



A Joint Venture of Andhra Pradesh Gas Distribution Corporation Ltd. and Hindustan Petroleum Corporation Ltd

LIMITED DOMESTIC COMPETITIVE BIDDING

BID DOCUMENT

FOR

ANNUAL RATE CONTRACT FOR MRS FABRICATION & INTERNAL PIPING WORKS FOR INDUSTRIAL & COMMERCIAL CONNECTIONS IN EAST AND WEST GODAVARI DISTRICTS OF ANDHRA PRADESH

(TENDER NO: GGPL/KKD/C&P/SR 2565/2019-20/06 dt. 18.07.2019)

DATE & TIME FOR PRE-BID MEETING: 23.07.2019 at 1500 Hrs. (IST)

**DUE DATE & TIME FOR
BID SUBMISSION : 01.08.2019 at 1400 Hrs. (IST)**

DUE DATE & TIME FOR BID OPENING: 01.08.2019 at 1500 Hrs. (IST)

E-mail- rameshna@gail.co.in/ kavya.gorle@apgcd.in /jayasree.d@apgcd.com

Website: www.godavarigas.in

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SECTION-I
INVITATION FOR BID (IFB)

SECTION-I**"INVITATION FOR BID (IFB)"**

Ref No: GGPL/KKD/C&P/2565/2019-20/06

Date: 18.07.2019

To,

PROSPECTIVE BIDDERS

SUB: ANNUAL RATE CONTRACT FOR MRS FABRICATION & INTERNAL PIPING WORKS FOR INDUSTRIAL & COMMERCIAL CONNECTIONS IN EAST AND WEST GODAVARI DISTRICTS OF ANDHRA PRADESH

Dear Sir/Madam,

- 1.0 Godavari Gas Private Limited herein after called GGPL invites bids from eligible bidders for the subject job/works, in complete accordance with the following details and enclosed tender documents.
- 2.0 The brief details of the tender are as under:

	NAME OF WORK / BRIEF SCOPE OF WORK/JOB	Annual Rate Contract for MRS Fabrication & Internal Piping Works For Industrial & Commercial Connections In East And West Godavari Districts Of Andhra Pradesh
A	TENDER NO. & DATE	GGPL/KKD/C&P/2565/2019-20/06 Date : 17.07.2019
B	TYPE OF BIDDING SYSTEM	TWO BID SYSTEM
C	TYPE OF TENDER	LIMITED DOMESTIC TENDER
D	CONTRACT PERIOD	2 Years (Clause no. 3 of SPECIAL CONDITIONS OF CONTRACT)
E	TENDER FEE with 18% GST (Refer clause no.5.2 of ITB)	Not Applicable
F	BID SECURITY / EARNEST MONEY DEPOSIT (EMD) (Refer clause no.16 of ITB)	APPLICABLE Rs. 2,58,000/-
G	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	From 18.07.2019 (10.00 Hrs, IST) to 01.08.2019 (14.00Hrs, IST) on following websites: (i) GGPLs Tender Website http://www.godavarigas.in

H	PRE-BID MEETING	23.07.2019 (15.00 Hrs, IST)
I	UN-PRICED BID OPENING	Date & time: 31.07.2019/15:00 Hrs
J	CONTACT DETAILS	Name : A.Ramesh Naik, Designation: Chief Manager (C&P) Phone No. & Extn : 7661029777 e-mail : rameshna@gail.co.in

In case of the days specified above happens to be a holiday in GGPL, the next working day shall be implied.

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB depending upon Type of Tender as mentioned at Clause no. 2.0 (c) of IFB. The IFB is an integral and inseparable part of the bidding document.
- ~~4.0 In case of e-tendering, the following documents in addition to uploading in the bid on GGPL's e-tendering website shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in e-tender by the bidder along with e-bid within the due date and time to the address mentioned in Bid Data Sheet(BDS):-~~
- ~~i) Demand Draft towards Tender fee (if applicable)~~
 - ~~ii) EMD/Bid Security (if applicable)~~
 - ~~iii) Power of Attorney~~
 - ~~iv) Integrity Pact (if applicable)~~
- 5.0 In case of Manual Bids, bids complete in all respect should reach at the address specified in Bid Data Sheet on or before the due date & time. Bids received after the due date and time is liable to be rejected.
- 6.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.
- 7.0 Any bidder, who meets the Bid Evaluation Criteria (BEC) and wishes to quote against this Tender Document, may download the complete Tender Document alongwith its amendment(s) if any from websites as mentioned at 2.0 (G) of IFB and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Due Date & Time of Bid Submission.
- 8.0 Bid(s) received from bidders to whom tender/information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from above mentioned website(s) shall be taken into consideration for evaluation & award provided that the Bidder is found responsive subject to provisions contained in Clause No. 2 of ITB.

The Tender Document calls for offers on single point "Sole Bidder" responsibility basis (except where JV/Consortium bid is allowed pursuant to clause no. 3.0 of ITB) and in total compliance of Scope of Works as specified in Tender Document.

- 9.0 Clarification(s)/Corrigendum(s) if any shall also be available on above referred websites. Any revision, clarification, addendum, corrigendum, time extension, etc. to the this Tender Document will be hosted on the above mentioned website(s) only. Bidders are requested to visit the website regularly to keep themselves updated.

Ref no.: GGPKKD/C&P/SR 2565/2019-20/06

- 10.0 All the bidders including those who are not willing to submit their bid are required to submit F-11 (Acknowledgement cum Consent letter) duly filled within 7 days from receipt of tender information.
- ~~11.0 SAP generated Request for Quotation (RFQ), if any shall also form an integral part of the Tender Document.~~
- 12.0 GGPL reserves the right to reject any or all the bids received at its discretion without assigning any reason whatsoever.

This is not an Order.

For & on behalf of
Godavari Gas Private Limited



(Authorized Signatory)

Name : A RAMESH NAIK

Designation : Chief Manager (C&P).

E-mail ID : rameshna@gail.co.inn

Contact No. : 7661029777

SECTION-II

BID EVALUATION CRITERIA & EVALUATION METHODOLOGY

1.0 TECHNICAL CRITERIA:

Bidders Qualification Criteria shall be as follows:

Bidder should have completed at least one similar work of fabrication and installation of natural gas metering & regulation system for the purpose of commercial & industrial application in single order value of not less than Rs.40 Lakhs in Last 7 years from the due date of final bid submission.

Or

Bidder should have completed laying of MDPE and GI/Cu piping network for providing PNG domestic connections and laying of carbon steel underground pipeline network or above ground piping work of natural gas / hydrocarbon application in single order value of not less than Rs.40 Lakhs in Last 7 years from the due date of final bid submission.

In support of above, copy of Work Order & Completion Certificate [of the same work order] indicating work order no., work order value, executed value and date of completion” must be submitted from the end user along with the offer.

Noted Below:

All the documents in support of Technical Criteria of Bid Evaluation criteria (BEC) to be furnished by the bidders shall necessary be **duly certified / attested by Chartered Engineer and notary public with legible stamp.**

Noted Below:

In case the bidder is executing a rate / maintenance contract which is still running and the contract value / quantity executed till one day prior to the due date of submission is equal to or more than the minimum prescribed value / quantity as mentioned in the BEC, such experience will also be taken into consideration provided that the bidder has submitted satisfactory work / supply execution certificate to this effect issued by end user / owner.

2.0 FINANCIAL CRITERIA:

The minimum **annual turnover** achieved by the bidder as per their audited financial results in any one of the preceding three financial years shall be 40 Lakhs.

Net worth of the bidder should be POSITIVE as per the last audited financial year.

The minimum **working capital** of the bidder as per the last audited financial year shall be Rs.8 Lakhs.

If the working capital of the bidder is less than value required above, then the bidder should supplement this with a letter from their bank, having net worth not less than Rs.100 Cr, confirming the availability of line of credit for the value as indicated above.

In support of above, bidder should submit “Details of financial capability of bidder” in prescribed format duly signed and stamped by a chartered accountant.

Further, copy of audited annual financial statements for submitted in bid shall be duly certified / attested by notary public with legible stamp.

Note to “BEC” (For Strict Compliance):

- (i) Bidders must furnish all relevant certificates / documents / information in support of their credentials to the above “eligibility criteria” along with the ‘Offer’, failing which the ‘Offer’ shall be summarily rejected.
- (ii) Bidders not meeting any of the above-mentioned “eligibility criteria” shall be rejected without assigning any reason.
- (iii) A job executed by a bidder for its own plant/projects cannot be considered as experience for the purpose of meeting the requirement of BEC of this tender.

However, jobs executed for Subsidiary/Fellow subsidiary/Holding Company will be considered as experience for the purpose of meeting BEC subject to submission of tax paid invoice (s) duly certified by Statutory Auditor /Chartered Accountant of the bidder towards payments of statutory tax in support of the job executed for Subsidiary / Fellow subsidiary / Holding company. Such bidders to submit documents in addition to the documents specified in the bidding document to meet BEC.

3.0 EVALUATION AND COMPARISON OF BIDS:

- a. Price Bids shall be evaluated on overall lowest basis of Schedule of Rates inclusive of all taxes & duties, GST etc.
- b. Bidders are required to quote for complete scope of services. If any bidder quotes for part scope/quantity shall be considered incomplete and shall not be evaluated, stands rejected.
- c. In case of tie between bidders, job shall be awarded to bidder having higher turnover in the preceding financial year.
- d. Public Procurement Policy for Micro and Small Enterprises Clause [pursuant to relevant Clause of 40.0 of ITB.

SECTION-III

INSTRUCTION TO BIDDERS

**(TO BE READ IN CONJUNCTION WITH
BIDDING DATA SHEET (BDS))**

INSTRUCTION TO BIDDERS

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INSTRUCTIONS TO BIDDERS [ITB]
(TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS))

[A] – GENERAL

1 SCOPE OF BID

- 1.1 The Employer as defined in the "General Conditions of Contract [GCC]", wishes to receive Bids as described in the Bidding Document/Tender document issued by Employer. Employer/Owner/GGPL occurring herein under shall be considered synonymous.
- 1.2 SCOPE OF BID: The scope of work/ Services shall be as defined in the Bidding documents.
- 1.3 The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.4 Throughout the Bidding Documents, the terms 'Bid', 'Tender' & 'Offer' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2 ELIGIBLE BIDDERS

- 2.1 The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/ Fraudulent/ Collusive/ Coercive practices, as defined in "Instructions to Bidders [ITB], Clause No. 39" (Action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices).
- 2.2 The Bidder is not put on 'Holiday' by GAIL/ GGPL or Public Sector Project Management Consultant (like EIL, MECON only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GAIL / GGPL or the Ministry of Petroleum and Natural Gas.

If the bidding documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/Award and will be returned immediately to such bidders.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to GGPL by the bidder.

It shall be the sole responsibility of the bidder to inform GGPL in case the bidder is put on 'Holiday' by GAIL/ GGPL or Public Sector Project Management Consultant (like EIL, Mecon. only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid and during the course of finalization of the tender.

Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

- 2.3 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to GGPL by the bidder.

It shall be the sole responsibility of the bidder to inform GGPL in case the bidder is under any liquidation court receivership or similar proceedings on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.4 Bidder shall not be affiliated with a firm or entity:

- (i) that has provided consulting services related to the work to the Employer during the preparatory stages of the work or of the project of which the works/services forms a part of or
- (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/ Consultant for the contract.

- 2.5 Neither the firm/entity appointed as the Project Management Consultant (PMC) for a contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process unless it is the sole Licensor/Licensor nominated agent/ vendor.

- 2.6 Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

- 2.7 Power of Attorney:

In case of a Single Bidder, Power of Attorney issued by the Board of Directors/ CEO / MD / Company Secretary of the Bidder/ all partners in case of Partnership firm/Proprietor in favour of the authorised employee(s) of the Bidder, in respect of the particular tender for signing the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and to act and take any and all decision on behalf of the Bidder, is to be submitted.

In case of a Consortium/JV, Power of Attorney issued by Board of Directors/ CEO / MD / Company Secretary of the Consortium Leader as well as Consortium Member(s) of the Consortium/ partners of JV, in favour of the authorised employee(s) of the Consortium Leader/Lead member of JV, for signing the documents on behalf of the Bidder, in respect of this particular tender, to sign the Bid and all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the Consortium/JV, are to be submitted.

The authorized employee(s) of the Bidder shall be signing the Bid and any consequence resulting due to such signing shall be binding on the Bidder.

3 BIDS FROM "JOINT VENTURE"/"CONSORTIUM" (FOR APPLICABILITY OF THIS CLAUSE REFER BIDDING DATA SHEET (BDS)): **Not applicable**

- 3.1 Bids from consortium/ JV of two or more members (maximum three including leader) are acceptable provided that they fulfill the qualification criteria and requirements stated in the Bidding Documents. Participating Consortium/ JV shall submit the Agreement as per the format F-17 clearly defining the scope and responsibility of each member. Members of consortium/ JV shall assume responsibility jointly & severally. The EMD shall be submitted by the Bidder (Consortium/ JV).
- 3.2 The Consortium/ JV Agreement must clearly define the leader/ lead partner, who shall be responsible for timely completion of work/ services and shall receive/ send instructions for and on behalf of the consortium during the period the bid is under evaluation as well as during the execution of contract.
- 3.3 All the members shall authorize the representative from the lead partner by submitting a Power of attorney (on a non judicial stamp paper of appropriate value) signed by legally authorized signatories of all the member(s). Such authorization must be accompanied with the bid. The authorized signatory shall sign all the documents relating to the tender/ contract. However, in case of award, payment shall be made to the consortium.
- 3.4 A consortium/JV once established at the time of submitting the Bid shall not be allowed to be altered with respect to constituting members of the JV/ Consortium or their respective roles/ scope of work, except if and when required in writing by owner. If during the evaluation of bids, a consortium/JV proposes any alteration/ changes in the orientation of consortium/JV or replacements or inclusions or exclusions of any partner(s)/ member(s) which had originally submitted the bid, bid from such a consortium/JV shall be liable for rejection.
- 3.5 Any member of the consortium/ JV shall not be eligible either in an individual capacity or be a part of any other consortium/JV to participate in this tender. Further, no member of the consortium/ JV shall be on 'Holiday' by GAIL / GGPL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Offer submitted by such consortium/ JV shall not be considered for opening/ evaluation/Award.

4 ONE BID PER BIDDER

- 4.1 A Firm/Bidder shall submit only 'one [01] Bid' in the same Bidding Process. A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.
- 4.2 Alternative Bids shall not be considered.

5 COST OF BIDDING & TENDER FEE

5.1 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Bank charges all courier charges including taxes & duties etc. incurred thereof. Further, GGPL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

5.2 **TENDER FEE: NOT APPLICABLE**

- 5.2.1 Tender Fee, if applicable, will be acceptable in the form of ‘crossed payee accounts only’ Bank Drafts/Banker’s Cheque[in favor of **Godavari Gas Private Limited** payable at place mentioned in **BDS**]. The Tender Fee is to be submitted as per Clause No. 2.0 (F) & 4.0 of IFB. A Bid without requisite Tender Fee will be ignored straightaway..
- 5.3 SMEs (Small & Micro Enterprises) are exempted from submission of Tender Fee in accordance with the provisions of Public Procurement Policy for MSE-2012 and Clause 40 of ITB. The Government Departments/PSUs are also exempted from the payment of tender fee.
- 5.4 In the event of a particular tender being cancelled, the tender fee (excluding GST, if any) will be refunded to the concerned bidders without any interest charges. No plea on interest charges in this regard shall be entertained by the Owner.

6 SITE VISIT

- 6.1 The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.
- 6.2 The Bidder or any of its personnel or agents shall be granted permission by the Employer to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.
- 6.3 The Bidder shall not be entitled to hold any claim against GGPL for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.

[B] – BIDDING DOCUMENTS

7 CONTENTS OF BIDDING DOCUMENTS

- 7.1 The contents of Bidding Documents / Tender Documents are those stated below, and should be read in conjunction with any 'Addendum / Corrigendum' issued in accordance with "ITB: Clause-9":
- Section-I : Invitation for Bid [IFB]
 - Section-II : BID EVALUATION CRITERIA [BEC] & Evaluation methodology
 - Section-III : Instructions to Bidders [ITB]
Annexure
Forms & Format
 - Section-IV : Technical specifications
 - Section-V : Special Conditions of Contract [SCC]
 - Section-VI : General Conditions of Contract [GCC]
 - Section-VII : Schedule of Rates

*Request for Quotation', wherever applicable, shall also form part of the Bidding Document.

- 7.2 The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Documents. The "Request for Quotation [RFQ] & Invitation for Bid (IFB)" together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.

8 CLARIFICATION OF BIDDING DOCUMENTS

- 8.1 A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify GGPL in writing or by fax or email at GGPL's mailing address indicated in the BDS no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the due date of submission of bid in cases where pre-bid meeting is not held. GGPL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. GGPL may respond in writing to the request for clarification. GGPL's response including an explanation of the query, but without identifying the source of the query will be uploaded on GGPL's tendering web site <http://www.godavarigas.in> communicated to prospective bidders by e-mail/ fax.
- 8.2 Any clarification or information required by the Bidder but same not received by the Employer at clause 8.1 (refer BDS for address) above is liable to be considered as "no clarification / information required".

9 AMENDMENT OF BIDDING DOCUMENTS

- 9.1 At any time prior to the 'Bid Due Date', Owner may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by addenda/ corrigendum.
- 9.2 Any addendum/ corrigendum thus issued shall be integral part of the Tender Document and shall be hosted on the websites as provided at clause no. 2.0 (H) of IFB /communicated to prospective bidders by e-mail/ fax. Bidders have to take into account all such addendum/ corrigendum before submitting their Bid.
- 9.3 The Employer, if consider necessary, may extend the date of submissions of Bid in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the amendment issued thereof.
-

[C] – PREPARATION OF BIDS**10 LANGUAGE OF BID:**

The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the Bid exchanged by Bidder and GGPL shall be written in English language only. In case a document, certificate, printed literature etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Chamber of Commerce of Bidders Country, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.

11. DOCUMENTS COMPRISING THE BID

11.1 In case the Bids are invited under the Manual two Bid system. The Bid prepared by the Bidder shall comprise the following components sealed in 2 different envelopes:

11.1.1 **ENVELOPE-I: "TECHNO-COMMERCIAL / UN-PRICED BID"** shall contain the following:

- (a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents.
- (b) 'Bidder's General Information', as per 'Form F-1'.
- (c) 'Bid Form', as per 'Form F-2'
- (d) Copies of documents, as required in 'Form F-3'
- (e) As a confirmation that the prices are quoted in requisite format complying with the requirements copy of Schedule of Rate (SOR) with prices blanked out mentioning quoted / not quoted (as applicable) written against each item.
- (f) 'Letter of Authority' on the Letter Head, as per 'Form F-5'
- (g) 'No Deviation Confirmation', as per 'Form F-6'
- (h) 'Bidder's Declaration regarding Bankruptcy', in 'Form F-7'
- (i) 'Certificate for Non-Involvement of Government of India ' from Bidder, as per 'Form F-8'
- (j) 'Agreed Terms and Conditions', as per 'Form F-10'
- (k) 'ACKNOWLEDGEMENT CUM CONSENT LETTER', as per 'Form F-11'
- (l) Duly attested documents in accordance with the "BID EVALUATION CRITERIA [BEC]" establishing the qualification.
- (m) Undertaking on the Letter head, as per the Form F-12.
- (n) Power of Attorney /copy of Board Resolution, in favour of the authorized signatory of the Bid, as per clause no.2.7 of ITB
- (o) Any other information/details required as per Bidding Document
- (p) EMD in original as per Clause 16 of ITB
- (q) All forms and Formats including Annexures.
- (r) Original Tender Fee (if applicable)
- (s) List of consortium/ JV member (s), if any, and Consortium Agreement (as per format) clearly defining their involvement & responsibility in this work, wherever applicable as specified elsewhere in the IFB/RFQ/BEC.
- (t) 'Integrity Pact' as per 'Form F-20'
- (u) 'Indemnity Bond' as per 'Form F-21'
- (v) Tender Document duly signed/ digitally signed by the Authorized Signatory.
- (w) Additional document specified in Bidding Data Sheet (BDS).

Note: All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder.

11.1.2 ENVELOPE-II: Price Bid

- i) The Prices are to be submitted strictly as per the Schedule of Rate of the bidding documents. GGPL shall not be responsible for any failure on the part of the bidder to follow the instructions.
- ii) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR format or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the "Schedule of Rates (SOR)" and indicate the discounted unit rate(s) only.
- iii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In case, it is observed that any of the bidder(s) has/have offered suo-moto Discount/Rebate after opening of un-priced bid but before opening of price bids such discount /rebate(s) shall not be considered for evaluation. However, in the event of the bidder emerging as the lowest evaluated bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the bidder shall be considered for Award of Work and the same will be conclusive and binding on the bidder.
- v) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the un-priced part of the bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.
- vi) In case any bidder does not quote for any item(s) of "Schedule of Rates" and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders . If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.

~~11.2 In case the bids are invited under e tendering system, bidders are requested to refer instructions for participating in E-Tendering enclosed herewith as Annexure-III and the ready reckoner for bidders available in <https://etender.gail.co.in>. Bids submitted manually shall be rejected, the bids must be submitted on GAIL's E-tendering website as follows :-~~

~~11.2.1 PART-I: "TECHNO-COMMERCIAL/UN-PRICED BID" comprising all the above documents mentioned at 11.1.1 along with copy of EMD/Bid Bond, Tender fee~~

~~(wherever applicable), copy of Power of Attorney and copy of integrity pact should be uploaded in the private area earmarked (Tender Document) in the GGPL's e-tendering portal.~~

~~Further, Bidders must submit the original " EMD & Tender Fee (wherever applicable), Power of Attorney, Integrity Pact (wherever applicable) and any other documents specified in the Tender Document to the address mentioned in IFB, in a sealed envelope, super scribing the details of Tender Document (i.e. tender number & tender for) within 7 days from the date of un priced bid opening.~~

~~Bidders are required to submit the EMD in original by Due Date and Time of Bid Submission or upload a scanned copy of the same in the Part I of the Bid. If the Bidder is unable to submit EMD in original by Due Date and Time of Bid Submission, the Bidder is required to upload a scanned copy of the EMD in Part I of Bid, provided the original EMD, copy of which has been uploaded, is received within 7 days from the Due Date of Bid Opening, failing which the Bid will be rejected irrespective of their status/ranking in tendering process and notwithstanding the fact that a copy of EMD was earlier uploaded by the Bidder.~~

11.2.2 PART-II: PRICE BID

~~The Prices are to be filled strictly in the Schedule of Rate of the bidding documents and provision mentioned at para 11.1.2 hereinabove and to uploaded in SOR attachment/Conditions of E-tendering portal.~~

~~*[In case of online bidding, necessary modifications w.r.t. SOR attachment and provisions for online filling the rate and its attachment, should be mentioned]*~~

~~11.3 In case of bids invited under *single bid system*, a single envelope containing all documents specified at Clause 11.1.1 & 11.1.2 of ITB above form the BID. All corresponding conditions specified at Clause 11.1.1 & 11.1.2 of ITB shall become applicable in such a case.~~

12 SCHEDULE OF RATES / BID PRICES

12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the Employer. The prices quoted by the Bidders will be inclusive of all taxes except GST ((CGST & SGST/UTGST or IGST).

12.2 Prices must be filled in format for "Schedule of Rates [SOR]" enclosed as part of Tender document. If quoted in separate typed sheets and any variation in item description, unit or quantity is noticed; the Bid is liable to be rejected.

12.3 **Bidder shall quote for all the items of "SOR" after careful analysis of cost involved for the performance of the completed item considering all parts of the Bidding Document.** In case any activity though specifically not covered in description of item under "SOR" but is required to complete the works as per Specifications, Scope of Work / Service, Standards, General Conditions of Contract ("GCC"), Special Conditions of Contract ("SCC") or any other part of Bidding

Document, the prices quoted shall be deemed to be inclusive of cost incurred for such activity.

- 12.4 All duties, taxes and other levies [if any] payable by the Contractor under the Contract, or for any other cause except final **GST (CGST & SGST/UTGST or IGST)** shall be included in the rates / prices and the total bid-price submitted by the Bidder. Applicable rate of **GST (CGST & SGST/ UTGST or IGST)** on the contract value shall be indicated in Agreed Terms & Conditions (Format-F10) and SOR
- 12.5 Prices quoted by the Bidder, shall remain firm and fixed and valid until completion of the Contract and will not be subject to variation on any account. Any new taxes & Duties, if imposed by the State/ Govt. of India after due date of bid submission but before the Contractual Delivery Date, shall be reimbursed to the contractor on submission of documentary evidence for proof of payment to State/ Govt. Authorities and after ascertaining its applicability with respect to the contract.
- 12.6 The Bidder shall quote the prices in 'figures' & words. There should not be any discrepancy between the prices indicated in figures and the price indicated in words. In case of any discrepancy, the same shall be dealt as per clause no. 30 of ITB.
- 12.7 Further, Bidder shall also mention the **Service Accounting Codes (SAC) / Harmonized System of Nomenclature (HSN)** at the designated place in SOR.
- 13 **GST (CGST & SGST/UTGST or IGST)**
- 13.1 Bidders are required to submit copy of the GST Registration Certificate while submitting the bids wherever **GST (CGST & SGST/UTGST or IGST)** is applicable.
- 13.2 Quoted prices should be inclusive of all taxes and duties, except **GST (CGST & SGST or IGST or UTGST)**. Please note that the responsibility of payment of **GST (CGST & SGST or IGST or UTGST)** lies with the Supplier of Goods / Services only. Supplier of Goods / Services (Service Provider) providing taxable service shall issue an Invoice/ Bill, as the case may be as per rules/ regulation of GST. Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods / Services (Service Provider) with requisite details.

Payments to Service Provider for claiming **GST (CGST & SGST/UTGST or IGST)** amount will be made provided the above formalities are fulfilled. Further, GGPL may seek copies of challan and certificate from Chartered Accountant for deposit of **GST (CGST & SGST/UTGST or IGST)** collected from Owner.

- 13.3 In case CBEC (Central Board of Excise and Customs)/ any equivalent Central Government agency/State Government agency brings to the notice of GGPL that the Supplier of Goods / Services (Service Provider) has not remitted the amount towards **GST (CGST & SGST/UTGST or IGST)** collected from GGPL to the government exchequer, then, that Supplier of Goods / Services (Service Provider) shall be put under Holiday list of GGPL for period of six months as mentioned in Procedure for Evaluation of Performance of Vendors/ Suppliers/Contractors/ Consultants.
- 13.4 In case of statutory variation in **GST (CGST & SGST/UTGST or IGST)**, other than due to change in turnover, payable on the contract value during contract period, the Supplier of Goods / Services (Service Provider) shall submit a copy of the

'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.

Beyond the contract period, in case GGPL is not entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then any increase in the rate of **GST (CGST & SGST/UTGST or IGST)** beyond the contractual delivery period shall be to Service Provider's account whereas any decrease in the rate **GST (CGST & SGST/UTGST or IGST)** shall be passed on to the Owner.

Beyond the contract period, in case GGPL is entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then statutory variation in applicable **GST (CGST & SGST/UTGST or IGST)** on supply and on incidental services, shall be to GGPL's account.

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

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

13.5 Where the GGPL is entitled to avail the input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-

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

13.5.2 The input tax credit of **GST (CGST & SGST/UTGST or IGST)** quoted shall be considered for evaluation of bids, as per evaluation criteria of tender document.

13.6 Where the GGPL is not entitled to avail/take the full input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-

13.6.1 Owner/GGPL will reimburse **GST (CGST & SGST/UTGST or IGST)** to the Supplier of Goods / Services (Service Provider) at actuals against submission of Invoices as per format specified in rules/ regulation of GST subject to the ceiling amount of **GST (CGST & SGST/UTGST or IGST)** as quoted by the bidder, subject to any statutory variations, except variations arising due to change in turnover. In case of any variation in the executed quantities (If directed and/or certified by the Engineer-In-Charge) the ceiling amount on which **GST (CGST & SGST/UTGST or IGST)** is applicable will be modified on pro-rata basis.

13.6.2 The bids will be evaluated based on total price including applicable **GST (CGST & SGST/UTGST or IGST)**.

13.7 GGPL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, it not registered yet.

However, in case any unregistered bidder is submitting their bid, their prices will be loaded with applicable **GST (CGST & SGST/UTGST or IGST)** while evaluation of bid. Where GGPL is entitled for input credit of **GST (CGST & SGST/UTGST or IGST)**, the same will be considered for evaluation of bid as per evaluation methodology of tender document.

13.8 In case GGPL is required to pay entire/certain portion of applicable **GST (CGST & SGST/UTGST or IGST)** and remaining portion, if any, is to be deposited by Bidder directly as per **GST (CGST & SGST/UTGST or IGST)** laws, entire applicable rate/amount of **GST (CGST & SGST/UTGST or IGST)** to be indicated by bidder in the SOR.

Where GGPL has the obligation to discharge **GST (CGST & SGST/UTGST or IGST)** liability under reverse charge mechanism and GGPL has paid or is /liable to pay **GST (CGST & SGST/UTGST or IGST)** to the Government on which interest or penalties becomes payable as per GST laws for any reason which is not attributable to GGPL or ITC with respect to such payments is not available to GGPL for any reason which is not attributable to GGPL, then GGPL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by GGPL to Contractor / Supplier.

13.9 Contractor shall ensure timely submission of invoice(s) as per rules/ regulations of GST with all required supporting document(s) within a period specified in Contracts/ LOA to enable GGPL to avail input tax credit. Further, returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

If input tax credit with respect to **GST (CGST & SGST/UTGST or IGST)** is not available to GGPL for any reason which is not attributable to GGPL, then GGPL shall not be obligated or liable to pay or reimburse **GST (CGST & SGST/UTGST or IGST)** charged in the invoice(s) and shall be entitled to / deduct/ setoff /recover the such **GST (CGST & SGST/UTGST or IGST)** thereupon together with all penalties and interest if any, against any amounts paid or payable by GGPL to Supplier of Goods / Services.

13.10 **Anti-profiteering clause**

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

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

13.12 **GST (CGST & SGST/UTGST or IGST) is implemented w.e.f. 01.07.2017 which subsumed various indirect taxes and duties applicable before 01.07.2017. Accordingly, the provisions of General Condition of Contract relating to taxes and duties which are subsumed in GST are modified to aforesaid provisions mentioned in clause no. 12 and 13 of ITB.**

14 BID CURRENCIES:

Bidders must submit bid in Indian Rupees only.

