

ADDENDUM-I TO TENDER

To,

SUB: **ADDENDUM-I TO TENDER DOCUMENT FOR 'METERING SKID FOR SRI RAM FERTILIZER - KOTA & CHECK METERING AT VIJAI PUR ' FOR NATURAL GAS PIPELINE PROJECTS OF M/ S GAIL.**
Tender No.: 05/ 51/ 23KF (SRI RAM - VIJAI PUR)/ GAIL/ 030A dated 19.05.2008

Dear Sir,

With reference to above, please note the following amendment(s) in this tender document as stated at this Addendum – I shall be read as flows: -

1) Section – IV (SCC), Clause no. 2 (Delivery Period) shall be read as flows :-

Shall be read as follows: -

Design, Engineering, Manufacturing, Inspection, Testing, Supply, assistance in Installation and Commissioning of Metering Skids consisting of filtration, pressure reduction, flow measurement through Turbine/Ultrasonic Meter along with necessary valves, piping, instruments & fittings

Turbine Meter With Control room mounted flow computer. (FOR KOTA)

UFM with Control room mounted flow computer. (FOR VIJAI PUR)

- 28 weeks (FOT Site) from FOI for Indian Bidders.
- 26 weeks (FOB) from FOI for Foreign Bidders.

2) Section – III (GCC), Clause No. 38 (Fall Clause) & 40 (Repeat Order) – Stand Deleted.

3) Section – III (GCC), Format – F-11, Small/ Micro/ Medium Enterprises : Enclosed as Annexure – I to this Addendum

4) Section – III (GCC), Format – F-10 (Integrity Pact) & Clause 46.0 Section – II (ITB) : Revised Integrity Pact is enclosed as Annexure – II to this Addendum for kind reference. The earlier Integrity Pact enclosed in the tender document shall be superseded by present one.

5) Section – II (ITB): Following clause shall supplement the ITB
Cenvat Credit

Bidders shall provide required documents for availing Cenvat Credit applicable on Excise duty and Service Tax. The value indicated against the same by the bidder in their price bid shall be

considered by Owner for availing Cenvat Credit. In case bidder fails to provide the required documents in support of Cenvat Credit, the equivalent amount unsupported value shall be deducted from due payment of bidder.

- 6) **Section – IX Vol. – II of II (Price Schedule)** – Revised SOR is enclosed as Annexure – III to this Addendum – I. Prices must be filled in the revised Schedule of Rate.

Bidder may please note following additional items also need to be considered while preparing your offer and making your price bid.

- 6.1 For SFCL Kota metering skid, an online gas chromatograph is required to be considered in scope of supply of metering skid and for the same Technical Specification and revised P&ID diagram are enclosed as Annexure - VII & VIII.
- 7) Guideline for submission of offer on e-tender of GAIL enclosed as Annexure – IV to this Addendum.
- 8) **Section – III (GCC), Format – F-12, Performance Evaluation** : Format is enclosed as Annexure –V to this Addendum.
- 9) Reply to queries raised during pre-bid enclosed as Annexure –VI to this Addendum.
- 10) **Section – II (ITB), Clause No. 12 -Bid Prices** : This clause in the tender gets superseded and shall be read as follows: -

For Indian Bidder:

- i) Indian Bidder shall indicate the following separately (as per Price Schedule).
- a. Ex-works price including packing and forwarding charges (such price to include all costs as well as duties and taxes paid or payable on components and raw materials incorporated or to be incorporated in the goods)
 - b. Excise Duty & Sales Tax (rates)/VAT which will be payable on the finished goods, if this contract is awarded.
 - c. The bidders shall indicate breakup of the quantum of imports involved for import of necessary raw materials and components giving CIF value of Import in applicable currency considered and included in bid price Essentiality certificate may be provided by the Purchaser for Project imports, wherever applicable.
 - d. The statutory variation in Excise duty & Sales Tax/LST/VAT on finished goods as stated above within the contractual delivery period shall be to GAIL's account. However, any increase in the rate of these taxes and duties beyond the contractual completion period shall be to bidder's account and any decrease in rate shall be passed on to GAIL. Further, any statutory variation in the rate of customs duty (except CVD) within contractual delivery period, on-the actual CIF value of import content, but subject to maximum of such duty payable on quoted CIF value, under Cl. i) a) of this Addendum – I shall also be to GAIL's account. In case of delay in delivery, any increase in the rate of customs duty beyond the contractual completion period shall be to bidder's account and any decrease in rate shall be passed on to GAIL.

- ii) Inland transportation, other local costs incidental to delivery of the goods to its final destination (FOT-site) shall be quoted by the Bidder. However, transit Insurance shall be arranged by Purchaser.
- iii) Foreign Bidders shall submit prices separately for the following-(as per Price Schedule - Section VII).
 - a) FOB port of shipment inclusive of all taxes, duties and storage charges upto FOB port of Shipment basis.
 - b) CFR port of discharge (INDIA).
 - c) CIF Port of Discharge (INDIA).

Note: Marine transportation, other local costs incidental to delivery of the goods at Mumbai Port shall be quoted by the Bidder. However, transit insurance shall be arranged by Purchaser.

- iv) The bidder's break-up of price components in accordance with above sub-clauses will be solely for the purpose of facilitating the comparison. of bids and will not in any way, limit the PURCHASER's right to contract on different terms.
- v) Fixed Price: Prices quoted by the bidder shall be firm and fixed during the bidder's performance of the contract and not subject to variation on any account except for variations permitted under i) d) of this Addendum – I for domestic bidders. A bid submitted with an adjustable price quotation will be treated as non responsive and rejected.
- vi) The delivery terms shall be interpreted as per INCOTERMS 2000.
- vii) The price quoted for supervision of installation & commissioning should be quoted inclusive of all taxes & duties, levies etc. but excluding service tax. Service tax shall be paid/ reimbursed by GAIL at actual on submission of Cenvatable invoice.

11) **Section – II (ITB), Clause No. 34 – Evaluation and Comparison of Bid** : Following clause shall supplement the Clause No. 34 of ITB:-

- i) Clause no. 34.2 after 1st para shall be read as follows :-

34.2.1 Where Indigenous & foreign bids exist :-

- a) Domestic Bidder:-

The evaluated price of domestic bidders shall include the following: -

- i) Ex-works price quoted by the bidder (including packing, forwarding, taxes and duties including customs duties, if any, on components and raw materials but excluding Inland Transportation to PURCHASER'S site).
- ii) Excise duty on the finished goods.
- iii) VAT / Sales Tax on the finished goods (Without any Concessional form)
- iv) Supervision charges quoted by the bidders for installation & commissioning as per SOR.
- v) Less Cenvatable Excise duty including Education cess as specified by the bidder.

b) Foreign Bidder

The evaluated price of foreign bidders shall include the following:

- i) CFR price quoted by the bidder.
- ii) Marine insurance @ 1% of FOB price
- iii) Landing charges @ 1% on CIF value
- iv) Prevailing merit rate of customs duty on (CIF value + landing Charges) as on the due date of submission of bid.
- v) Supervision charges quoted by the bidders for installation & commissioning as per SOR.
- vi) Less Cenvatable CVD including Education cess

34.2.2 Where only Foreign bids exist:-

The evaluated price of foreign bidders shall include the following

- i) CFR price quoted by the bidder.
- ii) Marine insurance @ 1% of FOB price
- iii) Landing charges @ 1% on CIF value
- iv) Prevailing merit rate of customs duty on (CIF value + landing Charges) as on the due date of submission of bid.
- v) Supervision charges quoted by the bidders for installation & commissioning as per SOR.
- vi) Less Cenvatable CVD including Education cess

34.2.3 Where only Indigenous bids exist:-

The evaluated price of foreign bidders shall include the following

- i) Ex-works price quoted by the bidder (including packing, forwarding, taxes and duties including customs duties, if any, on components and raw materials.
- ii) Excise duty on the finished goods.
- iii) VAT / Sales Tax on the finished goods (Without any Concessional form)
- iv) Freight up to site quoted by the bidder.
- v) Supervision charges quoted by the bidders for installation & commissioning as per SOR.
- vi) Less Cenvatable Excise duty including Education cess as specified by the bidder.

34.2.4 To enable the owner to avail Cenvat Credit the supplier shall furnish to owner all certificates and documents including Cenvatable invoice as may be required by the Owner to avail the Cenvat Credit with respect to excise duty as mentioned by the bidder in their bids. In case the certificate/ documents are not provided for aforesaid amount of Excise Duty & Service Tax, the short fall amount will be recovered from supplier's bill.

34.4 Bids shall be evaluated item wise for Foreign and Domestic bidder considering the total evaluated price of Item 1 & Item 2 of respective SOR of the bidder to arrive at L-1 price of each item. Cumulative total of item no. 1.1 to 1.3 for item no. 1 & 2.1 to 2.3 for item no. 2 shall be considered.

The above is issued as Addendum – I and shall form integral part of tender document.

All other terms and conditions including bid due date of the tender document shall remain unaltered.

Please submit alongwith your offer this Addendum-I to the tender document duly signed and stamped as a token of your acceptance of the terms and conditions stated hereinabove.

Thanking you,

Yours faithfully,
For & on behalf of
GAIL (India) Limited
(by its constituted attorney)

Encl. : As above

(A.K. Sharma)
DGM I/c (Contracts)
MECON Limited

Annexure – I to Addendum – I

**Enterprise's Information with respect to the Micro, Small
and Medium Enterprises Development Act, 2006**

Annexure – I to Addendum – I

Format F – 11

Enterprise's Information with respect to the Micro, Small and Medium Enterprises Development Act, 2006.

To,
M/s GAIL (India) Limited
New Delhi

Dear sir's

We here by confirm that we are a micro / small/ medium enterprise under the MSMED Act 2006." (*Please strike off whichever status Is not applicable*)

We are a supplier within the definition of section 2(n) of the MSMED Act _____(Yes/No)."

If the response to the above is 'yes", please provide us a copy of the **Entrepreneurs Memorandum (EM)** filed with the authority specified by the respective State Government.

Please note that if you do not provide the above confirmation, we will presume that you do not qualify as a micro or small enterprise under the MSMED Act 2006.

NAME & SIGNATURE OF AUTHORISED PERSON OF THE BIDDER

Note

1. With respect to micro and small enterprises, the MSMED Act defines the term 'supplier' as an enterprise which has filed memorandum with the authority specified by the respective State Government
2. If you are a micro / small enterprise and have **filed** a memorandum with the specified authority, please confirm the same as above.

Annexure – II to Addendum – I

I N T E G R I T Y P A C T

INTEGRITY PACT

Bidder is required to sign the Integrity Pact with GAIL as per format & terms conditions enclosed with tender. In case a bidder does not sign the integrity Pact, his bid shall be liable for rejection.

COMMITMENTS AND OBLIGATIONS OF THE “COUNTERPARTY”

- a) The Counterparty, directly or indirectly (through agent, consultant, advisor, etc.), shall not pay any bribe / influence or give undue / unlawful benefit to anyone to gain undue advantage in dealing with GAIL.
- b) The Counterparty will not engage in collusion of any kind including price fixation etc. with other Counterparts.
- c) The counterparty will not pass GAIL's confidential information to any third party unless specifically authorized by GAIL in writing.
- d) The Counterparties shall promote and observe best ethical practices within their respective organizations.
- e) The Counterparty shall inform the Independent External Monitor.
- f) If it received any demand, directly or indirectly, for a bribe/ favour or any illegal gratification / payment / benefit;
- g) If it comes to know of any unethical or illegal payment/benefit;
- h) If it makes any payment to any GAIL associate.
- i) The Counterparty shall not make any false or misleading allegations against GAIL or its associates.

VIOLATIONS & CONSEQUENCES:

- a) If a Counterparty commits a violation of its Commitments and Obligations under the Integrity Pact Programme during bidding process, their entire Earnest Money Deposit / Bid Security, would be forfeited and in addition, they may be blacklisted from the GAIL business in future.
- b) In case of violation of the Integrity pact by Counterparty after award of the Contract, GAIL shall be entitled to terminate the Contract. GAIL would forfeit the security deposits, encash the bank guarantee(s) and other payments payable to Counterparty in such cases.
- c) Subject to satisfaction of the Independent External Monitor, GAIL may ban / blacklist / put on holiday and exclude the Counterparty from future dealings until GAIL is satisfied that the Counterparty shall not commit any such violation in future.
- d) In addition to above, GAIL reserves its right to initiate criminal proceedings against the violating Counterparty, if the allegations by Counterparty are found frivolous, untrue and misleading and may also impose exemplary cost for the same.
- e) The Counterparty will be entitled to claim as determined by the Independent External Monitor, if the above (d) is found incorrect.

