at para . 4.1(c) above.

e. A suitable all steel construction weatherproof housing is to be constructed on the platform. Vertical posts of the housing structure are to be welded to the peripheral channels of platform through horizontal members and/or underneath cross members of platform. Welding of posts directly to the peripheral channels/floor sheet or welding of the horizontal members to the floor sheet itself should be avoided.

The housing is to be constructed as per following specifications –

i. Structure – All welded MS structure made out of square tubing of adequate size (min 5.00 cm sides).

ii. Paneling – Aluminium internal and external paneling of thickness not less than 18 gauges.

iii. Height – Not more than 2200 mm from truck platform. Overall height of the complete MSG unit including chimney shall not be more than 3400 mm from ground.

iv. Width & length – As per size of the truck platform (to cover the complete platform).

v. Doors – 1 (One) full height 2 (two) panel door at rear of the housing (width approx. 600 mm less than the cabin width) at rear of the housing.

2 (two) full height 2 (two) panel doors of minimum 1500 mm width on either sides of the housing. Positioning of the side doors as per convenience/easy access.

All doors shall be provided with strong hinges and locking provisions from inside & outside.

vi. Windows – Minimum 4 (four) nos windows of size preferably not less than 1.50 m x 0.75 m on sides of the housing with lockable sliding toughen glasses and aluminium frame.

vii. Ventilation – For proper ventilation the housing shall be fitted with two nos of suitable exhaust fans on opposite walls.

viii. Insulations – Glass wool packing inside all walls and doors to protect personnel from heat.

ix. Waterproofing – Suitable sealant/gasket shall be used to arrest water leakage through panel joints etc.

x. Illumination – Adequate number of lights inside the housing for proper illumination. While at least one number light is to be connected to truck electrical system, power sources for the rest will be from the steam generator circuit.

In addition, two searchlights connected to truck's electrical system (switches inside the driver's cabin) shall be provided at rear top corners of the housing.

Painting – Two coats of primer followed by two coats of paints of following shades.

Exterior – Caterpillar Yellow or Golden yellow.

Interior – Light shade.

xi. Others fitments/accessories –

a. Adequate firefighting equipment (e.g. fire extinguishers) inside the housing with suitable

mounting arrangements at suitable locations.
b. Suitable foldable ladder/steps of sufficient width below each door.
c. 01 (one) no fixed type ladder at rear of the housing for climbing to housing's roof top.
d. Suitable walkway on top of housing's roof to avoid damage to roof structure/paneling.
e. Roof of the housing shall be made slanting towards sides to avoid water accumulation.
f. Suitable ventilations with fixed cover on roof (Jack-roof type) and with folding cover on wall near the engine for easy escape of hot air shall be provided. Additionally two numbers exhaust fans shall be provided inside the MSG cabin for proper ventilation.
5.1 A detailed drawing of the housing showing dimensions, construction, material descriptions, positions of doors & windows, ladders/steps & walkway, floodlights, switchboards, fire extinguishers, ventilations etc. is to be submitted along with the bid for scrutiny and acceptance.
6.0 SPARES:
a) COMMISSIONING SPARES: The supplier has to supply all the spare parts required for initial commissioning of the unit.
b) OPERATIONAL CRITICAL SPARES: Supplier shall supply the following operational critical spares along with the supply of the EACH UNIT:
i. 1 ½" Globe type valve – 2 nos.
ii. 1" global type valve – 3 nos.
iii. Fuel pump (Suntec/Danfoss) – 1 no.
iv. Water pump – 1 no.
v. 1 ½" non-return valve – 2 nos.
vi. Ignition transformer – 1 no.
vii. Spray nozzle – 1 no.
viii. Safety valve – 1 no.
ix. Steam coil – 1 no.
x. Blower – 1 no.
xi. Alternator – 1 no.
xii. Ignition Electrodes 3/8" – 1 no.
xiii. ½" Non return valve – 1 no.
xiv. 1" Flange type globe valve – 3 nos.
xv. 1" Check valve – 2 nos.
xvi. 1 ½" Flange check valve – 1 no.
xvii. 1 ½" Flange type Globe valve - 2 nos.
xviii. Contactors – 1 set.
xix. Overload relays – 1 set.
xx. Fuses – 1 set.
xxi. Lamps – 1 set.
xxii. A set of instrumentation spares comprising field switch/ instruments, solenoid valve, flame sensor, programmable controller & card, power supply etc.
a. All spares in specified quantity as indicated above shall be supplied along with each unit.
b. Specific description, part nos, Make etc. and Unit price of each and every item shall clearly be indicated in the bid.
c. Bidder shall also quote separately for any additional spares with similar details as felt necessary for 2 (two) years trouble free operation & maintenance. However, cost of the spares will not be considered for bid evaluation.
c) Recommended spares: The bidder is to furnish a list of spares & components that will be required for regular operation and maintenance, overhauling etc., throughout the life of the equipment complete with price of each item. Annual consumption of each spare should be furnished. The bidder should also provide detailed spare list of all the items including bought out items in the operation and maintenance manuals. The list should include a spare parts list along with OEM part numbers, make & model of the equipment and contract postal address of