15 BID VALIDITY

15.1 Bids shall be kept valid for period specified in BDS from the final Due date of submission of bid'. A Bid valid for a shorter period may be rejected by GGPL as 'non-responsive'.

15.2 In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period. The request and the responses thereto shall be made in writing or by fax/email. A Bidder may refuse the request without forfeiture of his EMD. A Bidder agreeing to the request will not be required or permitted to modify his Bid, but will be required to extend the validity of its EMD for the period of the extension and in accordance with "ITB: Clause-16" in all respects.

16 EARNEST MONEY DEPOSIT

16.1 Bid must be accompanied with earnest money (i.e **Earnest Money Deposit (EMD)**) also known as **Bid Security**) in the form of '**Demand Draft**' / '**Banker's Cheque**' [in favour of **Godavari Gas Private Limited** payable at place mentioned in **BDS**] or '**Bank Guarantee**' or '**Letter of Credit**' strictly as per the format given in form F 4/ F- 4A (as the case may be) of the **Tender Document**. Bidder shall ensure that EMD submitted in the form of '**Bank Guarantee**' or '**Letter of Credit**' should have a validity of at least 'two [02] months' beyond the validity of the Bid. EMD submitted in the form of '**Demand Draft**' or '**Banker's Cheque**' should be valid for three months.

Bid not accompanied with EMD, or EMD not in requisite format shall be liable for rejection. The EMD shall be submitted in Indian Rupees only.

16.2 The EMD is required to protect GGPL against the risk of Bidder's conduct, which would warrant the forfeiture of EMD, pursuant to clause-16.7 of ITB.

16.3 GGPL shall not be liable to pay any documentation charges, Bank charges, commission, interest etc. on the amount of EMD. In case EMD is in the form of a

‘Bank Guarantee’, the same shall be from any Indian scheduled Bank or a branch of an International Bank situated in India and registered with ‘Reserve Bank of India’ as Scheduled Foreign Bank. However, in case of ‘Bank Guarantee’ from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the ‘Bank Guarantee’ itself or separately on its letterhead.

- 16.4 Any Bid not secured in accordance with “ITB: Clause-16.1 & Clause-16.3” may be rejected by GGPL as non-responsive.
- 16.5 Unsuccessful Bidder’s EMD will be discharged/ returned as promptly as possible, but not later than ‘thirty [30] days’ after finalization of tendering process.
- 16.6 The successful Bidder’s EMD will be discharged upon the Bidder’s acknowledging the ‘Award’ and signing the ‘Agreement’ (if applicable) and furnishing the ‘Contract Performance Security (CPS)/ Security Deposit’ pursuant to clause no. 38 of ITB.
- 16.7 Notwithstanding anything contained herein, the EMD may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the ‘Period of Bid Validity’
 - (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
 - (c) If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).
 - (d) Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.
 - (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) to acknowledge receipt of the “Notification of Award” / Fax of Acceptance[FOA]”,
 - (ii) to furnish “Contract Performance Security / Security Deposit”, in accordance with “ITB: Clause-38”
 - (iii) to accept ‘arithmetical corrections’ as per provision of the clause 30 of ITB.
- 16.8 In case EMD is in the form of ‘Bank Guarantee’ or ‘Letter of Credit’, the same must indicate the Tender Document No. and the name of Tender Document for which the Bidder is quoting. This is essential to have proper correlation at a later date.
- 16.9 MSEs (Micro & Small Enterprises) are exempted from submission of EMD in accordance with the provisions of PPP-2012 and Clause 40 of ITB. The Government Departments/PSUs are also exempted from the payment of EMD. However, Traders/Dealers/ Distributors /Stockiest /Wholesaler are not entitled for exemption of EMD.

17 PRE-BID MEETING (IF APPLICABLE)

- 17.1 The Bidder(s) or his designated representative are invited to attend a "Pre-Bid Meeting" which will be held at address specified in IFB. It is expected that a bidder shall not depute more than 02 representatives for the meeting.

- 17.2 Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on e-tendering.
- 17.3 Text of the questions raised and the responses given, together with any responses prepared after the meeting, will be uploaded on GGPL e-tendering website against the Tender. Any modification of the Contents of Bidding Documents listed in "ITB: Clause-7.1", that may become necessary as a result of the Pre-Bid Meeting shall be made by the Employer exclusively through the issue of an Addendum / Corrigendum pursuant to "ITB: Clause-9", and not through the minutes of the Pre-Bid Meeting.
- 17.4 Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

18 FORMAT AND SIGNING OF BID

- 18.1 The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for un-amended printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.
- 18.2 The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.
- 18.3 In case of e-tendering, digitally signed documents to be uploaded as detailed in addendum to ITB.

19 ZERO DEVIATION AND REJECTION CRITERIA

- 19.1 ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. GGPL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note GGPL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. GGPL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence. GGPL reserves the right to raise technical and/or commercial query(s), if required, may be raised on the bidder(s). The response(s) to the same shall be in writing, and no change in the price(s) or substance of the bids shall be sought, offered or permitted. The substance of the bid includes but not limited to prices, completion, scope, technical specifications, etc. Bidders are requested to not to take any deviation/exception to the terms and conditions laid down in this "Tender Documents", and submit all requisite documents as mentioned in this "Tender Documents", failing which their offer will be liable for rejection. If a bidder does not reply to the queries in the permitted time frame then its bid shall be evaluated based on the documents available in the bid.

- 19.2 **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:
- (a) Firm Price
 - (b) Earnest Money Deposit / Bid Security
 - (c) Specifications & Scope of Work
 - (d) Schedule of Rates / Price Schedule / Price Basis
 - (e) Duration / Period of Contract/ Completion schedule
 - (f) Period of Validity of Bid
 - (g) Price Reduction Schedule
 - (h) Contract Performance Security
 - (i) Guarantee / Defect Liability Period
 - (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
 - (k) Force Majeure & Applicable Laws
 - (l) Integrity Pact, if Applicable
 - (m) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid

Note:Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.

20 **E-PAYMENT**

Godavari Gas Private Limited has initiated payments to Suppliers and Contractors electronically, and to facilitate the payments electronically through '**e-banking**'. The successful bidder should give the details of his bank account as per the bank mandate form.

[D] – SUBMISSION OF BIDS

21 **SUBMISSION, SEALING AND MARKING OF BIDS**

- 21.1 In case of e-tendering, bids shall be submitted through e-tender mode in the manner specified elsewhere in tender document. No Manual/ Hard Copy (Original) offer shall be acceptable.
- 21.2 In case of manual tendering bid must be submitted in sealed envelope. If the envelope is not sealed & marked as per Clause No. 11 of ITB, the employer will assume no responsibility for misplacement or pre-mature opening of the bid.
- 21.3 All the bids shall be addressed to the owner at address specified in IFB.
- 21.4 Bids submitted under the name of AGENT/CONSULTANT/REPRESENTATIVE/RETAINER/ASSOCIATE etc. on behalf of a bidder/affiliate shall not be accepted.

22 **DEADLINE FOR SUBMISSION OF BIDS**

- 22.1 In case of e-bidding, the bids must be submitted through e-tender mode not later than the date and time specified in the tender documents/BDS.

- 22.2 In case of manual tendering EMD along with bid must be submitted within the due date & time.
- 22.3 GGPL may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids (clause 9 of ITB refers). In which case all rights and obligations of GGPL and the Bidders, previously subject to the original deadline will thereafter be subject to the deadline as extended. Notice for extension of due date of submission of bid will be uploaded on GGPL's website/ communicated to the bidders.

23 LATE BIDS

- 23.1 Any bids received after the notified date and time of closing of tenders will be treated as late bids.
- 23.2 ~~In case of e-tendering, e-tendering system of GGPL shall close immediately after the due date for submission of bid and no bids can be submitted thereafter.~~

In case of manual tendering, bids received by GGPL after the due date for submission of bids shall not be considered. Such late bids shall be returned to the bidder within "10 days" in 'unopened conditions'. The EMD of such bidders shall be returned along with the un-opened bid. In case of e-tendering, where the bid bond/physical documents has been received but the bid is not submitted by the bidder in the e-tendering portal, such bid bond/ physical documents shall be returned immediately.

- 23.3 Unsolicited Bids or Bids received to address other than one specifically stipulated in the tender document will not be considered for evaluation/opening/award if not received to the specified destination within stipulated date & time.

24 MODIFICATION AND WITHDRAWAL OF BIDS

- 24.1 Modification and withdrawal of bids shall be as follows:-

24.1.1 IN CASE OF E-TENDERING

~~The bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document.~~

24.1.2 IN CASE OF MANUAL BIDDING

The bidder may withdraw or modify its bid after bid submission but before the due date for submission as per tender document provided that the written notice of the modification/ substitution/ withdrawal is received by GGPL prior to the deadline for submission of bid.

- 24.2 The modification shall also be prepared, sealed, marked and dispatched in accordance with the provisions of the clause 11 & 22 of ITB with relevant 'Cut-Out Slip' duly pasted and mentioning on top of the envelope as "MODIFICATION". In case of withdrawal of bid, the Envelope containing withdrawal letter duly super scribing the envelope as "WITHDRAWAL" and "Tender Document number :...."/ communication regarding withdrawal of bid with "Tender Document number :...."/ must reach concerned dealing official of GGPL within Due date & Time of

submission of Bid. No bid shall be modified/ withdrawn after the Due Date & Time for Bid submission.

- 24.3 Any withdrawal/ modification/substitution of Bid in the interval between the Due Date & Time for Bid submission and the expiration of the period of bid validity specified by the Bidder in their Bid shall result in the Bidder's forfeiture of EMD pursuant to clause 16 of ITB and rejection of Bid.
- 24.4 The latest Bid submitted by the Bidder shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.
- 24.5 In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, GGPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s). Further, such bidder will be put on holiday for a period of six months after following the due procedure.

25 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

GGPL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for GGPL's action. However, Bidder if so desire may seek the reason (in writing) for rejection of their Bid to which GGPL shall respond quickly.

[E] – BID OPENING AND EVALUATION

26 BID OPENING

26.1 *Unpriced Bid Opening :*

GGPL will open bids, in the presence of bidders' designated representatives who choose to attend, at date, time and location stipulated in the BDS. The bidders' representatives, who are present shall sign a bid opening register evidencing their attendance.

26.2 *Priced Bid Opening:*

- 26.2.1 GGPL will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Bidders selected for opening of their price bids shall be informed about the date of price bid opening. Bidders may depute their authorized representative to attend the bid opening. The bidders' representatives, who are present shall sign a register evidencing their attendance and may be required to be present on a short notice.

26.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened in both manual tendering and e-tendering. In case of Manual Tender, the envelope containing Price Bid shall be returned unopened after opening of the price bids of techno-commercially responsive Bidders.

26.3 In case of bids invited under the single bid system, bid shall be opened on the specified due date & time.

27 CONFIDENTIALITY

Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such process.

28 CONTACTING THE EMPLOYER

28.1 From the time of Bid opening to the time of award of Contract, if any Bidder wishes to contact the Employer on any matter related to the Bid, it should do so in writing. Information relating to the examination, clarification, evaluation & recommendation for award shall not be disclosed.

28.2 Any effort by the Bidder to influence the Employer in the Employer's 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure in this regard.

29 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

29.1 The owner's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-

- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Is accompanied by the required 'Earnest Money / Bid Security';
- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-29.2"

29.2 A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-

- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document.

29.3 A material deviation, reservation or omission is one that,

- a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as specified in tender documents.
 - ii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer's rights or the tenderer's obligations under the proposed Contract.
- b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

29.4 The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.

29.5 If a Bid is not substantially responsive, it may be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the of material deviation, reservation or omission.

30 CORRECTION OF ERRORS

- 30.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the Bidder (by multiplying the quantity and rate) shall be taken as correct.
 - (ii) When the rate quoted by the Bidder in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount shall be re-calculated/ corrected accordingly.
 - (iii) When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes
- 30.2 The amount stated in the bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security shall be forfeited.

31 CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

Not Applicable. All bids submitted must be in the currency specified at clause 14 of ITB.

32 EVALUATION AND COMPARISON OF BIDS

Bid shall be evaluated as per evaluation criteria mentioned in Section-II of bidding documents.

33 COMPENSATION FOR EXTENDED STAY (FOR APPLICABILITY OF THIS CLAUSE REFER BDS):-

- 33.1 In the event of the time of completions of work getting delayed beyond the time schedule indicated in the bidding document plus a grace period equivalent to 1/5th of the time schedule or 2 months whichever is more, due to reasons solely attributable to Employer, the Contractor shall be paid compensation for extended stay (ESC) to maintain necessary organizational set up and construction tools, tackles, equipment etc. at site of work.
- 33.2 The bidder is required to specify the rate for ESC on per month basis in the “PRICE PART” of his bid, which shall be considered for loading on total quoted price during price bid evaluation. The loading shall be done of a period of 1/5th of the time schedule or 1 month whichever is less. In case bidder does not indicate the rate for ESC in price part of his bid, it will be presumed that no ESC is required by the bidder and evaluation shall be carried out accordingly.

34 PURCHASE PREFERENCE

Purchase preference to Central government public sector Undertaking and Micro and Small Enterprises (MSEs) shall be allowed as per Government instructions in vogue.

[F] – AWARD OF CONTRACT

35 AWARD

Subject to "ITB: Clause-29", GGPL will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

36 NOTIFICATION OF AWARD / FAX OF ACCEPTANCE

36.1 Prior to the expiry of 'Period of Bid Validity', Notification of Award for acceptance of the Bid will be intimated to the successful Bidder by GGPL either by Fax / E - mail /Letter or like means defined as the "Fax of Acceptance (FOA)". The Contract shall enter into force on the date of FOA and the same shall be binding on GGPL and successful Bidder (i.e. Contractor/Service Provider). The Notification of Award/FOA will constitute the formation of a Contract. The detailed Letter of Acceptance shall be issued thereafter incorporating terms & conditions of Tender Document, Corrigendum, Clarification(s), Bid and agreed variation(s)/acceptable deviation(s), if any. GGPL may choose to issue Notification of Award in form of detailed Letter of Acceptance without issuing FOA and in such case the Contract shall enter into force on the date of detailed Letter of Acceptance only.

36.2 Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award. The "Notification of Award" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract as per "ITB: Clause-37".

Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", GGPL will promptly discharge his 'Earnest Money / Bid Security', pursuant to "ITB: Clause-16"

37 SIGNING OF AGREEMENT

37.1 GGPL will award the Contract to the successful Bidder, who, within 'fifteen [15] days' of receipt of the same, shall sign and return the acknowledged copy to GGPL.

37.2 The successful Bidder/Contractor shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Contractor] and of 'state' specified in Bidding Data Sheet (BDS)only, within 'fifteen [15] days' of receipt of the "Fax of Acceptance [FOA]" of the Tender by the successful Bidder/Contractor failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period,shall constitute sufficient grounds for forfeiture of EMD/Security Deposit.

38 CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT

38.1 Within 30 days of the receipt of the notification of award/ Fax of Acceptance from GGPL, the successful bidder shall furnish the Contract Performance Security (CPS) in accordance with of General Conditions of the Contract. The CPS shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or Letter of Credit and shall be in the currency of the Contract. However, CPS shall not be applicable in cases where in the order value as specified in Notification of Award is less than INR 5 Lakh (exclusive of taxes & duties).

38.2 The contract performance security shall be for an amount equal to specified in Bidding Data Sheet (BDS) towards faithful performance of the contractual obligations and performance of equipment. For the purpose of CPS, Contract/order value shall be exclusive of GST (CGST & SGST/UTGST or IGST) to be reimbursed by the Owner.

Bank Guarantee towards CPS shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank in case of Indian bidder as well as foreign bidder. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead. This bank guarantee shall be valid for a period as three months beyond the DLP specified in Bid Data Sheet.

38.3 Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD.

38.4 The CPS has to cover the entire contract value including extra works/services also. As long as the CPS submitted at the time of award take cares the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional CPS. As soon as the total executed value is likely to burst the ceiling of awarded contract price, the contractor should furnish additional CPS.

39 PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/COLLUSIVE/ COERCIVE PRACTICES

39.1 Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices is enclosed at Annexure-I.

39.2 The Fraud Prevention Policy document is available on GAIL's website (www.gailonline.com)

39.3 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES

Notwithstanding anything contained contrary in GCC and other "CONTRACT DOCUMENTS", in case it is found that the Vendors/ Suppliers /

Contractors/Bidders/ Consultants indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as mentioned in GGPL's "Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices" (Annexure-I), the contractor/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by GGPL., to such Vendors/ Suppliers / Contractors/Bidders/ Consultants.

The Vendor/ Supplier / Contractor/ Bidder/Consultant understands and agrees that in such cases where Vendor/ Supplier / Contractor/ Bidder/Consultant has been banned (in terms of aforesaid procedure) from the date of issuance of such order by GAIL/ GGPL (India) Limited, such decision of GAIL/ GGPL (India) Limited shall be final and binding on such Vendor/ Supplier / Contractor/ Bidder/Consultant and the 'Arbitration clause' in the GCC and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue /dispute arising in the matter.

40 PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES

40.1 Following provision has been incorporated in tender for MSEs, in line with notification of Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaiming the Public Procurement Policy on procurement of goods and services from Micro and Small Enterprises (MSEs)

- i) Issue of tender document to MSEs free of cost.
- ii) Exemption to MSEs from payment of EMD/Bid Security.
- iii) In Tender, participating Micro and Small Enterprises quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro and small enterprises and such micro and small enterprises shall be allowed to supply upto 25% of the total tendered value. In case of more than one such Micro and Small Enterprises, the supply shall be shared proportionately (to tendered quantity). Further, out of above 25%, 5% (20% of 25%) shall be reserved for MSEs owned by SC/ST entrepreneurs. Further, 3% shall be reserved for MSEs owned by women within above 25% reservation. The respective quota(s) shall be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs/ MSEs owned by Women.

Further, the definition of MSEs owned by Women shall be as per the definition for MSEs owned by SC/ST Entrepreneurs.

The quoted prices against various items shall remain valid in case of splitting of quantities of the items above.

In case tendered item is non-splitable or non- dividable (specified in Bid Data Sheet), MSE quoting price within price band L1 (other than MSE) + 15% , may be awarded for full/ complete supply of total tendered value subject to matching of L1 price.

- 40.2 The MSE(s) owned by SC/ST Entrepreneurs shall mean:-
- In case of proprietary MSE, Proprietor(s) shall be SC/ST.
 - In case of partnership MSE, the SC/ST partners shall be holding atleast 51% share in the unit
 - In case of private Limited Companies, at least 51% share is held by SC/ST. If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

The MSE(s) owned by Women shall mean:-

- In case of proprietary MSE, Proprietor(s) shall be Women.
 - In case of partnership MSE, the Women partners shall be holding atleast 51% share in the unit
 - In case of private Limited Companies, at least 51% share is held by Women. If the MSE is owned by Women Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.
- 40.3 In case bidder is a Micro or Small Enterprise under the Micro, Small and Medium Enterprises Development Act, 2006, the bidder shall submit the following :
- Documentary evidence that the bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises or Udyog Aadhaar Memorandum.
 - If the MSE is owned by SC/ST Entrepreneurs/ Women Entrepreneur, the bidder shall furnish appropriate documentary evidence in this regard.

The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.

If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy (PPP) 2012.

Further, MSEs who are availing the benefits of the Public Procurement Policy (PPP) 2012 get themselves registered with MSME Data Bank being operated by NSIC, under SME Division, M/o MSME, in order to create proper data base of MSEs which are making supplies to CPSUs.

- 40.4 If against an order placed by GGPL, successful bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises with prior consent in writing of the purchasing authority/Engineer-in-charge, the details like Name, Registration No., Address, Contact No. details of material & value of

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procurement made, etc. of such Enterprises shall be furnished by the successful bidder at the time of submission of invoice/Bill.

- 40.5 The benefit of policy are not extended to the traders/dealers/ Distributors /Stockiest/Wholesalers.

41 AHR ITEMS

In item rate contract where the quoted rates for the items exceed 50% of the estimate rates, such items will be considered as Abnormally High Rates (AHR) items and payment of AHR items beyond the SOR stipulated quantities shall be made at the lowest amongst the following rates:

- I) Rates as per SOR, quoted by the Contractor/Bidder.
- II) Rate of the item, which shall be derived as follows:
 - a. Based on rates of Machine and labour as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).
 - b. In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labour plus 15% to cover contractor's supervision profit, overhead & other expenses.

42 VENDOR PERFORMANCE EVALUATION

Shall be as stipulated Annexure II to ITB herewith.

43 INCOME TAX & CORPORATE TAX

43.1 Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.

43.2 Corporate Tax liability, if any, shall be to the contractor's account.

43.3 Work Contract tax/ GST as may be applicable shall be deducted as per trade tax.

43.4 TDS, wherever applicable, shall be deducted as per applicable act/law/rule.

43.4 MENTIONING OF PAN NO. IN INVOICE/BILL

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods / services/works/consultancy services exceeding Rs. 2 Lacs per transaction.

Accordingly, supplier/ contractor/ service provider/ consultant should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case supplier/ contractor/ service provider/ consultant do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfillment of above requirement

44. SETTLEMENT OF DISPUTES BETWEEN GOVERNMENT DEPARTMENT AND ANOTHER AND ONE GOVERNMENT DEPARTMENT AND PUBLIC ENTERPRISE AND ONE PUBLIC ENTERPRISE AND ANOTHER

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitrator under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

45 DISPUTE RESOLUTION (ADDENDUM TO PROVISION REGARDING APPLICABLE LAWS AND SETTLEMENT OF DISPUTES OF GCC)

- 45.1 GAIL (India) Limited has framed the Conciliation Rules 2010 in conformity with supplementary to Part – III of the Indian Arbitration and Conciliation Act 1996 for speedier, cost effective and amicable settlement of disputes through conciliation. A copy of the said rules made available on GAIL's web site www.gailonline.com for reference. Unless otherwise specified, the matters where decision of the Engineer-in-Charge is deemed to be final and binding as provided in the Agreement and the issues/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be settled in accordance with the Conciliation Rules 2010.
- 45.2 Any dispute(s)/difference(s)/issue(s) of any kind whatsoever between/amongst the Parties arising under/out of/in connection with this contract shall be settled in accordance with the aforesaid rules.
- 45.3 In case of any dispute(s)/difference(s)/issue(s), a Party shall notify the other Party (ies) in writing about such a dispute(s) / difference(s) / issue(s) between / amongst the Parties and that such a Party wishes to refer the dispute(s)/difference(s)/issue(s) to Conciliation. Such Invitation for Conciliation shall contain sufficient information as to the dispute(s)/difference(s)/issue(s) to enable the other Party (ies) to be fully informed as to the nature of the dispute(s)/difference(s)/issue(s), the amount of monetary claim, if any, and apparent cause(s) of action.
- 45.4 Conciliation proceedings commence when the other Party(ies) accept(s) the invitation to conciliate and confirmed in writing. If the other Party (ies) reject(s) the invitation, there will be no conciliation proceedings.
- 45.5 If the Party initiating conciliation does not receive a reply within thirty days from the date on which he/she sends the invitation, or within such other period of time as specified in the invitation, he/she may elect to treat this as a rejection of the invitation to conciliate. If he/she so elects, he/she shall inform the other Party(ies) accordingly.
- 45.6 Where Invitation for Conciliation has been furnished, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Indian Arbitration and Conciliation Act, 1996 and GAIL (India) Limited Conciliation Rules, 2010. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall go for Arbitration. For the purpose of this

clause, the option of 'Conciliation' shall be deemed to have been exhausted, even in case of rejection of 'Conciliation' by any of the Parties.

45.7 The cost of Conciliation proceedings including but not limited to fees for Conciliator(s), Airfare, Local Transport, Accommodation, cost towards conference facility etc. shall be borne by the Parties equally.

45.8 The Parties shall freeze claim(s) of interest, if any, and shall not claim the same during the pendency of Conciliation proceedings. The Settlement Agreement, as and when reached/agreed upon, shall be signed between the Parties and Conciliation proceedings shall stand terminated on the date of the Settlement Agreement.

46.0 **INAM-PRO (PLATFORM FOR INFRASTRUCTURE AND MATERIALS PROVIDERS)**

INAM-Pro (Platform for infrastructure and materials providers) is a web based platform for infrastructure provides and materials suppliers and was developed by Ministry of Road Transport and Highways (MoRT&H) with a view to reduce project execution delays on account of supply shortages and inspire greater confidence in contractors to procure cement to start with directly from the manufacturers. Presently, numerous cement companies are registered in the portal and offering cement for sale on the portal with a commitment period of 3 years. These companies have bound themselves by ceiling rates for the entire commitment period, wherein they are allowed to reduce or increase their cement rates any number of times within the ceiling rate, but are not permitted to exceed the said ceiling rate.

MoRT&H is expanding the reach of this web-portal by increasing both the product width as well as the product depth. They are working on incorporating 60 plus product categories. The product range will span from large machineries like Earth Movers and Concrete Mixers, to even the smallest items like road studs. MoRT&H intend to turn it into a portal which services every infrastructure development related need of a modern contractor.

GGPL's contractors may use this innovative platform, wherever applicable. The usage of web – Portal is a completely voluntary exercise. The platform, however, can serve as a benchmark for comparison of offered prices and products.

47 **PROMOTION OF PAYMENT THROUGH CARDS AND DIGITAL MEANS**

To promote cashless transactions, the onward payments by Contractors to their employees, service providers, sub-contractors and suppliers may be made through Cards and Digital means to the extent possible

48 **CONTRACTOR TO ENGAGE CONTRACT MANPOWER BELONGING TO SCHEDULED CASTES AND WEAKER SECTIONS OF THE SOCIETY**

While engaging the contractual manpower, Contractors are required to make efforts to provide opportunity of employment to the people belonging to Scheduled Castes and weaker sections of the society also in order to have a fair representation of these sections.

49. **QUARTERLY CLOSURE OF THE CONTRACT(FOR APPLICABILITY OF THIS CLAUSE REFER BDS):-**

During execution of contracts/orders, various issues may arise. In order to timely detect and to address the contractual issue (s) during the execution of contracts, GGPL has introduced a mechanism of quarterly closure of the contract, under which all the issues related to the contract execution will be monitored on quarterly basis for resolution.

Vendors/Contractors are required to co-operate with EIC for proper implementation of this mechanism for smooth execution of the contract.”

50. **PROVISIONS FOR STARTPUS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY AND AS AMENDED FROM TIME TO TIME) [FOR APPLICABLITY REFER BDS]**

As mentioned in Section-II, Prior turnover and prior experience shall not be required for all Startups [whether Micro & Small Enterprises (MSEs) or otherwise] subject to their meeting the quality and technical specifications specified in tender document. Further, the Startups are also exempted from submission of EMDs. For availing the relaxation, bidder is required to submit requisite certificate towards Startup enterprise registration issued by Department of Industrial Policy and Promotion, Ministry of Commerce and the certificate should be certified by the Chartered Accountant (not being an resource or a Director or not having any interest in the bidder’s company/firm) and notary public with legible stamp. If a Startup [whether Micro & Small Enterprises (MSEs) or otherwise] gets qualified without turnover and experience criteria specified in tender and emerges lowest bidder, the order on such Startup shall be placed for entire tendered quantity/group/item/part wise as stated in tender. If a Startup emerge lowest bidder, the LoA on such Startup shall be placed for entire tendered quantity/group/item/part (as the case may be). However, during the Kick of Meeting monthly milestones/ check points would be drawn. Further, the performance of such contractor/ service provider will be reviewed more carefully and action to be taken as per provision of contract in case of failure/ poor performance.

===== X =====

PROCEDURE FOR ACTION IN CASE
CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES

A Definitions:

A.1 “Corrupt Practice” means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.

“Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.

A.2 “Fraudulent Practice” means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of contract/ order.

A.3 “Collusive Practice amongst bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

A.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.

A.5 “Vendor/Supplier/Contractor/Consultant/Bidder” is herein after referred as “Agency”

A.6 “Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

A.7 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ (ies) and Banning of business dealings with Agency/ (ies) and shall be the “Director” concerned.

A.8 “Allied Agency” shall mean all the concerns within the sphere of effective influence of banned/ suspended agencies. In determining this, the following factors may be taken into consideration:

- (a) Whether the management is common;
- (b) Majority interest in the management is held by the partners or directors of banned/ suspended firm.
- (c) substantial or majority shares are owned by banned/ suspended agency and by virtue of this it has a controlling voice.

A.9 “Investigating Agency” shall mean any department or unit of GAIL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the GAIL/ GGPL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.

B Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids :

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent /collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of contract

(i) During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, during execution of contract, the agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

The concerned order (s)/ contract(s) where corrupt/fraudulent/collusive practices is observed, shall be suspended with immediate effect by Engineer-in-Charge (EIC)/ Employer whereby the supply/ work/ service and payment etc. will be suspended. The action shall be initiated for putting the agency on banning.

After conclusion of process, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG)/ Contract Performance Security(CPS) submitted by agency against such order (s)/ contract (s) shall also be forfeited. The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract.

No risk and cost provision will be enforced in such cases.

(ii) After execution of contract and during Defect liability period (DLP)/ Warranty/Guarantee Period:

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/ Warranty/Guarantee Period, the agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the Contract cum Performance Bank Guarantee (CPBG)/Contract Performance Security (CPS) submitted by agency against such order (s)/ contract (s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an agency is found to have indulged in corrupt/fraudulent/collusive/coercive practices, after expiry of Defect liability period (DLP)/Warranty/Guarantee Period, the agency shall be banned for future business with GGPL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

Banning period shall be reckoned from the date of banning order and shall be 3 years.

In exceptional cases where the act of vendor/ contractor is a threat to the National Security, the banning shall be for indefinite period.

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an agency is put on Banning, such agency should not be considered in ongoing tenders/future tenders.
- C.2 However, if such an agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an agency is put on the Banning List during tendering and no irregularity is found in the case under process:
 - C.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
 - C.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
 - C.3.3 after opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on banning list for fraud/ mis-appropriation of facts committed in the sametender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any agency/(ies) shall be initiated by Corporate C&P Department when

- (i) Corporate Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the agency.
- (ii) Corporate Vigilance Department based on the input from Investigating agency, forward for specific immediate action against the agency.
- (iii) Non performance of Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than six months and is to be communicated to the agency and also to Corporate Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the agency on banning list.
- D.2.2 During the period of suspension, no new business dealing may be held with the agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the agency.
- D.2.4 The decision regarding suspension of business dealings should also be communicated to the agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that (i) the agency is put on suspension list and (ii) why action should not be taken for banning the agency for future business from GGPL.