INDEPENDENT EXTERNAL MONITORS (IEMS)

The following three Independent External Monitors (IEMs) have been appointed by GAIL, in terms of Integrity Pact (IP) which forms part of GAIL Tenders/ Contract.

- i) Dr. A.K. Kundra,
- ii) Shri S.C. Tripathi
- iii) Shri U. Sundararajan

This panel is authorized to examine / consider all references made to it under this tender. The bidder (s), in case of any dispute (s) / complaint (s) pertaining to this tender may raise the issue either with designated Tender Issuing Officer in GAIL or directly, with the IEMs on the panel c/o Chief Vigilance Officer, GAIL (India) Limited, GAIL Bhawan, 16, Bhikaiji Cama Place, R.K. Puram, New Delhi – 110066.

INTEGRITY PACT

(To be executed on plain paper and applicable to all tenders of the value of Rs. one crore and above)

Between GAIL (India) Limited, a Government of India Public Sector, (here-in-after referred to as "Principal ").

AND

..... (here-in-after referred to as "The Bidder/Contractor").

(Principal and the Bidder/Contractor are here-in-after are referred to individually as "Party" or collectively as "Parties").

PREAMBLE

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

In order to achieve these goals, the Principal co-operates with the renowned International Non-Governmental Organization 'Transparency International' (TI). Following TI's national and international experience, the Principal will appoint an Independent External Monitor who will monitor the tender process, the execution of the contract etc. 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 in this regard:-
 - i) No employee of the Principal, either in person or through family members, including relatives, will in connection with the tender for or the execution of a contract, demand or accept a promise for or accept for him/herself or for a third person, any material or immaterial benefit to which he/she is not legally entitled.
 - ii) The Principal shall, during the tender process treat all Bidders with equity. The Principal undertakes and ensures that before and during the tender process shall provide and share 'the same information to all Bidders and will not provide to any Bidder confidential/additional information through which one particular Bidder could take an advantage in relation to the tender process or the contract execution.
 - iii) 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 Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments and Undertakings by the Bidder/Contractor

1. The Bidder / Contractor commit and undertakes to take all measures necessary to prevent malpractices & corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution:
 - i) The Bidder / Contractor undertakes not to, directly or through any other person or firm offer, promise or give or influence to any employee of the Principal associated with the tender process or the execution of the contract or to any other person on their behalf any material or immaterial benefit to which he / she is not legally entitled in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - ii) The Bidder / Contractor undertakes not to enter into any undisclosed agreement or understanding, whether formal or informal with other Bidders. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelisation in the bidding process.
 - iii) The Bidder / Contractor undertakes not to commit any offence under the relevant Anti-corruption Laws of India. Further, the Bidder / Contractor will not use improperly 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 for the purposes of competition or personal gain and will not pass the information so acquired on to others.

- iv) The Bidder / Contractor will, when presenting his bid undertakes to disclose any and all payments 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 and allure third persons / parties 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 the award of contract, has committed a transgression through a violation of any provisions of Section 2 or in any other form so as to put his reliability or credibility as Bidder into question, the Principal shall be entitled to disqualify, put on holiday or blacklist the Bidder including from the future tender process or to terminate the contract, if already signed, on that ground.

- 1. If the Bidder / Contractor has committed a transgression through a violation of any provisions of Section 2 so as to put his reliability or credibility into question, the Principal shall be entitled to exclude including blacklist and put on holiday the Bidder / Contractor from entering into any GAIL future contract tender processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Principal taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion may be imposed for a minimum period of 6 months and maximum of three years.
- 2. A transgression is considered to have occurred if the Principal after due consideration of the available evidence, concludes that no reasonable doubt is possible.
- 3. The Bidder with its free consent and without any influence agrees and undertakes to respect and uphold the Principal's absolute rights 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.
- 4. Subject to the full satisfaction of the Principal, the exclusion of the Bidder / Contractor could be revoked - by Principal prematurely if the bidder / contractor can prove that he has restored / recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Section 4 - Forfeiture of EMD / Security Deposits

- 1. If the Principal has disqualified the Bidder from the tender process prior to the award in terms of Section 3, and during the execution of the contract, the Principal shall forfeit earnest money deposit / bid security money, encash the bank guarantee including due payments in addition to blacklisting or putting on holiday the bidder and terminating the contract.
- 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 Earnest Money Deposit / Security Deposit / Performance Bank Guarantee.
- 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 of 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 swears on oath that no previous transgression has occurred during the last three years with any other Company in any country conforming to the TI approach or including with any other Public Sector Enterprise /

Undertaking in India that could justify his exclusion from the tender process.

2. If the Bidder makes incorrect statement on this subject, he shall be disqualified from the tender process or the contract, if already awarded, could be liable to be terminated on this ground.

Section 6 - Equal treatment to all Bidders / Contractors / Subcontractors

1. The Bidder / Contractor undertakes to demand from all its sub-contractors, if any, an undertaking and commitment in conformity with this Integrity Pact, and to submit it to the Principal before signing of the contract.
2. The Principal will enter into agreements with similar conditions, as stipulated herein, with all Bidders, Contractors and Subcontractors.
3. The Principal shall disqualify from the tender process all Bidders who do not sign this Pact or violate any of its provisions.

Section 7 - Criminal charges against violating Bidders / Contractors / Sub-contractors

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 / Department for initiating appropriate action for above.

Section 8 -Independent External 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 any 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 Sub-contractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder / Contractor / Sub-contractor 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. However, the Independent External Monitor shall give an opportunity to the bidder / contractor to present its case before making its recommendations to the Principal.
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 taking corrective measures.
7. Monitor shall be entitled to compensation by the Principal on the same terms & conditions as being extended to/provided to Outside Expert Committee Members of ONGC.
8. 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.

9. The word 'Monitor' would include both singular and plural.
10. Independent External Monitor shall be required to maintain confidentiality of the information acquired and gathered during their tenure / role as Independent Monitor. Any breach in this regard would be subject to the legal judicial system of India.
11. The Independent External Monitors - shall be responsible to oversee the implementation of Integrity Pact Program to prevent corruption, bribes or any other unethical practices in the GAIL. However, Monitor(s) shall be personally and severally be liable for any action or suit brought by Bidder / Contractor / against the Monitor, in case the findings of Independent Monitor is / are found incorrect or biased or prejudiced.
12. Independent External Monitor(s) shall be required to furnish an Undertaking and shall disclose before taking any assignment that he / she has no interest in the matter or connected with the party (bidder / contractor) in any manner.

Section 9 - Pact Duration

The provisions of this Pact shall come into effect from the date of signing of this Pact by the both parties. 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 by either party 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 the Chairperson of the Principal.

Section 10 - Miscellaneous 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. The Arbitration clause provided in main tender document / contract shall not be applicable for any issue / dispute arising under Integrity Pact.
2. Changes and supplements as well as termination notices, if any, need to be made in writing. Side Agreements have not been made.
3. If the Contractor / Bidder is a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.
4. In case any or several of the provisions of this agreement turn out to be void, the remainder of this pact shall remain valid. The parties to this pact however, shall strive to come to an agreement to their original intentions in such a case.

(Name & Designation)
For the Principal

(Name & Designation)
For the Bidder/Contractor

Place : _____

Witness-1 : _____

Date : _____

Witness-2 : _____

Annexure – III to Addendum – I

SCHEDULE OF RATES

Annexure – III to Addendum – I

PREAMBLE TO PRICE SCHEDULE/ SCHEDULE OF RATES (SOR)

- 1) The quoted rates for man days for installation & commissioning shall be valid for 24 months from the date of FOI. The quoted rates shall be inclusive of all cost towards to & fro air fare, inland movement, boarding/ lodging, taxes & duties levies etc. but excluding service tax. Service tax shall be paid/ reimbursed by GAIL at actual on receipt of cenvatable invoice.
- 2) Evaluation shall be made item wise. Cumulative total of item no. 1.1 to 1.3 for item no. 1 and 2.1 to 2.3 for item no. 2 shall be considered and shall be carried out in accordance with point no. 11 of this Addendum – I.
- 3) Form – C or any concessional form shall not be issued by GAIL.
- 4) Owner reserves the right to place order on foreign bidders on CIF/CFR price quoted. In case of award on foreign bidder, initially the PO (Purchase Order) shall be placed on FOB basis and GAIL reserve the right to convert the same to CFR/CIF basis within 45 days from placement of order. Therefore CFR/CIF price should be valid for additional 45 days from the date of PO.
- 5) The SOR (price blanked out) indicating items quoted must be submitted with un-priced bid.
- 6) To enable the owner to avail Cenvat Credit, the supplier shall furnish to owner all certificates and documents including Cenvatable invoice as may be required by the Owner to avail the CENVAT credit with respect to excise duty as mentioned by the bidder in their bids. In case the certificate/ documents are not provided for aforesaid amount of excise duty & service tax, the short fall amount will be recovered from the supplier's bill.

PRICE SCHEDULE (for Foreign Bidder)
(To be submitted along with Schedule of Rates / Price Schedule)

NAME OF BIDDER :

METERING SKID FOR SRI RAM KOTA & CHECK METERING FOR VIJAI PUR

BID DOC NO. : 05/ 51/ 23KF(SRI RAM -VIJAI PUR)/ GAIL/ 030A

| Item | Description | Unit | Qty. (Nos.) | Currency | Unit Price | | | Total Price | | | Estimated Shipping Weight & Volume of the Item |
|------------|---|---------------------------|----------------|----------|--|---|------------------------------|---|---------------------|----------------------|--|
| | | | | | FOB Port of Loading (Specify Port) | CFR Port of Entry Mumbai | CI F Port of Entry Mumbai | FOB Port of Loading (Specify Port) (3x5) | CFR Mumbai (3x6) | CI F Mumbai (3x7) | |
| (1) | (2) | | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1.0 | Design, Engineering, Manufacturing, Testing, Inspection, Packaging, Forwarding, Transportation, Insurance, Mandatory & commissioning spares and Supply of Metering skid along with all accessories, Consumables and Commissioning Spares including Assistance in Configuration, Interfacing, Integrated Testing & Commissioning as per Job specifications and Special Instructions enclosed | | | | | | | | | | |
| 1.1 | Metering Skid for Sri Ram Fertilizer Kota with On line gas chromatograph as per MECON spec. (Refer P&Id No. MEC/23KF(sri ram-kota)/05/62/00/MS/1003 Rev 2) | No. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| 1.2 | Mandatory Spares | | | | | | | | | | |
| A) | Cartridge Filter Element | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| B) | O – Ring For Filter End Closure | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| C) | PCV Diaphragm | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| D) | PCV Pilot Diaphragm | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| E) | Lubricant cartridge for plug valves | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| F) | All type of Studs For One Complete Skid | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| G) | Vane pack for filter separator | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| H) | O – Ring for Filter separator | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| I) | All types of Filters/Filter Elements for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| J) | Repair Kit for GC Valve, Sample Probe etc. for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| K) | Moisture Trap for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| | Total for 1.0 (1.1 & 1.2) | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Sl. No. | Description | Unit | Qty. (Nos.) | Currency | Unit Rate | Total amount including all taxes and duties excluding service tax | | | | | |
| 1.3 | Assistance during commissioning of skids at site with GC (Sri Ram Fertilizer Kota).The price shall be inclusive of Airfare, Boarding, Lodging, Local Transport, Incidental, Traveling etc. and all other expenses. The quoted price shall also include all taxes, duties & levies etc but excluding service tax | DM rate per man day | 15 | | | 0.00 | | | | | |
| | Total for 1.0 (Supply on FOB & Assistance) | | | | | 0.00 | | | | | |