OEM for all items of the whole unit. The price quoted for recommended spares will not be taken into account for bid evaluation.
d) The bidders must submit a written undertaking (along with the bid) that they would be able to supply all the requisite spares and consumables (including bought out items) for a minimum period of 10 (ten) years from the certified date of completion / successful field commissioning of the unit.
e) To provide Two (02) sets of tool box of reputed make.
7.0 DOCUMENTATION:
i) The following documents are to be submitted along with the bid:
a) Preliminary P & I diagram along with bill of equipment.
b) Instrumentation schematic diagram and interlock control circuit diagram.
c) General layout diagram showing dimensions of various components and the unit as a whole.
d) Details of weight/load distribution on the truck chassis.
e) Detailed calculation for sizing of all equipment.
f) Relevant technical catalogue/manuals of each component like water pump, fuel pump, blower, diesel engine, coil tube, alternator, burner system, instruments & control system etc. Detailed specification of each component should be provided.
g) Electrical control circuit diagram and layout diagram.
h) Test certificates including copy of CPRI test certificate for type test of the electrical panels.
i) Bill of materials for all equipment.
ii) The following documents are to be submitted by the successful bidder within 4 weeks from the receipt of the formal order for OIL's approval. Only after receiving approval from OIL, fabrication of the MSG unit shall start.
a) Detailed engineering drawing showing lay out of all equipment, load distribution, rear overhang, equipment mounting details, P&I drawing, electrical circuit diagram, panel wiring diagram, details (including make & model no) of all equipment along with quality assurance plan.
Note: During detailed designing of the unit special emphasis shall be given to the issue of ease of accessibility, servicing/maintenance and removability of individual equipment while maintaining a reasonable compactness of the unit as a whole.
b) Detailed calculation for sizing of all equipment.
c) Loop diagram and lop details.
d) PLC hardware and software.
e) Logic details of startup, sequence, interlock, safety shutdown, alarm, control & monitoring.
f) Ladder programs development for startup, sequence, interlock, safety shutdown, alarm, control & monitoring.
g) Emergency & Shutdown logic.
h) Power and control circuit diagrams of generator control panel, MCC and burner control system.
i) Details of cables, luminaries and other accessories.
iii) The following documents are to be submitted prior to dispatch of the equipment. The supplier is to note that only after scrutiny of the following documents and obtaining categorical approval, the equipment shall be dispatched from works:
a) 5 sets of bounded Operation and maintenance manual (additionally one copy in a CD) covering all the equipment including the truck unit. The manuals shall contain details like make, model, part number etc. of all installed equipment including bought out items with contact postal address of the supplier / OEM and a detailed spares list. However to reduce the size of the manual, the manual may be separated into following volumes
§ Manual for truck unit.
§ Manual for MSG unit with control panel and its related ancillaries like pumps, blowers etc. The manual shall contain the detailed P&I diagram, panel wiring diagram, electrical circuit