The competent authority to approve the suspension will be same as that for according approval for banning.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an agency as long as the name of agency appears in the Suspension List.
- D.3.2 If an agency is put on the Suspension List during tendering:
- D.3.2.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
- D.3.2.2 after opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
- D.3.2.3 after opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. If the agency is put on Suspension list for fraud/ mis-appropriation of facts conducted in the sametender/other tender where errant agency emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.

- D.3.3 The existing contract (s)/ order (s) under execution shall continue.
- D.3.4 Tenders invited for procurement of goods, works and services shall have provision that the bidder shall submit a undertaking to the effect that (i) neither the bidder themselves nor their allied agency/(ies) are on banning list of GAIL/ GGPL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The agency may file an appeal against the order of the Competent Authority for putting the agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of banning order.
- F.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- F.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- G. Wherever there is contradiction with respect to terms of 'Integrity pact' , GCC and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice' shall prevail.

Annexure-II

**PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/
SUPPLIERS/ CONTRACTORS/ CONSULTANTS**

1.0 OBJECTIVE

The objective of Evaluation of Performance aims to recognize, and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with GGPL in Projects and in O&M so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

2.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/ Consultant for all orders/Contracts with a value of Rs. 7 Lakhs and above is recommended to be drawn up. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) Initiation of Measures:

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) Implementation of Corrective Measures:

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of GGPL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

3.0 PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

3.1 FOR PROJECTS

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action need to be initiated by Engineer-in-charge/Project-in-charge:

Sl.No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where Performance rating is “POOR”:

Recommend such defaulting Vendor/ Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality : **One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iii) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/ Supplier/Contractor/ Consultant or Repeated Offence: **Three Years**

Non performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order, such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in “Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices”

(B) Where Performance rating is “FAIR”:

Recommend for issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

3.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 3.1 for Projects.

3.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/ contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure-2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- iii) Depending upon Performance Rating, following action need to be initiated by Site C&P:

Sl. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR”

Recommend such defaulting Vendor/Supplier/Contractor/ Consultant for putting on Holiday for a period from one to three years as given below:

- (i) Poor Performance due to reasons other than Quality : **One Year**
- (ii) Poor Performance on account of Quality (if any mark obtained against Quality parameter is less than 30): **Two Years**
- (iv) Poor Performance leading to termination of contract or Offloading of contract due to poor performance solely attributable to Vendor/Supplier/Contractor/Consultant or Repeated Offence: **Three Years**

Non-performance of a Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order such Vendor/ Supplier/ Contractor/Consultant are also to be considered for Suspension.

In all such cases, concerned site will put up recommendation for issuance of SCN and putting the party on suspension list as per process defined for suspension in “Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices”

(B) Where Performance rating is “FAIR”

Recommend for issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

4.0 **EXCLUSIONS:**

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 7 Lakhs.
- ii) One time Vendor/ Supplier/Contractor/ Consultant.
- iii) Orders for Misc./Administrative items/ Non stock Non valued items.

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

5.0 **REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY**

- 5.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

6.0 **EFFECT OF HOLIDAY**

- 6.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant should not be considered in ongoing tenders/future tenders.
- 6.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.
- 6.3. Effect on other ongoing tendering:
- 6.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 6.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.
- 6.3.3 after opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. If errant party emerges as the lowest (L1), then such tender shall also be cancelled and re-invited.
- 7.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

- 8.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to GGPL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

9. APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.

- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) “Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

10. **ERRANT BIDDER**

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, GGPL shall forfeit EMD paid by the bidder and such bidders shall be debarred from participation in re-tendering of the same job(s)/item(s).

Further, such bidder will be put on holiday for a period of six months after following the due procedure.

- 11. In case GST department brings to the notice of GGPL that a Party has not paid to the credit of the Government the GST collected from GGPL, then party will be put on holiday for a period of six months after following the due procedure.

GGPL
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/Supplier/ 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				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note :

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.

(*) Allocation of marks should 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:

Name:

Designation:

Instructions for allocation of marks

1. Marks are to be allocated as under :

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Upto 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 12 weeks	20
	” 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 16 weeks	20
	” 20 weeks	15
	” 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 endanger system integration and safety of the system	Failure of severe nature	0 marks
	- Moderate nature	5 marks
	- low severe nature	10-25 marks
iii) Number of deviations	1. No deviation	5 marks
	2. No. of deviations ≤ 2	2 marks
	3. No. of deviations > 2	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 Contract 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, Drawings 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

GGPL
PERFORMANCE RATING DATA SHEET
(FOR O&M)

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

Performance Parameter	Delivery Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated (*)				

Remarks (if any)

PERFORMANCE RATING (**)

Note :

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance

(*) Allocation of marks should 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:

Name:

Designation:

Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under :

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Upto 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 12 weeks	20
	” 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	” 8 weeks	30
	” 10 weeks	25
	” 16 weeks	20
	” 20 weeks	15
	” 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 prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature	0 marks
	- Moderate nature	5 marks
	- low severe nature	10-25 marks
iii) Number of deviations	1. No deviation	5 marks
	2. No. of deviations ≤ 2	2 marks
	3. No. of deviations > 2	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 Contract 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, Drawings 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

BIDDING DATA SHEET (BDS)**ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:**

A. GENERAL	
ITB clause	Description
1.2	The Invitation for Bids/ Tender no is : GGPL/KKD/C&P/2565/2019-20/06
1.1	The Employer/Owner is: Godavari Gas Private Limited, Rajahmundry
2.1	The name of the Works/Services to be performed is: MRS FABRICATION & INTERNAL PIPING WORKS FOR INDUSTRIAL & COMMERCIAL CONNECTIONS IN EAST AND WEST GODAVARI DISTRICTS OF ANDHRA PRADESH.
3	BIDS FROM CONSORTIUM/JOINT VENTURE : NOT APPLICABLE
5.2.1	Demand Draft/ Banker's Cheque towards Tender fee (if applicable) shall be in favour of <i>Godavari Gas Private Limited</i> payable at Rajamahendravaram, E.G Dist Andhra Pradesh
B. BIDDING DOCUMENT	
ITB clause	Description
8.1	For <u>clarification purposes</u> only, the communication address is: Attention: A. Ramesh Naik, CM (C&P) Andhra Pradesh Gas Distribution Corporation, Street Address: Door No. 70-14-5/1, Floor/Room number:Siddarth Nagar, Near RTO office, City: Kakinada- 533003, East Godavari Dist., Andhra Pradesh, Country: India Email: rameshna@gail.co.in

C. PREPARATION OF BIDS

ITB clause	Description				
11.1.1 (u)	The Bidder shall submit with its Techno-commercial/ Unpriced bid the following additional documents (SCC Refers): Indemnity Bond				
12	Additional Provision for Schedule of Rate/ Bid Price are as under: NIL				
12. & 13	Whether GGPL will be able to avail input tax credit in the instant tender: Currently no. <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table>	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
YES	<input type="checkbox"/>				
NO	<input type="checkbox"/>				
14	The currency of the Bid shall be INR				
15	The bid validity period shall be 3 Months from final 'Bid Due Date'.				
16.1	In case ' Earnest Money / Bid Security ' is in the form of ' Demand Draft ' or ' Banker's Cheque ', the same should be favor of <i>Godavari Gas Private Limited</i> payable at Rajamahendravaram, E.G Dist Andhra Pradesh. Details of GGPL's Bank is Canara Bank, Hyderabad Industrial Finance Branch, A/C No. 2423201000324, IFSC Code: CNRB0002423				

D. SUBMISSION AND OPENING OF BIDS

ITB clause	Description
18	In addition to the original of the Bid, the number of copies required is one.
22	The E-Tender No. of this bidding process is: <u>Not applicable</u>
22.3 and 4.0 of IFB	For <u>bid submission purposes</u> only (Manual) or the submission of physical document as per clause no. 4.0 of IFB, the Owner's address is : Attention: A. Ramesh Naik, CM (C&P) Andhra Pradesh Gas Distribution Corporation, Street Address: Door No. 70-14-5/1, Floor/Room number: Siddarth Nagar, Near RTO office,

	City: Kakinada- 533003, East Godavari Dist., Andhra Pradesh, Country: India Email: rameshna@gail.co.in
26	The bid opening shall take place at: Godavari Gas Private Limited Attention: A. Ramesh Naik, CM (C&P) Andhra Pradesh Gas Distribution Corporation, Street Address: Door No. 70-14-5/1, Floor/Room number:Siddarth Nagar, Near RTO office, City: Kakinada- 533003, East Godavari Dist., Andhra Pradesh, Country: India Email: rameshna@gail.co.in Date: 31.07.2019 / Time: 15:00 Hrs
E. EVALUATION, AND COMPARISON OF BIDS	
ITB clause	Description
32	Evaluation Methodology is mentioned in Section-II.
33	Compensation for Extended Stay: NOT APPLICABLE
40	Public Procurement policy for Micro and Small Enterprises: NOT APPLICABLE
50	Provisions for Start-Ups: NOT APPLICABLE
F. AWARD OF CONTRACT	
ITB clause	Description
37	State of which stamp paper is required for Contract Agreement: Andhra Pradesh
38	Contract Performance Security/ Security Deposit : Applicable If applicable: 10 % of contract value.
40	Whether tendered item is non-split able or not-divisible : NO
41	Provision of AHR Item : Applicable
Clause no. 27.3 of GCC	Bonus for Early Completion: Not Applicable

FORMS & FORMAT

LIST OF FORMS & FORMAT

Form No.	Description
F-1	BIDDER'S GENERAL INFORMATION
F-2	BID FORM
F-3	LIST OF ENCLOSURES
F-4	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID SECURITY"
F-4A	PROFORMA OF "LETTER OF CREDIT" FOR "EARNEST MONEY / BID SECURITY"
F-5	LETTER OF AUTHORITY
F-6	NO DEVIATION CONFIRMATION
F-7	DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION, COURT RECEIVERSHIP ETC.
F-8	CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA
F-9	PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-10	AGREED TERMS & CONDITIONS
F-11	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-12	UNDERTAKING ON LETTERHEAD
F-13	BIDDER'S EXPERIENCE
F-14	CHECK LIST
F-15	FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL IS INADEQUATE
F-16	FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-17	FORMAT FOR CONSORTIUM/JV AGREEMENT
F-18	BIDDER'S QUERIES FOR PRE BID MEETING
F-19	E-BANKING FORMAT
F-20	INTEGRITY PACT
F-21	INDEMNITY BOND

F-1**BIDDER'S GENERAL INFORMATION**

To,
M/s GGPL
Rajahmahendravaram

TENDER NO:

1	Bidder Name	
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited/Others If Others Specify: _____ [Enclose certificate of Registration]
3	Name of Proprietor/Partners/Directors of the firm/company	
4	Number of Years in Operation	
5	Address of Registered Office: *In case of Partnership firm, enclose letter mentioning current address of the firm and the full names and current addresses of all the partners of the firm.	City: District: State: PIN/ZIP:
6	Operation Address (if different from above)	City: District: State: PIN/ZIP:
8	Telephone Number	_____ (Country Code) (Area Code) (Telephone No.)
9	E-mail address	
10	Website	
11	Fax Number:	_____ (Country Code) (Area Code) (Telephone No.)
12	ISO Certification, if any	{ If yes, please furnish details }
13	Bid Currency	

14	Banker's Name	
15	Branch	
17	Bank account number	
18	PAN No.	[Enclose copy of PAN Card]
19	GST no.	[Enclose copy of GST Registration Certificate]
20	EPF Registration No.	[Enclose copy of EPF Registration Certificate]
21	ESI code No.	[Enclose copy of relevant document]
22	We (Bidder) are cover under the definition of section 2 (n) of the MSMED Act	Yes / No <i>(If the response to the above is 'Yes', Bidder to provide Purchaser a copy of the Entrepreneurs Memorandum (EM) filled with the authority specified by the respective State Government.)</i>
23	Whether Micro/Small/Medium Enterprise	(Bidder to submit documents as specified it ITB)
24	Type of Entity	Corporate/ Non-Corporate (As per Service tax Act). (In case of Non-Corporate Entity, bidder will submit documentary evidence for same).

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-2
BID FORM

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:
TENDER NO:

Dear Sir,

After examining / reviewing the Bidding Documents for the tender of
“_____” including
"Specifications & Scope of Work", "General Conditions of Contract [GCC]", "Special
Conditions of Contract [SCC]" and "Schedule of Rates [SOR]", etc. the receipt of which is
hereby duly acknowledged, we, the undersigned, are pleased to offer to execute the whole
part of the job and in conformity with the said Bid Documents, including Addenda /
Corrigenda Nos. _____.

We confirm that this Bid is valid for a period as specified in BDS from the date of opening of
"Techno-Commercial / Un-priced Bid", and it shall remain binding upon us and may be
accepted by any time before the expiry of that period.

If our Bid is accepted, we will provide the "Contract Performance Security / Security
Deposit" equal to "_____ of the Contract Price" or as mentioned in Tender Document
for the due performance within "thirty [30] days" of such Award.

Until a final Agreement/Letter of Award is prepared and executed, the tender document
(including addenda/ corrigenda) together with the "Notification of Award" shall constitute a
binding Agreement between us.

We understand that Bidding Document is not exhaustive and any action and activity not
mentioned in Bidding Documents but may be inferred to be included to meet the intend of the
Bidding Documents shall be deemed to be mentioned in Bidding Documents unless otherwise
specifically excluded and we confirm to perform for fulfillment of Agreement and
completeness of the Work in all respects within the time frame and agreed price.

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

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

F-3
LIST OF ENCLOSURES

To,

M/s Godavari Gas Private Limited
Rajamahendravaram

SUB:

TENDER NO:

Dear Sir,

We are enclosing the following documents as part of the bid:

1. Power of Attorney of the signatory to the Bidding Document.
2. Document showing annual turnover for the last three years such as annual reports, profit and loss account, net worth etc. along with information as sought in enclosed format F-16
3. Document showing Financial Situation Information as sought in enclosed format F-16
4. Copy of Bidding Documents along with addendum/corrigendum duly signed and sealed on each page, in token of confirmation that Bid Documents are considered in full while preparing the bid and in case of award, work will be executed in accordance with the provisions detailed in Bid Documents.
5. Documentary Evidences showing the Bidder's claim of meeting Technical Criteria as mentioned in Clause 4 of ITB.
6. Bid Security/EMD*
7. Tender Fee*
8. Integrity Pact*
9. Power of Attorney*
10. Duly certified document from chartered engineer and or chartered accountant.

Note:

* In case of e-bidding the bidder has the option to submit specified documents in physical form on/before the bid due date or within seven days from the bid opening date. However, scanned copy of these (same) documents must be submitted on-line as part of e-bid before the bid due date/time.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

FORMAT F-4
PROFORMA OF "BANK GUARANTEE"
FOR "EARNEST MONEY / BID SECURITY"
(To be stamped in accordance with the Stamp Act)

Ref.....

Bank Guarantee No.....

Date.....

To,
M/s Godavari Gas Private Limited
D. No.: 85-06-23/2, 2nd Floor, Above Happy Home Furniture Shop,
40th Ward, Morumpudi Junction,
Rajamahendravaram – 533103
East Godavari Dist, Andhra Pradesh
SUB:
TENDER NO:

Dear Sir(s),

In accordance with Letter Inviting Tender under your reference No _____ M/s. _____ having their Registered / Head Office at _____ (hereinafter called the Tenderer), wish to participate in the said tender for _____

As an irrevocable Bank Guarantee against Earnest Money for the amount of _____ is required to be submitted by the Tenderer as a condition precedent for participation in the said tender which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the _____ Bank at _____ having our Head Office _____ (Local Address) guarantee and undertake to pay immediately on demand without any recourse to the tenderers by Godavari Gas Private Limited, the amount _____ without any reservation, protest, demur and recourse. Any such demand made by GGPL, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

This guarantee shall be irrevocable and shall remain valid up to _____ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s. _____ whose behalf this guarantee is issued.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this _____ day of _____ 20__ at _____.

WITNESS:

(SIGNATURE)
(NAME)

(OFFICIAL ADDRESS)

(SIGNATURE)
(NAME)

Designation with Bank Stamp

Attorney as per

Power of Attorney No. _____

Date: _____

**INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY
"BANK GUARANTEE"**

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank. In case of foreign Bank, the said Bank's Guarantee to be issued by its correspondent Bank in India on requisite non-judicial stamp paper
2. The expiry date should be arrived at in accordance with "ITB: Clause-15.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Fax / Phone from where the Earnest Money Bond has been issued.
6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs. 1,000,000,000.00 [Rupees One Hundred Crores] or equivalent alongwith documentary evidence.

F-5
LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending Subsequent 'Negotiations' / 'Pre-Bid Meetings' / 'Un-priced Bid Opening' / 'Price Bid Opening']

Ref:
To,
M/s Godavari Gas Private Limited
Rajahmahendravaram

Date:

SUB:
TENDER NO:

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending any 'Negotiations' / 'Meetings [Pre-Bid Meeting]', 'Un-priced Bid Opening', 'Price Bid Opening' and for any subsequent correspondence / communication against the above Bidding Documents:

[1] Name & Designation _____ Signature _____
Phone/Cell:
Fax:
E-mail: @

[2] Name & Designation _____ Signature _____
Phone/Cell:
Fax:
E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

Note: This "Letter of Authority" should be on the "**letterhead**" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Techno-commercial / Un-priced" & "Price Bid" Openings. Bidders authorized representative is required to carry a copy of this authority letter while attending the un-priced and priced bid opening, the same shall be submitted to **Godavari Gas Private Limited**.

F-6
"NO DEVIATION" CONFIRMATION

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:
TENDER NO:

Dear Sir,

We understand that any 'deviation / exception' in any form may result in rejection of Bid. We, therefore, certify that we have not taken any 'exception / deviation' anywhere in the Bid and we agree that if any 'deviation / exception' is mentioned or noticed, our Bid may be rejected.

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:

F-7
DECLARATION REGARDING HOLIDAY/BANNING AND LIQUIDATION, COURT RECEIVERSHIP

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:

TENDER NO:

Dear Sir,

We hereby confirm that we are not on 'Holiday' by GAIL/ GGPL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid.

Further, we confirm that neither we nor our allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of GAIL /GGPL or the Ministry of Petroleum and Natural Gas.

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

In case it comes to the notice of GGPL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices.

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

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-8
CERTIFICATE FOR NON-INVOLVMENT OF GOVT. OF INDIA

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:
TENDER NO:

Dear Sir,

If we become a successful Bidder and pursuant to the provisions of the Bidding Documents, award is given to us for the tender for“ _____”,the following Certificate shall be automatically enforceable:

"We agree and acknowledge that the Employer is entering into the Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Employer is authorized to enter into Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Employer is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

F-9
PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE
SECURITY / SECURITY DEPOSIT"
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To,
M/s Godavari Gas Private Limited
Rajahmahendravaram

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the "contractor/supplier" which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of _____ vide PO/LOA/FOA No. _____ dated _____ for **Godavari Gas Private Limited** having registered office at(herein after called the "GGPL" which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of Rs. _____ (Rupees _____) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank/Scheduled Commercial Bank, undertaking full responsibility to indemnify **Godavari Gas Private Limited**, in case of default.

The said M/s. _____ has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake to give the irrevocable & unconditional guarantee to you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to **Godavari Gas Private Limited** we shall on first demand pay without demur, contest, protest and/ or without any recourse to the contractor to GGPL in such manner as GGPL may direct the said amount of Rupees _____ only or such portion thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the order/contract with the said M/s. _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.
3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that

any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.

4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid upto _____ (this date should be 90 days after the expiry of defect liability period/ Guarantee period) _____. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee shall continue to be enforceable until it is discharged by GGPL in writing. However, if for any reason, the supplier/contractor is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the supplier/contractor fails to perform the supply/work fully, the bank hereby agrees to further extend this guarantee at the instance of the supplier/contractor till such time as may be determined by GGPL. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ (contractor) on whose behalf this guarantee is issued.
6. Bank also agrees that GGPL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the supplier/contractor and notwithstanding any security or other guarantee that GGPL may have in relation to the supplier's/contractor's liabilities.
7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by GGPL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at Kakinada.
7. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Supplier/Contractor up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Supplier/Contractor to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.

Ref no.: GGPLKGD/C&P/SR 2565/2019-20/06

8. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the
Bank

INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK
GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of Bid to be considered as Kakinada.
2. The Bank Guarantee by Bidders will be given from bank as specified in Tender.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
4. If a Bank Guarantee is issued by a commercial bank, then a letter to Employer and copy to Consultant (if applicable) confirming its net worth is more than Rs. 100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency along with documentary evidence.

F-10
AGREED TERMS & CONDITIONS

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:

TENDER NO:

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and should be returned along with Un-priced Bid. Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	
2.	Please confirm the currency of quoted prices is in Indian Rupees.	
3.	Confirm quoted prices will remain firm and fixed till complete execution of the order.	
4	Rate of applicable GST	CGST:.....% SGST:.....% IGST:.....% Total :%
4.1	Whether in the instant tender GST is covered in reverse charge rule of Goods and service tax	Yes/ No In case of Yes, please specify GST) payable by: GGPL:.....% Bidder:.....%
5.	i) Confirm acceptance of relevant Terms of Payment specified in the Bid Document. ii) In case of delay, the bills shall be submitted after deducting the price reduction due to delay.	
6.	Confirm that Contract Performance Security will be furnished as per Bid Document.	
7.	Confirm that Contract Performance Security shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
8.	Confirm compliance to Completion Schedule as specified in Bid document. Confirm contract period shall be reckoned from the date of Fax of Acceptance.	
9.	Confirm acceptance of Price Reduction Schedule for delay in	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	completion schedule specified in Bid document.	
10.	a) Confirm acceptance of all terms and conditions of Bid Document (all sections). b) Confirm that printed terms and conditions of bidder are not applicable.	
11.	Confirm your offer is valid for period specified in BDS from Final/Extended due date of opening of Techno-commercial Bids.	
12.	Please furnish EMD/Bid Security details : a) EMD/ Bid Security No. & date b) Value c) Validity	
13.	Confirm acceptance to all provisions of ITB read in conjunction with Bid Data Sheet (BDS).	
14.	Confirm that Annual Reports for the last three financial years are furnished along with the Un-priced Bid.	
15.	Confirm that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	
16.	Confirm the none of Directors of bidder is a relative of any Director of Owner or the bidder is a firm in which any Director of Owner/ GGPL or his relative is a partner.	
17.	All correspondence must be in ENGLISH language only.	
18.	Owner reserves the right to make any change in the terms & conditions of the TENDER/BIDDING DOCUMENT and to reject any or all bids.	
19.	Confirm that all Bank charges associated with Bidder's Bank shall be borne by Bidder.	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-11
ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of tender document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to concerned executive in GGPL issued the tender, by filling up the Format)

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

SUB:
TENDER NO:

Dear Sir,

We hereby acknowledge receipt of a complete set of bidding document along with enclosures for subject item/job and/or the information regarding the subject tender.

- We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code:
Telephone Number :
Fax Number :
Contact Person :
E-mail Address :
Mobile No. :
Date :
Seal/Stamp :

- We are unable to bid for the reason given below:

Reasons for non-submission of bid:

Agency's Name :
Signature :
Name :
Designation :
Date :
Seal/Stamp :

F-12
UNDERTAKING ON LETTERHEAD

To,

M/s Godavari Gas Private Limited
Rajamahendravaram

SUB:

TENDER NO:

Dear Sir

We hereby confirm that “The contents of this Tender Document No. _____ have not been modified or altered by M/s.(Name of the bidder with complete address). In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by M/s.....(Name of the bidder) shall be liable for rejection”.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-13
BIDDER'S EXPERIENCE

To,

M/s Godavari Gas Private Limited
 Rajamahendravaram

SUB:

TENDER NO:

Sl. No	Description of the Services	LOA /WO No. and date	Full Postal Address & phone nos. of Client. <i>Name, designation and address of Engineer/ Officer-in-Charge (for cases other than purchase)</i>	Value of Contract/Order (Specify Currency Amount)	Date of Commencement of Services	Scheduled Completion Time (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-14
CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the bidder to make sure that the necessary data/information as called for in the bid document has been submitted by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects.

Please ensure compliance and tick (√) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Digitally Signing (in case of e-bidding)/ Signing and Stamping (in case of manual bidding) on each sheet of offer, original bidding document including SCC, ITB, GCC ,SOR drawings, addendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		XXXXXXXXXX
i	Covering Letter, Letter of Submission		
ii	Bid Security		
iii	Signed and stamped original copy of bidding document along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
v	Copies of documents defining constitution or legal status, place of registration and principal place of business of the company		
vi	Bidders declaration that regarding, Holiday/ Banning, liquidation court receivership or similar proceedings		
vii	Details and documentary proof required against qualification criteria along with complete documents establishing ownership of equipment as per SCC are enclosed		
viii	Confirm submission of document along with unpriced bid as per bid requirement.		XXXXXXXXXX
3.0	Confirm that all forms duly filled in are enclosed with the bid duly signed by authorised person(s)		
4.0	Confirm that the price part as per Price Schedule format submitted with Bidding Document/		XXXXXXXXXX

	uploaded in case of e-bid.		
7.0	Confirm that annual reports for last three financial years & duly filled in Form 16 are enclosed in the offer for financial assessment (where financial criteria of BEC is applicable).		

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

F-15
FORMAT FOR CERTIFICATE FROM BANK
IF BIDDER'S WORKING CAPITAL IS INADEQUATE/NEGATIVE

(To be provided on Bank's letter head)

Date:

To,
M/s. Godavari Gas Private Limited

Dear Sir,

This is to certify that M/s (name of the bidder with address)
(hereinafter referred to as Customer) is an existing customer of our Bank.

The Customer has informed that they wish to bid for GGPL's RFQ/Tender no.
..... dated for
.....(Name of the supply/work/services/consultancy) and as
per the terms of the said RFQ/Tender they have to furnish a certificate from their Bank
confirming the availability of line of credit.

Accordingly M/s (name of the Bank with address) confirms
availability of line of credit to M/s (name of the bidder) for at least an
amount of Rs. _____

It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (or Equivalent
USD) and the undersigned is authorized to issue this certificate.

Yours truly

for (Name & address of Bank)

(Authorized signatory)

Name of the signatory:

Designation :

Stamp

F-16

**FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE/ CERTIFIED
PUBLIC ACCOUNTANT (CPA) FOR FINANCIAL CAPABILITY OF THE BIDDER**

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

A. AUDITED ANNUAL TURNOVER* OF LAST 3 YEARS:

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

B. NETWORTH* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year _____
	Amount (Currency)
1. Net Worth	

C. WORKING CAPITAL* AS PER LAST AUDITED FINANCIAL STATEMENT

:

Description	Year _____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	

****Refer Instructions***

Note: It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable only in case of Indian Companies]

Name of Audit Firm:

[Signature of Authorized Signatory]

Chartered Accountant/CPA

Name:

Date:

Designation:

Seal:

Membership No.:

Instructions:

1. The Separate Pro-forma shall be used for each member in case of JV/ Consortium.

2. The financial year would be the same as one normally followed by the bidder for its Annual Report.
3. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non- responsive.
4. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be “Sale Value/ Operating Income”
 - (ii) **Working Capital** shall be “Current Assets less Current liabilities” and
 - (iii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
5. **Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.**
6. This certificate is to be submitted on the letter head of Chartered Accountant/CPA.

F-17

~~(TO BE INCLUDED ONLY WHERE CONSORTIUM/JV ARE ALLOWED)~~

**~~FORMAT FOR CONSORTIUM/JV AGREEMENT
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)~~**

CONSORTIUM/JV AGREEMENT

F-18

BIDDER'S QUERIES FOR PRE BID MEETING

To,

M/s Godavari Gas Private Limited
Rajahmahendravaram

Sub :

Tender No :

SL. NO.	REFERENCE OF BIDDING DOCUMENT				BIDDER'S QUERY	GGPL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by fax and also by e-mail before due date for receipt of Bidder's queries.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER: _____

F-19

E-Banking Mandate Form

(To be issued on vendors letter head)

1. Vendor/customer Name :
2. Vendor/customer Code:
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
5. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) RTGS IFSC code of the bank branch
 - i) NEFT IFSC code of the bank branch
 - j) 9 digit MICR code

I/We hereby authorize Godavari Gas Private Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the GGPL responsible.

(Signature of vendor/customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)

F-20
INTEGRITY PACT

NOT APPLICABLE

F-21
INDEMNITY BOND

WHEREAS Godavari Gas Private Limited. (hereinafter referred to as “**GGPL**”) which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at D. No.: 85-06-23/2,2nd Floor, Above Happy Home Furniture Shop, 40th Ward, Morumpudi Junction, Rajamahendravaram – 533103] has entered into a contract with M/s*..... (hereinafter referred to as the “**Contractor**”) which expression shall unless repugnant to the context include its representatives, successors and assigns, having its registered office at *..... and on the terms and conditions as set out, inter-alia in the [*mention the work order/LOA/Tender No.*]and various documents forming part thereof, hereinafter collectively referred to as the ‘**CONTRACT**’ which expression shall include all amendments, modifications and / or variations thereto.

GGPLhas also advised the Contractor to execute an Indemnity Bond in general in favour of GGPL indemnifying GGPL and its employees and Directors including Independent Directors from all consequences which may arise out of any prospective litigation or proceedings filed or may be initiated by any third party, including any Banker / financial institution / worker(s) / vendor(s)/ subcontractor(s) etc. who may have been associated or engaged by the Contractor directly or indirectly with or without consent of GGPL for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GGPL and all its employees, Directors, including Independent Directors, from and against all/any claim(s), damages, loss, which may arise out of any litigations/ liabilities that may be raised by the Contractor or any third party against GGPL under or in relation to this contract. The Contractor undertakes to compensate and pay to GGPL and/or any of its employees, Directors including Independent Directors, forth with on demand without any protest the amount claimed by GGPL for itself and for and on behalf of its employees, Directors including Independent Directors together with direct/indirect expenses including all legal expenses incurred by them or any of them on account of such litigation or proceedings.