PRICE SCHEDULE (for Foreign Bidder)
(To be submitted along with Schedule of Rates / Price Schedule)

| Item | Description | Unit | Qty. (Nos.) | Currency | Unit Price | | | Total Price | | | Estimated Shipping Weight & Volume of the Item |
|------------|---|---------------------------|----------------|----------|--|---|------------------------------|---|---------------------|----------------------|--|
| | | | | | FOB Port of Loading (Specify Port) | CFR Port of Entry Mumbai | CI F Port of Entry Mumbai | FOB Port of Loading (Specify Port) (3x5) | CFR Mumbai (3x6) | CI F Mumbai (3x7) | |
| (1) | (2) | | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 2.0 | Design, Engineering, Manufacturing, Testing, Inspection, Packaging, Forwarding, Transportation, Insurance, Mandatory & commissioning spares and Supply of Metering skid along with all accessories, Consumables and Commissioning Spares including Assistance in Configuration, Interfacing, Integrated Testing & Commissioning as per Job specifications and Special Instructions enclosed | | | | | | | | | | |
| 2.1 | Check Metering Skid for Vijaipur (Refer P&Id No. MEC/23KF(Vijaipur)/05/62/00/MS/1005 Rev 1) | No. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| 2.2 | Mandatory Spares | | | | | | | | | | |
| A) | PCV Diaphragm | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| B) | PCV Pilot Diaphragm | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| C) | All type of Studs For One Complete Skid | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| D) | All type of Gaskets For One Complete Skid | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | |
| | Total for 2.0 (2.1 & 2.2) | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Sl. No. | Description | Unit | Qty. (Nos.) | Currency | Unit Rate | Total amount including all taxes and duties excluding service tax | | | | | |
| 2.3 | Assistance during commissioning of skids at site with GC (Sri Ram Fertilizer Kota). The price shall be inclusive of Airfare, Boarding, Lodging, Local Transport, Incidental, Traveling etc. and all other expenses. The quoted price shall also include all taxes, duties & levies etc but excluding service tax | DM rate per man day | 10 | | | 0.00 | | | | | |
| | Total for 2.0 (Supply on FOB & Assistance) | | | | | 0.00 | | | | | |
| | Grand Total for 1.0 & 2.0 (Supply on FOB & Assistance) | | | | | 0.00 | | | | | |

Note :

- 1) The metering skid supplier shall assist during commissioning of skids at various sites. For this purpose the Bidders shall indicate Lumpsum separate price for each skid at Sl No. 1.3 & 2.3 above. Maximum Mandays to be considered per site has been indicated against the same and the same will be considered for evaluation and order placement purpose.
- 2) Evaluation shall be done ITEM-WISE for Item Nos. 1 & 2 separately. For evaluation, Item Nos. 1.1 to 1.3 for item No. 1.0 and Item Nos. 2.1 to 2.3 for Item No. 2.0 shall be considered.
- 3) Foreign bidders may note that they can quote for providing Services for Assistance during Commissioning i.e. item no. 1.3 & 2.3 and get paid in Indian Rupees
- 4) Foreign bidders to note that any tax & duty that becomes payable in their home country on account of service rendered in lieu of item no. 1.3 & 2.3 i.e. Assistance during commissioning shall be paid & borne by themselves.
- 5) The quoted rates for man days for supervision of installation & commissioning shall be valid for 14 months from the date of FOI
- 6) Service Tax shall be paid extra at actual.

PRICE SCHEDULE (for Indian Bidder)
(To be submitted along with Schedule of Rates / Price Schedule)

NAME OF BIDDER :

METERING SKID FOR SRI RAM KOTA & CHECK METERING FOR VIJAI PUR

BID DOC NO. : 05/ 51/ 23KF(SRI RAM -VIJAI PUR)/ GAI L/ 030A

| Sl. No. | Description | Unit | Qty. (Nos.) | Unit Price Ex-works including cost of imported raw material/ components & Project Rate of Customs Duty thereon, pkg/ fwd, but excluding ED & ST on finished goods | Per Unit Terminal Excise Duty | Per Unit Sales Tax | Per Unit Freight upto Project Site by Road | Per Unit FOT Site (4+ 5+ 6+ 7) | Total FOT Project Site (3x8) | Total Ex-works (3x4) | Cl F value of Imp. Comp. Per Unit Included in (4) | Total Cl F value of Imp. Comp. Included (3x11) | Project Rate of Customs Duty(CD), Surcharge, CVD included In (4) (in percentage) | Domestic Value addition (in percentage) against the item if availing Price Preference as per Bid Doc. Article-35 Section-2 |
|---------|---|---------------------|-------------|---|---|--------------------|--|--------------------------------|------------------------------|----------------------|---|--|---|--|
| (1) | (2) | | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| 1.0 | Design, Engineering, Manufacturing, Testing, Inspection, Packaging, Forwarding, Transportation, Insurance, Mandatory & commissioning spares and Supply of Metering skid along with all accessories, Consumables and Commissioning Spares including Assistance in Configuration, Interfacing, Integrated Testing & Commissioning as per Job specifications and Special Instructions enclosed | | | | | | | | | | | | | |
| 1.1 | Metering Skid for Sri Ram Fertilizer Kota with Online Gas chromatograph as per MECON spec. (Refer P&Id No. MEC/23KF(sri ram-kota)/05/62/00/MS/1003 Rev 2) | No. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| 1.2 | Mandatory Spares | | | | | | | | | | | | | |
| A) | Cartridge Filter Element | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| B) | O – Ring For Filter End Closure | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| C) | PCV Diaphragm | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| D) | PCV Pilot Diaphragm | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| E) | Lubricant cartridge for plug valves | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| F) | All type of Studs For One Complete Skid | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| G) | Vane pack for filter separator | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| H) | O – Ring for Filter separator | Set | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| E) | All types of Filters/Filter Elements for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| F) | Repair Kit for GC Valve, Sample Probe etc. for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| G) | Moisture Trap for Gas Chromatograph | Sets | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| | Total for 1.0 (1.1 & 1.2) | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Sl. No. | Description | Unit | Qty. (Nos.) | Unit Rate | Total amount including all taxes and duties excluding service tax | | | | | | | | | |
| 1.3 | Assistance during commissioning of skids at site with GC (Sri Ram Fertilizer Kota) .The price shall be inclusive of Airfare, Boarding, Lodging, Local Transport, Incidental, Traveling etc. and all other expenses. The quoted price shall also include all taxes, duties & levies etc but excluding service tax | DM rate per man day | 15 | | 0.00 | | | | | | | | | |
| | Total for 1.0 (Supply & Assistance) | | | | 0.00 | | | | | | | | | |

PRICE SCHEDULE (for Indian Bidder)
(To be submitted along with Schedule of Rates / Price Schedule)

| Sl. No. | Description | Unit | Qty. (Nos.) | Unit Price Ex-works including cost of imported raw material/ components & Project Rate of Customs Duty thereon, pkg/ fwd, but excluding ED & ST on finished goods | Per Unit Terminal Excise Duty | Per Unit Sales Tax | Per Unit Freight upto Project Site by Road | Per Unit FOT Site (4+5+6+7) | Total FOT Project Site (3x8) | Total Ex-works (3x4) | Cl F value of Imp. Comp. Per Unit Included in (4) | Total Cl F value of Imp. Comp. Included (3x11) | Project Rate of Customs Duty(CD), Surcharge, CVD included In (4) (in percentage) | Domestic Value addition (in percentage) against the item if availing Price Preference as per Bid Doc. Article-35 Section-2 |
|---------|---|---------------------|-------------|---|---|--------------------|--|-----------------------------|------------------------------|----------------------|---|--|--|--|
| (1) | (2) | | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| 2.0 | Design, Engineering, Manufacturing, Testing, Inspection, Packaging, Forwarding, Transportation, Insurance, Mandatory & commissioning spares and Supply of Metering skid along with all accessories, Consumables and Commissioning Spares including Assistance in Configuration, Interfacing, Integrated Testing & Commissioning as per Job specifications and Special Instructions enclosed | | | | | | | | | | | | | |
| 2.1 | Check Metering Skid for Vijaipur (Refer P&Id No. MEQ/23KF(Vijaipur)/05/62/00/MS/1005 Rev 1) | No. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| 2.2 | Mandatory Spares | | | | | | | | | | | | | |
| | A) PCV Diaphragm | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| | B) PCV Pilot Diaphragm | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| | C) All type of Studs For One Complete Skid | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| | D) All type of Gaskets For One Complete Skid | Set. | 1 | | | | | 0.00 | 0.00 | 0.00 | | 0.00 | | |
| | Total for 2.0 (2.1 & 2.2) | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |
| Sl. No. | Description | Unit | Qty. (Nos.) | Unit Rate | Total amount including all taxes and duties excluding service tax | | | | | | | | | |
| 2.3 | Assistance during commissioning of skids at site with GC (Sri Ram Fertilizer Kota) .The price shall be inclusive of Airfare, Boarding, Lodging, Local Transport, Incidental, Traveling etc. and all other expenses. The quoted price shall also include all taxes, duties & levies etc but excluding service tax | DM rate per man day | 10 | | 0.00 | | | | | | | | | |
| | Total for 2.0 (Supply & Assistance) | | | | 0.00 | | | | | | | | | |
| | Grand Total for 1.0 & 2.0 (Supply & Assistance) | | | | 0.00 | | | | | | | | | |
| | Grand Total for 1.0 & 2.0 excluding Assistance | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | |

NOTES:

- The metering skid supplier shall assist during commissioning of skids at various sites. For this purpose the Bidders shall indicate Lumpsum separate price for each skid at Sl No. 1.3 & 2.3 above. Maximum Mandays per site as per SOR qty. will be considered for evaluation and order placement purpose.Maximum Mandays to be considered per site has been indicated against the same and the same will be considered for evaluation and order placement purpose.
- Evaluation shall be done ITEM-WISE for Item Nos. 1 & 2 separately. For evaluation, Item Nos. 1.1 to 1.3 for item No. 1.0 and Item Nos. 2.1 to 2.3 for Item No. 2.0 shall be considered.
- The quoted rates for man days for supervision of installation & commissioning shall be valid for 14 months from the date of FOI

Please indicate

Excise Duty @

Sales Tax @ Without ' C' Form

LST @

VAT @ Without any Form

Service Tax shall be paid extra at actual on submission of cenvatable invoice

Annexure – I V to Addendum – I

**GUIDELINE FOR SUBMISSION OF
OFFER ON E-TENDERING**

GAIL (India) Limited

**GUIDELINE FOR SUBMISSION OF OFFER ON
E-TENDERING**

1. PROCURE FOR PARTICIPATION IN E-PROCUREMENT

GAIL (India) Limited has developed a secured and User friendly system which will enable Vendors/ Bidders to search, view, download tenders directly from GAIL (India) Limited secured website and also enables them to participate and submit online bids/ offers in the E-Procurement site directly from the internet in secured and transparent manner maintaining confidentiality and security throughout the tender evaluation process and award. Bidders are requested to read following conditions in conjunction with various conditions, wherever applicable appearing with this bid invitation for E-Procurement. The conditions mentioned hereunder shall supersede and shall prevail over the conditions enumerated elsewhere in the bid document.

1.1 How to submit online bids/ offers electronically against E-procurement tenders ?

Vendors/ Bidder who wish participate for e-tenders which are uploading on GAIL (India) Limited website <https://etender.gail.co.in> in should follow the following steps which shall permit them to Search, Display/ View, Download and submit their electronic bids/ offers online in a secured manner ensuring confidentiality.

Vendors / bidders are advised to read the following instructions for participating in the electronics tenders directly through internet :-

- 1.1.1 No late and delayed bids/ offers after due date/ time shall be permitted in E-tendering system. Time being displayed on our e-Tendering System shall be final binding on bidder and bids have to be submitted by bidder(s) considering this time only and not the time as per their location/ country. No bid can be submitted after the last date and time of submission deadline, however if bidders intends to change the bid already entered may change/ revise the same on or before the last date and time of submission deadline. The system time (IST) that will be displayed on E-Procurement webpage shall be the time and no other time shall be taken into cognizance.
- 1.1.2 Bidders are advised in their own interest to ensure that bids are uploaded in E-Procurement system well before the closing date and time of bid.
- 1.1.3 No bid can be modified after the dead line for submission of bids.
- 1.1.4 No manual bids/ offers shall be permitted. The offers submitted through E-tendering system shall only be considered for evaluation.
- 1.2 How to search, view and download e-tender?