diagram etc.
§ Manual for alternators, Motors and related panels.
§ Operation & maintenance manual and illustrated spare parts catalogue for the prime mover (pilot engine).
§ Manual for Instrumentation and control system including recommended spare parts list.
However, one copy of the manual shall be provided as master copy containing all the details in the same volume.
b) Necessary certificate/documents from competent Government authority to obtain permission from IBR, Assam for operating the boiler in OIL's operational area.
c) Engine emission certificates for truck engine as well as MSG prime mover.
d) Temporary registration, Insurance, Road tax, Sale letter in Form 21 & 22 (in originals) etc. of the truck as applicable, in the name of M/s OIL INDIA LTD, Duliajan required under Indian MV Act for onward registration of the unit in Assam, India.
e) Test certificates including copy of CPRI test certificate for type of the electrical panels.
f) License copy of software for control & instrumentation system if any.

8.0 DEVIATIONS FROM THE SPECIFICATIONS:

The bidder shall enclose comprehensive list of intended deviations from the technical specifications, of any clearly highlighting the reasons thereof, along with the bid. If no deviations from the Technical specifications are intended, the same shall be confirmed in the offer. But OIL reserves the right for acceptance or rejection of the deviation.

9.0 BID SUBMISSION & DOCUMENTATIONS:

Bidder's response to all NIT stipulations should clearly be defined maintaining the same sequence as in the NIT. Bidder shall furnish specific details / specifications of all major components, systems with Make & Model etc. Submission of technical leaflet/catalogue alone is not sufficient.

General Response like – 'As per NIT specifications / Technical leaflet' 'Noted' etc, or in any similar fashion is not encouraged. Quoting only the NIT stipulation without any confirmation of acceptance of the same and/or without any confirmation of offering the same is also not acceptable.

10.0 INSPECTION CUM ACCEPTANCE

10.1 PRE DESPATCH INSPECTION: Inspection shall be carried out by OIL's representatives at the supplier's works in two (02) stages:

Stage 1

1st stage inspection shall be carried out during preparation of the skid for mounting the water tanks & preparation of the platform for the housing.

Stage 2

2nd stage inspection shall be carried out during final assembly of various components including complete control & instrumentation system. The supplier shall carry out change in assembly that may be desired by OIL Inspector. Further, OIL may depute its Inspector for trial run of the unit at the supplier's works prior to dispatch of the unit. The supplier shall inform at least thirty (30) days ahead for such inspection (prior to each stage) to enable OIL to send its inspector(s).

10.2 Pre shipment inspection shall be carried out by OIL (by representative of user as well as service dept viz. Electrical, Instrumentation, Transport Dept. Field Engineering etc.) at manufacturer's site. The supplier shall inform OIL at least thirty (30) days ahead for such inspection to enable OIL to send its inspectors. The supplier has to arrange for six (06) OIL engineers for inspection. OIL will bear the expenses towards traveling and accommodation etc. of the OIL's inspection team. The Inspection cum Acceptance process would include the following minimum steps/tasks but not limited to -

a. Physical verification/inspection of all the items/fittings/accessories including all Parts Catalogue, Maintenance & Service Manuals, Final Chassis Built Up/Vehicle Content Record

documents, etc. and actual loading on axles. The supplier shall arrange driver/operator, weighing facility and any other infrastructure during the process of inspection as and when required.
b. Operational testing of the carrier.
c. Supplier shall have to take note of any minor modification(s) for operational requirement suggested by the inspector and comply with the same at no extra cost to OIL.
d. The inspection report would be prepared at the end of the inspection and jointly signed by both the parties.
e. Supplier shall confirm in writing compliance of all the points raised in the inspection report as well as any other subsequent additions/changes, following deliberation with the inspector after arrival at Duliajan.
f. Supplier will affect despatch of the unit only on receipt of OIL's despatch advice.

10.3 THIRD PARTY INSPECTION
10.3.1 Third Party inspection of the units is to be carried out for all the component of the unit by OIL approved TPI agency (viz M/s Lloyds, M/s Bureau Veritas, M/s Tuboscope Vetco, M/s IRS, M/s Rites or M/s DNV only). Scope of 3rd party inspection:
i) Witness the manufacturing and assembly
ii) Witness the functional and performance tests
iii) Any other requirement of the inspection agency to satisfy of the equipment as per applicable standards.
10.3.2 Third Party Inspection (TPI) charges to be quoted separately.