AND THE CONTRACTOR hereby further agrees with GGPL that:

- (i) This Indemnity shall remain valid and irrevocable for all claims of GGPL and/or any of its employees and Directors including Independent Directors arising out of said contract with respect to any such litigation / court case for which GGPL and/or its employees and Directors including Independent Directors has been made party until now or here-in-after.
- (ii) This Indemnity shall not be discharged/revoked by any change/ modification/amendment/assignment of the contract or any merger of the Contractor with other entity or any change in the constitution/structure of the Contractor’s firm/Company or any conditions thereof including insolvency etc. of the Contractor, but shall be in all respects and for all purposes binding and operative until any/all claims for payment of GGPL are settled by the Contractor and/or GGPL discharges the Contractor in writing from this Indemnity.

The undersigned has full power to execute this Indemnity Bond for and on behalf of the Contractor and the same stands valid.

SIGNED BY :

For [*Contractor*]

Authorised Representative

Place:

Dated:

Witnesses:

- 1.
- 2.

SECTION – IV

SCOPE OF WORK

&

JOB SPECIFICATIONS

JOB SPECIFICATION

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1.0 GENERAL & PROJECT DESCRIPTION

1.1 PROJECT DESCRIPTION

Godavari Gas Pvt. Limited, a JV company of M/s APGDC and M/s HPCL, is engaged in development of CNG & City Gas Distribution Networks (CGDN) in Geographical Areas in East and West Godavari Dist. for distribution of CNG and PNG to various consumer segments.

Presently, Godavari Gas is planning to implement CNG & City Gas Distribution Network (CGDN) to supply Natural Gas to domestic, Commercial, Industrial and Automobile Consumers in the towns of Rajahmundry, Amalapuram, Bhimavaram, Tadepalligudem, Eluru, Tanuku, Tuni, Nidadavole/ Kothapeta/ Ravulapalem, Draksharamam/ Mandapeta/ Ramachandrapuram, Narsapur/Palacollu in the Geographical Area (GA) of East and West Godavari Dist..

This tender deals the extension of pipeline network in East Godavari & West Godavari for supplying Natural Gas to Commercial & Industrial consumers. It is proposed to execute the work of MDPE Pipe laying, Supply of CS Pipe & Fittings for MRS erection, fabrication, modification & installation for industrial and commercial connections.

. 1.2 SCOPE OF WORK

The present document gives the specification to be adopted for procurement of CS pipes & fittings, fabrication, erection, installation, and commissioning of MRS (Meter Regulating Skid) along with internal piping (on request) on downstream of MRS to supply Natural Gas for commercial and industrial customers in East Godavari and West Godavari complying with OISD standards & petroleum and Natural Gas Regularly Board (PNGRB) Guidelines..

A city gas distribution system, connection to commercial and industrial customers is a major activity and it consists of variety of gas equipment from high flow burners, simple furnace to complex thermo pack or boiler. PE line carrying gas at 4 bar pressure is laid underground from downstream of FRS/DRS to connect MRS (Meter regulator System) (installed at customer premise), which regulates the pressure and meters gas supply as per the customer requirement. The specification for PE laying is enclosed in tender document.

The selection of site for installation of MRS is key to safety and integrity of gas installation and public. It shall be installed in a well-ventilated area and away from building, utilities or major installation with easy approach and access for maintenance.

The scope of contractor includes receiving, taking over, transportation and unloading of free issue material (Meter, Regulator and isolation brass valves) from GGPL's designated place to site or vice versa. It also includes procurement and supply of all materials (butt end or threaded) CS pipe & fittings, Ball valves, Rubber Hoses, Brass jets/Nozzles consumables like spiral wound & insulating gaskets, fasteners, painting material, cold applied tape, tools & tackles, clamps, pressure gauges, skilled and unskilled manpower etc, for satisfactory completion of the work.

The designing and installation procedures shall also be provided by the contractor to GGPL before start of installation work.

The bidder/ contractor shall procure & supply the following materials/ items/ equipment but not limited to:

Procurement and supply of all items /material viz. pipes, ball valves, fittings and flanges, Brass Valves, Globe Valves, gaskets, fasteners, clamps and supports (refer enclosed drawings), pressure gauges, Cold applied tapes, consumables and other tools and tackles for fabrication, erection, installation, commissioning of MRS & internal piping.

Procurement & Supply of MDPE Fittings, HDPE pipes, SS tubing, and warning mat.

Procurement & Supply of safety devices Gas Detector, solenoid valves and slam shutoff valves etc.

Supply of items/ materials other than free issue materials (MDPE Pipe, Meter & Regulator) for work like providing utilities (water compressed air, electricity, nitrogen gas etc.) manpower (skilled and unskilled), consumables (welding rods, filler wires, lubricants/oils, waste cottons etc.) etc. for fabrication of MRS &

internal piping is included in the scope.

Procurement & supply of steel /RCC structures for working platforms adders, pipe supports, cross over etc.

Procurement & supply of personnel protective equipment (PPE).

Procurement & supply of first aid facilities.

Procurement & supply of painting material as per specification of paintwork.

Procurement & supply of any other items not listed above, but required to complete the entire scope of work. All the above procurement and supply of listed items/material shall be in line with the specification. Data sheets, GGPL approved drawing and QAP and shall be procured of approved vendor makes as enclosed in tender documents.

Contractor shall be liable for supply and installation of required fittings, tubing etc. necessary for installation of PT / RT / Flow input for EVC / Data Logger and commissioning shall be deemed complete only after the complete installation of PT / RT / Flow Input along with EVC / Data logger.

The broad scope of this tender comprises of but not limited to the following:

- 2.1 Plan and prepare a schedule for execution and work implementation as per QA/QC plans. Contractor will submit the Construction/ Execution procedures before commencement of work.
- 2.2 In principle permission for laying of the pipe line from the concerned landowning authority (i.e. PWD/NH/Municipal Corporations etc.) shall be obtained by GGPL and handed over to the contractor. All liasioning during execution of pipe line laying

with the authorities such as PWD/NH/Municipal Corporations, local officials, traffic police, police, APEPDCL, BSNL, etc. and any other utility companies / agencies such as OFC operators etc. are in the scope of the contractor. The scope also includes liaisoning with Society / individual land owners for smooth execution of pipeline laying. Repairing/replacement of all damaged utilities if any, and payment of any compensation (if claimed by the incumbent owner/other utility agencies) is in scope of the contractor.

- 2.3 Prior to start of construction activity, contractor shall prepare route survey drawing marked for proposed gas pipe line laying and submit to GGPL/PMC for approval. Execution shall start after due approval.
- 2.4 Receiving, loading, transporting, unloading and stacking of MDPE pipes issue by GGPL as free issue material from GGPL designated storage yard within East and West Godavari Dist. GA limit but upto maximum 50Km from the working site. All toll taxes etc are also included in the scope.
- 2.5 Proper storing, stacking, identification, providing security, and insurance, during storage, laying and upto handing over of pipelines.
- 2.6 Making trial pits to determine the underground utilities/services such as existing pipelines, Cables (Electrical/Communication), Conduits, U/G drainage, Sewers, tunnels, Subways foundations etc, and deciding optimum routes and depths for laying the pipelines based on the actual site condition / approved pipeline route by EIC/authorities.
- 2.7 DELETED
- 2.8 Wherever required the grass/ turfing, pavement, linings, drains roads and other such 'pucca' area shall be locally removed to facilitated trenching and pipe laying works. The same is to be reinstated to its original stage.
- 2.9 Supply & Installation of Safety/ Warning Signs, barricading of the entire route to be trenched. Pits to be similarly barricaded along with the warning sign.
- 2.10 To make trenches with stable slopes but restricting minimum disturbance to aboveground/underground services/ installation as per specifications and approved route plans; keep the trenches free from water and soil till placement of pipes;
- 2.11 Supplying, Uncoiling/ stringing the PE pipes of required sizes pipes into trenches as per specification.
- 2.12 Joining the pipe ends with fittings and valves by approved electro-fusion techniques as per specification.
- 2.13 Supplying & Installation of pipe fittings like elbow, tee, reducers, tapping saddles, joints, connectors, transition fittings, valves, sleeves etc. including construction of supports, valves pits, inspection chambers along with all materials etc. as per specification.
- 2.14 Laying pipeline using trench less technology methods with or without casing pipes as per specification and as directed by EIC.
- 2.15 Supply of good quality GI sleeves, concrete casing pipes, sand and other material, fittings to be supplied by the Contractor as per provisions of tender.

- 2.16 Supplying and laying of warning mat (with tracer wire) and bricks over the PE pipe.
- 2.17 Back filling and compaction by jumping jack compactor using approved 'good' soil or using excavated earth or borrow earth as per requirement and specification and replacement of tiles, slabs removed during the excavation. Cleaning all unserviceable material, debris, excess earth near trenches etc to designated disposal area.
- 2.18 Carrying out pneumatic testing and purging as per specifications and approved procedures; providing all tools, tackles, instruments, manpower and other related accessories for carrying out the testing of pipes.
- 2.19 Nitrogen purging (including supply), commissioning & gas charging of tested pipeline as per approved procedure.
- 2.20 Restoration of existing ground features such as grass/ turfing, paving, roads, drains, concrete, floral beds, fencing, titles, flooring masonry etc. to original condition and to match with adjoining conditions -functionally and aesthetically - upto the entire satisfaction of GGPL/MECON/ any other third party agency designated by GODAVARI GAS PVT. LTD and local authorities, failing which, it will be done at the risk and cost of the contractor.
- 2.21 Obtaining satisfactory completion certificates for the restoration work done from the concerned authorities.
- 2.22 Supply and laying of the above ground GI installation in the building/flat/apartment of consumer. Supply & laying of copper tube, isolation valves & appliance valves.
- 2.23 Collecting Free Issue materials like Regulators, meters & other associated fittings and installing the same including supply of fittings, as required.
- 2.24 Supply, fabrication and installation of Warning Plate marker.
- 2.25 Testing of total GI & copper installation.
- 2.26 Commissioning of total GI & copper installation for a unit, wherein gas is made available.
- 2.27 Extending branch pipes from the existing and handed over GI piping network and completing the connection upto kitchen.
- 2.28 Returning surplus Free Issue Material to GODAVARI GAS PVT. LTD (GGPL) store after reconciliation of free issue material and submission of final Reconciliation Document to the satisfaction of GGPL /MECON.
- 2.29 Studying the existing reticulated LPG system, collecting documents for existing system, carrying out modification in existing piping connections as required, changing of meters & regulators (as required), testing the piping system
- 2.30 Handing over the completed works to GGPL for their operation /usage purposes.
- 2.31 Maintaining the completed pipelines/installation for any defect, failures during defect liability period.
- 2.32 Preparation and submission of As-built drawings, details of crossings, measurement sheets and deviation statements on completion / commissioning of work by

way of drawing, sketches and tables.

2.34 Planning, detailing the size, route survey drawings, identification of underground utilities, foreign pipelines, crossings, and location of valve chamber, FRS, DRS, MRS as well as service line location is in scope of contractor.

2.35 Mainlines -The final alignment of mainlines will be worked out at site in consultations with the Owner/Owner's representatives after route survey and trial pits, at contractor cost. Any change in routing from the issued drawings due to site constraint will be notified to EIC & his specific written approval shall be obtained before carrying out the job.

2.36 Service lines :- Consultant/Third Party Inspection Agency and the contractor will conduct a joint survey at each probable premise/ housing colony/pockets/area to be supplied with gas.

The survey record will note customer's detail/cd potential gas supply points, proposed regulator positions and estimates of material quantities. The contractor's representatives will make sketch of the agreed pipe routes.

2.37 The contractor will be responsible for contacting the customer and making the necessary arrangements for access and appointments to carry out the work. Contractor shall maintain job card and complaint books at site. Owner will not be responsible for time lost due to failed appointments or disputes with customers.

2.38 The Contractor shall locate and expose manually all underground facilities if any during trenching.

Safety barriers shall be erected along the trench to prevent any damages or accident. On locations where pipeline is laid under the existing facilities and near the approaches of the crossing, the trench shall be gradually deepened to avoid sharp bends.

2.39 All sewers, drains, ditches and other natural waterways encountered while trenching shall be maintained open and functional by providing proper temporary installations if required. Suitable dewatering pumps shall be deployed to dewater, if required

2.40 Whenever it is permitted by Authorities and /or Owner to open cut paved road crossing, or where the line is routed within the road pavement, the Contractor shall remove the paving in accordance with the restrictions and requirements of the authorities having jurisdiction thereof as directed by Owner. After laying the pipeline, backfilling shall be immediately performed and all the areas affected connected with the excavation works shall be temporarily restored

2.41 In case of damage to any of above referred structures/utilities the Contractor shall be responsible for repairs/replacement at his own cost, which shall be carried out to the satisfaction of concerned authorities, resident and Owner

2.42 Others

Throughout the period of execution of such work, the Contractor shall provide and use warning signs, traffic lights or lanterns, barricades, fencing, watchman etc. As required by the local authorities' jurisdiction and/or Owner.

For all roads, paths, walkways etc. which are open-cut, the Contractor shall provide temporary diversions properly constructed to allow the passage of normal traffic with the minimum inconvenience and interruptions.

The paving shall be resorted to its original condition after the pipeline is installed.

The Contractor shall excavate to additional depth at all the points where the contour of the earth may require extra **depth**, or where deep trench is required at the approaches to crossings of roadways, railroads, rivers, streams, drainage and ditches without any extra cost implication to owner.

The Contractor shall excavate all **such** aforesaid depths as may be required at no extra cost to Owner. The trench shall be cut to a grade that will provide a firm, uniform and continuous support for the pipe.

The Contractor shall take conducive measures to ensure the protection of underground utilities as per the instructions of Owner or relevant authorities.

Where the pipeline crosses underground utilities/structures, Contractor shall first manually excavate to a depth and in such a manner that the utilities/structures are located, then proceed with the conventional methods.

The locations, where the pipeline has to be laid more or less parallel to an existing pipeline cable and/or other utilities in the Right-of-way the Contractor shall perform the work to the satisfaction of the Owner of the existing pipeline/cable/utility. In such locations, the Contractor shall perform work in such a way that even under the worst weather and flooding conditions, the existing pipeline/utilities remain stable and shall neither become undermined nor have the tendency to slide towards the trench.

GENERALTERMS AND CONDITION

- I. Special Condition of Contract shall be read in Conjunction with the General Conditions of Contract, SOR, PJS of work, specifications, Drawings and any other documents forming part of this contract wherever the context so requires.
- II. Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.
- III. Where any portion of the General Condition of Contract is repugnant, to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Condition of Contract and shall to the extent of such repugnancy, or variations, prevail.
- IV. The materials, design and workmanship shall satisfy the relevant INDIAN STANDARDS, the TECHNICAL SPECIFICATIONS contained herein and CODES referred to. Where the technical specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- V. Wherever it is mentioned in the specifications that the CONTRACTOR shall perform certain work or provide certain facilities, it is understood that the CONTRACTOR shall do so at his cost and the VALUE OF CONTRACT shall be deemed to have included cost

of such performance and provisions, so mentioned.

- VI. It will be Contractor's responsibility to bring to the notice of Engineer-in-charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists.
- VII. In the absence of any specifications covering any material, design of work(s) the same shall be performed/ supplied/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-in-charge, which will be binding on the Contractor.

3.1 PROCUREMENT

- 3.1.1 CONTRACTOR shall procure and supply all the materials other than OWNER supplied materials, required for permanent installation of underground PE pipeline and aboveground GI Installation in sequence and at appropriate time. All equipment, materials, components etc. shall be suitable for the intended service. Approved vendor list has been indicated in the bid package for various items. For items which are not covered in the vendor list, CONTRACTOR shall obtain Owner's prior approval for the vendor.
- 3.1.2 CONTRACTOR shall procure all materials, components, equipment, consumable etc. required for successful completion of the pipeline system. CONTRACTOR shall also procure and supply spares required for pre-commissioning and commissioning/ start up as recommended for all items supplied by him as per specifications provided in the bid package. Where no specification is available in the contract, the same shall be prepared by the CONTRACTOR based on the piping material specification and shall be subject to Owner's approval.
- 3.1.3 Material take-off with complete description of size, rating, material, thickness and specifications to be prepared by contractor.
- 3.1.4 Only single offer shall be provided by the bidder fully complying to specifications/ drawings/ requirements for Owner's review and approval. CONTRACTOR shall provide for inspection of the items at vendor's works by the OWNER/ Owner's REPRESENTATIVE or by a reputed inspection agency and shall submit inspection reports for Owner's clearance.
- 3.1.5 Stores management including receipt, warehousing, preserving the material in good condition, issue of material to construction site, reconciling/ handing over surplus material to OWNER for OWNER supplied items.
- 3.1.6 Carryout proper documentation of inspection and quality assurance programme for all equipment and bulk materials duly approved by OWNER. CONTRACTOR shall maintain an accurate and traceable listing of procurement records for the location, quality and character of all permanent materials in the Project.
- 3.1.7 CONTRACTOR shall immediately report to the OWNER of all changes which will affect material quality, and recommend any necessary corrective actions to be taken.
- 3.1.8 Submit periodic manufacturing progress reports highlighting hold ups and slippages, if any, to OWNER and take remedial measures.
- 3.1.9 Interact with authorities such as GST, Customs etc. as necessary and arrange for transportation of the materials under his scope of supply to site.

- 3.1.10 All purchased items shall be liable for inspection and acceptance by Owner/ Owner's Representative.
- 3.1.11 Compliance with vendor's and supplier's instructions and recommendations for transportation, handling, installation & commissioning.

3.2 Construction

3.2.1 General

- 3.2.1.1 All construction works shall be carried out as per approved drawings, procedures, specification and applicable codes and standards. Any changes at site shall also need prior approval from the OWNER / CONSULTANT.

Owner will take minimum 10 working days from the date of submission of the documents / drawings submitted by the contractor for owner's comments / approval.

3.2.1.2 Statutory Approvals

The Owner shall provide to the Contractor the basic / in principal approval for laying the pipeline. However, the Contractor at his own initiative shall obtain all permissions, permits and licenses necessary for the performance of the work. If any such permission, permit or license required for the performance of the work by the contractor can only be granted at the request or recommendation of the Owner, the Owner shall at the request of the Contractor, provide recommendatory letters to the contractor to obtain or procure the same. The contractor shall not, however be entitled to any additional compensation over and above contracted rates of services for any hardship or increased cost caused by any idleness, suspension or disruption of work or any other account whatsoever as a result of the inability of the contractor to obtain the permission(s), permit(s), license(s) aforesaid to match with the progress of the work nor shall the same constitute a ground for extension of time.

a) The approval from any authority required as per statutory rules and regulations of Central/ State Government agencies etc. shall be the contractor's responsibility unless otherwise specified in the tender document. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted (after getting signed from the owner) by the Contractor well ahead of time so that the actual construction/ commissioning of the work is not delayed for want of the approval/ inspection by concerned authorities. The Contractor shall arrange the inspection of the works by the authorities and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. However statutory fees paid, if any, for all inspections and approvals by such authorities shall be reimbursed at actual by the Owner to the Contractor on production of documentary evidence.

b) The defective work resulting from poor workmanship and/ or material supplied by contractor, as pointed out by any statutory authority shall be rectified by the contractor at no extra cost to the Owner. Any change/ addition required to be made to meet the requirements of the statutory authorities, the same shall be carried out by the contractor free of charge. The inspection and acceptance of the work by statutory authorities shall, however, not absolve the contractor from any of his responsibilities under this contract.

3.2.1.3 The Contractor shall comply with all the conditions and requirements issued by Authorities having jurisdiction in the area where the work is to be performed.

It shall be the Contractor's sole responsibility to make arrangements for land for setting up of its string fabrication yards, all storage areas for line pipe and other materials, wherever required, and all other work areas.

The Contractor shall make all arrangements for access to his work site at his own cost and responsibility. If no public road exists Contractor shall arrange on his own for access to his work area at no extra cost to the COMPANY.

The CONTRACTOR shall be responsible for claims if any arising out of damage/ obstruction to public & private utilities like lines of DOT, telecom operators, water lines, electric cables etc. where the claims may cover the restoration costs as well as loss of revenue due to down time.

3.2.1.4 Providing schedules, progress reporting, organization chart at construction site, quality assurance plan and developing quality control procedures, as per requirements indicated elsewhere in the bid package.

3.2.1.5 Coordination and supervising the work of sub-contractors.

3.2.1.6 Transportation of appropriate materials and taking delivery of Company supply materials, store, worksite, intermediate storage points, maintaining and operating an adequate material control procedure at worksite.

3.2.1.7 Installation of all GI piping, supports etc. as per approved drawings.

3.2.1.8 All works related to laying and commissioning works shall be performed in accordance with relevant specifications and requirements enclosed elsewhere in the bid package.

3.2.1.9 CONTRACTOR shall provide complete details of manpower, equipment etc. to be deployed. Mobilizing and providing all equipment, manpower (skilled and unskilled), consumable and other resources etc. for each spread as required for the execution of the complete job defined herein and thereafter demobilizing the same upon completion of work.

3.2.1.10 Provide, maintain and operate all temporary facilities required for the construction related works and remove after completion of work. Providing barricading at trench in city area as per instruction of engineer in charge for safety.

3.2.1.11 Hook up/ tie-in of pipeline and piping system with other facilities etc.

3.2.1.12 All works related to cleaning, testing, dewatering, swabbing, drying pre-commissioning and commissioning of the work tendered.

3.2.1.13 Idle time preservation of pipeline, if required.

3.2.1.14 All incidental and associated works and any other works not specifically listed therein but are required to be carried out to complete entire work related to pipelines and terminals.

3.2.2 Branch / service Pipeline

3.2.2.1 Familiarization of Pipeline Route

Bidders are advised to make site visits to familiarize themselves with all the salient features of available infrastructure along the proposed pipeline in GA area of 20 Towns in East & West Godavari Dist.. Contractor shall be deemed to have considered all constraints and eventualities on account of site conditions while formulating his bid. Jobs can be awarded in any

location within East and West Godavari Dist. GA. Contractor shall not be eligible for any compensation in terms of cost and/ or time, on account of site conditions varying to any extent from whatever described in the Bid Package.

3.2.2.2 The working area may have lots of existing PVC, PE & utility pipelines or other pipelines & cables, CONTRACTOR shall ensure that these lines are not damaged/ cut affecting the water / power / communication / other supply to concerned Users / Owners / Authorities. Wherever required, necessary precautions had to be maintained for uninterrupted supply.

3.2.2.3 Receiving the Free Issue Materials from the store of the owner, loading & unloading and transportation to work site / store up to 60 km by the contractor. Supply, loading, unloading, handling, stacking, storing and transportation to their designated stack yard/ dump site/ store or workshop/ work site of all other materials by CONTRACTOR as the case may be.

3.2.2.4 Stacking, clearing, grading as required, trenching to all depths in all types of soil including soft & hard rock by chiseling or otherwise cutting etc. to a width to accommodate the PE pipeline as per relevant standards, drawings, specification etc. transportation of PE pipes along the route, stringing, aligning, jointing including testing, inspection, field jointing including supply of all materials as per specifications, laying and lowering of the pipeline, back filling, Supply and installation of pipeline as shown in approved drawings and as directed by OWNER, installation of supports wherever required, supply of select backfill material as required, clean-up, flushing, pneumatic testing, nitrogen purging / pre-commissioning and commissioning of complete pipeline system, including all associated works as per relevant specifications, standards and approved drawings.

3.2.2.5 Sand/ soft soil padding around pipe wherever required in areas where trenching has been done in hard soil area / rocky area including supply of sand/ soft soil. The thickness of sand/ soft soil padding at the top of pipe shall be minimum 150 mm and bottom of pipe shall be minimum 150 mm or as per drawing.

3.2.2.6 Supply & Installation of all inline/ valves/ fittings/ transition fittings as per requirements of approved drawings.

3.2.2.7 Testing & Purging

A) Testing

Pressure testing will be carried out with compressed air. Compressed dry air will be provided by Contractor for testing purposes and is to be included in the rates.

For main PE pipelines work the Contractor shall perform progressive pressure testing to avoid having to find leaks in long lengths of pipe. The test pressure shall be around 1.5 times of MAOP or 9.0 bar(g) as per EIC and there shall be no unaccountable pressure loss during the test period.

Test procedure with sketches showing the pipeline to be tested, vent points, gauge location, and inlet pressure print is to be prepared & got approved by EIC before commencing of the Pressure testing.

For main PE line the test duration shall be 24 hrs . With these tests the pressure should be allowed to stabilize for a period of 30 minutes after pressurization. The holding period may then commence and continue for 24 hours. Measuring instruments shall have been calibrated and their accuracy and sensitivity confirmed. For testing of Network, calibrated pressure gauges of suitable range shall be supplied by the contractor. The pressure gauges shall be calibrated from time to time as desired by Engineer-in-Charge. All testing shall be witnessed and approved by the EIC or his

delegated representative.

Tie-in joints may be tested at working pressure following commissioning.

For service lines in some cases testing will be carried out independently of the testing of the mains for which the test duration may be reduced to 4 hrs.

The service testing in this case will be performed after the service installation is complete but before the service tee has been tapped. Also in some cases the tapping of the service tee may be deferred pending the completion and purging of the main pipelines. For GI pipeline network, the testing will be done at 2 kg/cm² for 4 hours.

B) Purging

Purging shall be carried out in accordance with the principles defined in the American Gas Association publication 'Purging Principles and Practice'.

Nitrogen required for purging will also be provided by the Contractor. Nitrogen shall be supplied in labelled, tested and certified cylinders, and completed with all necessary regulators, hoses and connections, which will be in good condition and working order.

In addition, the Contractor shall submit and get approved a Purging Plan before commencing any purging work. The Plan shall include, but not be limited to, the provision of the following materials and equipment:

Personal safety equipment, Fire extinguisher, Purging adapter, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squash-off tool, Polyethylene connecting pipe work.

The Plan shall also include the purging process along with detail on the sequence of events. The process is to also specifically mention the need to lay a wet cloth over the PE main and in contact with the ground, to disperse static electricity during the purging work.

A purge stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

3.2.2.8 Markers

Supply & Installation of all types of markers including all associated civil works. Any other work not specifically mentioned above but required for making the entire pipeline system ready for operation.

3.2.2.9 Priorities

The Contractor shall start the execution work as per approved execution methodology / plan/ procedure to complete the scope of work and shall deploy adequate manpower, machinery, tool & tackles etc. accordingly.

However, Owner may, at its sole option, assign priority of construction to any part/ segment of the work. Contractor shall comply with such priority of execution and their deployment without any time and cost implication to the Owner.

3.2.2.10 Pre-commissioning and Commissioning

Pre-commissioning including supply of all materials, consumables and manpower of the complete pipeline system

- Making the entire system ready for commissioning and providing assistance during the complete duration of commissioning operations.

Completion of all pipeline activities as detailed in SOR.

3.2.2.11 Installation of Riser and Lateral Pipes in High Rise Building for PNG connection

Procurement of GI Pipes (heavy duty) as per IS-1239 Part-I duly Zinc coated in accordance with IS 4736 & wrought steel fittings (forged fittings) conforming to IS-1239 Part-II or Malleable fittings as per IS 1879. The threading of GI pipe shall be NPT and conforming to ANSI B120.1

Erection, Fabrication, threading, Testing & Installation of GI Pipes & Fittings etc., including NPT threading as per technical specification and sketch attached.

Preparation and approval of sketches, schedules, execution procedures as per technical specification. All consumables and fittings are under contractor's scope.

Supply & fixing of MS angle clamps, Ceiling clamps & dowel plugs with screws, grout material, suitable thread sealant i.e. Teflon Tape / lock tight, Supply and fixing of studs & bolts of various sizes ranging from 1/2" to 2" and 3/4" to 2", Jointing of transition fittings to above ground GI pipes, purging, testing and commissioning of the complete installation.

The entire riser assembly shall be made of threaded riser assembly. Isolation valve shall be placed in riser as may be required in line with the site condition, so as to provide independent operation for a block of flats/rooms/houses. For all kitchens, irrespective of consenting or uninterested customers, each lateral shall be laid upto an approachable distance (≤ 300 mm) of the intended kitchen area before installing the isolation valve, so as to ensure easy operation of the isolation valve and avoidance of arrangement of hanging supports for future extension of the lateral. All lateral which are not being laid up to a kitchen, must be plugged with end cap/plug. However, to the extent possible, the isolation valve in the lateral should be approachable from inside the house as well as from outside the house. This is to ensure that isolation valve can be attended even if the corresponding customer is not available or the house is locked.

Pipe and required fittings shall be first coupled with threaded (NPT) joints. The threaded joints are to be made using male tapered thread and female parallel thread fittings. All threading shall be NPT threading with threading making machine.

Teflon/PTFE Tape can be used in threaded joints.

Risers and laterals must be designed to run through the optimal possible route, taking into consideration potential meter positions, design regulations and access for future maintenance. A riser must not be constructed so that the laterals face directly into the wall from the riser.

Risers and laterals must be laid a minimum of 300 mm from any electrical equipment or installations. On occasions where the pipe has to cross over a cable, this has to be done at right angles and a minimum gap of 25 mm must be maintained between the pipe and cable. Consideration may be given to wrapping the pipe with electrical insulation tape for protection against electrical short circuiting.

All riser and lateral pipe shall be clamped to the building at intervals not exceeding 1.5 meter. If any tee or fittings lies in between the pipe then clamp shall be placed 150 mm far away from center line of fittings on both sides. However, the same may be changed as per site conditions/as directed by SE. Minimum gap between pipe and wall shall be 25 mm. The

joints/fittings of the GI installations shall be painted only after carrying out testing of the installation.

Where pipe passes through the balcony and the surface is slightly elevated around the service pipe or its surrounding, sleeves to be provided to prevent the accumulation of water at that point.

Pipe shall preferably be entered into building above ground and remain in a ventilated location. The location for entry shall be such that it can be easily routed to the usage points by the shortest practicable route.

No concealed piping work will be accepted. In case of piping are laid in a confined area, proper ventilation measures for the piping area is to be provided.

The GI piping inside house will be done up to the inlet of the gas meter. An isolation valve will be provided prior to the meter. Piping inside kitchen area will be done through 12mm X 0.6mm thk copper tube at the downstream of the gas meter. In case Gas meter is installed outside the kitchen area, then copper tubing will be carried out only after the GI piping, downstream of the meter, enters the kitchen.