Vendors/ Bidders must go to e-tender website <https://etender.gail.co.in> and login using their user-id and Password. In the case of vendors not possessing the User Id and Password, they can access through Guest Login as guest. This facilitates viewing of tenders in display mode in Collaboration Folder (C Folder). If the vendor desires to download the NIT and attachment e-tender at this stage, he may download the same for viewing free of cost.

Note: All e-tender notices and bid documents are available only in soft copies such as Microsoft Word, Excel, PDF Files. For downloading/ viewing PDF files use Adobe 6 Software utility which can be installed free of cost from vendors home page link by

any vendors onto his own computer.

1.3 Participation in bid, request for User Id and Password

To participate in bid submission, it is mandatory on the part of vendor(s) to have User ID and Password. To obtain User ID and Password, Vendor/ Bidder must open <https://etender.gail.co.in> in site and perform the following steps:-

1.3.1 Click on button Request User ID (for New Bidder)

1.3.2 Fill the on line form and submit. Ensure that the E-mail address given in the form is valid and active. If you have already been provided with the Vendor Code of GAIL, please mention the 10 digit Vendor Code in specified field, otherwise leave blank.

1.3.3 Ensure that all the mandatory fields (indemnified with a star mark) are filled in application form for User ID creation, E-Procurement administrator would take possible care to allot an User ID and Password within 4 working days. An E-mail (system generated) shall be sent to your E-mail ID (mentioned by you in the registration form) giving details of your User ID and Password.

On receipt of User ID, please reset the Password immediately by logging to our E-tendering site. User ID and Passwords are unique to each vendor and the vendor can use the same to view/download/participate in all e-tender of GAIL.

Note : Without login registration ID vendor cannot participate in e-tender. There will be single login ID permission for one single vendor. There can be more than one ID for the same vendor at different location address. Obtaining User ID is an on-going process and is not linked to any particular bid invitation (tender). Any vendor willing to participate in GAIL tenders can obtain User ID as described above. Each vendor will get one User ID. Vendors are requested to designate one officer from their organization who will submit bids on line. Vendors are advised to apply for User ID at least 7 days prior to the last date of bid submission in their own interests. User IDs shall be given within 4 days subject to condition that information furnished by the bidder is complete in all respect. GAIL shall not be responsible for any delays in allocation of User ID/Password and the ensuing consequences including but not limited to timely submission of bids.

1.4 What is a digital signature ?

This is a unique digital code which can be transmitted electronically and primarily identifies a unique sender. The objective of digital signature is to guarantee that the individual sending the message is who he or she really claims to be just like the written signature. The Controller of Certifying Authorities of India (CCA) has authorized certain trusted Certifying Authorities (CA) who in turn allot on a regular basis Digital certificates. Documents which are signed digitally are legally valid documents as per the Indian IT Act (2000)

1.5 Why is a digital signature required

In order to bid for GAIL e-tenders all the vendors are required to obtain a legally valid digital certificates as per Indian IT Act from the licensed certifying authorities (CA) operating under the Root Certifying Authority of India (RCAI), Controller of

Certifying Authorities (CCA) of India.

1.6 How to obtain Digital Certificate from Certifying Authority (CA)

Vendors/ Bidders cannot submit online bids/offers under e-tenders without obtaining valid Digital Certificate from Certifying Agency (C.A.). A hyperlink on Vendors/ Bidder home page gives link to Controller of Certifying Agency's (CCA) website from there the bidder can access website of various CA sites, using the link provided. One Digital Certificate is valid for specified period and can be used for signing any number of quotations against enquiries issued by GAIL during such validity period.

Note: In terms of IT Act 2000, only a digitally signed document will be considered as valid signed document. The Digital Certificate is issued by C.A. in the name of a person authorized for filling Bids / offers on behalf on his company. The certificate is installed/ stored in his computer or preferably received by him (his authorized person) in form as **USB token**. Vendor/ Bidder can submit their Bids / Offers On-line only after digitally signing the bid / documents with the above allotted Digital Signatures.

1.7 Steps for obtaining Digital Certificate:-

Digital Certificate can be obtained by the following steps:-

- i) Visit the site of the licensed CA* using internet browser.
- ii) Apply for a class 3 Digital Certificate for the designated individual with the name of Organization. Ensure the Digital Certificate is legally valid in India.
- iii) For making payment and submission of documents required for issue of the digital certificate, follow the instructions on the CA's website.
- iv) Use the class 3 Digital Certificate thus obtained for online bidding on GAIL E-Procurement site.

*** Link to some licensed CA's are provide below**

- a) <http://www.ncodesolutions.com>
- b) <http://www.safescrypt.com/>
- c) <http://www.tcs-ca.tcs.co.in/>
- d) <http://www.mtnltrustline.com>

1.8 Submission of documents

Bidders are required to upload all tender forms and supporting documents which form part of the bid/ tender in the E-Procurement (COLLABORATION, C-Folders) site only.

However, documents required to be submitted physically are Bid Documents fee, Bid Security and Power of Attorney need to be submitted in sealed envelope and the same should reach MECON Limited, 15th Floor, Scope Minar,, Laxmi Nagar, North Tower, District Centre, Delhi – 110 092 (cut- out slip placed below) before bid due date. Bidder shall ensure that all the documents relevant to bid are uploaded in time and failure to upload the same before bid submission date is the sole responsibility of bidder. Under no circumstances, GAIL shall entertain and request for acceptance of bid documents in physical form, which were to be uploaded in e-form.

Note:

- i) Bidder is required to save/store their bid documents for each item into their computer before submitting their bid into E-tendering system by pressing the Hold Button.
- ii) Bidder is required to fill up the price/rate strictly in the Schedule of Rate (SOR) attached with tender. Inadvertently, if a document is uploaded in Collaboration Folder (C Folder) by the bidders, such document can be deleted by the Bidder and in its place a new/modified document can be uploaded. The new/modified document will be required to be signed digitally. Where two similar documents are existing in the folder, the latest version of the document shall only be taken into cognizance for evaluation and earlier versions shall be ignored. Bidders are requested to upload small sized documents preferably (upto 2 MB) at a time to facilitate easy uploading into E-Procurement site. GAIL does not take any responsibility in case of failure of the bidder to upload the documents within specified time of tender submission.

1.9 Prices, other documents and digital signature:

The Prices are to be submitted online strictly as per the Schedule of Rates (SOR). GAIL shall not be responsible for any failure on the part of the bidder to follow the instructions.

Un-priced techno-commercial bid document should be placed in the private area earmarked in the C-folder. Before the bid is uploaded, the bid comprising of all attached documents should be digitally signed using digital signatures issued by an acceptable Certifying Authority (CA) in accordance with the Indian IT Act 2000. If any modifications are required to be made to a document after attaching digital signatures, the digital signature shall again be attached to the modified documents before uploading the same. The Authenticity of above digital signatures shall be verified through authorized CA after bid opening and in case the digital signature is not authorized/valid, the bid will be rejected. Bidder shall be responsible for ensuring the validity of digital signatures and proper usage of the same by responsible persons who can bind the bidder. Scanned copy of bind of attorney of the signature issued by the bidding company should be submitted on line along with other documents as per tender conditions.

BIDDER SHALL OBTAIN THE DIGITAL CERTIFICATE DIRECTLY FROM CERTIFYING AUTHORITY (CA) ONLY AND DIGITAL CERTIFICATE ISSUED BY SUB CA / AGENT WILL NOT BE COMPATIBLE WITH OUR E-tendering SYSTEM FOREIGN BIDDERS SHALL ALSO HAVE TO OBTAIN DIGITAL CERTIFICATE FROM CERTIFYING AUTHORITIES IN INDIA AS APPROVED BY CCA. DIGITAL CERTIFICATE OBTAINED FROM FOREIGN COUNTRIES ARE NOT ACCEPTABLE.

*** Links to some licensed CA's In India are provided below. Foreign Bidders may obtain the Digital Certificate form these CAs.**

- a. <http://www.ncodesolutions.com>
- b. <http://www.safescrypt.com/>
- c. <http://www.tcs-ca.tcs.co.in/>
- d. <http://www.mtnltrustline.com/>

1.10 PRICES:

The bidder needs to enter the prices on line strictly as per the SOR format provided in our E-Tender. No new conditions shall be added by the Bidder.

1.11 Submission and opening of bids:

The bid along with all the copies of documents should be submitted in e-form only through GAIL E-Procurement portal.

1.12 Last Date for Submission /Receipt of Bids:

System does not allow for submission /receipt of bids beyond the deadline for bid submission. However, if the bidder for some reason intends to change the bid already entered, he was change/revise the same on or before the last date and time of submission.

The system time displayed on GAIL's E-Procurement webpage shall be final and binding on the bidders for all purposes pertaining to various events of the subject tender and no other time shall be taken into cognizance.

Bidders are advised in their own interest to ensure that bids are uploaded in E-Procurement system well before the closing date and time of bid.

Bidders must use any computer having **Windows 2000 or Windows XP** versions of higher of window operating system and an internet web Browser version internet explorer V6.0 or higher recommended.

1.13 Proxy:

If any bidder is unable to access GAIL's E-Procurement site or Bid Documents, the bidder may please check whether they are using proxy to connect to internet or their PC is behind any firewall and may contact their system administrator to enable connectivity. Please note that Port 443 and Port 8443 should be enabled on proxy/firewall for HTTPS connectivity. Dial-up internet connectivity without Proxy settings is another option.

Annexure – V to Addendum – I

PERFORMANCE EVALUATION

ATTACHMENT-I

PERFORMANCE EVALUATION

PURPOSE

- 1.1 GAIL follows a system of Performance Evaluation of vendors and contractors to monitor and ensure the timely and smooth completion of supplies, execution of contracts, and maintenance of quality standards. The basic objective is to recognize and develop reliable vendors and contractors who consistently meet or exceed expectations and requirements of GAIL with respect to timely receipt of supplies, completion of work and services and the quality specifications, standards. Vendors and contractors whose performance is not found satisfactory will be debarred from future business with GAIL.
- 1.2 All the suppliers and contractors working with GAIL will be evaluated based on the parameters defined in the performance Rating Data Sheet as per enclosed Attachment –I.
- 1.3 The evaluated rating may be falling in any of the following category depending upon the scoring of points in various parameters.:

Very good
Good
Fair
Poor
- 1.4 In case, a vendor/contractor is not able to achieve a minimum scoring of 60% points in the given parameters individually and collectively for all parameters i.e. with poor rating shall be put on “HOLIDAY” for a period of 1 to 3 years depending upon the nature of failure on their part in performance and such vendors and contractors will not be allowed to participate in business with GAIL for the Holiday period.
- 1.5 The vendors and contractors will be blacklisted for submitting forged documents in respect of experience, turnover and any other requirements forming the basis for pre qualifying / eligibility criteria irrespective of their rating in the past. Such vendors & Contractors will be debarred from having business with GAIL in future.