11.0 COMMISSIONING:
11.1 The supplier shall depute their competent personnel for initial startup and commission the units at OIL's operating site within fifteen (15) days from the intimation of OIL. Any spares / components, if required at the time of commissioning the unit, shall have to be replaced/supplied free of charge by the supplier.
Installation / commissioning charges should be quoted separately which shall be considered for evaluation of the offers. While quoting Installation/commissioning, charges above, bidder should take into account all charges including to and fro fares, boarding/lodging, local transport at Duliajan, Assam and other expenses of supplier's personnel during their stay at Duliajan. OIL may provide accommodation on chargeable basis subject to availability. Bidder should confirm about providing all these services in their Bid. However, OIL reserves the right to provide such services at its own discretion.
11.2 There shall be at least 3 (three) successive uninterrupted field operations for each of the units for successful field trial.

12.0 TAX & DUTIES:
(i) All taxes, stamp duties and other levies imposed outside India shall be the responsibility of the Bidder/Seller and charges thereof shall be included in the offered rates.
(ii) All taxes & levies imposed in India, for the services including installation & commissioning, shall be to the Bidder/Seller's account.
(iii) Income tax on the value of the Services rendered by the Bidder /seller in connection with installation, commissioning, training etc shall be deducted at source from the invoices at the appropriate rate under the I.T Act & rules from time to time.

13.0 NOTES TO THE BIDDERS:
(a) The supplier shall provide a tool kit for operation and maintenance of prime mover, boiler & instrumental panel.
(b) 'OIL' logo will have to be marked prominently on both sides of the boiler house.

(c) The bidder has to mention the names of manufacturer of all items quoted. All the items offered shall be from manufacturers as mentioned in the NIT at the relevant places.
(d) The bidder shall do the packaging of the unit in such a manner that all the equipment are easily accessible and removable for regular operation & maintenance.
(e) The supplier shall obtain permission from the IBR, Assam for operating the boiler in OIL's operational area.
(f) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.
(g) Oil India Purchase order no must be engraved on the body of the item. Bidder must confirm the same categorically in their quotation.

SPECIAL TERMS AND CONDITION

14. CONFORMITY TO THE NIT SPECIFICATIONS:

a. The bidder must confirm that they are approved Boiler Manufacturer.
b. The bidder must confirm that the supplied Mobile steam Generators shall conform to the requirements as per State Boiler Authority, Assam
c. Bidder must fill the Technical check list/data sheet enclosed with the offer.
d. The bidder must confirm that the offered unit / goods shall be of recent manufacture.
e. The bids and the accompanied technical documentation must be in English language only. The bids with other than English language must have an English version.
f. The bidders must confirm that the offered MSG shall perform at the desired rate and parameters as mentioned in para 2.0 of Annexure - IA.
g. The bidders are to confirm categorically the commissioning clause as mentioned in Para 11.0 of Annexure – IA.
h. The bidders shall adhere to commitment of spares as per clause no 6.0 of Annexure - IA. Bidder must undertake that the provision for supplying spares (including bought out items) of the equipment will be continued for next ten (10) years from the certified date of completion/successful field commissioning of the unit.
i. The bidder has to confirm categorically that all electrical/instrumentation equipment to be supplied, if any, shall meet the relevant International/ National standards and the installation shall be carried out as per the relevant rules, regulations and practice.

The bidder shall furnish the experience towards execution of the item as per BRC criteria (2.1) in a tabular format as shown below:-

SL NO	Client/ Customer Name and Address	Order No/ Contract No	Date of Order	MSG Specification & Qty supplied	Date of supply	Supporting document enclosed

- This is a sample copy similar to FORM 21 of Indian Motor Vehicle Act only. The certificate to be issued by supplier shall contain following minimum information. -

---

SALE CERTIFICATE

Certified that ……. (brand name of the vehicle) has been delivered by us to …….……..…… on …… (date).