The copper piping will be supported with closed clamps in place of open ended clamp.

Total 10m of GI piping length and 5m of copper piping length is being consider for each connection for any individual house and for the lateral length for any flat within a building/apartment. Any additional length required for completing the connection will be paid at a rate , as decided by the OWNER from time to time. For this purpose, a consent form from the respective customer must be got signed prior to commencement of the work.

Risers and laterals shall be Leak tested with compressed air @ 2 bar (g) for minimum 4 hrs after vertical installation. Copper piping work / GI piping work at the down stream of the gas meter will be tested at 100mbar for 15 minutes.

The joints/ fittings of the GI installation shall be painted only after carrying out testing of the installation

Making temporary but stable platforms/scaffolding/rope ladder etc., required for installation of pipes/fittings at all heights/multi storied flats and locations.

Any other material & activities not mentioned/covered above, but otherwise required for satisfactory completion/safety of work as defined in tender has to be supplied / done by contractor within specified schedule at no extra cost to owner.

4.0 SCOPE OF SUPPLY

4.1 Owner's Scope of Supply (Free Issue Item)

Owner's scope of supply includes all MDPE pipe, meters & Regulators only as required.

Free Issue Materials shall be issued to the Contractor from the designated store(s) of Godavari Gas Pvt. Ltd. Contractor shall be responsible for lifting the free issue materials from Owner's storage point(s) and transporting the same to work site(s) at his own cost. The scope includes receiving, loading, unloading and transporting the free issue material from GGPL designated store yard within East and West Godavari Dist. GA limit to working site/contractor's store and stacking them properly. All toll taxes etc are also included in the

scope.

4.2 Material to be supplied by Contractor

The procurement and supply, in sequence and at the appropriate time, of all materials and consumables required for completion of the work as defined in this Bid document except the materials specifically listed above, shall be entirely the CONTRACTOR'S responsibility and item rates quoted for the execution of the CONTRACT shall be inclusive of supply of all these materials. The material to be supplied by the Contractor shall be as per specification and preferred make as indicated in Appendix-I or duly approved / recommended for use by Godavari Gas Pvt. Ltd. / MECON.

All materials except what is under Owner's scope of supply as mentioned in Clause No. 4.1 above, and required for successful completion of works in all respects shall be supplied by the Contractor and the cost of such supply shall be deemed to have been included in the quoted price without any additional liability on the part of Owner.

Other than GI pipes and copper pipes, major materials to be supplied by the contractor for completing the network is given below. However other additional/ Supplementary materials required for execution of the project is to be supplied by the contractor

Major Supply Material under Contractor's Scope

A) Coupler / bends / elbows as required

- i) For 125/90mm (PE)
- ii) For 63 mm (PE)
- iii) For 32mm (PE)
- iv) For 20 mm (PE)

B) End Caps

- i) For 125/90mm (PE)
- ii) For 63 mm (PE)
- iii) For 32mm (PE)
- iv) For 20 mm (PE)

C) Equal Tee

- i) For 125/90mm (PE)
- ii) For 63 mm (PE)
- iii) For 32mm (PE)
- iv) For 20 mm (PE)

D) Saddle Tapping Tee

- i) Saddle Tapping Tee 32x20 (PE)
- ii) Saddle Tapping Tee 63x20 (PE)
- iii) Saddle tapping Tee 63x32 (PE)
- iv) Saddle tapping Tee 125 x 32 (PE)
- v) Saddle tapping Tee 125 X 20 (PE)
- vi) Saddle tapping Tee 90 x 32 (PE)
- vii) Saddle tapping Tee 63 X 20 (PE)

E) Reducer

- i) Reducers 32x20 (PE)
- ii) Reducers 63x32(PE)
- iii) Reducers 125x63 (PE)
- iv) Reducers 125 x 90 (PE)

F) Transition Fitting

- i) PE to G.I. (20 mm to 1/2")
- ii) PE to G.I. (20 mm to 3/4")
- iii) PE to G.I. (20 mm to 1")
- iv) PE to G.I. (32 mm to 3/4")
- v) PE to G.I. (32 mm to 1")
- vi) PE to G.I. (32 mm to 1 1/2")
- vii) PE to Steel 125 mm to 3"
- viii) PE to Steel 90mm to 3"
- ix) PE to Steel 63mm to 2"

G) Warning mat

Warning Mat 250 mm Wide-0.5mm Thick without traceability wire

H) GI Fittings

- i) Elbows F End (1/2") (GI)
- ii) Elbows F End (3/4") (GI)
- iii) Elbows F End (1") (GI)
- iv) Elbows F End (1 1/2") (GI)
- v) M & F Elbows End (1/2") (GI)
- vi) M & F Elbows End (3/4") (GI)
- vii) M & F Elbows End (1") (GI)
- viii) M & F Elbows End (1 1/2") (GI)
- ix) Equal Tee (1/2") (GI)
- x) Equal Tee (3/4") (GI)
- xi) Equal Tee (1") (GI)
- xii) Equal Tee (1 1/2") (GI)
- xiii) Union (1/2") (GI)
- xiv) Union (3/4") (GI)
- xv) Union (1") (GI)
- xvi) Union (1 1/2") (GI)
- xvii) Sockets (1/2") (GI)
- xviii) Sockets (3/4") (GI)
- xix) Sockets (1") (GI)
- xx) Sockets (1 1/2") (GI)
- xxi) Reduced Elbows (3/4" x 1/2") (GI)
- xxii) Reduced Elbows (1" x 3/4") (GI)
- xxiii) Reduced Elbows (1 1/2" x 3/4") (GI)
- xxiv) Reduced Elbows (1 1/2" x 1") (GI)
- xxv) Hex Nipple Size (1/2" x 2") Long (GI)
- xxvi) Hex Nipple Size (1/2" x 3") Long (GI)
- xxvii) Hex Nipple Size (3/4" x 2") Long (GI)
- xxviii) Hex Nipple Size (1" x 2") Long (GI)
- xxix) Hex Nipple Size (1 1/2" x 2") long (GI)
- xxx) Reduced Sockets (3/4" x 1/2") long (GI) xxxi) Reduced Sockets (1" x 3/4") (GI)

- xxxi) Reduced Sockets (1½" x ¾") (GI)
- xxxii) Reduced Sockets (1½" x 1") (GI)
- xxxiii) GI Plugs ¾"

Any fittings not specified above but required for GI, Copper and PE lines is in the scope of contractor.

5.0 DOCUMENTS, SPECIFICATION, STANDARDS AND DRAWINGS

5.1 Owner shall furnish tender purpose drawings as listed in content of Volume-II of II of the tender document and other typical standard drawings attached with respective technical specifications enclosed with Volume-II of II of the tender document. Contractor shall prepare detail engineering drawing, bill of materials and all installation drawings and submit to Consultant for approval prior to start of the job / any procurement.

5.2 Contractor shall prepare routing drawing, isometric drawings, any specific detail drawings (if required by Engineer-in-charge) & bill of materials and submit the same for Owner/ Consultant's approval/ record.

Contractor shall indicate various existing utilities line in their drawing.

5.3 No installation small or big shall be carried out without approved / standard drawings.

5.4 After Completion of work & commissioning of pipeline system, Contractor shall incorporate all the correction in drawings, prepare and submit the "as built drawings" in 4 sets of hard copies and soft copies in two CDs. Soft copy of all as-built drawings shall be submitted preferably in AutoCAD, however drawing made manually are also acceptable.

5.5 Specifications

The work shall be carried out by CONTRACTOR strictly in accordance with the specifications enclosed in Volume-II of II of this document.

5.6 Drawings

Tender drawings are included in Vol.-II of the bid package for BIDDER's reference purpose only. Bidders are advised to visit the site before submitting their bids. The Contractor shall develop all routing and isometric drawings as detailed in respective SCC, PJS & SOR etc.

6.0 RESOURCES FACILITIES

6.1 Recruitment of Personnel by Contractor

The Contractor shall not recruit personnel of any category from among those who are already employed by the other agencies working at the sites but shall make maximum use of local labour available.

6.2 Construction Water and Power Supply

No water and power will be provided by the owner. It is the responsibility of the contractor to arrange water and power at his own cost.

6.3 Land for Residential Accommodation

Owner shall not provide any land for residential accommodation or office/store purpose for contractors' staff and labour.

7.0 PROJECT SCHEDULING & MONITORING

The following schedules/documents/reports shall be prepared and submitted by the Contractor for review/approval at various stages of the contract.

7.1 After the Award of Contract

a) The Contractor shall submit within 1 week of Fax of Intent, the total organogram for both site and controlling office along with experience details of the crew. Within 1 week of allotment of the work front, shall submit the work schedule along with manpower planning for approval of client / consultant.

b) The contractor is required to submit within 2 weeks the planning for procurement and name of vendors being considered.

7.2 Project Review Meetings

The Contractor shall present the programme and status at review meetings to be held on monthly basis, highlighting target Vs. achievement, major hold-ups, remedial measures etc.

7.3 Progress Reporting Performa

Contractor shall submit on regular basis the Daily Progress Report comprising

- i) Activity programme for the day, Progress of the previous day and commutative progress,
- ii) Manpower & machinery deployed.

The monthly Report also should be submitted by the contractor comprising i) target vs. achievement, ii) Major achievements, iii) New fronts added in working, iv) manpower and equipment deployment schedule, v) areas of concern, vi) Record of mandays lost, vii) Photographs of the work.

7.5 Progress Reports

7.5.1 CONTRACTOR shall make every effort to keep the OWNER adequately informed as to the progress of the WORK throughout the CONTRACT period.

CONTRACTOR shall keep the OWNER informed well in advance of the construction schedule so as to permit the OWNER to arrange for requisite inspection to be carried out in such a manner as to minimize interference with progress of WORK. It is imperative that close coordination be maintained with the OWNER during all phases of WORK.

7.5.2 By the 10th (tenth) of each month, CONTRACTOR shall furnish the OWNER the monthly report covering the progress as of the last day of the previous month. These reports will indicate actual and scheduled percentage of completion of construction as well as general comments of interest or the progress of various phases of the WORK.

7.5.3 Progress reports shall be supplied by CONTRACTOR with photographs etc. Such progress reports shall be in the form and size as may be required by the OWNER and shall be submitted in at least 2(two) copies.

8.0 CONSTRUCTION

OWNER reserves the right to inspect all phases of CONTRACTOR's operations to ensure conformity to the SPECIFICATIONS. Owner will have Engineers, Inspectors or other duly authorized representatives, made known to the CONTRACTOR present during progress of the WORK and such representatives shall have free access to the WORK at all times. The presence or absence of an OWNER's representative does not relieve the CONTRACTOR of the responsibility for quality control in all phases of the WORK. In the event that any of the WORK being done by the CONTRACTOR or any SUB-CONTRACTOR is found by OWNER's representatives to be unsatisfactory or not in accordance with the DRAWINGS, procedures and SPECIFICATIONS, the CONTRACTOR shall, upon verbal notice of such, revise the work in a manner to conform to the relevant DRAWINGS, procedures and SPECIFICATIONS.

8.1 Rules & Regulations

CONTRACTOR shall observe in addition to Codes specified in respective specification, all National and Local Laws, Ordinances, Rules and Regulations and requirements pertaining to the WORK and shall be responsible for extra costs arising from violations of the same.

8.2 Procedures

Various procedures and method statements to be adopted by CONTRACTOR during the construction as required in the respective specifications shall be submitted to OWNER in due time for APPROVAL. No such construction activity shall commence unless approved by OWNER in writing.

8.3 Field Inspection

CONTRACTOR shall have at all times during the performance of the WORK, a Competent Superintendent on the work front. Any instruction given to such superintendent shall be construed as having been given to the CONTRACTOR.

8.4 Erection and Installation

The CONTRACTOR shall carry out required supervision and inspection as per quality Assurance plan and furnish all assistance required by the OWNER in carrying out inspection work during this phase. The OWNER will have engineers, inspectors or other authorized representatives present who are to have free access to the WORK at all times. If an OWNER's representative notifies any deficiency, or recommends action regarding compliance with the SPECIFICATIONS, the CONTRACTOR shall make every effort to carry out such instructions to complete the WORK conforming to the SPECIFICATIONS and approved DRAWINGS in the fullest degree consistent with the best industry practice.

8.5 Construction Aids, Equipment, Tools & Tackles

For satisfactory execution of the work, CONTRACTOR shall be solely responsible for making available, all requisite Construction Equipment, Special Aids, Tools, Tackles and testing equipment and appliances. Such construction equipment etc. shall be subject to examination by owner and approval for the same being in first class operating condition. Any discrepancies pointed out by OWNER shall be immediately got rectified, repaired or the

equipment replaced altogether, by CONTRACTOR. OWNER shall not in any way be responsible for providing any such equipment, machinery, tools and tackles.

The OWNER reserves the right to rearrange such deployment depending upon the progress and priority of work in various sections.

9.0 DOCUMENTATION

9.1 "As Built" Drawings

The Contractor will submit as-built drawings in A3/ A2 sheet form at 1:200 scale with four sets of print-outs plus soft copy in two sets of CD. The as-built drawing shall be submitted on area wise as specified. The bill of materials used for the particular area shall be specified on the drawings

9.2 Completion Document - PE& GI

The following documents shall be submitted in hard binder by the BIDDER in FOUR sets, as a part of completion documents: -

1. Copies of the Inspection reports, Laying Graphs, HDD Profiles (if required) and valve pit drawings (if required).
2. Pre testing, final Hydrostatic / pneumatic and other Test results and reports.
3. Consumption statements of PE/ GI certified by Owner's Site Engineer.
4. Material Reconciliation, stores issue & return statements
5. All other requirements as specified in the respective specifications.
6. Completion Certificate issued by Owner's Site Engineer.
7. No claim certificate by the BIDDER.
8. Completion certificate for embedded and covered up works wherever applicable.
9. Recovery statement, if any.
10. Deviation statement.
11. Statement for reconciliation of all the payments and recoveries made in the progress bills.
12. Copies of deviation statement and order of extension of time, if granted.
13. Any other contractual documents required on completion.
14. Total list of houses in the area allotted to him giving details of connections provided & reasons where connection could not be given/ completed.
15. The details recorded in measurement cards of every domestic house.
16. Details of houses where extra piping done along with materials used.
17. Total material consumption report.
18. Material reconciliation with respect to the materials issued.
19. Test reports & test certificates of gauges etc
20. Any other documents / records required.
21. Duly filled and signed PNG job cards, GI testing reports and Commissioning/ conversion reports of domestic and commercial installations.

10.0 ORDER OF WORKS/PERMISSIONS/RIGHT OF ENTRY/CARE OF EXISTING SERVICES.

10.1 The order in which the WORK shall be carried out shall be subject to the approval of the Engineer-in-charge and shall be so as to suit the detailed method of construction adopted by the CONTRACTOR, as well as the agreed joint programme. The WORK shall be carried out in a manner so as to enable the other contractors, if any, to work concurrently.

OWNER reserves right to fix up priorities which will be conveyed to the CONTRACTOR

and he shall plan and execute work accordingly.

10.2 Existing Service

10.2.1 Drains, pipes, cables, overhead wires and similar services encountered in course of the works shall be guarded from damage by the CONTRACTOR at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Owners thereof.

10.2.2 Should any damage be done by the CONTRACTOR to any mains, pipes, cables or lines (whether above or below ground etc.), whether or not shown on the drawings the CONTRACTOR must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-Charge.

11.0 MAKE OF MATERIAL/BOUGHT OUT ITEMS

Approved vendors for various major items is enclosed as Appendix-I to Particular Job Specification with this tender documents. The bidder shall consider such names as indicated in the aforesaid list for procurement of bought-out items. In case any other make is proposed, the Owner reserves the right to accept or reject it after due review. For any other item not covered in the list enclosed with this tender document, prior approval shall be obtained by the contractor for its make/ supplier's name.

12.0 INSPECTION OF SUPPLY ITEMS

All inspections and tests shall be made as required by the specifications forming part of this contract. Contractor shall advise Owner/ Consultant in writing at least 10 days in advance of the date of final inspection/tests.

Manufactures inspection or testing certificates for equipment and materials supplied, may be considered for acceptance at the discretion of Owner/ Consultant. All costs towards testing etc. shall be borne by the contractor within their quoted rates. All inspection of various items shall be carried out based on Quality Assurance Plan, which will be submitted by the Contractor and duly approved by Owner/ Consultant.

13.0 ESCALATION

The Unit Rates quoted shall be kept firm till completion of work, and no price Escalation shall be paid.

14.0 DOCUMENTS TO BE SUBMITTED/ PRODUCED ALONGWITH R.A.BILLS

- i) Computerized R.A. Bill/ Manual Bill, with GST No./Labour Licence No. printed thereon.
- ii) ESI/ EPF clearance certificates for the last month along with R.A .Bills.
- iii) Insurance Policy as per relevant clauses of Contract Agreement.
- iv) Photocopy of the measurement sheets
- v) Any other document required for the purpose of processing the bills.
- vi) Registration Certificate with tax authorities of state concerned.

15.0 INSURANCE FOR FREE ISSUE MATERIAL

15.1 Insurance for Free Issue Material

Contractor shall at his own expense arrange, secure and maintain

insurance cover for Owner's supplied free issue materials as defined in Tender Document of adequate value as intimated by owner / consultant. Contractor's quoted price shall be inclusive of all costs on account of insurance liabilities covered under the Contract. Contractor to note that the beneficiary of insurance cover shall be GGPL. The total approximate cost of free issue material is expected to be around **Rs. 1 Crore**. However the cost will be apportioned as per quantity of connections allotted. The contractor may take the insurance as per the following schedule:

- a) Up to 3 months : 30%
- b) Up to 6 months: 60%
- c) Beyond 9 months: 100%

15.2. Insurances in India

15.2.1 Contractor shall at his own expense arrange, secure and maintain insurance with Indian insurance companies to the satisfaction of the owner as may be necessary and to its full value for all such amounts to protect the works in progress from time to time and the interest of Owner against all risks as detailed herein. The form and the limit of such insurance as defined herein together with the under writer works thereof in each case should be as acceptable to the Owner. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of this responsibilities and obligations under Contractor.

15.2.2 Any loss of damage to the equipment during inland transportation, storage, erection and commissioning till such time the Work is taken over by Owner shall be to the account of Contractor. Contractor shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/ or replacement of the parts of the Work damaged or lost. Contractor shall provide the Owner with a copy of all insurance policies and documents shall be submitted to the owner immediately upon the Contractor having taken such insurance coverage. Contractor shall also inform the Owner regarding the expiry cancellation and/ or changes in any of such documents and ensure revalidation/ renewal etc., as may be necessary well in time.

15.2.3 The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk etc. The scope of such insurance shall cover the entire value of supplies of equipment, plants and materials.

15.2.4 All cost on account of insurance liabilities covered under this Contract will be to Contractor's account and will be included in Contract Price. However, the Owner may from time to time, during the currency of the Contract, ask the Contractor in writing to limit the insurance coverage risk and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Value Of Contract to the extent of reduced premium amounts.

Contractor as far as possible shall cover insurance with Indian Insurance Companies.

16.0 SPECIAL POINTS PERTAINING TO SPECIFICATION

The minimum pipeline cover shall be kept as follows:

Pipeline Burial Requirement : The entire pipeline shall be buried and provided with a minimum cover as given in Table below :

Pipeline Burial Requirements Location	Min. Cover (m)
a) minor water crossing (below firm bed level)	1.5
b) Cased/ Uncased Road/ cart track crossings	1.2
c) Drainage, ditches at roads crossings	1.0
d) Residential and other locations including rocky areas	1.0

Note:

- i) The depth of cover shall be measured from the top of the pipe to the top of the undisturbed surface of soil or the top of graded working strip, whichever is lower. The fill material in the working strip shall not be considered in the depth of cover.
 - ii) The cover shall be measured from the top of road or top of rail, as the case may be;
 - iii) For water courses that are prone to scour and erosion, adequate safe cover as mentioned above or as advised by concerned authorities (whichever is stringent) shall be provided below the predicted scour profile expected during the life time of the pipeline.
 - iv) When scour level is not known, an additional cover of at least 1 m or as advised by concerned authorities shall be provided from the existing firm bed of the river / water course except in case of rocky river bed;
 - v) Minimum cover mentioned above against Sl. no. a), b), c), d) & e) category may be increased based on the statutory requirements from concerned authorities and their requirement shall be final and binding to the contractor.
 - vi) Soft soil / sand padding of minimum 150 mm thickness or as mentioned in drawing (whichever is stringent) to be provided around the pipeline where gravel / hard soil or rocky area is encountered.
- Piping at consumer ends, connection at existing tap-off location and for future connections along with bill of materials.

Contractor shall develop General Arrangement Drawings (GADs) good for construction for size 32 / 20mm and locations based on typical sketches/ drawings along with bill of materials and submit to Owner for reviews/ approval. Construction work shall be carried out based on construction drawings duly approved by Owner/ Consultant.

- The detailed engineering for above ground installation shall include detail engineering pertaining to all disciplines (if required) along with bill of materials.
- All the documents/ drawings prepared by the Contractor shall be submitted to Owner/ Engineer-in-charge for review and approval. All works shall be executed based on the approved drawings/ documents only.
- Contractor shall obtain all clearance from Government authorities (if required). However bank

guarantee/ required fee or charges shall be submitted by Owner.

16.1 Following points shall be taken care by the contractor before / during execution works.

- i) Contractor shall be responsible for taking necessary precautions regarding traffic (installation of notice / warning boards).
- ii) Contractor shall be totally responsible for the occurrence of any accident during excavation of road and shall be liable for damages /expenses due to the same.
- iii) Concerned authority / Owner shall not be responsible for any loss /damage.
- iv) One copy of the permission shall be made available with contractor's responsible work man (if required) at the place where excavation is undertaken.
- v) While executing the subject work, excavation shall be done in consultation with the concerned authority engineer of that area.
- vi) Necessary safety measures shall be taken for the gas pipeline, since high tension lines and other services carriers are running alongwith ingas pipeline route in the area.

17.0 SPECIAL NOTES PERTAINING TO SCHEDULE OF RATES (SOR)

- i) The quantities given above against individual items are indicative and shall not be considered to be binding. The quantities may be increased, decreased or deleted at site at the time of actual execution and as per discretion of Owner/ Engineer-in-charge. The unit rate shall be operated to work out the final payment due to Contractor.
- ii) The payment will be made as per actual certified measurement at site.
- iii) VOID
- iv) The scope as mentioned in the SOR is of indicative nature only and shall include all activities as detailed in the relevant clauses of the respective Particular Job Specifications, Technical Specifications, Data Sheets & drawings, etc.
- v) The total executed value of the contract must be monitored and the contractor must inform to GGPL/ MECON prior to reaching of total executed value to the awarded contract value.

18.0 CONVERSION OF EXISTING LPG RETICULATED SYSTEM TO PNG SYSTEM

18.1 Conversion of existing LPG reticulated system to PNG system by the following steps:

- Studying the existing LPG system and preparing the complete plan to convert it into PNG system with minimum disturbance to end users. This needs to be done in consultation with RWA/Society representative and the plan need to be get approved from MECON / GGPL.
- Testing of the existing LPG piping (GI/MS) upto isolation valve of the consenting owners as per testing procedure, purging with nitrogen gas, replacement of LPG regulator, meter etc. Regulators and meters shall be free issue material. The item includes all required supply and

installation to complete the work.

- Replacing of service regulators of the existing LPG system (if required) Regulators shall be of free issue material.

19.0 APPENDIX-I TO PARTICULAR JOB SPECIFICATION

LIST OF APPROVED SUPPLIER FOR BOUGHT OUT ITEMS PE FITTINGS

- 1) M/s Jain Irrigation systems Ltd. Jalgaon
- 2) M/s George Fisher, Germany
- 3) M/s Kimplas Piping Systems ltd., Nashik
- 4) M/s Aliaxis Utilities & Industry Pvt. Ltd (Formerly Glynwed pipe systems)
- 5) M/s Friatech AG, Germany
- 6) M/s Agru, Austria

PE VALVES

- 1) M/s Friatech AG, Germany
- 2) M/s George Fisher, Germany
- 3) M/s Plasson Ltd., Israel
- 4) M/s Agru, Austria
- 5) M/s Aliaxis Utilities & Industry Pvt. Ltd (Formerly Glynwed pipesystems)

GI PIPES

- 1) Goodluck steel tubes ltd, Ghaziabad
- 2) Indus tubes ltd , New Delhi
- 3) Jindal pipes ltd , New Delhi / Bengaluru
- 4) Jyotindra steel & tubes ltd, Firozabad
- 5) Rama Steel tubes ltd, New Delhi
- 6) Surya Roshni ltd, Bhadurgarh
- 7) Vishal Pipes Ltd. New Delhi
- 8) Advance Steel Ltd. New Delhi
- 9) Swastik Pipe Ltd, New Delhi / Bengaluru
- 10) Indian seamless metal tubes ltd., Pune
- 11) Appolo tubes., Bengaluru

WARNING MAT WITH TRACING WIRE

1. M/s SparcoMultiplast Pvt. Ltd., Ahmedabad
2. M/s Singhal Industries, Ahemdabad
3. M/s Puja Packing, Mumbai
4. M/s Bina Enterprises, Mumbai

GI FITTINGS

- 1 M/s Jainsons Industries, Jalandhar
- 2 M/s Jupiter Metal Industries Ltd.
- 3 M/s RAJNESH Malleables ltd., Delhi
- 4 M/s Industrial Valves & Components, Delhi
- 5 M/s Sarin industries, Delhi
- 6 M/s Excel metal & Engineering Industries, Mumbai
- 7 Modern Stores & Engineering Concern, Kolkata
- 8 Jinan Meide Casting Co. Ltd, China

COPPER TUBES AND FITTINGS

1. Paras Industries Ltd., Jamnagar
2. Rajco Metal, Mumbai
3. Chandan Enterprises, Mumbai
4. Mehta Tubes, Mumbai
5. COFIT Industries, Bengaluru

BRASS FIITING

1. M/s Chandan Enterprises, Mimbai
2. M/s Paras Industries Ltd., Jamnagar
3. M/s Umesh Enterprises, Mumbai
4. M/s Mehta Tubes, Mumbai

FLEXIBLE HOSE

1. M/s KPC Flex Tubes, Faridabad
2. M/s Vestas Hose Division, New Delhi
3. M/s Alfa Flexi Tubes, Bahadurgarh

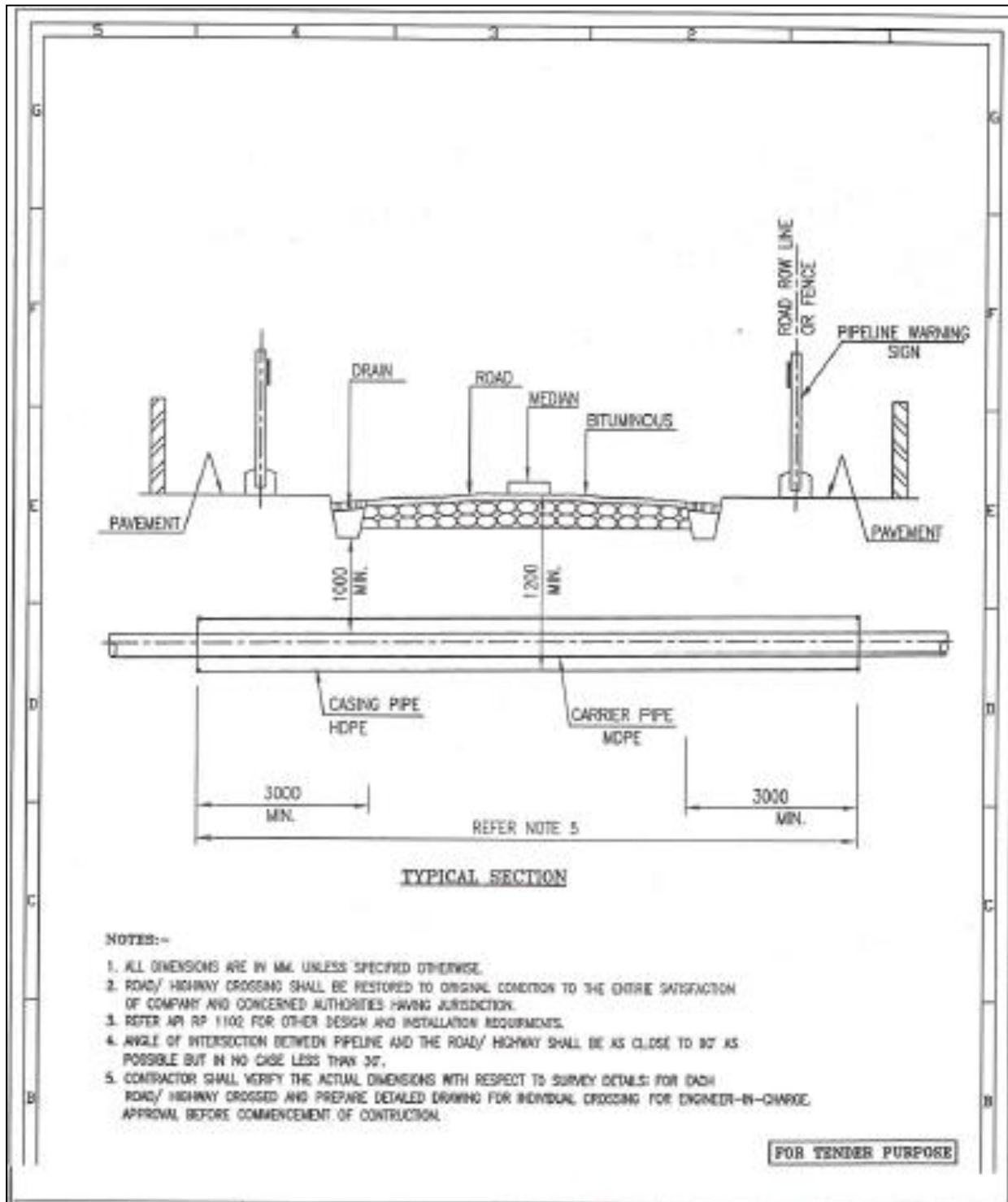
ISOLATION VALVES AND APPLIANCE VALVES

1. M/s Universal srl, Italy
2. M/s TiemmeRaccorderieSede, Italy
3. M/s Jainson Industries, Jalandar
4. M/s EnolgasBonimus.a.s., Italy
5. M/s Fratelli Fortis s.r.l, Italy
6. M/s GiacomoClimbrio, Italy
7. M/s Parker Hannifin S.P.A., USA
8. M/s Singapore Valve & Amp; Fittings Pte Limited, Singapore/Bengaluru
9. M/S RubinetterieUtensilerie Bonomi (RUB), Italy
10. M/s ZhegiangValoginTechnology Co. Ltd., China