GAIL (INDIA) LIMITED
PERFORMANCE RATING DATA SHEET
(FOR PROJECTS/CONSULTANCY JOBS)

- (i) Project/Work Centre :
- (ii) Order/Contract No. & Date :
- (iii) Brief description of Items :
Works/Assignment
- (iv) Order/Contract value (Rs.) :
- (v) Name of Vendor/Contractor/ :
Consultant
- (vi) Contracted delivery/ :
Completion Schedule
- (vii) Actual delivery/ :
Completion date

| Performance Parameter | Delivery/Completion Performance | Quality Performance | Reliability Performance | Total |
|-----------------------|---------------------------------|---------------------|-------------------------|-------|
| Maximum Marks | 40 | 40 | 20 | 100 |
| Marks Allocated (*) | | | | |

Remarks (if any)

PERFORMANCE RATING (**):

Note:

(*) Allocation of marks would be as per enclosed instructions

(**) performance rating shall be classified as under :

| Sl. No. | Range (Marks) | Rating |
|---------|---------------|-----------|
| 1. | 60 & below | POOR |
| 2. | 61-75 | FAIR |
| 3. | 76-90 | GOOD |
| 4. | MORE THAN 90 | VERY GOOD |

Signature of Authorised signatory with name & designation

INSTRUCTIONS FOR ALLOCATION OF MARKS

Marks are to be allocated as under :

1.1 DELIVERY/COMPLETION PERFORMANCE :

40 MARKS

| Delivery Period / completion Schedule | | Delay in weeks | Marks |
|---------------------------------------|----------------|---------------------|-------|
| a) | Up to 3 months | Before CDD | 40 |
| | | Delay upto 4 weeks | 35 |
| | | Delay upto 8 weeks | 30 |
| | | Delay upto 10 weeks | 25 |
| | | Delay upto 12 weeks | 20 |
| | | Delay upto 16 weeks | 15 |
| | | More than 16 weeks | 0 |
| b) | Above 3 months | Before CDD | 40 |
| | | Delay upto 4 weeks | 35 |
| | | Delay upto 8 weeks | 30 |
| | | Delay upto 10 weeks | 25 |
| | | Delay upto 16 weeks | 20 |
| | | Delay upto 20 weeks | 15 |
| | | Delay upto 24 weeks | 10 |
| | | More than 24 weeks | 0 |

1.2 QUALITY PERFORMANCE

40 MARKS

For Normal Cases: No Defects/No Deviation/No failure :

40 marks

| | | | |
|------|---|--|-----------------------------------|
| i) | Rejection/Defects | Marks to be allocated on pro-rata basis for acceptable quantity as compared to total quantity for normal cases | 10 Marks |
| ii) | When quality failure endangers the system integration and safety of the system. | Failure of severe nature - Moderate nature - low severe nature | 0 marks 5 marks 10-25 marks |
| iii) | Number of deviations | 1. No. deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2 | 5 Marks 2 marks 0 marks |

1.3 RELIABILITY PERFORMANCE

20 MARKS

A. FOR WORKS / CONTRACTS

| | | |
|------|---|---------|
| i) | Submission of order acceptance, agreement, PBG, Drawings and other documents within time | 4 marks |
| ii) | Mobilization of resources as per Contact and in time | 4 marks |
| iii) | Liquidation of Check-list points | 4 marks |
| iv) | Compliance to statutory and HS & E requirements Or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs | 4 marks |
| v) | Timely submission of estimates and other documents for Extra, Substituted & AHR items | 4 marks |

B. FOR SUPPLIES

| | | |
|------|---|---------|
| i) | Submission of order acceptance, PBG , Drawing and other documents within time | 5 marks |
| ii) | Attending complaints and requests for after Sales service/warranty repairs and/or query/advice (upto the evaluation period) | 5 marks |
| iii) | Response to various correspondence and conformance to standards like ISO | 5 marks |
| iv) | Submission of all required documents including Test Certificates at the time of supply | 5 marks |

Annexure – VI to Addendum – I

REPLY TO QUERIES

Addendum - IB (Technical)

Metering Skid For SriRam Fertilizers - Kota & Check Metering at Vijaipur.

Query received during Prebid discussion held at GAIL project office.

Reference Bid Document No.:05/51/23KF (SRI RAM - VIJAIPUR) / GAIL /030A

| SL No. | QUESTIONS | CLARIFICATION |
|--------------------------|---|---|
| 1 | Volume II of II , Special Instructions (for Flow Computer) , Calibration shall be with Air / Natural Gas | Calibration shall be done with natural Gas. |
| 2 | Entire Skid shall be approved from NPL / NMI / PTB | The UFM skid shall be Approved by Sole Meter Manufacturer / NPL / NMI / PTB. |
| 3 | Linearity = +/-0.5% for Turbine Flow Meter . Clarify | For Turbine Meter Linearity shall be +/- 0.5% - for 0.2Qmax to Qmax. +/- 1.0% - Upto 0.2Qmax. |
| 4 | Wet Calibration of Turbine Meter shall be done with Meter Run or without Meter Run. | Wet calibration of Turbine meter shall be done along with Meter run. |
| 5 | As the body of Turbine meter is Casting . The end connection shall also be casting. | Confirmed. |
| 6 | Flow Computation shall be done in accordance to AGA-8 / NX-19 | Flow Computation shall be done only in accordance to AGA-8 |
| 7 | As the skid is to be provided with Panel mounted Flow Computer , GSM modem will be in the safe area so GSM need not be suitable for mounting in Hazardous area. Please Clarify | GSM will be mounted in control panel so the same is not required to be suitable for mounting in Hazardous area. |
| 8 | Regulator shall be EN334 or PED 97/23/EC | Regulator shall be as per EN334 or Confirming to EN334 |
| 9 | Flow Computer shall be web enabled. | The same shall be ignored and stands deleted. |
| 10 | Limit Switch to be provided on PCV. The same is not possible . Clarify. | No Limit switch shall be provided on PCV. The requirement of limit switch is deleted. |
| 11 | SDV shall be tight shut off. Please clarify. | SDV shall be tight shut off , Leakage CLASS - VI. |
| 12 | Confirm the distance between Skid and Control room to finalize the need of current repeaters in the control room. | The distance between control room and skid shall be 200meters (Approx.) |
| 13 | Point No: 4.6, Refer datasheet for Cartridge Filter. | Particle Size \geq 5 microns |
| 14a. | Refer datasheet No: MEC/23KF(Sriram Kota)/05/21/DS/VB/02 Rev 0 & MEC/23KF(Sriram Kota)/05/21/DS/VB/03 Rev 0 & MEC/23KF(Vijaipur) /05/21/DS/VB/02 Rev 0 Point No. : 6.1 | 2" Ball valve will have full Bore. > 2" Ball valve will have reduced bore. |
| 14b. | Datasheet for Ball Valves 0.5" to 1.5" , for Sriram & Vijaipur | Valves will be floating ball type with full bore |
| ADDITIONAL POINTS | | |
| 15 | Bidder shall consider Mandays for assistance (DM rate) during commissioning in SOR 15 days in place of 4 days for Sri Ram Kota and 10 days of in place of 4 days for Vijaipur | |
| 16 | Delivery for Indian Bidder : 28 weeks; for Foreign Bidder : 26 weeks | |
| 17 | Bidder Shall quote the Metering Skid for Sri Ram fertilisers Kota with online Gas Chromatograph as per MECON specification enclosed. | |
| 18 | Maximum allowable pressure drop 3 kg/cm ² g for inlet flange to outlet flange of the skid shall be considered. | |
| 19 | Revised P& Id has been enclosed for Sriram kota. | |
| 20 | For GC extraction tools and cables from field to control room is not required. (ignore such clause in the Tech. Spec.) | |

Metering Skid For SriRam Fertilizers - Kota & Check Metering at Vijaipur.

QUERY AGAINST BID DOCUMENT NO. 05/ 51/ 23KF(SRI RAM -VI JAYPUR)/ GAI L/ 030A

Sheet 2 of 3

| Sr. No. | Tender Section Ref. | Tender Clause Ref. | Bidder Query | CLARIFICATION |
|---------|--|---|--|---|
| 1 | a) Scope of Work for Metering Skid. b) P&ID for Kota | a) Pt. No. 3.3.41 page no. 34 b) P&ID page no. 45 | Please confirm that the Main line Size shown in P&ID is final or we have to resize it according to the Maximum velocity consideration i.e. 18m/s upto PCV & 22m/s after PCV. | Line size as per P&ID |
| 2 | a) Scope of Work for Metering Skid. b) Spec. for Inst. Panel & Accessories c) Job Spec. for Package USM & FC | a) Pt. No. 3.3.49 Page No. 34 b) Pt. No. 8(b) Page No. 86 c) Pt. No. 4.6.9 Page No. 112 | We understand that Supply & Laying of all types of cables (Signals, control, between USM & FC & power cables) from field junction box to control room is not in the scope of this tender. Please confirm. | Confirm |
| 3 | a) Scope of Work for Metering Skid. b) Data Sheet Ball Valve | a) Pt. No. 3.3.44 Page 34 b) Pt. No. 6.1 Page 45 | We understand that all Ball Valve size 2" & greater will be Full Bore Trunnion Mounted type. Please re-confirm that our understanding is correct. | Refer this Addendum |
| 4 | a) Scope of Work for Metering Skid. b) P&ID | a) Pt. No. 3.2(ii) Page 34 b) P&ID page no. 136 | In P&ID Differential Pressure Transmitter is mentioned with Cartridge filter while in scope of work it is Differential Pressure Gauge. Please confirm the scope of supply. | DPT required with local display in engg unit. |
| 5 | Data Sheet for Cartridge Filter & Filter Separator | Page No. 53 | We understand that Quick Opening Closure will be required for both Cartridge Filter & Filter Separator. Pls. re-confirm | For 600 # QOAC required |
| 6 | a) Data Sheet for Filter Separator b) Annexure -II | a) Note (iii) Page no. 56 b) Gas Comp.for Sri Ram .Page no. 133 | Gas Composition mentioned in Filter data sheet & in annexure II are not same, please confirm which one we should consider for calculation/sizing. | Gas compositions as per annexure II |
| 7 | a) Data Sheet Pressure Safety Valves b) P&ID, Vijaypur | a) 01 Tag No. for PSV; Page no. 61 b) Page No. 137 | In P&ID , Pressure Safety Valves are not depicting, while in PSV data sheet tag nos. are mentioned for the same. Kindly confirm the scope of supply for the same. | PSV shall be supplied as per data sheet (6 nos.) |
| 8 | Special Instruction to the Vendor (For Flow Computer) | Point 5. Out Puts Page No. 75 | We understand that the following Flow computer output will full-fill the application requirement a) 4 nos. Analog Outputs b) 5 nos. Serial outputs c) 3nos. Digital outputs. Please confirm that our understanding is correct. | your understanding is not correct. Considered all output as per data sheet. |
| 9 | Special Instruction to the Vendor (For Flow Computer) | Point 23(n) GSM Modem Page No. 78 | As GSM Modem will be installed in control room (Safer Area), hence the requirement for mounting in Hazardous area may not be required. Please confirm our understanding is correct. | Refer this Addendum |
| 10 | Specification for accessories | Point No. 5 ; Page no. 91 | We understand that Space heater is not required. Please confirm. | Required as per data sheet |
| 11 | Job Spec. for Package USM & FC | Point 2.1(b); Page 105 | We understand that we have to supply interface cable between FC & RTU, if yes then please give the distance between FC & RTU. | Cable is not required however any assistance required for interfacing shall |

Metering Skid For SriRam Fertilizers - Kota & Check Metering at Vijaipur.

QUERY AGAINST BID DOCUMENT NO. 05/ 51/ 23KF(SRI RAM -VI JAYPUR)/ GAIL/ 030A

| | | | | |
|----|---|---|--|---------------------------------------|
| | | | | be in bidder's scope. |
| 12 | Job Spec. for Package USM & FC | Point 2.1(h); Page 106 | The use of Transducer Extration tool is very rare, & also this tool may be available with Gail. Hence we request you to remove this from current scope of supply to reduce the project cost. Please confirm. | Same is required refer revised SOR. |
| 13 | a) Job Spec. for Package USM & FC b) Data Sheet of Ultrasonic Meter | a) 4.6.8(b) Page no. 112; b) Point no. 27 Out put; page no. 122 | We understand that we have to consider the meter output mentioned in data sheet, because they are sufficient to full-fill the requirement of the application. Please confirm. | Full fill the technical requirements. |
| 14 | P&ID | Filter Seperator | a) Level Transmitter is having Local display facility, hence Level Gauge may not be required. Please confirm that whether Level gauge will be required or not. | Required |

Annexure – VII to Addendum – I

TECHNICAL SPECIFICATION FOR GAS CHROMATOGRAPH



GAIL (India) Limited

(A Govt. of India Undertaking)
NEW DELHI, INDIA

METERING SKID FOR SRI RAM FERTILIZER

MATERIAL REQUISITION

**MR No. : MEC/23KF (SRI RAM /VIJAIPUR) /05/E5
/GAIL/ 030**


SUB ITEM: ONLINE GAS CHROMATOGRAPH



**MECON LIMITED
DELHI**

LIST OF ENCLOSURES

[illegible]

| | | | | | | | |
|---|--------------------------------|---|--|----------|----|------|-----|
|  | MECON LIMITED DELHI | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | 0 | 02.06.08 | | | |
| | | | Rev | Date | By | Chkd | App |
| | | | MATERIAL REQUISITION | | | | |
| CLIENT: GAIL (INDIA) LIMITED. | | ITEM: ONLINE GAS CHROMATOGRAPH | MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

1.1 Scope

The Gas Chromatograph is a part of the metering skid and shall be supplied along with respective metering skids. The GC vendor along with skid vendor shall execute this part.