Name of the buyer ……..…..…….
Address …….

The details of the vehicles are as under -:

1. Class of vehicle ……..
2. Maker's name & address ……..
3. Chassis No. ……..
4. Engine No. ……..
5. Horse power or cubic capacity ……..
6. Fuel used ……..
7. Number of cylinders ……..
8. Month and year of manufacturing ……..
9. Seating capacity (including driver) ……..
10. Unladen weight ……..
11. Maximum axle weight, number and description of tyres –

(a) Front axle ……..
(b) Rear axle/axles ……..
(c) Any other axle ……..
12. Colour (s) of the body ……..
13. Gross vehicle weight ……..
14. Type of body ……..

Date: ……. Signature of the manufacturer / dealer

_____

- This is a sample copy similar to FORM 22(A) of Indian Motor Vehicle Act only. The certificate to be issued by supplier shall contain following minimum information. -

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CERTIFICATE OF COMPLIANCE WITH POLLUTION STANDARDS / SAFETY STANDARDS OF COMPONENTS AND ROAD WORTHINESS

Certified that …… (brand name of the vehicle) bearing Chassis number …… and Engine number …….. complies with the ……. (name of Emission Standard – Euro III, etc.) Emission standard as well as other Safety & Road Worthiness Standards as per provisions of the …….. (name of Motor Vehicles Act of country of origin).

It is also certified that body of the above vehicle has been fabricated by us and the same complies with the provisions of the …….. (name of Motor Vehicles Act of country of origin).

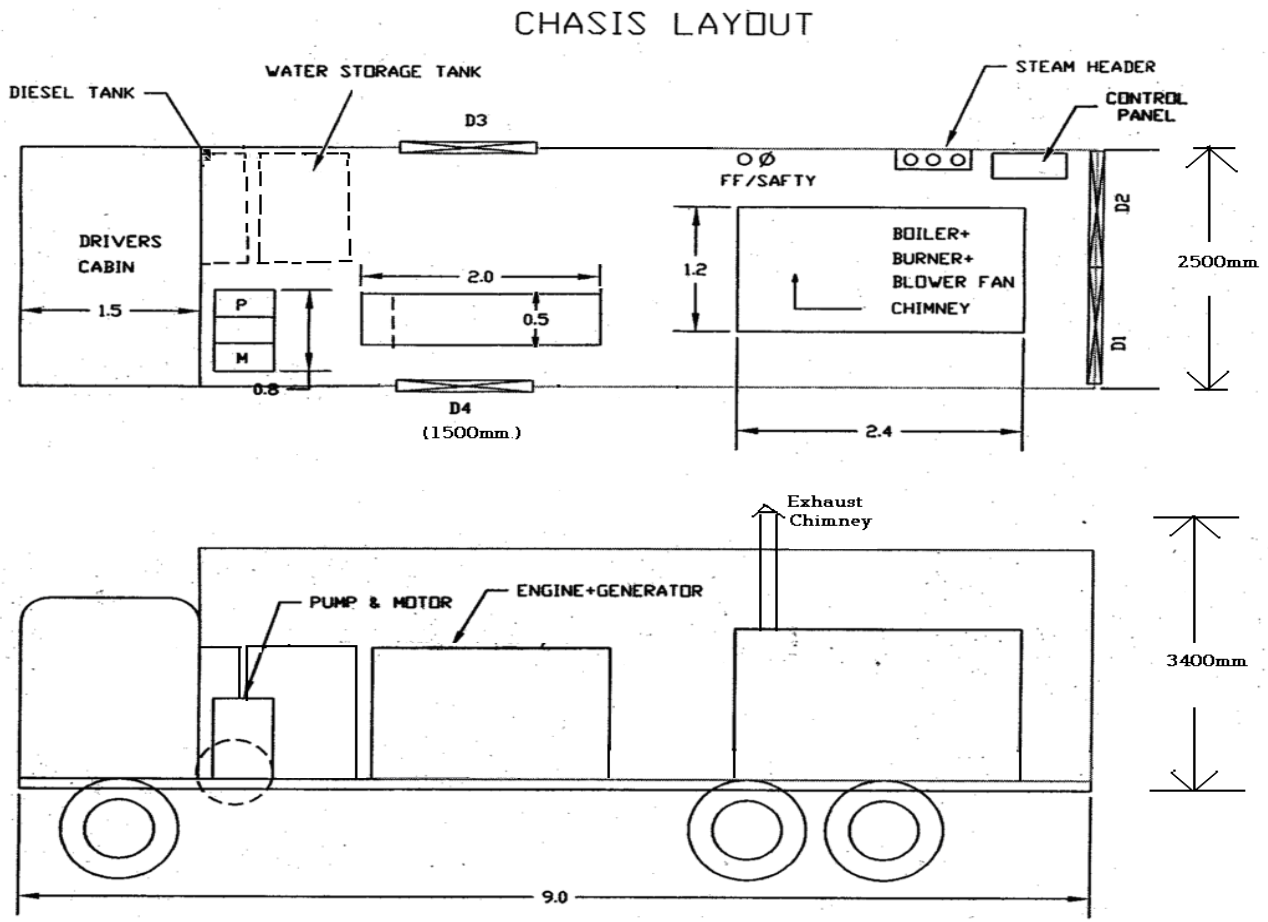
Signatures of Manufacturer / Body Builder