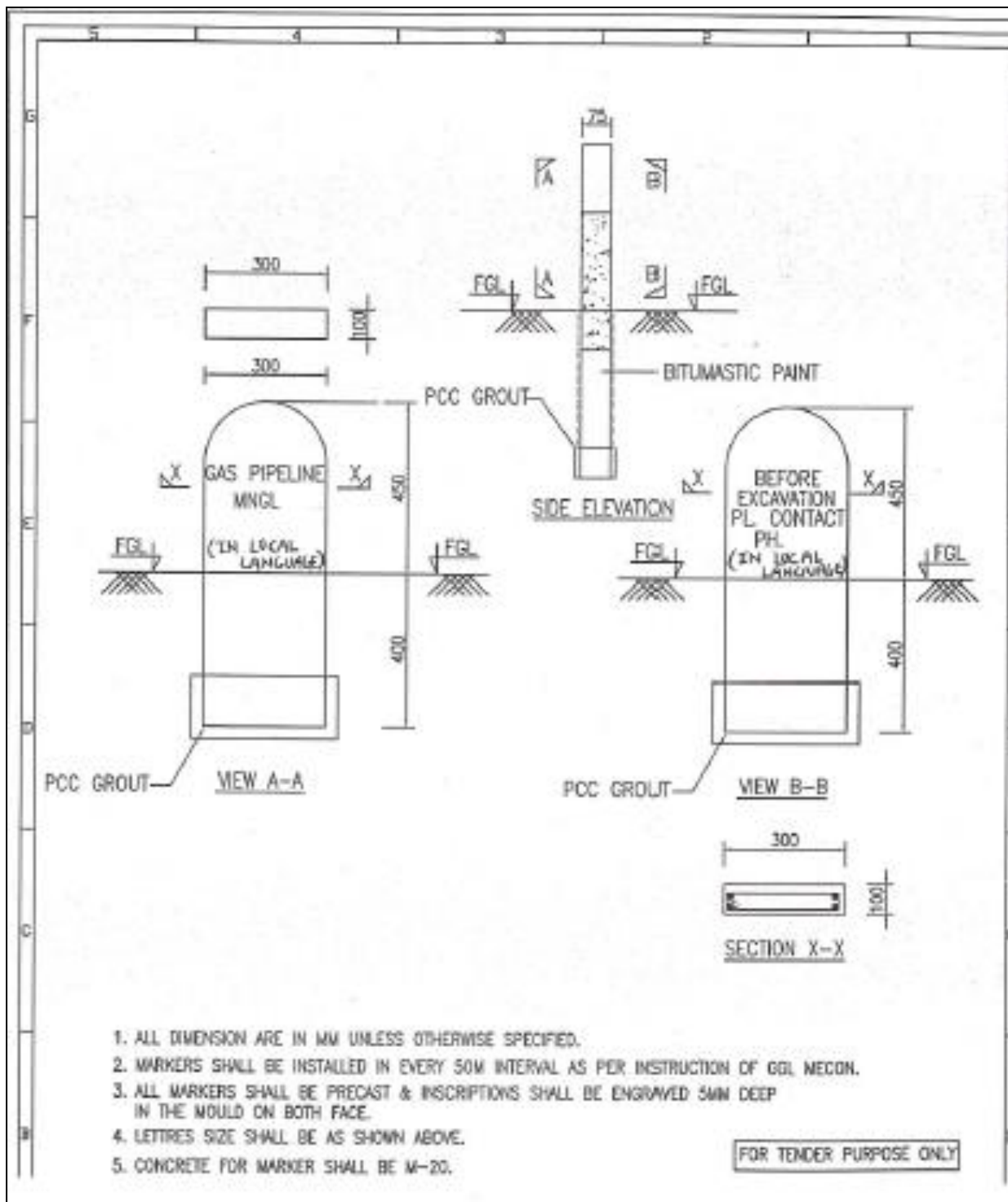
PAINT

1. Asian Paints
2. Berger Paints
3. Kansai Nerolac Paints

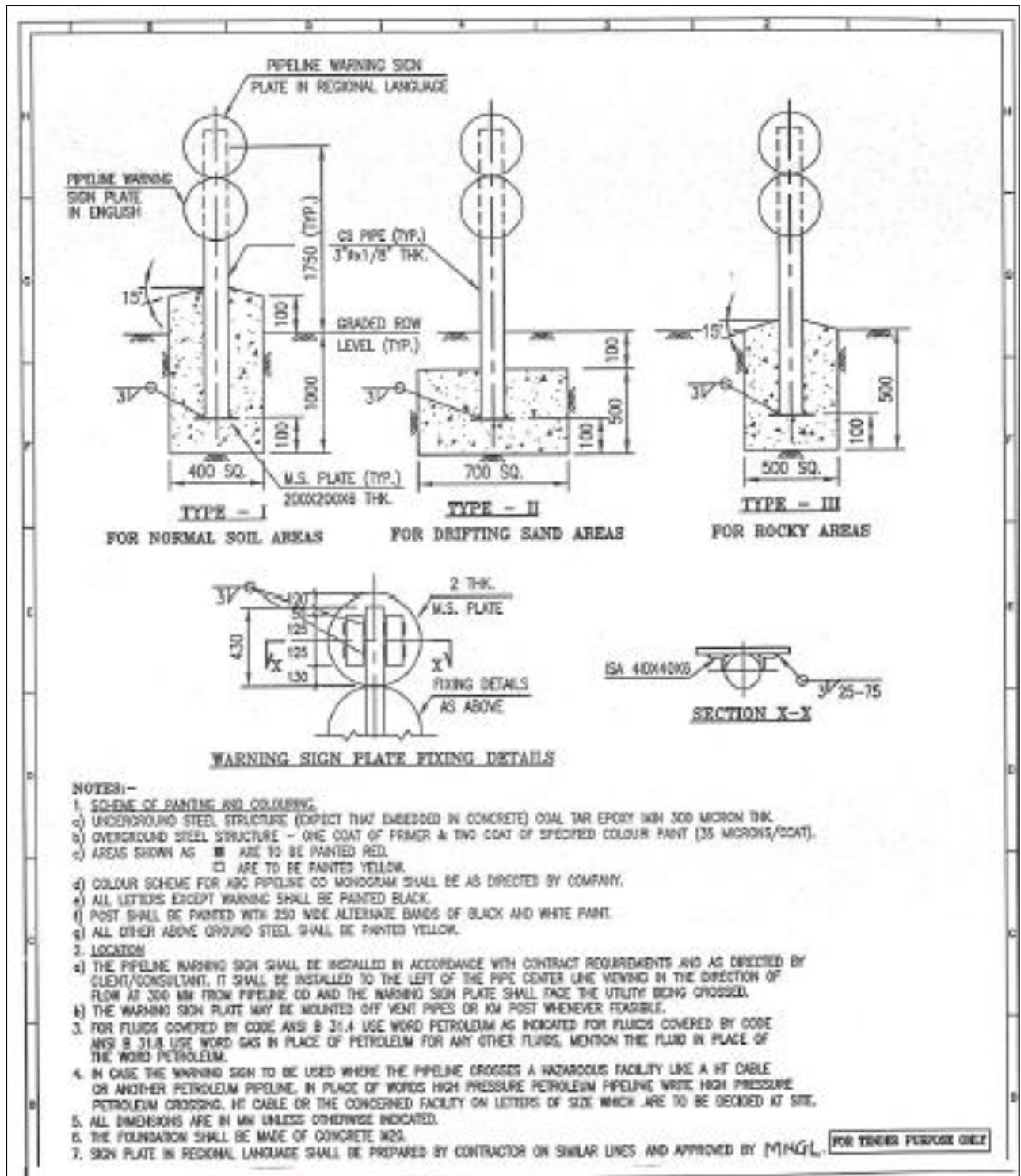
DRAWINGS



Road/Highway Crossing for MDPE Pipes



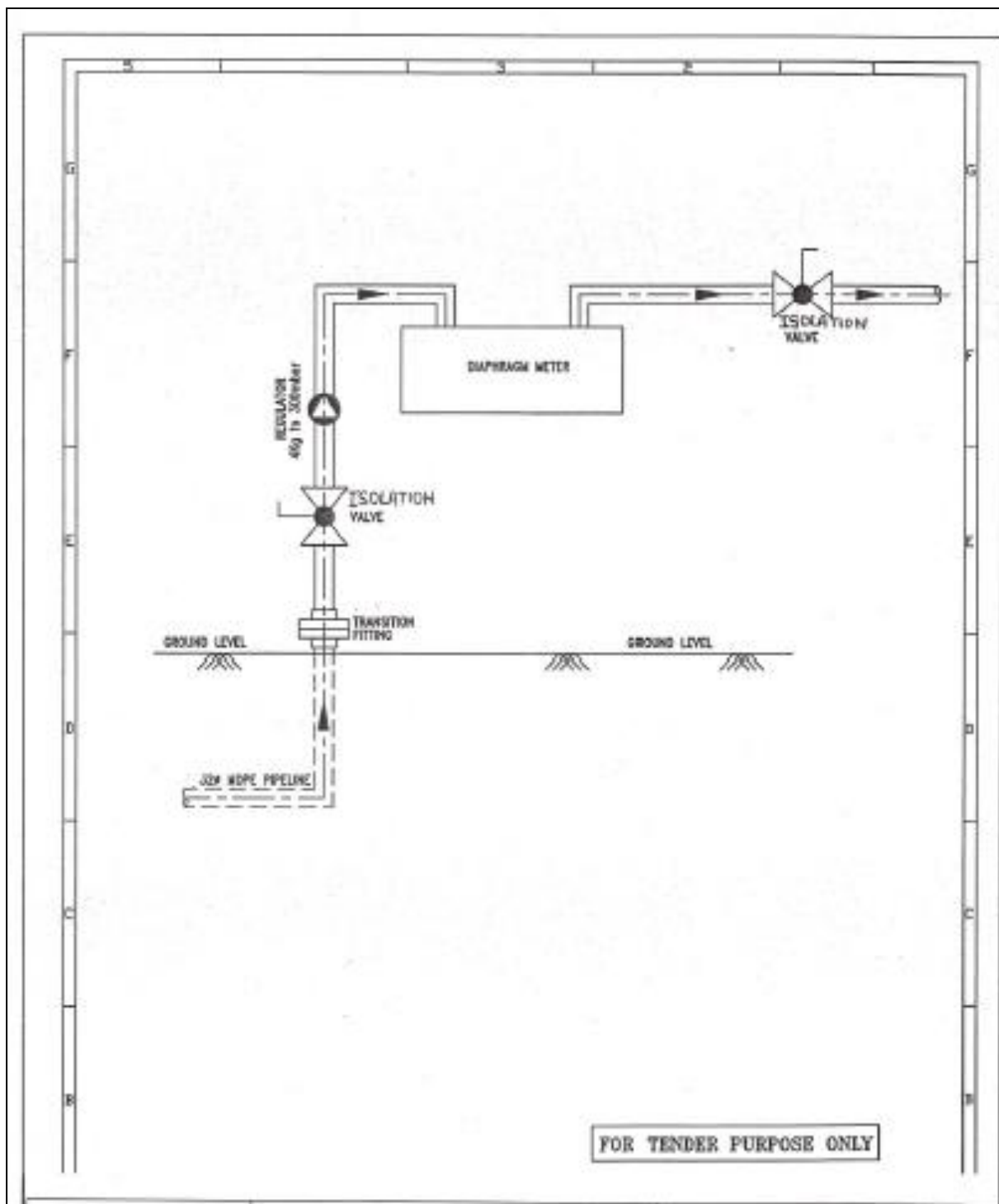
Typical details of Markers



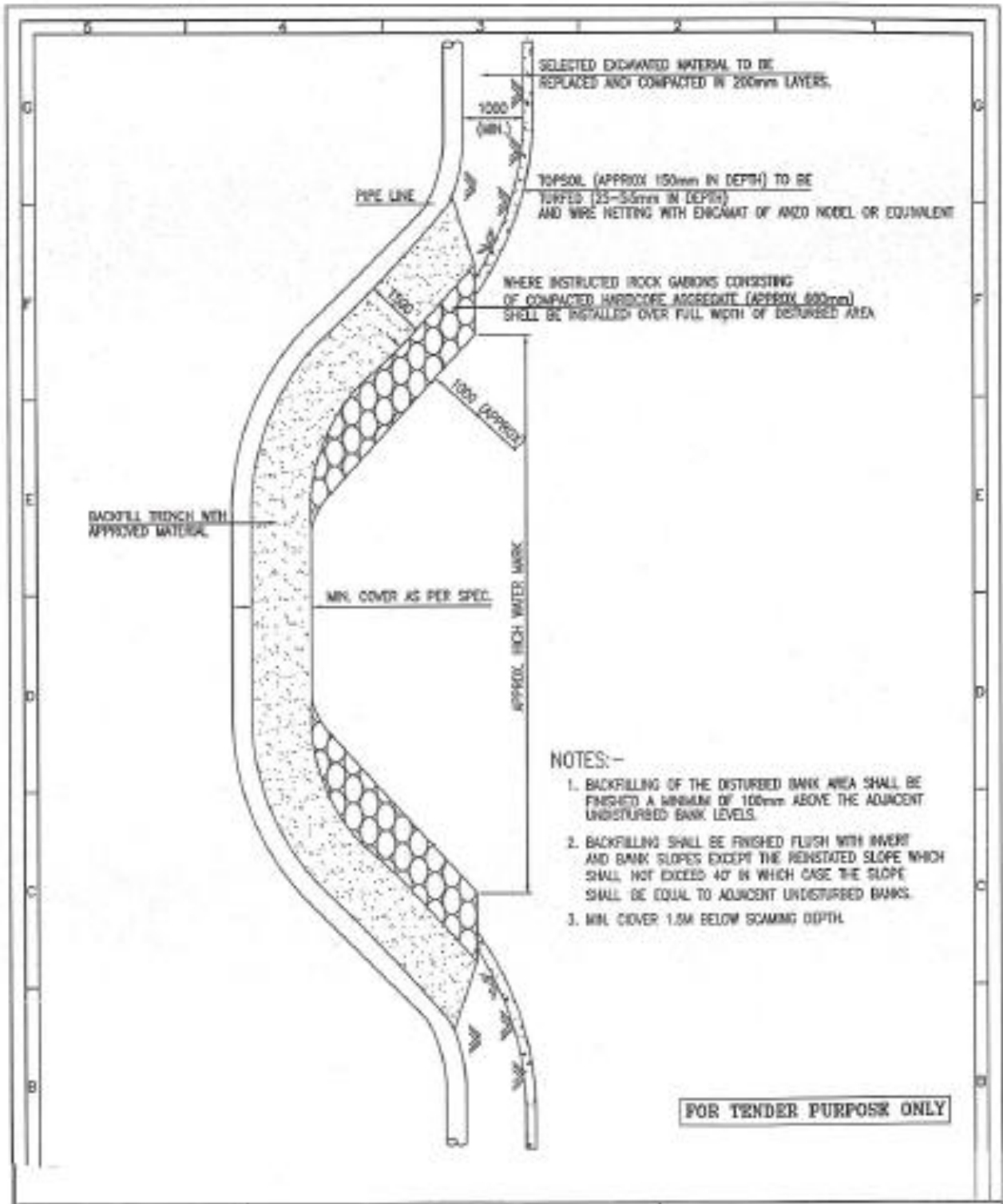
Pipeline Warning Signs



Warning Signs without foundation



Typical Commercial Connection Scheme



Standard details for Drain Crossings

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1.0 GENERAL INFORMATION

1.1 Introduction

M/s GGPL (GGPL) is a JV Company of APGDC and HPCL. GGPL is developing infrastructure to provide PNG (Piped Natural Gas) as fuel for Domestic, Industrial & Commercial sectors and CNG (Compressed Natural Gas) to private & commercial vehicles in East and West Godavari Dist.

1.2 Nature of Contract

The contractor shall be paid on a Price schedule basis. The contractor shall execute the work and perform his obligations under the contract and GGPL shall pay the contractor for measured quantity of each item of work actually carried out under the contract. Payment shall be at the rate for the work set out in the agreed Price schedule.

2.0 SCOPE OF WORK

Generally, the following shall constitute the Contractor's scope of work:

2.1 Plan and prepare a schedule for execution and work implementation as Per QA/QC plans. Contractor will submit the Construction/ Execution procedures before commencement of work.

2.2 In principle permission for laying of the pipe line from the concerned land-owning authority (i.e. PWD/NH/Municipal Authorities etc.) shall be obtained by GGPL. and handed over to the contractor. All Liaisoning during execution of pipe line laying with the authorities such as Municipal Authorities/NH/PWD/Panchayat Raj, etc., local officials, traffic police, police, Electricity Board, BSNL, RTO etc. and any other utility companies / agencies such as OFC operators etc. are in the scope of the contractor. The scope also includes Liaisoning with Society / individual land owners for smooth execution of pipeline laying. Repairing/replacement of all damaged utilities if any, and payment of any compensation (if claimed by the incumbent owner/other utility agencies) is in scope of the contractor.

2.3 Before the WORK or any part thereof are begun, the Contractor's agent and the Engineer-in-Charge's representative shall together survey the SITE and decide the tentative route considering all obstructions on which the pipeline is to be laid and on which measurements of the WORK are to be based. Such particulars shall be plotted by the BIDDER and trial pits started thereon.

The Contractor shall be entirely responsible for the correctness of every part of the WORK and shall rectify any errors or imperfections therein. Such rectifications shall be carried out by the Contractor

- at his own cost, when instructions are issued to this effect by the Engineer-in-Charge or his representative.
- 2.4 Receiving, loading, transporting, unloading and stacking of MDPE pipes issue by GGPL as free issue material from GGPL designated storage yard within East and Wes Godavari Dists. GA limits to the working site. All toll taxes etc are also included in the scope.
 - 2.5 Proper storing, stacking, identification, providing security, and insurance, during storage, laying and up to handing over of pipelines.
 - 2.6 Making trial pits to determine the underground utilities/services such as Existing pipelines Cables (Electrical/Communication), Conduits, U/G drainage, Sewers, tunnels Subways foundations etc, and deciding optimum routes and depths for laying the pipelines based on the actual site condition / approved pipeline route by EIC/authorities.
 - 2.7 DELETED
 - 2.8 Wherever required the grass/ turfing, pavement, linings, drains roads and other such 'pucca' area shall be locally removed to facilitate trenching and pipe laying works. The same is to be reinstated to its original stage.
 - 2.9 Supply & Installation of Safety/ Warning Signs, barricading of the entire Route to be trenched. Pits to be similarly barricaded along with the warning sign.
 - 2.10 To make trenches with stable slopes but restricting minimum disturbance to aboveground / underground services/ installation as per specifications and approved route plans; keep the trenches free from water and soil till placement of pipes.
 - 2.11 Supplying, Uncoiling/ stringing the PE pipes of required sizes pipes into trenches as per specification.
 - 2.12 Joining the pipe ends with fittings and valves by approved electro-Fusion techniques as per specification.
 - 2.13 Supplying & Installation of pipe fittings like elbow, tee, reducers, Tapping saddles, joints, connectors, transition fittings, valves, sleeves etc. including construction of supports, valves pits, inspection chambers along with all materials etc. as per specification.
 - 2.14 Laying pipeline using trench less technology methods with or without casing pipes as per specification and as directed by EIC.
 - 2.15 Supply of good quality GI sleeves, concrete casing pipes, sand and other

material, fittings to be supplied by the Contractor as per provisions of tender.

- 2.16 Supplying and laying of warning mat (with tracer wire) and bricks over the PE pipe.
- 2.17 Back filling and compaction by jumping jack compactor using approved 'good' soil or using excavated earth or borrow earth as per requirement and specification and replacement of tiles, slabs removed during the excavation. Cleaning all unserviceable material, debris, excess earth near trenches etc to designated disposal area.
- 2.18 Carrying out pneumatic testing and purging as per specifications and approved procedures; providing all tools, tackles, instruments, manpower and other related accessories for carrying out the testing of pipes.
- 2.19 Nitrogen purging (including supply), commissioning & gas charging of tested pipeline as per approved procedure.
- 2.20 Restoration of existing ground features such as grass/ turfing, paving, roads, drains, concrete, floral beds, fencing, tiles, flooring masonry etc., to original condition and to match with adjoining conditions - functionally and aesthetically - upto the entire satisfaction of GGPL/MECON/ any other third party agency designated by GGPL and local authorities, failing which, it will be done at the risk and cost of the contractor.
- 2.21 Obtaining satisfactory completion certificates for the restoration work done from the concerned authorities/Households.
- 2.22 Supply and laying of the above ground GI installation in the building/ flat/apartment of consumer.
- 2.23 Collecting Free Issue materials like Regulators, meters & other associated fittings and installing the same including supply of fittings, as required. Supply & laying of copper tube, isolation valves & appliance valves.
- 2.24 Supply, fabrication and installation of Warning Plate marker.
- 2.25 Returning surplus Free Issue Material to GGPL store after reconciliation of free issue material and submission of final Reconciliation Document to the satisfaction of GGPL/MECON.
- 2.26 Handing over the completed works to GGPL for their operation / usage purposes.
- 2.27 Maintaining the completed pipelines/installation for any defect, failures during defect liability period.

- 2.28 Preparation and submission of As-built drawings, details of crossings, Measurement sheets and deviation statements on completion / commissioning of work by way of drawing, sketches and tables.

3.0 MATERIAL, LABOUR, PLANT AND EQUIPMENT

3.1 Owner's Scope of Supply (Free Issue Item)

Materials like MDPE pipe, Regulators and Meters will be issued to the Contractor as Free Issue Materials, from the designated store(s) of GGPL. Contractor shall be responsible for lifting the free issue materials from Owner's storage point(s) and transporting the same to work site(s) at his own cost up to 60km.

3.2 Supplied by the Contractor

The contractor is to procure all bought out items from approved vendors and accordingly keep GGPL / MECON informed. The inspection of bought out items would be carried out by GGPL / MECON / Third Party Inspection.

In general PE pipe shall be of the following lengths indicated.

20mm/32mm	100 Mtrs. Coils
63 mm	100 Mtrs. Coils

The Contractor shall provide the skilled labour, tools, material and equipment necessary for the proper execution of the Work. This will include but not be limited to list of specialized items included in this tender.

3.2.1 Equipment & Machinery

All vehicular type machinery shall be in good working order and shall not cause spillage of oil or grease. To avoid damage to paved surfaces the Contractor will provide pads of timber or thick rubber under the hydraulic feet or outrigger of machinery.

In addition to above, the contractor must have dedicated bar coded electro-fusion (Automatically readable) machine with power generator (at any point of time minimum 2nos.), Pipe Cutters (like circular guillotine), End Scrapers, Pipe Straightener, approved Top loading clamp for fusing saddle tapping tee, clamps of all sizes for Electro-fusion fittings, re-rounding tools and test ends etc. Contractor has to arrange on his own all equipment for trenchless crossings such as HDD, Moling & rock cutting equipment, PE fusion equipment at the site whenever required.

Contractor must also have to arrange his own equipment for restoration work like water tanker and jumping jack compactor for compaction of backfilled trenches and roller and other required equipment/ machinery for asphaltting/ road works.

Contractor shall provide and ensure that the working crew is equipped with proper harness, petzl, safety helmet, safety shoe etc.

In case there is non-availability of approved equipment, tools and tackles during the work at site, suitable penalties may be levied, as per the contract.

3.2.2 Imported Backfill and Material

The Contractor shall be responsible to arrange the supply of approved soft soil / coarse sand free from any impurities like clay, mica and soft flaky pieces as per the instruction of EIC/Owner.

For supply of sand in trench for rocky terrain, no separate charges are payable and is included in price schedule item for excavation of hard rock/Morrum.

Also supply of sand in valve chambers, Normal chambers & Built up surface, if required, as per the instruction of EIC, is not separately payable.

In case specified trench depths are not achieved & if directed by Engineer-in-charge Contractor to provide GI casing pipes and cement concrete, as envisaged in the contract.

3.2.3 Other Materials

The Contractor shall supply the following items where required.

- All materials required for form work, trench support, temporary trench crossings.
- All sign boards, barricades, tin sheets, lights and protective equipment.
- Material required for installation of valve chambers.
- Electrical power, water etc. which is required for execution shall be arranged by the contractor.
- All minor items not expressly mentioned in the Contract but which are necessary for the satisfactory completion and performance of the Work under this Contract.

3.2.4 Manpower

The contractor shall provided the skilled labour, fitters, jointers along with tools necessary for the proper execution.

3.2.5 Acquisition, Receipt, & Storage of Materials

For materials being supplied by owner, the contractor shall collect all materials from GGPL store between working hours following all documentation procedures laid down and as directed by EIC. The contractor shall at the time of receipt of

material physical examine all materials and notify the EIC immediately of any damage. Any damage not recorded at the time of inspection done by contractor will be deemed not to have existed at the time of receipt of material. Cost of repair, rectification, replacement will be borne by the contractor. Any defective material found during the time of installation will be noted and forwarded to stores for replacement immediately

with P.O reference and only with written approval of EIC. The contractor shall ensure that no defective material shall be returned to store at the time of closure of contract.

The contractor shall maintain store with permanent locking arrangement, preferably near site so that all the material are stored in such a manner so as to prevent and damage to the materials from scratching , gouging , indentation , excessive heat or by contact with any sharp objects and chemicals.

The contractor shall maintain log book at their respective stores stating issue and availability of free issue material at a given day. Further the contractor is required to undertake and submit an inventory of materials every month to Owners/Owners Representative .

4.0 PROGRESS OF WORK

The Contractor shall proceed with the Work under the Contract with due expedition and without delay.

The EIC may direct in what order and at what time the various stages or parts of the work under the Contract shall be performed.

Contractor has to regularly submit daily progress reports, weekly progress reports, graphs with utilities, testing reports, material consumption and inventory reports, deviation statements etc.

5.0 APPROVALS

It is the contractor's responsibility to inform and co-ordinate the concerned local authorities and also other utility agencies before commencement of work at site. To ensure smooth execution of the work on a day to day basis, the contractor has to liaison with respective authorities and obtains necessary approvals.

6.0 REFERENCE SPECIFICATION, CODES AND STANDARDS

The contractor shall carry out the work in accordance with the requirement of latest relevant applicable standards, this specification, GGPL's Engineering Standards; relevant Oil India Safety Directorate (OISD) norms, Latest PNGRB

Guidelines, ASME B31.8 - Gas Transmission and Distribution Piping Systems; Australian Standard 3723 - Installation and Maintenance of Plastics Pipe Systems for Gas; and the American Gas Association Document -Purging Principles and Practice. ISO: 4437/ IS:14885 for underground polyethylene pipes and GGPL's approved procedures Should the contractor find any discrepancy, ambiguity or conflict in or between any of the Standards and the contract documents, then this should be promptly referred to the Engineer-in-Charge (EIC) for his decision, which shall be considered binding on the contractor.

7.0 SAFETY

The Contractor shall conform to the requirements outlined elsewhere in the tender document. In addition, the Contractor shall observe safe working practices in the storage and handling of cleaning fluids, flammable fluids, etc, and ensure smoking or naked flames are not permitted in the vicinity when these materials are being used.

Trench walls shall be battered with sufficient slope in order to minimize a trench collapse. Where there is a danger of an earth slide or collapse, the trench shall remain open for the minimum time possible with proper barricading. The Contractor is to ensure that no person enters a trench, which is of a depth of 1.5 meters or greater, unless the trench has adequate shoring or the sides are battered to such an extent as to prevent a trench collapse

The Contractor shall also protect all work sites with warning signs, barricades and night lighting. The Contractor shall inspect all fenced excavations daily, and maintain them in good order.

The trenches/ pits shall not be kept open in night times. However in case the same is essential the same shall be properly barricaded with proper lighting arrangements & manned.

The Contractor shall provide all safety equipment's like harness, petzl, helmets, boots, etc. to the labour which are necessary for safe working practice.

Any accident causing injury to any person or damage to property or equipment shall be immediately reported.

Where the EIC determines that the work is being performed by the Contractor in an unsafe manner, he may impose penalty on the contractor for noncompliance of HSE at work site and may also suspend the Work until corrective action is taken by the Contractor.

For further details refer Attached Health Safety and Environment (HSE) technical specification.

8.0 ROUTE SURVEY

8.1 Routing drawing will be prepared by the contractor after conducting route survey. The same will be submitted and work at site will be taken up after approval is accorded by GGPL / MECON for the submitted route and respective sizes.

8.2 The scope also includes preparation of drawing, for any change in route, re-route alignment drawing shall also be prepared by contractor. Any change in routing from the issued drawings due to site constraint will be notified and only after approval of the changed route, the job shall be carried out.

9.0 ORGANIZATION OF WORK

9.1 All construction work will be carried out as per direction of EIC, and this will be the primary point of contact between the contractor and GGPL on site. All work will be executed through the EIC and site control will be exercised by Site Engineer of GGPL/MECON. The contractor shall ensure that technical quality standards are maintained, that construction is carried out cost effectively and that a customer-friendly and good public image of GGPL is maintained.

9.2 Contractor shall designate a RCM who will be the single point coordinator to interact with EIC/Consultant/TPIA. RCM will have POA from the company so that he can attend review meetings, receive materials, sign documents, claims and receive payments etc. Contractor shall submit the organization chart indicating in-charges of project, store, QA/QC and shall take approval from the owner for the same.

9.3 The contractor will appoint his own supervisors of minimum number instructed by EIC. These personnel will be responsible to the Site Engineer (SE) for monitoring construction standards and for ensuring that all detailed technical requirements are met on each and every job which is undertaken. The contractor's supervisor(s) will have day to day liaison with the SE, and will provide the SE with technical reports and audits, and other management information as is required on work progress and construction quality standards.

9.4 The contractor's supervisor shall have mobile/phones to ensure that they can be contacted at all times. The contractor will also nominate one person who can be contacted if necessary after the working hours, for the duration of the project. The contractor's supervisors will have sufficient access to transport at all times so as to enable them to visit sites and attend meetings with MECON/ GGPL as is required. For day to day work, SE of MECON/ GGPL shall issue work instructions, other communication to the contractor's supervisors. No deviation from the approved technical specification / issued construction drawings shall be undertaken without written approval.