- 1.1.1 This specification, together with the data sheets attached herewith, covers the minimum requirements for the complete design, engineering, material selection, manufacturing, supply, nameplate marking, inspection, testing, shipping, erection, testing and commissioning of On-Line Gas Chromatographs with all accessories for **NATURAL GAS PIPELINE PROJECT – UNDER METERING SKID** for Sri Ram fertilizer Kota of M/s GAIL. GC Controller along with Zener Barriers/Isolators shall be fully wired and **mounted in a separate G.C Panel to be installed in the Control Room**. Printer with stand (if not an integral unit with GC) along with connecting cables, shall be loose supplied. The Sampling System, Gas Analyser, Calibration, and Carrier Gas Cylinders all will be on skid mounted in field and suitable for installation in hazardous area and specified weather condition. For detail scope of work refers Bill of Material (Indicative) mentioned elsewhere in the Technical Specification attached with this document.

- 1.1.2 The related standards referred to herein and mentioned below shall be of the latest editions prior to the date of the purchaser's inquiry.

IEC – 79 Electrical Apparatus for Explosive Gas Atmosphere.

IEC – 529 Degree of Protection provided by Enclosures.

ANSI/ASME American National Standards Institute/ American Society of Mechanical Engr.

B. 1.20.1 Pipe Thread

B 16.5 Steel Pipe Flanges and Flanged Fitting

B 16.20 Ring joint Gaskets and Groove for Steel Pipe Flanges

API American Petroleum Institute MPMS (Relevant Portions)

CENELEC EN 50020 Electrical Apparatus for Potentially Explosive Atmospheres

DIN 50049 Document on Material Testing


IS- 2147 Degree of Protection Provided for Enclosures

IS – 2148 Flame proof Enclosures of Electrical Apparatus

IEC – 801 Electromagnetic compatibility for Industrial Process Measurement and Control Equipment.


- 1.1.3 In the event of any conflict between this specification, data sheets, related standards, codes etc. the vendor should refer the matter to the purchaser clarification and only after obtaining the same should proceed with the manufacture of the items in question.

- 1.1.4 Purchaser's data sheets indicate type, minimum sampling system requirements and material construction for Gas Chromatograph and its sampling system. However, this does not absolve the vendor of the responsibility for proper selection with respect to the following :

| | | | | | | | |
|---|---------------------------|--|---|----------|----|------|------|
|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

- a. Proper design of the sampling system and gas chromatograph to measure the component of interest to the stated accuracy.
 - b. Selection of materials for all the parts of the gas chromatograph system so as to be compatible with the process stream and surrounding atmosphere as per purchaser's data sheets.
- 1.1.5 Vendor shall note that the offered instruments shall be suitable for the following ambient conditions:
 Temperature Range: 65 °C (MAX) , 5 - 50 °C (operating)
 Humidity: 100 % (max)
- 1.1.6 Vendor shall be responsible for selection of the correct model no. of instruments to meet the specifications contained in this spec. In case of model no. required to be changed at later date, the same shall be done by the vendor without any price or delivery implications
- 1.1.7 Offer shall be clear, unambiguous (with no alternatives) and complete with all data sheets, catalogues etc.
- 1.1.8 **Gas Chromatograph shall be connected to the Flow Computers (the scope of SKID vendor). Hence suitable interface & integration with Flow Computer is under GC Vendor's scope.**
- 1.1.9 Separate Analyser Cabin, necessary Sample Handling System, Tubing from main pipeline to Analyser Cabin (approximate distance between Analyser Cabin and Sampling Point on the pipelines will be min. 50 mtr.), Bottles and Skid for mounting are under Vendor's scope.
- 1.2.0 Vendor shall provide certificate for all the tests indicated in para 4.0 of this specification. In addition, vendor shall provide the 'Manufacturer's certificate of Conformity' to purchaser's specifications as per clause 2.2. of DIN 50049.
- 1.2.1 **Spare Parts:-**
 a) Consumable as a part of the offer.
 b) Commissioning spares as a part of the offer.
- 1.2.2 Special Tools and Tackles for Operation & Maintenance of GC. List must be furnished along with the offer. (if required)
- 1.2.3 All units of measurement for various items in vendor's specification sheets shall be to the same standards as in purchaser's data sheets. All instruments shall be graduated in the same engineering units as indicated in purchaser's data sheets.
- 1.2.4 All the materials specifications for various parts in the vendor's specification sheet shall be to the same standards as those in purchaser's data sheets e.g. ASTM, BS etc.
- 1.2.5 Vendor shall not offer any prototype instruments in his bid. All instruments offered should have been proven in refinery or petrochemical plants before bidding.

| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR


1.3.0 DRAWINGS & DATA

Vendor shall submit all the data/drawings/documents as indicated below,

A Along with the offer

Vendor's Offer shall include a detailed specification sheet for Gas Chromatograph system which shall contain the following information :-

- a) All the details regarding type, construction, materials, accessories etc. of the On-line Gas Chromatograph along with technical catalogue.
- b) Detailed sketch showing various components of sampling and sample conditioning system.
- c) Sample flow rates required achieving response time, the recommended length and size of the sampling tube between process tap and sampling system.
- d) Any special cabling requirements including shielding and grounding requirements and maximum permissible distances of separation between the field and the control room mounted units etc.
- e) A Copy of the Certificate of intrinsic safety/ flameproof from statutory body like BASEEFA, FM, PTB, CMRI etc. as applicable.
- f) Consumption figures of electrical power and other utilities for each gas chromatograph system.
- g) Overall dimensions of major units dimension of the skid to be mounted in field.


| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

B After Placement of Order

Vendor shall submit certified drawings and specification sheets for Gas Chromatograph which shall include the following (* marked shall be submitted for approval)


- a. * Bill of Material of the complete G.C system.
- b. * G.A Drg. With overall Dimension of both Sampling unit & 19" Rack.
- c. Sampling interconnection details identifying each component with make and model number.
- d. Detailed interconnection diagram for process, piping and tubing. (Hook up Diagram)
- e. Installation drawings.
- f. Calibration curves as required for each Gas Chromatograph system.
- g. Cabling details including shielding / grounding requirements.
- h. Utility consumptions.
- i. Technical Literatures, Installation & Commissioning Manuals for all supplied items.
- j. Quality Assurance Plan.
- k. Software required for the systems.
- l. Wiring Diagram of 19" Rack.
- m. Cable Parameters (Capacitance, inductance, L/R ratio) for interconnection cable between field and the control room mounted units for intrinsically safe system.
- n. The details of the heat load, humidity particulate / chemical filtration etc. of the system.
- o. Vendor shall provide certificate for the entire test indicated in para 4.0 of this specification. In addition, vendor shall provide the "manufacturer's certificate of Conformity" to purchaser's specifications as per clause 2.2 of DIN 50049.

| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

2.0 DESIGN AND CONSTRUCTION

- 2.1 In general Gas Chromatograph and sampling systems shall be designed and constructed in accordance with API – MPMS (Relevant portions).
- 2.2 Process Stream sampling shall be continuous.
- 2.3 The Gas Chromatograph performance shall be within specifications when the supply voltage varies by $\pm 10\%$ of specified value and supply frequency varies by ± 3 HZ of specified value.
- 2.4 Unless otherwise specified material of all components wetted by sample shall be ANSI – 316 SS.
- 2.5 The Programmable control unit shall be of control room mounted type.
- 2.6 Unless otherwise specified, the following shall govern :
- a. Threaded connections shall be NPT to ANSI / ASME B 1.20.1.
 - b. Flanged connection shall be as per ANSI / ASME B 16.5.
 - c. Grooves of ring type joint flanges shall be octagonal as per ANSI / ASME B 16.20.
 - d. Flange face finish shall be serrated concentric to paragraphs 6.3.4.1, 6.3.4.2, 6.3.4.3 of ANSI/ ASME B 16.5. The face finish as specified in data sheet shall have serration as follows :
- | | | |
|----------|---|-----------------|
| Serrated | : | 250 to 500 AARH |
| 125 AARH | : | 125 to 200 AARH |
| 63 AARH | : | 32 to 63 AARH |

| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

2.6 Gas Chromatograph enclosures and accessories shall be suitable for the electrical area classification indicated in purchaser's data sheets. Unless otherwise specified, the enclosures shall be to the following standards :

Weather proof housing : IP 55 as per IEC – 529 / IS – 2147
 Flame proof housing : Flame proof Ex (d) as per IEC – 79/IS-2148
 Flameproof equipment shall also be made weatherproof.

Intrinsically safe version of Gas Chromatograph shall be suitable for the area classification indicated in purchaser's data sheets. Unless otherwise specified, the intrinsic safety shall be to the following standards :

Intrinsically safe BS 5501/CENELEC EN 50020. All such Gas Chromatographs shall also be weatherproof to IP 55 as per IEC- 79 / IS – 2147.

The intrinsically safe and explosion proof equipment shall be certified by statutory bodies like BASEEFA, FM, PTB, CMRI etc.


In addition to the certificate from statutory body, for instruments supplied for projects in India, approval form CCOE (Chief Controller of Explosives) shall also be furnished by vendor irrespective of their place of manufacture and the same is mandatory. In case CCOE certificate is not available now, vendor to confirm to supply the same for each item before shipment.

2.7 All interconnecting wiring shall be colour coded / numbered and terminal blocks clearly identified.

2.8 The sampling system, Gas Chromatograph Analyser, Bottles etc. shall be supplied pre – mounted on cabinet of self-standing skid, in general. The foundation of skid shall have holes to anchor it to the ground with anchor bolts. The enclosure to skid shall be weatherproof to IP 55, as a minimum.


2.9 The design of Gas Chromatograph system shall be in compliance with the electromagnetic compatibility requirements as per IEC – 801.

2.10 The Gas Chromatograph shall provide isolated analog current output as specified in data sheet.

| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

- 2.11 Process sample return point and utilities as required will be made available near the Gas Chromatograph at pressure and temperature conditions specified in the data sheet for each Gas Chromatograph as single point supply and return. In general, all the offered items are to comply with maximum pressure and temperature data specified in data sheets. In exceptional cases, standard cell or such part of instrument with a rating lower than maximum pressure and temperature can be offered provided suitable conditioning means and hardware are provided and adequate safety devices with proper hook up enabling discharge to a flare header is provided. Multi – point distribution of utilities and process sample, is to be arranged by vendor following good engineering practices.
- 2.12 Sampling System (General requirements for all Gas Chromatograph)**
- 2.12.1 The sampling system shall be furnished with all the necessary equipment and accessories to condition and regulate the sample to acceptable levels.
- 2.12.2 The sampling system shall be engineered, designed, fabricated and furnished completely assembled as an integral part of the Gas Chromatograph Analyser or as a separate Unit. The sampling system shall be designed on the basis of the utilities available as indicated in the job specifications.
- 2.12.3 Each sampling system component shall be capable of being removed without disassembling the entire system.
- 2.12.4 Sampling system shall be designed for easy integration with the Gas Chromatograph Analyser in the field.
- 2.12.5 Sampling system design shall be such that the sample drawn for analysis is truly representative of the process stream. Extra care shall be exercised in the selection of the various components forming the sampling system.
- 2.12.6 The sampling system shall be designed to move the sample from the process to the Gas Chromatograph in the shortest possible time. Due consideration shall be given to the size of the sample tubing to avoid possible plugging. Any requirement of steam tracing of sample tubing shall be indicated in the bid.

| | | | | | | | |
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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR


- 2.12.7 Vendor shall clearly indicate the details of sample disposal to be provided by purchaser. When details of sample return points are indicated in purchaser's data sheet, sampling system shall be designed to meet the requirement.
- 2.12.8 Sampling system shall consist of one or more of the following components as required by the service conditions shown on the instrument data sheets : filters (coarse and fine), pressure regulators, relief valves, flow indicators, flow controllers, temperature indicators, scrubbers, heaters, coolers, dryers, sample pumps, aspirators etc. Vender in the bid with proper reasoning shall include any additional requirement.
- 2.12.8 Where purchaser's data sheets indicate the possibility of polymer formation or presence of excess polymers, vender shall offer suitable design features to minimize plugging because of polymer residue.
- 2.12.9 Filters shall be always dual and it shall be possible to remove and replace one of the filters without upsetting the operation of the Gas Chromatograph.