_____

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions of NIT.

ANNEXURE-II



SKETCH ONLY FOR REPRESENTATION PURPOSE-NOT TO SCALE

ANNEXURE – III

PRICE SCHEDULE OF MOBILE STEAM GENERATOR

(To be submitted as Notes & attachment only in Price Bid)

SL NO.	DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST	REMARKS
1	UNIT COST OF MSG (MOBILE STEAM GENERATOR)				
2	TPI				
3	PACKING				
4	EXCISE DUTY				
5	CST/VAT				
6	COST OF SPARES (As per clause no. 06 (b) spares to be supplied along with each unit & unit price of each spares to be mentioned)				
7	SALES TAX ON SPARES				
8	FREIGHT				
9	INSURANCE				
10	INSTALLATION & COMMISIONING				
11	SERVICE TAX				
12	ANY ITEM WHICH MAY BE REQUIRED FOR SUCCESSFUL COMPLETION OF THE JOB				
13	COST OF SPARES (FOR TWO YEAR TROUBLE FREE OPERATION WITH DETAILS) AS MENTIONED IN ANNEXURE – IA (clause No. 06 (c) (Unit price of each spares to be mentioned)				
14	COST OF SPARES (FOR REST OF THE LIFE) AS MENTIONED IN ANEXXURE – IA – clause no. 06 (d) (Unit price of each spares to be mentioned)				

Annexure- DDD

INTEGRITY PACT

Between

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

And

(Name of the bidder).....hereinafter referred to as "The Bidder/Contractor"

Preamble :

The Principal intends to award, under laid down organizational procedures, contract/s for Tender No. **SDI5585P15.** 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 Page 2 of 6 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 h e/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 risibility 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.

1. 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 form 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 intensions.

R BARMAN
SR MANAGER MATERIALS (IP) ----------

For the Principal For the Bidder/Contractor

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

Date 05.12.2014 . Witness 2 : .....

Bidders Response Sheet **Annexure-FFF**

Tender No.	
Bidders Name	

Sl No.	Description	Remarks
1	Name of Bidder	
2	Whether tender document purchased from OIL's offices.	
3	Place of Despatch	
4	Whether Freight charges have been included in your quoted prices	
5	Whether Insurance charges have been included in your quoted prices	
6	Make of quoted Product	
7	Offered Validity of Bid as per NIT	
8	Delivery Period in weeks from placement of order	
9	Complied to Standard Payment Terms of OIL or not.	
10	Bid Security Submitted (if applicable)	
11	Details of Bid Security Submitted to OIL (if applicable)	
	a) Bid Security Amount (In Rs):	
	b) Bid Security Valid upto:	
	c) Name and Full Address of Issuing Bank:	
12	Confirm that the Bid Security submitted (In case of Bank Guarantee) is in toto as per format provided in the tender.	
13	Bid Security if Not submitted reasons thereof	
14	Whether you shall submit Performance Security in the event of placement of order on you (if applicable)	
15	Integrity Pact Submitted (if applicable)	
16	Confirm that the Integrity Pact submitted is in toto as per format provided in the tender.	
17	Whether submitted documents in support of General Qualification criteria of NIT	
18	If bidder is Small scale unit whether you have quoted your own product	
19	If bidder is Small scale unit whether you are eligible for purchase preference (as per Govt guideliness)	
20	Whether filled up the bank details for online payment as per Annexure GGG	