9.5 Contractor shall maintain a Project site office, Material store with following facilities:

Telephone, Mobile phones, printers/Scanning/Xerox machines, Computer with e-mail facility, transportation facility

10.0 STRUCTURES, SERVICES AND OTHER PROPERTY

10.1 Location of Underground Utilities

The contractor shall locate all buried utility pipes, underground cables, water mains and other obstructions intersecting or adjacent to the Works, and shall make available the necessary labour to expose and record the depth of cover over all obstructions in advance of excavation. This shall be done far enough in advance of excavation to facilitate gradual change in grade or position found necessary to clear any obstructions.

In addition, the contractor shall excavate trial pits as necessary to determine the pipe route. The number of trial pits will be agreed with the EIC in advance of any excavation. Restoration of the abandoned trial pits and trenches shall be the contractor's responsibility. No payments shall be made for such type of jobs.

It is contractor's responsibility to interact with other utility agencies regarding their existing utilities and finalize the route along with these agencies and Owner/Owner's representative

There will be no additional payments in respect of abandoned trenches incurred because of insufficient or inadequate trial pits, or any associated lost time or delays.

10.2 Protection of Structures and Utilities

The Contractor shall at his own cost, support and protect all buildings, walls, fences or other structures and all utilities e.g. Electrical cables, Telephone Cables, Water pipelines, Sewer pipelines etc., and property which may, unless so protected, be damaged as a result of the execution of the works. He shall also comply with the requirements in the specification relating to protective measures applicable to particular operations or kind of work. Special care shall be taken while laying Pipelines near the trees.

10.3 Interference with Traffic, Street Drainage and General Public

The Work shall be executed in such a manner as to cause minimum of inconvenience to persons requiring to use public or private roads, lanes, thoroughfares, walkways, rights-of use or passages through which the Works are to be executed. The trench shall be back filled, compacted, levelled and extra

earth shall be removed immediately after laying of pipeline to avoid public inconvenience. Closure of roads, etc, shall not be permitted without the approval of the EIC.

The Contractor shall comply with all local Authorities requirements to traffic, and keep roads open to traffic, and maintain access to and within any private property.

Wherever the pipe route crosses driveways, access tracks or entrances to private properties, the Contractor shall give the owner, occupier or relevant authority at least 24 hours prior notice of intended commencement of excavation and shall be restricted to pass through.

The Contractor shall not, in any circumstance, use a private driveway, access track or entrance without the prior approval.

The Contractor shall provide suitable access where necessary in the form of temporary bridges, culverts, flumes, etc, of a size and type approved by the EIC.

The Contractor shall comply with all relevant road Laws. Where limits and/or speed limits have been placed in the vicinity of the Works, the Contractor shall provide for the necessary movement of plant and equipment in accordance with the requirements of the relevant authority.

The Contractor shall not obstruct any drainage pipes or channels in any road but shall deviate them where necessary and use all proper measures to provide for the free passage of water.

The Contractor shall deliver the completed works after proper cleaning of the site.

The contractor shall conduct his operations at all times, with a view to minimizing as far as practicable noise from plant and other objectionable nuisance (e.g. oil leakage).

11.0 TRENCHING

The Contractor shall perform the excavation works so as to enable the pipe to be laid in conformity with the levels, depths, slopes, curves, dimensions and instructions shown on the Drawings, Specifications or as otherwise directed by the EIC.

Contractor shall excavate and maintain the pipeline trench on staked centre line as per approved alignment sheets taking into account the horizontal curves of the pipelines.

While trenching, care shall be taken to ensure that all underground structures and utilities are disturbed only to the minimum. Suitable crossing shall be provided and maintained wherever necessary to permit general public, property owners or his tenants to cross or move stock or equipment from one side of the trench to another side. Trenching shall be made with sufficient slopes on sides in order to minimize collapsing of the trench. On slopes wherever there is danger of landslides, the pipeline trench shall be maintained open only for the time strictly necessary. GGPL may require excavation by hand tools, local rerouting and limiting the period of executing of the works. Before trench cuts through water table, proper drainage shall be ensured, both near the ditch and ROU in order to guarantee the soil stability.

The Contractor shall ensure that trench bottom is maintained in the square form as far as possible, with equipment, so as to avoid/ minimize the hand grading at the bottom of the trench. The Contractor shall do all such handwork in the trench as required to free the bottom of trench from loose rock, pebbles and to trim protruding roots from the bottom and sidewalls of the trench.

11.1 Depth of Trench

The minimum depth of cover shall be measured from top of pipe to the top of undisturbed surface of the soil or top of the graded working strip or top of road or top of rail, whichever is lower.

The depth of the trench will be such as to provided minimum cover as stipulated below :

a) For Distribution Main and Service Lines

i) Minor Water Crossing/ Canal	2.5m
ii) Uncased/ Cased Road Crossing	1.5m
iii) Rail/ Road Cased Crossing	1.5m
iv) Normal Areas	1.0m

The minimum depth as mentioned above may be greater than as may be required by Government/ Public authorities under jurisdictions. The Contractor shall perform such work without extra compensation, according to the requirement of concerned authorities.

In case the depth could not be achieved due to practical problems and the same is demonstrated, EIC after examining thoroughly and considering the codes and standards may allow the contractor to provide suitable protection by way of GI casing pipe, concrete casing of pipes. This will be provided without extra cost to GGPL, unless otherwise specified in the contract.

11.2 Width of Trench

The width of the trench shall be wide enough to provide bedding around the pipe and to prevent damage to the pipe inside the trench. Unless otherwise directed by the EIC and where ground conditions permit, the minimum distance from the inside edge of the trench wall to the outside of the pipe shall be as per approved drawings/procedure. No payment will be made for extra width of trench for any reason.

11.3 Trench Base

The trench bottom shall be cut or trimmed to provide a uniform bedding for the pipe, and shall be free of stones, metal, wood, vegetation, clods of earth or other debris before placement of the pipe.

Hard rock is defined as trench material with a single piece dimension exceeding 1.5 m in length which cannot be removed other than by the use of pneumatic chisel/drill or sledge hammer and chisel.

Excavation through soil mixed with boulders that have been used for a road base will not be considered as hard rock for the purposes of payment.

11.4 Clearances

Unless otherwise approved, the following clearances shall be maintained between the external wall of the gas pipe and the external surface of other underground assets in the vicinity of the Works.

- 150-300 mm where the gas pipe crosses other assets, other than electric cables, whereupon the clearance shall be 300 mm.
- 300mm where the gas pipe is on a similar alignment to the other assets.

Where the above clearances cannot be achieved, or in other special circumstances, the EIC may approve/specify protection with concrete/MS coated pipe/ GI encasing pipe etc. The protective material shall be supplied and installed by the Contractor at his cost, unless otherwise specified in the contract.

11.5 Under Ground Interferences

The Contractor shall locate and expose manually all underground facilities, if any, during trenching. Safety barriers, if required shall be erected to prevent any damages or accident. On locations where pipeline is laid under the existing facilities and near the approaches to the crossing, the trench shall be gradually deepened to avoid sharp bends. All sewers, drains, ditches and

other natural waterways encountered while trenching shall be maintained open and functional by providing proper temporary installations if required. Suitable dewatering pumps shall be deployed to dewater, if required.

Whenever it is permitted by Authorities and / or GGPL to open cut paved road crossing, or where line is routed within the road pavement, the Contractor shall remove the paving in accordance with the restrictions and requirements of the authorities having jurisdiction thereof as directed by GGPL. After laying the pipeline, backfilling shall be immediately performed and all the areas connected with the works shall be temporarily restored.

In case of damage to any of above referred structures/ utilities the contractor shall be responsible for repairs/ replacement at his own cost, which shall be carried out to satisfaction of concerned authorities, resident and MECON/ GGPL.

11.6 Others

Throughout the period of execution of such work, the Contractor shall provide and use warning signs, traffic lights or lanterns, barricades, fencing, watchman etc. as required by the local authorities having jurisdiction and/ or GGPL. For all roads, paths, walkways etc. that are open-cut, the Contractor shall provide temporary diversions properly constructed to allow the passage of normal traffic with the minimum of inconvenience and interruptions. The paving shall be restored to its original condition after the pipeline is installed.

The Contractor shall excavate to additional depth at all the points where the contour of the earth may require extra depth, or where as deep trench is required at the approaches to crossings of roadways, railroads, rivers, streams, drainage ditches without any extra cost implication to GGPL.

The Contractor shall excavate all such aforesaid depths as may be required at no extra cost of GGPL.

The trench shall be cut to a grade that will provide a firm, uniform and continuous support for the pipe.

The Contractor shall take conducive measures to ensure the protection of underground utilities as per the instructions of GGPL or relevant authorities.

Where the pipeline crosses underground utilities/ structures, Contractor

shall first manually excavate to a depth and in a such a manner that the utilities/ structures are located, then proceed with the conventional methods.

The locations, where the pipeline has to be laid more or less parallel to an existing pipeline cable and/ or other utilities in the Right-of-way the Contractor shall maintain proper distances and perform the work to the satisfaction of GGPL and other utility agencies. In such locations, the Contractor shall perform work in such a way that even under the worst weather and flooding conditions, the existing pipeline/ utilities remain stable and shall neither become undermined nor have the tendency to slide towards the trench.

11.7 Bedding

The contractor shall ensure that the pipe when placed in the trench is supported and surrounded by a bed of screened excavated soil, which shall be stone free and have a maximum grit size of 5mm in order to ensure no damage occurs to the pipe.

However in case of rocky soil, the bedding shall be done with approved/ good quality packing sand, subject to the approval of the EIC, the size distribution of the sand/ shall be the same as per soil. The packing sand shall be placed to a minimum thickness of 150mm around the pipe in case of rocky terrain. Unless directed by the EIC the quantity of bedding & surrounding sand shall confirm to specifications. There shall be no void space in packing sand around the pipe.

12.0 LAYING

Laying of MDPE pipelines shall commence only after ensuring proper dimensions and clean surface of the trench. The trench bottom shall be free from the presence of cuts, stones, roots, debris, stakes, rock projections upto 150mm below underside of pipe and any other material which could lead of perforation/ tearing of the pipe wall. After ensuring above the PE pipe coil shall be uncoiled smoothly through proper equipment's / care inside the trench ensuring no damage to pipe coil during laying. The Contractor must ensure that pipe caps are provided before lowering of pipeline. The trench after this can be released for back filling leaving adequate lengths open at the ends, for jointing.

Where given specific approval by the EIC, a pipe may pass through an open drain or nallah. Where this is permitted the pipe shall be made to pass through just below the cover slab. Also an encasing of concrete or steel sleeve shall be provided for the MDPE pipe for protection. The sleeve material shall be as per specification and of reputed make. The sleeve will be procured and laid by the Contractor. The payment for the length of pipe in the sleeve will be made as per SOR. All other work necessary to

break through the walls of the obstruction, and to seal the annulus portion between the pipe and the sleeve as well as between the sleeve and the wall, shall be deemed to be included in the rates. Open ends of pipe placed in the trench shall be securely capped or plugged to prevent the ingress of water or other matter. The Contractor is to ensure that nothing enters the inside of the pipe during the laying process as this could cause a future blockage or regulator malfunction due to dust, etc.

Valves shall be installed at locations shown on the drawing or as directed by the EIC and joined with PE pipes by electro-fusion techniques. The valves shall be supported on a bed of fine fill of grit size not greater than 5mm so as to avoid any stress on the incoming and outgoing pipe work.

Laying graphs with details of depth, length, offsets from fixed references, other utility crossings, fittings, size of casing pipe used for the pipeline shall be prepared on daily basis and submitted to Site Engineers for approval. These details will be further incorporated into As-Built Drawings.

14.0 JOINTING OF POLYETHYLENE PIPE

The procedure for jointing of PE pipe and fittings is enclosed. Only Bar coded electro-fusion machine (Automatically Readable) with in-built memory to store the jointing data that can read the bar code of the fittings, shall be used for jointing of MDPE pipe / fittings.

Unless it is unavoidable, manual feeding electro-fusion machines should not be used for jointing purpose.

The Contractor has to submit the certificate of calibration of Fusion machine at the time of start of work and at fixed intervals as per the instruction of SEs. Contractor shall ensure that the machine is always available at site and no stoppage of work takes place due to the non-availability of machines.

The contractor shall flush the Pipeline with air to remove dust, water, mud etc. before fusing the joints.

Before joining, the Contractor shall place packing sand under the pipes on both sides of the joint to keep the pipes in line and at the correct alignment during the jointing process. Alignment clamps with the correct size shells should be used to align the pipe during the electro-fusion cycle.

The Contractor shall ensure that polyethylene pipe is only cut with an approved PE pipe cutting tool. Before fusion is attempted, shall remove the oxidized surface of the pipe to be inserted into the electro-fusion coupling. The tool must remove a layer of 0.1 mm to 0.4 mm from the outer surface of the PE pipe. It may also be noted that no fusion will be allowed

without clamping device and only the approved cutting tools (Hack Saw shall not be allowed for cutting the Pipe) shall be used. The contractor has to supply all the consumables required for carrying fusion of the joints (like cloth/paper napkin, acetone etc.).

If, upon inspection, the EIC determines a joint is defective, Contractor shall remove the joint by an approved method. The cost of this work shall be borne by the Contractor.

Contractor shall arrange generator for power supply for fusion machine. Taking power connection from electric poles, connections or residential premises is strictly not permitted.

Only, Approved Jointers shall carry out fusion of all joints. Contractors shall provide the list of jointers to be used on the job and make arrangements for qualification Testing of the jointers in presence of Owner / Owner's representative. All approved Jointers shall bear Identity cards signed by Owner/Owner's representative.

15.0 BACKFILLING

Backfilling shall be done after ensuring that appurtenance have been properly fitted and the pipe is following the ditch profile at the required depth that will provide the required cover and has a bed which is free of extraneous material and which allows the pipe to rest smoothly and evenly. Dewatering shall be carried out prior to backfilling. No backfilling shall be allowed if the trench is not completely dewatered.

Prior to backfilling it should be ensured that the post padding where required of compacted thickness 150mm is put over and around the pipe immediately after lowering.

Backfilling shall be carried out immediately after the post padding (wherever required) is completed in the trench, inspected and approved by GGPL/MECON, so as to provide a natural anchorage for the pipe, avoiding, sliding down of trench sides and pipe movement in the trench. If immediate backfilling is not possible, a padding of at least 200mm of earth, free of rock and hard lumps shall be placed over and around the pipe and coating.

The backfill material shall contain no extraneous material and/ or hard lumps of soil, which could damage the pipe and/ or coating or leave voids in the backfilled trench. In case, it is required and directed by EIC, screening of the backfill material shall be carried out with specified equipment before backfilling the trench.

The surplus material shall be neatly crowned directly over the trench and the

adjacent excavated areas on both sides of the trench to such a height which will, in GGPL/ MECON opinion of provide adequately for future settlement of the trench backfill during the maintenance period and thereafter. The down shall be high enough to prevent the formation of the depression in the soil when backfill has settled into its permanent position should depression occur after backfill, Contractor shall be responsible for remedial work at no extra cost to Company. Surplus material, including rock, left from this operation shall be disposed off to the satisfaction of land owner or authority having jurisdiction at no extra cost to GGPL.

Where small pieces of rock, gravel, lumps of hard soil or like materials are encountered at the time of trench excavation, sufficient earth or select backfill materials shall be placed around and over the pipe to form a protective cushion extending at least to a height of 150mm above the top of the pipe. Select backfill materials for padding that are acceptable, shall be screened soil, containing no gravel. All these works shall be carried out by Contractor at no extra cost to GGPL. Loose rock may be returned to the trench after the required selected backfill material has been placed, provided the rock placed in the ditch will not interfere with the use of the land by landowner, or tenant.

In case where hard rock is encountered or as is decided by EIC, sand padding is to be provided up to height of 150mm around the pipe.

When the trench has been dug through drive ways or roads, all backfilling shall be executed with suitable material in layers as approved by MECON/ GGPL and shall be thoroughly compacted. Special compaction methods as required may be adopted. All costs incurred thereupon shall be borne by the Contractor.

Trenches excavated in dykes which are the properties of railways or which are parts of main roads shall be graded and backfilled in their original profile and condition. If necessary, new and/ or special backfill materials shall be supplied and worked up to.

After laying of PE pipe lines, back filling with available soft soil up to depth of minimum 300mm, placing brick as per given drawing or instruction of GGPL / MECON, back filling with available soil up to minimum depth of 300mm above bricks, putting approved warning mat of 0.5mm thick and 250 mm wide (as per attached specification) and as approved drawing and procedure. The warning mat it to be unrolled centrally along the pipe length and thereafter further backfilling will commence. Backfilling activity shall include proper compaction by jumping jack compactor and watering in layers of 150mm above the warning mat.

Proper crowning of not more than 150mm shall be done. All the excavated material required to be used during the Restoration process shall be stacked and kept

separately and properly. Wherever Road cutting/ Tiles removal/ PC cutting has been done during excavation for laying, the area shall be back filled and compacted immediately so that no inconvenience is caused to the general public. Electro-fusion of joints is to be undertaken immediately after lowering and the activity shall not be kept pending for lack of Electro-fusion jointing. The backfilling shall be considered complete only after the joint is completed. Debris and other surplus material shall be removed immediately after the backfilling.

16.0 MOLING:

The Moling shall be carried out as per the requirement of site condition if open cut is not feasible as specified by GGPL/ MECON and approved procedures. The contractor has to carry out thorough survey of the underground utilities before going for the Moling, to avoid the damage to the other utilities.

No extra payment will be made for any trial/ abandoned pits made during the survey. The supply of all equipment, power required for carrying out Moling work, is in contractor's scope. The type of Moling to be carried out i.e., Manual/ Machine with or without casing shall be at the discretion of GGPL / MECON. A prior approval is to be taken before starting the Moling.

For manual Moling, the contractor shall ensure that the size of the hole to the extent possible, is maintained at maximum 20% of the size of the casing / carrier pipe whichever is applicable. After completion of Manual Moling the hole shall be properly compacted / filled with soil by watering and by approved procedures, the pits shall be backfilled, compacted & restored. The rate for such crossing work by using casing pipe & carrier pipe or only carrier pipe shall be payable as per Schedule of Rates. No separate payment shall be made for pulling the carrier pipe.

The rates for Moling, as indicated in SOR, are payable as per the size of the casing/ carrier pipe and are inclusive of excavation of pits, backfilling, compaction, restoration, jointing and insertion of carrier pie. Warning mat and bricks shall not be provided by contractor for the length of moling.

Any damages occurred to other utilities during the Moling operation shall be immediately notified and rectified by the contractor without any cost implication to GGPL.

The length of the Hole (excluding the sizes of the pits on both ends) shall be considered for the measurement of Moling length. However, intermediate pits, if any, will be considered in the moling length.

17.0 HORIZONTAL DIRECTIONAL DRILLING

The HDD techniques are required to be carried out by the Contractor where conventional trenching/Moling is not possible viz. railways, major waterways, highways, roads etc. Details of such crossings shall be obtained by the Contractor, and construction drawings shall be prepared by the Contractor in consultation with MECON/ GGPL. Execution of the work shall be based on the MECON/ GGPL approved drawings. The contractor has to do the thorough survey of the underground utilities before commencement of HORIZONTAL DIRECTIONAL DRILLING in order to avoid the damage to the other utilities. No extra payment will be made for any trail/ abandoned pits made during the survey. The supply of all equipments is in Contractors scope. Work to be carried out in accordance with API - 1102.

Once the work is allotted, any delay in mobilizing / non - availability of HDD machines as per site requirement and conditions shall attract penalties as per contract.

The type of HDD to be carried out i.e. conventional (with or without casing) shall be at the discretion of GGPL/ MECON. And prior approval is to be taken before starting the HDD.

The rates for HDD, as indicated in SOR, are payable as per the size of the carrier pipe and are inclusive of excavation of pits, backfilling, compaction, jointing and insertion of carrier pipe and restoration of pits. For HDD with casing pipe, no separate payment shall be made for pulling of the carrier pipe. The rate quoted by the Contractor shall be inclusive of pulling carrier pipe.

Any damages occurred to other utilities during the HDD operation shall be immediately notified and rectified by the Contractor without any cost implications to GGPL.

18.0 Deleted

19.0 RESTORATION

Wherever the restoration is required, the roads, footpaths including roads and footpaths inside colonies) shall be restored to original condition, and the same shall be done as per concerned local authorities norms and to the satisfaction of the concerned local Authority. For curing of the installed concrete, wet sack cloth is to be placed on the finished surface and kept damp for a period of 36 hours. Where slabs and blocks are to be restored, the level of the compacted sub base is to be adjusted according to the slab/block thickness. The slabs or blocks should be laid on moist bedding material, which should be graded sand, mortar or mortar mix. The slabs or blocks should be tapped into position to ensure that they do not rock after laying.

The restored slabs or blocks should match the surrounding surface levels. Joint widths should match the existing conditions, and be filled with a dry or wet mix of mortar. The restoration of roads shall be carried out as per specifications given by the concerned authority (i.e., PWD/NH/Municipal Corporation etc.) as per applicable SOR item Turf shall be replaced in highly developed grassed area. In lesser-developed grassed areas topsoil should be replaced during the restoration process. Where permanent surface restorations cannot be completed immediately, the Contractor shall provide and maintain a suitable temporary running surface for vehicular traffic and pedestrians. The Contractor will be responsible for the maintenance of all restoration carried out, for the duration of the Contract guarantee period.

The Contractor is to ensure the restoration work is properly supervised, and that the material used is suitable for the purpose and properly compacted. Where the required standards are not achieved the Contractor will be required to replace the defective restoration work. Penalty shall be imposed on the contractor in case of noncompliance of HSE at work site.

Note that Payment for pipe laying will only be authorized on initial satisfactory restoration, and where the sites has been cleared of all surplus materials, etc. Contractor has to obtain the clearance certificate from the concerned local authorities after completion of the restoration work. The restoration specification specified in the tender is only a typical specification and the contractor has to carry out restoration as per latest version of the (PWD/ IRC) specification to its original condition and also to the entire satisfaction of land owner (Private/Public).

The expenditure incurred towards testing of the material used for restoration as per applicable standards, shall be borne by the contractor.

20.0 TESTING

Pressure testing will be carried out with compressed air. Compressed dry air will be provided by Contractor for testing purposes and is to be included in the rates.

For main pipelines work the Contractor shall perform progressive pressure testing to avoid having to find leaks in long lengths of pipe. The test pressure shall be around 1.5 times of MAOP or 9.0 bar(g) and there shall be no unaccountable pressure loss during the test period.

Test procedure with sketches showing the pipeline to be tested, vent points, gauge location, and inlet pressure print is to be prepared & got approved by EIC before starting of the pressure testing .

For main line the test duration shall be 24 hrs. With these tests the pressure

should be allowed to stabilize for a period of 30 minutes after pressurization. The holding period may then commence and continue for 24 hours. Measuring instruments shall have been calibrated and their accuracy and sensitivity confirmed. For testing of Network, calibrated pressure gauges of suitable range shall be supplied by the contractor. The pressure gauges shall be calibrated from time to time as desired by Engineer-in-Charge. All testing shall be witnessed and approved by the EIC or his delegated representative.

Tie-in joints may be tested at working pressure following commissioning.

For service lines in some cases testing will be carried out independently of the testing of the mains for which the test duration may be reduced to 4 hrs. The service testing in this case will be performed after the service installation is complete but before the service tee has been tapped. Also in some cases the tapping of the service tee will be delayed pending the completion and purging of the main pipelines.

21.0 PURGING

Purging shall be carried out in accordance with the principles defined in the American Gas Association publication ‘Purging Principles and Practice’.

Nitrogen required for purging will also be provided by the Contractor. Nitrogen shall be supplied in labelled, tested and certified cylinders, and completed with all necessary regulators, hoses and connections, which will be in good condition and working order.

In addition, the Contractor shall submit and get approved a Purging Plan before commencing any purging work. The Plan shall include, but not be limited to, the provision of the following materials and equipment: Personal safety equipment, Fire extinguisher, Purging adapter, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squash-off tool, Polyethylene connecting pipe work.

The Plan shall also include the purging process along with detail on the sequence of events. The process is to also specifically mention the need to lay a wet cloth over the PE main and in contact with the ground, to disperse static electricity during the purging work.

A purge stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

22.0 VALVE PIT

The valve pit shall be constructed in accordance with approved drawing,

payment shall be as per relevant price schedule item.

The construction of valve chambers shall be taken up immediately after installation of valve.

22.1 Workmanship

The excavation work shall be done at a location given by Engineer-in-Charge. All care shall be taken not to damage existing facilities and surface of construction shall be restored to its original state.

23.0 WARNING PLATE MARKERS

23.1 Warning plate Marker: As per typical Drawings is enclosed shall be installed at regular intervals as per the instructions of the EIC immediately after laying of the pipeline. The installation of the type of the Pole Marker shall be decided by the EIC depending on the site condition. The Markers shall be painted before installation as per the approved procedure. The supply of the paint and painting as per the specification is in contractor's scope. Supply & Installation of the markers shall be paid as per the SOR.

23.2 The artwork shown in the drawing is typical for all the markers. The contractor must take prior approval for the artwork from EIC before installation of Markers. The artwork must have GGPL's logo and specify the distance of the pipeline from the marker.

24.0 ASSISTANCE IN COMMISSIONING

Contractor shall provide the required personnel, Vehicles, labour, supervision, tools, equipment, instruments for performance tests and commissioning activities as per requirement of GGPL/MECON.

25.0 STANDARD OF WORK

25.1 All work carried out under this contract shall be to standards, codes of practice, construction procedures and other technical requirements as defined in the technical specifications.

25.2 The manpower deployed on the respective work shall be adequately trained & shall have necessary skills to executive / supervise the work. However, the assess mention the qualification of the personal shall be at the discretion of EIC.

26.0 RECORDING (AS-BUILT DRAWINGS)

The Contractor will be required to submit computerized as-built drawings duly certified by EIC in A0/ A1 sheet form at 1:200 scale with FOUR sets of

prints plus two sets soft copy(In CD). The as-built drawing shall be submitted area wise as directed. The bill of materials used for the particular area shall be specified on the drawings. The Contractor shall use the area and crossing survey drawings prepared by them as reference. On-site sketches, picking up key reference points, shall be made during the installation of services. The lengths, depths of installed pipe work, changes in direction, major fittings, etc, shall be recorded together with appropriate references to other services crossed and in the proximity of the gas pipe.

Distance of pipeline from permanent property /structure should be provided at least every 50 meters. If there is any change in alignment/orientation and offset distance etc. of the pipeline in between the above said 50 meters, the same shall be clearly mentioned in the as laid.

The as built drawing shall be as per the legends provided by EIC.

Details & offset distances from other utilities present should be given in as built drawing. If there is any change in the depth of pipeline, the same shall be clearly marked with details in these drawings. The details of additional protection provided must be mentioned.

Details of the PE stop off valve and other fittings used should be shown with adequate information and orientation. Technical deviation (if any) should be provided with reference to the buildings and permanent structure around, and the same should be cited clearly with all relevant details. Complete details of nallah crossings should be shown in a separate sketch

Name of roads, major landmarks and buildings should be mentioned appropriately for reference.

Proper Chainage shall be mentioned on all the drawings to be referred with continuation reference.

Land based features shown on the drawing shall match the exact distance as they were on real ground with respect to scale ratio (1:200)

The details shall be prepared in standard format using Map Info/AUTOCAD Map and submitted in CD ROM. Contractor shall also make the item wise material consumption report for the respective areas in a soft copy and to be submitted along with the as-built drawings.

27.0 Civil and Structural Works

The contractor has to supply the adequate materials and skilled manpower for the completion of all the civil & structural works . The contractors shall also

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ensure that the work carried out as per the detail mentioned in the schedule of rates.

Special care should be taken at the time of labours working in depths/lifting of the skids by hydras/ cranes considering all the safety guidelines The contractors has to ensure that sample of all the material shall be inspected and approved by EIC before carrying out installation or erection work. The contractor has to submit the test certificates for all the materials to be used at the site .the construction shall be carried out strictly as per the drawings provided by the GGPL.

**TECHNICAL SPECIFICATION
FOR
MEDIUM DENSITY
POLYETHYLENE FITTINGS
AND
ELECTRO-FUSION
FOR
NATURAL GAS DISTRIBUTION**

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SCOPE AND FIELD OF APPLICATION

This specification elaborates the requirements for Electrofusion fittings in the nominal size range 20 to 125 mm made from PE compound used with PE pipes for supply of natural gas and to be used at operating temperature not more than 40°C.

The material grades to be used are PE 100. The fittings shall be yellow or black in colour.

1.0 Electro Fusion Fitting Jointing

- 1.1 For Electro Fusion fitting jointing an electrical resistance element is incorporated in the socket of fitting which when connected to an appropriate power supply, melts and fuses the materials of the pipe and fitting together.
- 1.2 The effectiveness of this technique depends on attention to the preparation of the jointing surfaces, in particular the removal of the oxidized surface of the pipe over the socket depth and ensuring the jointing surface are clean. If ovality causes gap between concentrically located pipe and the fitting to exceed 1% of the pipe OD after re-rounding to ensure correct welding. If the gap still exceeds 1% of the pipe OD after re-rounding then a check should be made of the pipe OD dimensions to determine if it meets specification.
- 1.3 The maximum gap between eccentrically located pipe and fitting i.e. pipe touching fitting at one point must not exceed 2% of the pipe OD.
- 1.4 Sometimes coiled pipes may be too oval to fit into couplers, or the end of the pipe may make the alignment of the ends impossible. In such circumstances the use of a mechanical pipe straightener or rounding tool is necessary.

2.0 EQUIPMENT

- 2.1 The control box input supply is to be from a nominal 240V generator, which is normally of 2.5kVA or 5 kVA capacity. The Nominal output of the generator is to be 240V + 15%, -10% between no load and full load. Control box are to include safety devices to prevent excessive voltages being present at the control box output. The safety devices shall operate in less than 0.5 s

Note that extension leads are not to be used on the control box outlet connections.

Warning : Control boxes are not intrinsically safe and must therefore not be taken to trench.