3.0 NAMEPLATE

- 3.1 The Gas Chromatograph and its accessories shall have a SS nameplate firmly attached to it at a visible place, furnishing the following information as applicable :
- Tag number as per purchaser's data sheets.
 - Manufacturer's Serial No. and Model No.
 - Manufacturer's name / trade mark.
 - Range
 - Area classification in which the equipment can be used.

4.0 INSPECTION AND TESTING

- 4.1 Unless otherwise specified, purchaser reserves the right to test and inspect all the items at the vendor's works. Vendor shall provide necessary facilities, utilities, labour and consumables required for carrying out the job.
- 4.2 Vendor shall submit the following test certificates and test reports for purchaser's review :
- Material test certificate for all wetted parts (MIL certificates).
 - Twenty Four - hour repeatability test report.
 - Calibration report for all Gas Chromatographs.
 - Effect of interfering components present in the process sample.
 - Certificates from statutory bodies for use in area classification indicated in data sheet.

| | | | | | | | |
|---|---------------------------|--|---|----------|----|------|------|
|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

SPECIAL INSTRUCTIONS TO THE VENDOR

4.3 Witness Inspection

4.3.1 The Gas Chromatographs shall be subjected to pre – despatch inspection by the purchaser. Following tests shall be carried out, as a minimum : -

- a. Physical dimensional verification and workmanship.
- b. Leak checking of complete system using nitrogen or instrument air.
- c. The Gas Chromatographs shall be calibrated using a test sample 50% of scale reading for the component of interest. Deviation of actual calibration from the calibration curve supplied by vendor shall be within $\pm 1\%$ of span.
- d. Repeatability shall be demonstrated for a period of at least 8 hours continuously using a standard sample, unless otherwise specified.
- e. Effect of variation in the power supply, voltage and frequency, to be verified. The Gas Chromatograph must function satisfactorily.
- f. Review of all test certificates and test reports indicated in para 4.2 of this specification.

5.0 SHIPPING

5.1 All threaded and flanged openings shall be suitably covered to prevent entry of foreign material


5.2 Each major part shall be sealed in thick plastic bags. Suitable moisture absorbent shall be provided for electronic components.

6.0 REJECTION

Vender shall make his offer in detail, with respect to every item of the purchaser's specifications. Any offer not confirming to this shall be summarily rejected.

7.0 All documents and literatures are to be supplied in English Language. The Unit of measurement for all the parameters will be as per Data sheet

8.0 All the Field mounted equipments, Control room mounted instruments and necessary tubing, cables, enclosures, mounting accessories are in vendors scope. The system should be supplied in a ready to installed condition at site. All the operation, performance and maintenance guideline to be demonstrated during Inspection and documents to be furnished along with dispatch of the Equipments.


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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

TECHNICAL SPECIFICATIONS FOR GAS CHROMATOGRAPH

1. **Tag no.**
As per Annexure I
2. **Line no.**
As per Annexure I
3. **Service**
Measurement / calculation of the following parameters for custody transfer :
 - Analysis of gas composition
 - Gas Specific Gravity
 - Gas Calorific Value (Net & Gross)
 - Compressibility Factor


GAS CHROMATOGRAPH / GAS CHROMATOGRAPH ELECTRONICS :

1. **Type**
Continuous On – line Gas Chromatograph microprocessor controlled.
2. **No. of Streams**
Single Stream
3. a) **Column**
Micro packed column with high resolution and low carrier gas consumption.
- b) **Column size (length / dia.)**
By Vendor
4. **Detector**
High performance Thermal conductivity type
5. a) **Carrier gas**
Helium along with pressure regulators
- b) **Flow rate / pressure / purity**
By vendor
6. **Cycle time**
4.0 minutes max.
7. a) **Sampling system**
Sample conditioning system with pressure, flow and temperature regulation with sampling valves, tubes, fittings etc.
- b) **Flow meter**
By vendor
- c) **Mounting**
To be mounted in the field adjacent to the pipeline.

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| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

TECHNICAL SPECIFICATIONS FOR ON-LINE GAS CHROMATOGRAPH

8. a) **Probe**
316 SS retractable probe
- b) **Pipeline Flange**
1½" A 105, RF, SERR. FINISH to ANSI B 16.5, Rating same as line rating. Refer Annexure I. Pipeline Flange shall be protruding 200 mm from the surface of the pipeline.
- c) **Line isolating valve**
1½" FB valves rating same as line rating. Refer Annexure I.
- d) **Probe Housing material**
Carbon steel
- e) **Probe Insertion**
Standard
- f) **Probe length**
By vendor
9. a) **Gas Chromatograph**
Solid – state electronics protected from industrial EMI/ RFI interference.
- b) **Inputs / outputs**
Via digital link with programmable control unit.
10. **Gas Chromatograph & Gas Chromatograph electronics mountings**
Complete Gas Chromatograph and Gas Chromatograph electronics together with fully tubed carrier gas and calibration gas cylinders.
11. **Scope and hook up arrangement**
By vendor
12. **Area Classification**
NEC Class I, Div I, Gr. C & D, temp. Class T3.
14. **Power supply**
230 V, AC, 50 HZ
 - Vendor shall supply for explosion proof isolator switches for main power supply in Gas Chromatograph cabinet.
 - Vendor to note that any other voltage level or DC supplies required shall be in vendor's scope.
15. **Cable entry**
Vendor to furnish cable entry size for signal, power & control cables.
16. **Accessories**
 - a. Carrier gas cylinders and pressure regulators for minimum 2 years consumption.
 - b. Calibration gas cylinders and pressure regulators for min. 1 year consumption.


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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

TECHNICAL SPECIFICATIONS FOR ON-LINE GAS CHROMATOGRAPH

17. Gas Chromatograph field equipments shall be suitable for the ambient conditions and shall guarantee that the performance of the GC shall not Deteriorate up to the specific ambient conditions. Documentary proof shall be furnished in support of performance otherwise vendor to provide suitable provision such as shelter/ cabinet with full details with offer.
18. The skid for Gas Chromatograph Analyser, sampling system & its accessories, Gas cylinders, Bottles stands weather proof enclosures suitable for mounting in the field and Programmable Control Unit, Printer in control room, necessary tubing and cabling all in vendors scope of supply. Detail has to be furnished along with offer.
19. The Analyzer Unit shall be fully microprocessor controlled with heated oven, Detectors column flow adjustments Access panel, purge air controls, carrier gas controls etc. and certified for Hazardous area installation in the field.
20. The Detector system and electronics shall withstand high and low temperatures.
21. The Gas Chromatograph shall have retention time reproducibility character with analyzer programs stored in EEPROM and with battery backed CMOS memory. The GC shall store the data (of 3 shifts per day of 4 minute cycle average up to a month) for minimum one month. Vendor shall furnish the maximum capacity of the GC to store the data in the offer.
22. The offer GC should have extensive data storage/retrieval capacity to keep valuable data / results for future use. The GC archive shall store minimum most recent 1200 cycles & last 400 calibration and average result of last 64 days. Details have to be furnished in the offer.
23. The Gas Chromatograph shall have auto diagnosis feature and shall display error/ warn messages about the status of every parameter and eventful malfunctioning.
24. The Gas Chromatograph shall have method linking feature so that the analyzer shall be programmed to perform automatically and sequentially different determinations on a mixed sampler batch with each sample is analyzed according to its own method.

Programmable Control Unit

1. **Type**
Microprocessor based with alphanumeric display for input / output signals. Diagnostics results and other parameters with integral / hand held alphanumeric keyboard for data entry and other manual commands.
2. **Functions**
Control of all analysis functions in a cycle from operation of sampling valves to detection of peaks and precise calculations for peak measurements, area integration and internal normalization. Average values of analysis and computed results for 8, 16 & 24 hours shall be available automatically or on – demand. Also generation of gas analysis report (scheduled or on- demand) and average report (8,16 & 24 hr. averages) for calorific value Gross & Net and specific gravity.

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| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

TECHNICAL SPECIFICATIONS FOR ON-LINE GAS CHROMATOGRAPH

3. Design

Gas Chromatograph shall be compact, rugged and of proven design to meet the specific needs of energy measurement for natural gas.

4. Calibration

Automatic calibration with user selectable time intervals. To accurately determine the relative response factors with / without single component calibrations such as high purity methane. Vendor shall indicate the accuracy and repeatability of the measurement achieved by the calibration method adopted.

5. Diagnostics

Online automatic diagnostics for self-checking of system integrity periodically of giving alarm.

6. Inputs / outputs / Serial port


- a. Operator inputs via portable keyboard. Manual inputs for pressure and Temp.
- b. Potential free Contact output for malfunction.
- c. Four Nos. Analog Output (4 – 20 mA, isolated) signals for driving 600 ohms load resistance each for :
 1. Gas Calorific Value (Net)
 2. Mole % CO₂
 3. Specific Gravity
 4. Mole % N₂
- d. Chromatogram output for all analysis compounds.
- e. Dedicated 1 No. RS 232 C & 1 No. RS 485 (MODBUS ASCII) serial link for transmission of the following signals :

| | |
|--------------------|---------------------------------|
| — Gas composition | — Calorific value (Gross & Net) |
| — Specific gravity | — Compressibility |
- f. Separate port for Laptop and Printer (if provided against integral printer)

Note : Complete details and documentation with respect to protocol details with message structure, frame structures, synchronizing / timing signals, memory locations for data addressability and interface software driver details shall be furnished in order to successfully implement a serial link with the RTU (by Purchaser). The communication protocol shall be MODBUS and for read function, CODE-3 or CODE-4 is required. For writing function, Function code 6 (Single) and 16 (Multiple) are required.

7. Interface

- a. Digital line with Gas Chromatograph electronics in the field.
- b. RS 232 C / 485 serial communication link with owner's RTU (MODBUS ASCII) output


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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

TECHNICAL SPECIFICATIONS FOR ON-LINE GAS CHROMATOGRAPH


- 8. Mounting**
Control Room mounted
- 9. Enclosure**
General purpose
- 10. Power Supply**
230 V, AC, 50 HZ
- 11. Cabling**
Vendor to provide required interconnecting cables. All cables to be supplied with cable glands of double compression type and certified suitably.
- 12. Printer**
Printer: (If integral printer not available with offered GC model)
 - The Color Desk Jet Printer shall be for printing the Gas Analysis Report, an average report in a format indicating data, time & day, type of analysis etc. The Printer shall also be for Alarm Printing, Alarm Reports, Event log etc. Printer table shall also be included in the scope of the Bidder.
 - **Make shall be HP/ EPSON.**

PERFORMANCE

- 1. Components to be analyzed**
Composition as given in process gas composition – As per Annexure – II
 - 2. Standard calculations**
 - a. Real calorific value, wet and dry as per GPA 2172
 - b. Specific gravity as per GPA 2172
 - c. Compressibility of gas as per AGA 8. Vendor to note that configuration for AGA 8 shall be done by manually feeding as part of the MR.
 - 3. Repeatability**
 - a. Calorific value : ± 10 at 1000 kcal / scm
 - b. Specific gravity : ± 0.002 at 0.6 sp. Or better
- Note** Vendor shall provide the ranges as implemented in the programmer unit for each of the components, for the purpose of display and various outputs (4-20 mA and RS 232 – C). These ranges shall be configurable and shall be optimally selected to meet the above performance criteria.