NOTE: Please fill up the greyed cells only.

Technical Bid Checklist **Annexure-EEE**

Tender No.	
Bidder's Name :	

		Compliance by Bidder	
SL. NO.	**BEC / TENDER REQUIREMENTS**	Indicate 'Confirmed' / 'Not Confirmed' / Not applicable	Indicate Corresponding page ref. of unpriced bid or Comments
1	**Bidder to confirm that he has not taken any exception/deviations to the bid document .**		
2	**Confirm that the product offered strictly conform to the technical specifications.**		
3	**Confirm that the Offer has been made with Bid Bond / Bank Guarantee / Earnest Money along with the offer (Wherever Applicable) ?**		
4	**Confirm unconditional validity of the bid for 120 days from the date of opening of techno-commercial bid.**		
5	**Confirm that the prices offered are firm and / or without any qualifications?**		
6	**Confirm that all relevant fields in the on-line biding format been filled in by the bidders for the items quoted by them.**		
7	**Confirm that the the price bid is in conformity with OIL's online bidding format ?**		
8	**Confirm that the Bid comply with all the terms & conditions ?**		
9	**Confirm that the offers and all attached documents are digitally signed using digital signatures issued by an acceptable Certifying Authority (CA) as per Indian IT Act 2000.**		
10	**CONFIRM THAT YOU HAVE SUBMITTED THE DULY SIGNED INTEGRITY PACT DOCUMENT (Wherever Applicable)**		
11	**CONFIRM THAT YOU HAVE SHALL SUBMIT PERFORMANCE BANK GUARANTEE AS PER NIT IN THE EVENT OF PLACEMENT OF ORDER ON YOU (Wherever Applicable)**		
12	**CONFIRM THAT YOU HAVE SUBMITTED DOCUMENTS AS PER GENERAL QUALIFICATION CRITERIA**		

NOTE: Please fill up the greyed cells only.

ANNEXURE - GGG

(TO BE FILLED UP BY ALL THE VENDOR IN THEIR OWN LETER HEAD)
(ALL FIELDS ARE MANDATORY)

Tender No.	**:……**
Name of Beneficiary	**:M/s……**
Vendor Code	**:……...**
Address	**:..…….**
	..……..
Phone No. (Land Line)	**:..…….**
Mobile No.	**:..…….**
E-mail address	**:..…….**
Bank Account No. (Minimum	
Eleven Digit No.)	**:..…….**
Bank Name	**:..…….**
Branch	**:..…….**
Complete Address of your	**:..…….**
Bank	**:..…….**
IFSC Code of your Bank	
a) RTGS	**:……...**
b) NEFT	**:……...**
PAN	**:……...**
VAT Registration No.	**:……...**
CST Registration No.	**:……...**
Service Tax Registration No.	**:……...**
Provident Fund Registration	**:……...**

I/We confirm and agree that all payments due to me/us from Oil India Limited can be remitted to our above mentioned account directly and we shall not hold Oil India Limited responsible if the amount due from Oil India Limited is remitted to wrong account due to incorrect details furnished by us.

……
Office Seal **Signature of Vendor**

Counter Signed by Banker:
Seal of Bank:

Enclosure: Self attested photocopies of the following documents-

1) **PAN Card**
2) **VAT Registration Certificate**
3) **Service Tax Registration**
4) **CST Registration**
5) **Provident Registration Certificate**
6) **Cancelled cheque of the bank account mentioned above (in original).**
7) **Bank Statement not older than 15 days on the date of submission.**