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| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

| TECHNI CAL SPECI FI CATI ONS FOR ON-LI NE GAS CHROMATOGRAPH | |
|---|--|
| PROCESS / LINE CONDITIONS | |
| 1. | Line size / rating As per Annexure I |
| 2. | Schedule As per Annexure I |
| 3. | Line material As per Annexure – I |
| 4. a) | Composition & Properties of Natural gas As per Annexure – I |
| b) | Operating / Design pressure (kg/ cm² g) & Temperature (Deg. C) As per Annexure – I |
| c) | Dew point of gas - 3.8 at operating conditions |
| 5. | Utilities available : (To be confirmed Before Procurement) a. Power supply 230 V, AC, 50 HZ b. Instrument air Available Minimum 4.0 Kg/cm ² g Maximum 7.0 Kg/cm ² g |
| Note : Instrument air with 3/8” OD SS 316 tube shall be made available near the skid by the owner. All further tubing (15m-20 m), dual compression fittings, adapters, Filter Regulators. gauges required for the above shall be in vendor’s scope. | |

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| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

ANNEXURE - I


TECHNICAL SPECIFICATIONS FOR ON-LINE GAS CHROMATOGRAPH

SERVICE CONDITIONS

1. Tag Nos. : AE –1031 (one for Sri Ram Fertilizer Kota)
2. Quantity : 1 No. with skid
3. Gas Composition : Refer Annexure – II
4. Gas Pressure (Operating) : 42 - 43 Kg/cm² G
5. Gas pressure (Design) : 49 Kg/cm² G
6. Gas Temp (Normal) : 20 – 50⁰ C
7. Gas Temp. (Design) : : -20 to 65⁰ C
8. Moisture Content : Dry Gas
9. Line Size / Rating / Sch. / Flow

| Tag No. | Line Size | Rating | Sch. | Flow (MMSCMD) | Remarks |
|-----------------------|-----------|--------|--------------------|--------------------|--|
| AE – 1031 For skid | 8" * | 300 # | 12.7 mm thick * | 0.7 Min - 1.2 Max. | * The information is tentative and to be confirmed at the time of Order Placement. |

11. Power Supply : 230 V AC, 50 HZ
12. Instrument Air : 5.0 Kg/ cm² G

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| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |


INDICATIVE BILL OF MATERIALS FOR ON-LINE GAS CHROMATOGRAPH

Field Mounted Items:

1. Analyser for Gas Chromatograph with Necessary Certificate (CENELEC, CE, NMI etc.), 230 VAC / 50 Hz, One steam / one Cal., Power and signal cables and all accessories.
2. Sample probe (SS) (inlet ¾" outlet ¼" - or as recommended) with SS Relief valve and pressure gauge, Thredolet 3000 # material ASTM – A-105 (as per ANSI B 16.5) thread as per ANSI B 1.20.1, necessary assembly consisting of Ball valve, manometer and Relief Valve etc.
3. Sample line (1/16" SS tubing in protective Hose.) minimum 30 mtr.
4. Sample Conditioning Cabinet with all accessories, equipments, PRV, Flow meter, PG, filters, Moisture Trap etc. and fittings. All fitting shall be Swagelok make.
5. Mounting Skid for of Analyser, sampling conditioning cabinet and the bottle stand with vent system of 3 mtr. An explosion proof Junction Box with Switches for signal & power supply along with necessary power & signal cables and glands.
6. Bottle (duly filled for Calibration Gas, Carrier Gas) & Bottle Stand with Bottle pressure regulators, Automatic switchover system for Carrier Gas, Heating plate etc.
7. All Cables, Glands, Terminals, Tubing, structural items, Panel accessories required for installation of the system is in vendor's scope.
8. Dedicated earthing terminal has to be provided on the skid.

Control Room Mounted Items:

1. Programmable Control Unit with all inputs/outputs and serial / communication ports as mentioned in clause No.6 of Technical Specification of Programmable Control Unit.
2. G.C Panel along with all accessories like Zener Barriers/Isolators, AC/DC Converter, Power Supply unit, etc, as required to be installed in G.C Panel.
3. All required Signal Cables (armored) / Fiber Optic Cables, Power Cables and RS 232 Communication Cable (min 10-15 Mtr) and Cable Glands. Distance between the Control Room and the field Analyser Unit shall be considered minimum 225 mtr. for any estimation purpose.
4. Colour Desk Jet Printer with printer table (If not the integral part of GC).
5. The Flow computer and GC communication (on serial port) and further for SCADA if required in the scope of vendor.

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|  | MECON LIMITED DELHI | ITEM: ON-LINE GAS CHROMATOGRAPH | 0 | 02.06.08 | | | |
| | | | Rev. | Date | By | Chkd | Appd |
| CLIENT : M/s GAIL (INDIA) LIMITED | | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | MR NO. : MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |


GAS COMPOSITION PARAMETERS

ITEM : **GAS CROMATOGRAPH**

PROJECT : **NATURAL GAS PIPELINE PROJECT -METERING SKIDS
(Sri Ram Fertilizer Kota)**

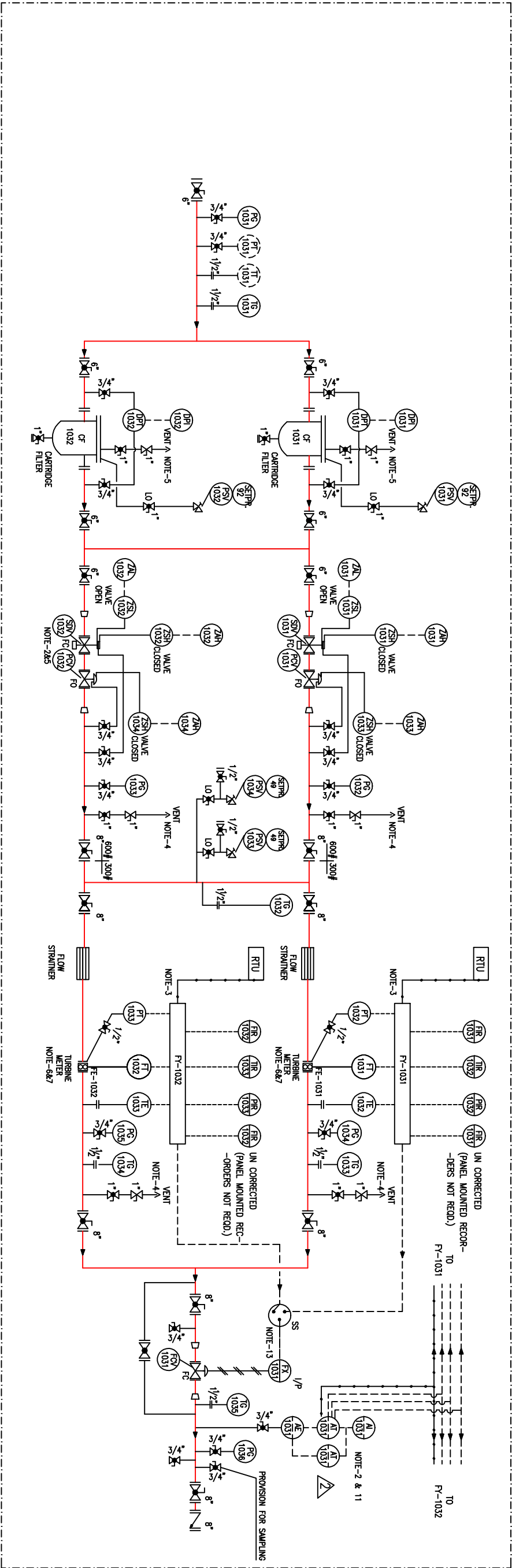
CLIENT : **M/s GAIL (India) Limited.**

| Sr. No. | Component | Mol% |
|---------|------------------|----------|
| 1. | METHANE | 89.872 |
| 2. | ETHANE | 6.4123 |
| 3. | PROPANE | 2.1808 |
| 4. | I-BUTANE | 0.50018 |
| 5. | N-BUTANE | 0.41015 |
| 6. | I-PENTANE | 0.012004 |
| 7. | N-PENTANE | 0.012004 |
| 8. | NITROGEN | 0.60022 |
| | Total | 100 |
| | Molecular Weight | 18.0224 |

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|  | MECON LIMITED DELHI | PROJECT: METERING SKID FOR SRI RAM FERTILIZER - KOTA | 0 | 02.06.08 | | | |
| | | | Rev | Date | By | Chkd | App |
| | | | MATERIAL REQUISITION | | | | |
| CLIENT: GAIL (INDIA) LIMITED. | | ITEM: ONLINE GAS CHROMATOGRAPH | MEC/23KF (Sri Ram/ VIJAIPUR) /05/ E5 /GAIL/ 030 | | | | |

Annexure – VIII to Addendum – I

P & ID DIAGRAM




NOTES :-

1. ALL LINES SIZES SHOWN ABOVE ARE INDICATIVE. VENDOR HAS TO DESIGN THE SYSTEM BASED ON THE MAXIMUM VELOCITY OF GAS 18 M/Sec. UPTO PCV AND 22M/Sec DOWNSTREAM OF PCV.
2. VENDOR HAS TO INCLUDE SKID MOUNTED INSTRUMENTS, CONTROL ROOM MOUNTED INSTRUMENTS AND CONTROL PANEL.
3. CONTROL ROOM MOUNTED FLOW COMPUTERS SHOULD BE SUPPLIED LOOSE. FLOW COMPUTER SHOULD HAVE HOOK UP FACILITY WITH GAS CHROMATOGRAPH (TO BE SUPPLIED BY SKID SUPPLIER), FLOW COMPUTER TO BE PROVIDED WITH GSM MODEM. FLOW COMPUTER ALL DATAS TO BE AVAILABLE TO SCADA.
4. ALL VENTS SHALL BE LOCATED AT A MIN. HEIGHT OF 3M ABOVE THE HIGHEST OPERATING PLATFORM.
5. SDV SHALL BE OF SLAM SHUT VALVE & SHALL BE CLOSED IN EVENT OF HIGH PRESSURE DISCHARGE FROM PRESSURE CONTROL VALVE. PCV SHALL BE OF FAIL TO OPEN TYPE AND OF PILOT OPERATED.
6. FLOW MEASUREMENT SHALL BE BY TURBINE FLOW METER WITH CONTROL ROOM MOUNTED FLOW COMPUTER. FLOW COMPUTER SHALL HAVE A FACILITY FOR AUDIT TRAIL, WEB ENABLED.
7. MEIERING TUBE SHALL BE IN CONFIRMATION WITH AGAT LATEST EDITION UPSTREAM & DOWN STREAM PIPE LENGTH SHALL BE MAINTAINED ACCORDINGLY & TRANSPORTED LOOSE.
8. ALL BALL VALVES OF SIZE 2" & ABOVE SHALL BE TRUNNION/PIVOT MOUNTED AND ALL BALL VALVES OF SIZE OF 1 1/2" & BELOW SHALL BE FLOATING TYPE.
9. CARTRIDGE ELEMENTS SHALL BE SUITABLE FOR DRY GAS
10. THE DESIGN OF METERING SYSTEM SHALL BE DONE BY THE MANUFACTURER OF THE METERING DEVICE. THE UPSTREAM AND DOWNSTREAM METER RUNS, FLOW STRAIGHTNER SHALL ALSO BE SUPPLIED AND WET CALIBRATED BY METERING MANUFACTURER. METERING MANUFACTURER SHALL BE RESPONSIBLE FOR REVIEW AND APPROVE ENTIRE METERING SKID LAYOUT DRAWINGS TO MAINTAIN ACCURACY AS PER NPL/NMI/PTB.
11. THE PT SHALL BE PUT UNDER A CONTROLLED ATMOSPHERE. NECESSARY CANOPY TO BE PROVIDED.
12. The Upstream and Downstream meter runs, flow straightner, and Turbine Flow Meter Shall be cold insulated. The thermowell and Impulse Tubing of Pressure Transmitter (for metering) shall also be cold insulated.
13. NATURAL GAS TO BE USED FOR REGULATION OF CONTROL VALVE.
14. CABLES FROM FIELD TO CONTROL ROOM IN NOT UNDER VENDOR'S SCOPE.

LEGEND :-

- BALL VALVE
- GLOBE VALVE
- CHECK VALVE
- PLUG VALVE

QTY REQD. - 1 NO.



GAIL (INDIA) LIMITED

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METERING SKID FOR SRI RAM FERTILIZER-KOTA

PAID DIAGRAM FOR GPRM SKID OF CAPACITY 0.7 MM TO 1.2 MM SCMD

MECON LIMITED

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| | | | | | | | | | | METERING SKID FOR SRI RAM FERTILIZER-KOTA | | | | | | | | | |
| | | | | | | | | | | PAID DIAGRAM FOR GPRM SKID OF CAPACITY 0.7 MM TO 1.2 MM SCMD | | | | | | | | | |
| | | | | | | | | | | SCALE : NIS | | | | | | | | | |
| | | | | | | | | | | DRG. NO. MEC/23M(Gr1-ran-ran-ko)/05/02/00/MS/1003 2 | | | | | | | | | |
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