A mechanical pipe surface preparation tool is to be used before fusion is attempted. The tool is capable of removing the oxidized surface of the pipe in excess of the insertion depth. The tool is to remove a layer of surface material 0.2-0.4 mm thick from outer surface of the pipe preferably in a continuous strip of swarf over that length and round of the pipe. Pipe clamps for restraining, aligning and re-rounding the pipes in the fusion process are to be

used. Pipe cutters with saw and saw guide Protection against adverse weather conditions.

2.2 Electro Fusion Jointing Method / Procedure

Preparation

- Ensure there is sufficient space to permit access to the jointing area. In a trench, a minimum clearance of 150 mm is required.
- Check that the pipe ends to be jointed are cut square to the axis of the pipe and any burrs removed.
- Wipe pipe ends clean lint free material to remove traces of dirt or mud
- Mark the area over which the oxidized pipe surface is to be removed i.e., by placing the socket of the bagged fitting along side the pipe end. Trace a line round the circumference at the appropriate distance from the end of the pipe using a felt tip pen or similar.

Note that the fitting should not to be removed from the packaging at this stage.

- Connect the electro fusion control box input leads to the generator
- Check that the reset stop button, if fitted on the control box is in the correct mode.
- Check that reset stop button if fitted on the control box is in the correct mode
- Using the pipe end preparation tool, remove the entire surface of the pipe uniformly, preferably in continuous swarf over the area identified. i.e. in excess of insertion depth.
- A mechanical scraper could be used however there is a considerable risk that the end preparation will not be adequate with the use of such a tool.

Note that the prepared pipe surface should not be touched by hand.

- Remove the fitting from its packing and clean the scrapped area of the pipe surface and the bore of the fitting with a disposable wipe impregnated with Iso-propanol / Acetone. Ensure the prepared surfaces are completely dry before proceeding

Note that while Iso-propanol is a suitable cleaner , its use is subject to local health and safety regulation.

Check that the pipe clamps are of the correct size for the pipes to be jointed . Insert the pipe ends into the fitting so that they are in contact with centre stop.

Using the pipe clamps, secure the pipes so that they cannot move during the fusion cycle. Check that the pipes ends and the fitting are correctly aligned.

Connect the control box and check that they have been fully inserted.

If required by the control box enter the fusion jointing time into the control box timer. The jointing time is indicated on the fitting. Check the correct time as shown on the control box display.

Note 1 : Automatic control box are available which obviate the need to enter the fusion time.

Note 2 : Gloves and goggles should be worn during the fusion process

Note 3: If the fusion cycle terminates before completion of the countdown, check for faults as indicated by the control box warning lights and check that there is adequate fuel in the generator. DO NOT attempt a second fusion cycle within one hour / cooling of joint at Ambient temperature of the first attempt.

2.3.1 Records : Records of appropriate servicing and calibration shall be kept.

2.3.2 Training : It is necessary that operators , inspection and supervisory personnel acquire the skills of Electro-fusion fitting. The necessary training should be carried out by qualified instructor with the objective of enabling participants to

- Understand the principles of electro-fusion fitting jointing
- Identify pipe and appropriate fitting markings
- Carry out pre jointing machine and equipment checks
- Make satisfactory Electro-fusion joints from pipes and fittings of different sizes
- Inspect for and identify joints of acceptable

Note that some form of assessment and certification should be associated with the training . The certificate should detail the pipe and fitting size range and the equipment used. A register of successful participants should be kept.

2.4 Electro-Fusion Saddle Jointing

For Electro Fusion fitting jointing an electrical resistance element is incorporated in the socket of fitting which when connected to an appropriate power supply, melts and fuses the materials of the pipe and fitting together.

The effectiveness of this technique depends on attention to the preparation of the jointing surfaces, in particular the removal of the oxidized surface of the pipe over the socket depth and ensuring the jointing surface are clean.

Method of holding the tapping tee saddle during the fusion cycle used are namely top loading and under clamping around the pipe. In a trench a minimum

clearance of 150 mm is required.

2.5 Electro-Fusion Saddle Jointing Method / Procedure

Preparation

Expose the pipe onto which the tapping tee is to be assembled , ensuring there is sufficient clear space (min 150mm) around the pipe .

Clean the pipe over the general area on which the saddle is to be assembled using clean disposable lint free material

Without removing the fitting from its packaging , place over the required position on the main. Mark the pipe surface all around and clear of the saddle base area using a felt tip pen or similar.

Remove the surface of the pipe to a depth of 0.2 to 0.4mm over the full area marked using a suitable tool and remove the swarf.

Connect the electro fusion control box input leads to the generator

Check that the reset stop button, if fitted on the control box is in the correct mode.

Check that reset stop button if fitted on the control box is in the correct mode.

Remove the fitting from its packing and clean the scrapped area of the pipe surface and the bore of the fitting with a disposable wipe impregnated with Iso-propanol / Acetone. Ensure the prepared surfaces are completely dry before proceeding

Note that while Iso-propanol is a suitable cleaner , its use is subject to local health and safety regulation.

Position the fitting base onto the prepared pipe surface , and bring the lower saddle into position then gradually and evenly tighten the nuts until the upper saddle makes firm contact with scrapped pipe.

Check that there is sufficient fuel for the generator to complete the joint .

Start the generator and check that it is functioning correctly
Switch on the control box if applicable

Connect the control box output leads to the fitting terminals and check that they have been fully inserted.

If required by the control box enter the fusion jointing time into the control box timer. The jointing time is indicated on the fitting. Check the correct time

as shown on the control box display.

Note 1 : Automatic control box are available which obviate the need to enter the fusion time.

Note 2 : Gloves and goggles should be worn during the fusion process

Press the start button on the control box and check that the heating cycle is proceeding as indicated on the display.

On completion of the heating cycle , the melt indicators, where incorporated, should have risen. If there is no apparent move in the melt indicators, a new saddle joint should be made. Cut the tee of the faulty joints from its base.

If a satisfactory joint has been made , the joint is to be left in the clamps for the cooling time specified on the fitting label or any the automatic control box

Note 3 : If the fusion cycle terminates before completion of the countdown , check for faults as indicated by the control box warning lights and check that there is adequate fuel in the

The connection of the service pipe to the fitting outlet should be carried out in accordance with the procedure of the appropriate section of this item

Do Not attempt to tap the main with the integral cutter for at least 10 minutes after the completion of cooling cycle.

Note that some form of assessment and certification should be associated with the training. The certificate should detail the pipe and fitting size range and the equipment used. A register of successful participants should be kept.

2.6 STOPPING THE GAS FLOW

In the operation of a distribution system there is a periodic need to stop the gas flow for either routine or emergency maintenance. The flow may be stopped through the use of installed fitting such as valves. Where installed fittings are not available or the use of such would cause significant supply disruption, then one of the following methods may be employed.

2.7 SQUEEZE - OFF

- a. To control the gas flow a special tool may be used to squeeze the pipe walls together. Hydraulic jacks are used to supply the necessary force to compress the pipe walls for sizes 90 mm and above.
- b. As will be seen the squeeze-off equipment comprises two bars to apply pressure to outside of the pipe. The bars are brought together either manually or hydraulically, squeezing the pipe material together until
a seal is

formed where the upper and lower walls meet.

- c. The hydraulic machines should have a spring return for the jack and locking to prevent accidental release of pressure during operation. All squeeze - off machines should be fitted with check plate or stops to avoid over compression of the pipe.
- d. Where the pipe walls are compressed the polyethylene pipe will be severely deformed in the regions of maximum compression. The pipe will eventually regain its original shape after squeezing but there will be reduction in some pressure bearing properties.
- e. A complete stop may not always be obtainable because of wrinkling of the inside of the pipe. If a complete stop is required than a second squeeze can be used, with an intermediate vent to remove the gas which passes the first squeeze, from the trench area of approximately three pipe diameters area. A second squeeze - off procedure should be a minimum of three pipe diameters and right angles to the squeeze.
- f. While not essential it would be good practice to fit a reinforcing stainless steel band / do not squeeze again adhesive tape around the pipe upon the completion of squeezing operation.

2.8 BENDING - BACK

Bending back of the pipe may be performed where the pipe has been severely damaged and stopping the gas flow is imperative. Its application is of a temporary nature and will provide a relief until a permanent repair can be affected. The section of pipe, which has been bent back, will have to be replaced because of the damage caused by the severeness of the band back operation. The need of any bend back operation is most likely to occur as a consequence of damage caused to a PE service pipe.

While it is not the prime function of a saddle tee, controlling the flow in the service may be achieved by winding down the internal tapping tool opening of the installed saddle tee to shut off the flow to the service pipe.

3.0 SYMBOLS & DEFINITIONS

3.1 Symbols for Electro fusion Fittings

3.1.1 Symbols for Electro fusion Socket Fittings

The dimensions and main symbols used in this part of ISO 8085 are shown in figure 1, where

D1 is the mean inside diameter in the fusion zone comprising the mean inside diameter measured in a plane parallel to the plane of the mouth at a distance of $L3 + 0.5 L2$ from the plane at the mouth.

D2 is the minimum bore comprising the minimum diameter of the flow channel through the body of the fitting. L1 is the depth of penetration of the pipe or of the male end of a spigot fittings.

L2 is the nominal length of the fusion zone corresponding to the heated length.

L3 is the nominal unheated entrance length of the fitting comprising the distance between the mouth of the fittings and the near end of the fusion zone.

3.1.2. Symbols for Electro fusion Tapping Tees

The main symbols used for tapping tees are shown in Figure 2, where h is the height of the service pipe and comprising the distance between the axis of the main pipe and the axis of the service pipe.

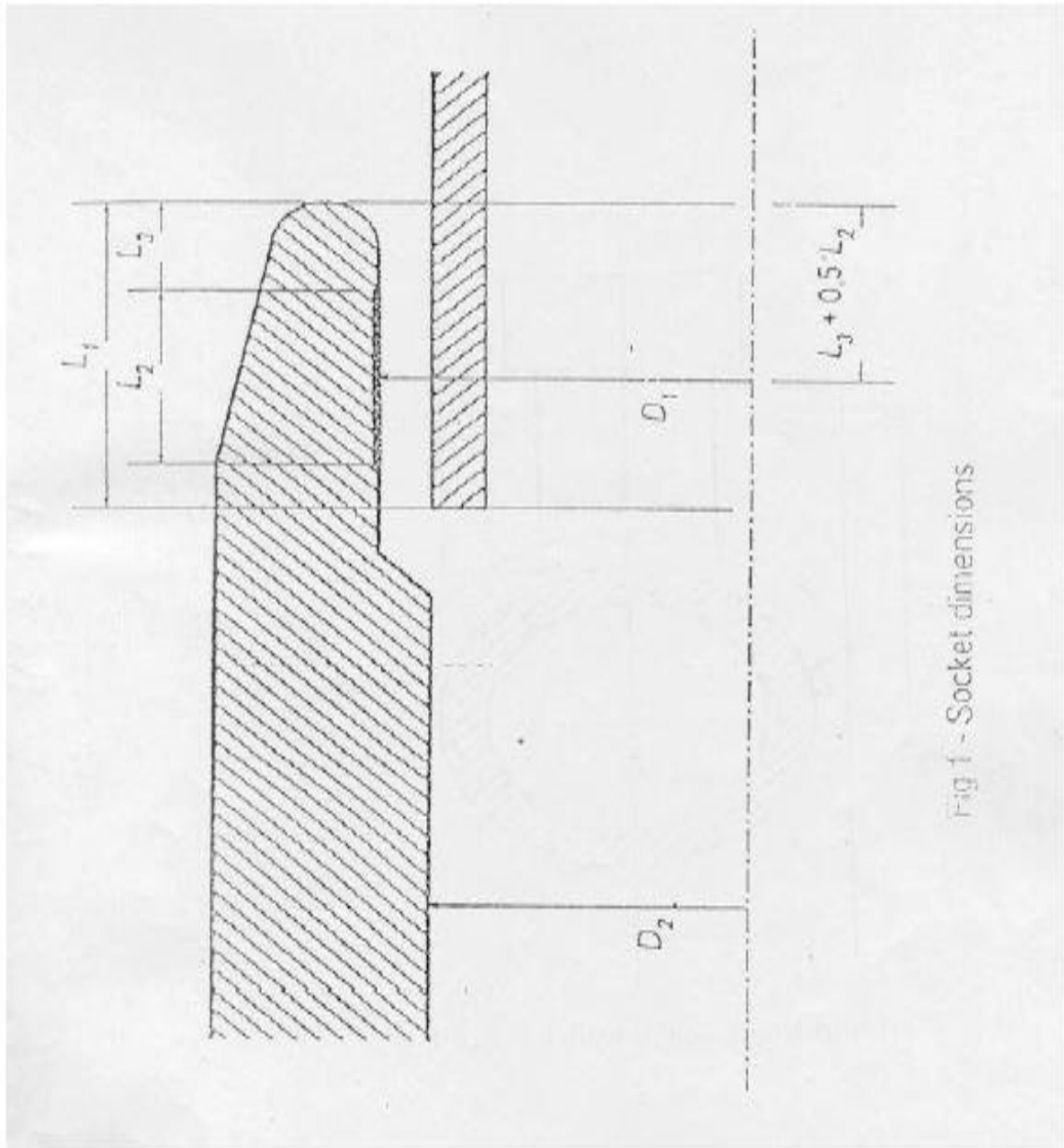


Fig 1 - Socket dimensions

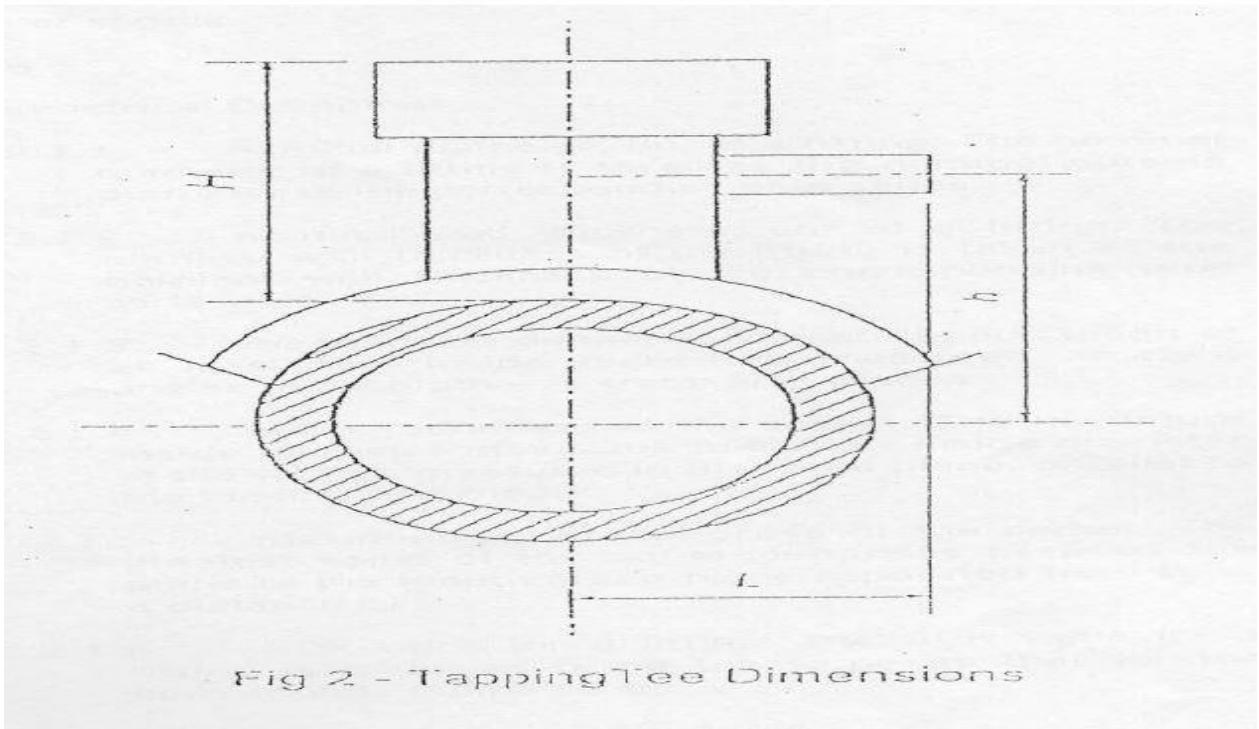


Fig 2 - Tapping Tee Dimensions

L is the width of the tapping tee and comprising the distance between the axis of the main pipe and the plane of the mouth of the service pipe.

H is the height of the saddle which comprises the distance from the top of the tapping tee or saddle.

3.2 Definitions

3.2.1. Geometrical Definitions

3.2.1.1 Nominal diameter (d_n) of a fitting:

The nominal diameter of a fitting is taken as the nominal outside diameter of the corresponding pipe series

3.2.1.2 Nominal wall thickness (e_n) of a fitting:

The nominal wall thickness of the fittings is taken as the nominal wall thickness of the corresponding pipe series.

3.2.1.3 Mean inside diameter:

The arithmetic mean of at least two inside diameter measured at right angles to each other in transverse planes.

3.2.1.4 Out of roundness of the Socket:

The maximum inside diameter minus the minimum inside diameter of the socket, measured in the same plane, parallel to the plane of the mouth.

3.2.1.5 Maximum out of roundness of the socket:

The greatest value of the out of roundness between the plane of the mouth and a plane separated from it by a distance L1.

3.2.1.6 SDR value for a fitting:

The SDR value for a fittings is taken as being the same as that for the corresponding pipe series. Where, $SDR = dn/en$

3.2.1.7 Wall thickness, E of a fitting:

The wall thickness of a fittings at any point of the body of the fitting which could be submitted to a stress induced by the pressure of the gas in the piping system.

3.2.2 Material Definition

3.2.2.1 Virgin Material :

Materials such as granules or powder that has not been subjected to use or processing other than that required for its manufacturer and to which no re-processable or recyclable materials have been added.

3.2.2.2 Own Reprocessable Material :

Material prepared from rejected unused pipes, fittings or valves, including trimmings from the production of pipes, fittings or valve, that will be reprocessed in a manufacturer's plant after having been previously processed by the same manufacturer by a process such as injection moulding or extrusion.

3.2.2.3 Compound:

A homogenous mix of base polymer (PE) and additives, i.e. antioxidants, pigments, UV-stabilisers and others..., at a dosage level necessary for the processing and of components of this standards. The additives shall not have a negative influence on the performance with respect to feasibility. All additives shall be uniformly dispersed.

3.2.3 Definition related to Material Characteristics

3.2.3.1 Lower Confidence Limit (LCL):

A quantity with the unit in mega Pascals (MPa), which can be considered as a property of the material representing the 97.5% lower confidence limit of the predicted long-term hydrostatic strength at a temperature 20° C for 50 years in water.

3.2.3.2 Overall Service (Design) Coefficient (C):

An overall coefficient with a value larger than 1.0 which takes into consideration service conditions as well properties of the components of a piping system other than those represented in LCL. For gas applications, C can have any value equal to or greater than 2.0.

3.2.3.3 Minimum Required Strength (MRS):

The value of the LCL rounded down to the next lower value of the R 10 series when the lcl is less than 10 Mpa, or to the next lower value of the R 20 series when the lcl is greater than or equal to 10 Mpa.

Note: R10 and R 20 series are the Renard number series according the ISO 3 and ISO 497

3.2.3.4 Melt Mass Flow Rate (MFR):

A value relating to the viscosity of the molten material at a specified temperature and rate of shear.

3.2.4 Definitions Related to Service Conditions

3.2.4.1 Gaseous Fuel:

Any fuel which is in the gaseous state at a temperature of + 15° C and a pressure of 1 bar.

3.2.4.2 Maximum Operating Pressure (MOP)

The maximum effective pressure of the gas in the piping system, expressed in bar, which is allowed in continuous use. It takes into account the physical and the mechanic characteristics of the components of a piping system.

$20 * MRS$

Note: It is given by the equation:

$$\text{MOP} = C * (\text{SDR} - 1)$$

3.2.5 Definition on Design of Electrofusion Fittings:

3.2.5.1 Electrofusion Socket Fitting:

A polyethylene (PE) fittings which contains one or more integral heating elements, that are capable of transforming electrical energy into heat to realise a fusion joint with a spigot - end or a pipe.

3.2.5.2 Electrofusion Saddle Fitting:

A polyethylene (PE) fitting (top loading or wrap around) which contains one or more integral heating elements, that are capable of transforming electrical energy into heat to realise a fusion joint onto a pipe.

3.2.5.3 Tapping Tee:

An Electro fusion saddle fitting which contains an integral cutter, to cut through the pipe wall. The cutter remains in the body of the saddle after installation.

3.2.5.4 Branch Saddle:

An Electrofusion saddle fitting which requires an ancillary tool for drilling a hole in the adjoining main pipe.

3.2.5.5 U Regulation :

Control of the energy supplied during the fusion process of an Electrofusion fitting, by means of the voltage parameter.

3.2.5.6 I Regulation:

Control of the energy supplied, during the fusion process of an electrofusion fitting by means of the current parameter.

4.0 DESIGNATION

4.1 Fittings shall be designed according to the grade of material, nominal diameter and Standard Dimension Ratio (SDR).

4.2 Grade of Material:

4.2.1. Fittings shall be classified according to the grade of material as given in following table:

Table-1

Material	M.R.S. Mpa	1 cl (20° C, 50 Yrs 97.5%) Mpa	Maximum Allowable Operating Pressure
PE 80	8.0	$8.00 \leq 1 \text{ cl} \leq 9.99$	5.5 Bar
PE 100	10.0	$10.00 \leq 1 \text{ cl} \leq 11.19$	7.0 Bar

4.3 Nominal Diameter

The Nominal Diameter for fittings covered in this standard are 16, 20, 25, 32, 40, 63, 75, 90, 110, 125, 140, 160, 180 mm.

4.4 Material

4.4.1 Polyethylene Compound:

The Polyethylene compound used in the manufacture of fitting shall be a cadmium free compound. It shall be free from visible water, shall comply with the requirements as specified in Table - 2.

Table-2 : Characteristics of PE Compound

Characteristics	Units	Requirements	Test Parameters	Test Method
Conventional Density	Kg/m ³	≥ 930 (base polymer)	23 °C	ISO 1183 – ISO 1872/1
Melt Mass-flow Rate	g/10min	+/- 20% of value nominated	190°C condition 18	ISO 1133
Thermal Stability	Minutes	>20	200° C(2)	ISO TR 10837
Volatile Content at Extrusion	mg/Kg	≤ 350		ISO 4437 Annex.A
Water Content (3)	mg/Kg	≤ 300		ASTM D 4019
Carbon Black Content	%(m/m)	$2,0 \leq \dots \leq 2,5$		ISO 6964
Carbon Black Dispersion (4)	Grade	≤ 3		ISO DIS 11420
Pigment Dispersion (5)	Grade	≤ 3		ISO DIS 13949

Resistance to Gas Constituents	h	≥ 20	80° C 2Mpa	ISO 4437 Annex.B
Resistance to rapid crack propagation (RCP) (6)	Mpa	The critical pressure in the FS test shall be greater than or equal to the value of the MOP of the system	0° C	ISO DIS 13478
Full Scale (FS) test : $d \geq 250$ mm		Multiplied by 1:5		
Or S4 test : In principle according to all diameters(7)	Mpa	The critical pressure in the S4 test shall be equal to or greater than the value of the MOP of the system divided by 2,4 (8)	0° C	ISO DIS 13477
Resistance to slow crack growth $e_n > 5$ mm	h	165	80° C, 8,0bar(f) (9) 80° C, 9,2bar(f) (10)	ISO DIS 13479

- 1) Non black compound shall conform to the weathering requirements to ISO 4437
- 2) Test may be carried out at 210°C providing that there is a clear correlation to the results at 200°C, in case of dispute the reference temperature shall be 200°C
- 3) Only applicable if the compound does not conform to the requirement for volatile content. In case of dispute the requirements for water content shall apply
- 4) Carbon black dispersion for black compounds only.
- 5) Pigment dispersion method for non-black compounds only.
- 6) Only applicable for fittings which incorporate extruded pipe elements.
- 7) Shall be performed on pipe with a wall thickness of ≥ 15 mm.
- 8) This factor 2.4 is still under study and may be subject to change. If the requirement is not met, then retesting by using the Full Scale (FS) test shall be performed

- 9) Test parameter for PE 80.
- 10) Test parameter for PE 100.

5.0 DESIGN

- Fittings shall be designed for system operation at the pressures given in Table –I
- Fittings shall be free from cracks, voids, blisters, distortion, dent or other defects.
- Fittings shall be capable of being fusion jointed to pipes using control boxes. The fittings shall exhibit the strengths and fusion compatibility with, pipes of respective sizes.
- Each fitting shall be bar coated and shall have a permanent fusion indicator.
- Heating coil design shall be such that it should not be damaged during assembly leading to short circuit of heating coil.

5.1 Electrofusion Socket Fittings

Electrofusion Socket Fittings shall incorporate a method of controlling pipe penetration within each socket. The inner cold zone of each socket shall not be less than $(0.1 d + 5)$ mm for sizes upto 125 mm & 0.1 d for sizes greater than 125 mm.

5.2 Tapping Tees

Tapping tees shall be capable of installation by a force between 1 kN and 1.5 kN applied from above and on the centre line of the tapping tees stack. The tapping tees shall provide a means of cutting through the pressurised main pipe and allowing the gas flow into the outlet pipe.

5.3 Transition Pieces

To make connection between steel pipe and MDPE pipe specially fabricated transition pieces consisting of steel and MDPE pipes should conform to the requirements mentioned herein.

5.3.1 MDPE Pipe:

The MDPE pipe with one end plain should conform to the specification (IS:14885/ SDR 11)

5.3.2 Steel Pipe:

Black ERW steel pipe should conform to the specifications as laid in API STD 5L (latest revision)

5.3.2.1 Pipe End:

One end of the pipe should be bevelled for welding angle of bevel should be $30^{\circ} + 5^{\circ}$.

5.3.3 Joining between Steel and MDPE Pipes:

Steel and MDPE pipes should be so jointed in the factory so as to have a monolithic joint which is leak free and should be mechanically as strong as or stronger than the PE Pipe.

6.0 ELECTRICAL CHARACTERISTICS

For each size and type of fitting, the manufacturer shall declare the nominal resistance of the heating element and specify the production tolerances.

The manufacturer shall demonstrate that satisfactory joint can be made using the extremes of these tolerances.

All fittings shall have mechanically shrouded metal electrical terminals. The fittings terminals connections shall be suitable for use with voltage less than or equal to 48 volts. Considerations should be given to the design of the shroud with respect to impact damage. When hollow terminal pins are used, the hole at the top of the pin shall be less than 1 mm diameter. The terminal pin material shall be corrosion resistant and the surface finish shall be N7.

Fittings incorporation two electrofusion sockets shall have both sockets fused in a single operation.

The heating elements shall be suitable designed to prevent short circuiting or local overheating/ under heating during the fusion operation. Protective coating applied to the heating element shall not have a detrimental effect on the joint.

The heating element wire shall not be disturbed during assembly.

7.0 DIMENSIONS

7.1 Measuring Temperature

Fittings shall not be measured within 24 hrs. of manufacturer to allow for normalization. The fittings shall be measured at an ambient temperature of $23 \pm 2^{\circ}\text{C}$, after a conditioning period of 5 Hrs.

Methods of measurements shall provided the appropriate degree of accuracy, and the reference conditions specified in this clause 6 apply in case of disputes in dimensional measurement.

7.2 Dimensional Stability

7.2.1 Couplers (Including all forms of socket fittings)

All coupler dimensions shall conform to their specified value when the fitting has been stored for a period of 12 months at a temperature of $30 \pm 2^{\circ}\text{C}$.

7.2.2 Tapping Tees and Branch Saddles:

All tapping tee and branch saddle dimensions shall conform to their specified agreed values when the fitting has been stored for a period of 12 month at a temperature of 30 ±2°C.

TABLE 3 : SOCKET DIMENSIONS

Pipe Size d mm	Limits for average diameter d on each fitting measured over apparent fusion length L mm		Apparent fusion length L mm	Penetration depth L mm
	<i>Maximum</i>	Minimum	Minimum	Maximum
16	16.6	16.4	15	41
20	20.6	20.4	16	41
25	25.6	25.4	18	41
32	32.9	32.5	18	41
40	41.0	40.6	18	49
50	51.1	50.7	20	55
55	56.1	55.7	21	63
63	64.1	63.7	23	63
75	76.3	75.9	25	70
90	91.5	91.1	28	79
110	111.3	111.1	32	82
125	126.7	126.2	35	87
140	141.7	141.2	38	92
160	162.1	161.4	42	98
180	182.1	181.5	46	105

Notes:

1. The apparent fusion length, L, is the length of the integral heating elements, from the first regular section of the element to the end of the regular section, on one side of the fitting. This dimension to be measured from outside edge to outside edge of wire.
2. Any protrusions into the bore of the fitting (e.g. centralization ribs) shall not prevent easy assembly in the field.
3. The overall length of a straight coupler is equal to twice the quoted maximum penetration depth L.

TABLE 4: OVERALL LENGTH OF REDUCERS

Major Diameter mm	Maximum Length mm
25	90
32	90
63	120
90	180
125	215
180	280
200	245
225	260
250	280
280	300
315	320

TABLE 5: BRANCH SADDLE ASSEMBLY OUTLET LENGTH

Off-take Size Mm	Shut-off method	Dimension from flange face to crown of main		Dimension from pipe end to crown of main	
		Class B fitting mm	Class B fitting mm	Class B fitting mm	Class B fitting mm
63	Valve	-	-	-	-
63	Squeeze	-	260*	-	-
90	Valve	-	-	400	-
90	Squeeze	400	180**	-	-
125	Valve	-	-	550	-
125	Squeeze	360	180***	-	-
180	Valve	-	-	750	-
180	Squeeze	360	180+	-	-
250	Valve	-	-	-	-
250	Squeeze	360	180++	-	-

* Flange size DN50

** Flange size DN100

*** Flange size DN 150

+ Flange size DN250

++ Flange size DN 250

8 **PERFORMANCE REQUIREMENTS**

8.1 **Mechanical Characteristics**

Fittings shall be tested using pipes, which conform to ISO 4437, Test samples shall be assembled in accordance with ISO DIS11413, following the technical instruction of the manufacturer and using fusion equipment conforming ISO DIS 12176.2.

When tested in accordance with the test methods as specified in table

– 6 using the indicated parameters, the fittings have mechanical characteristics confirming to the requirements given in Table 6.

TABLE 6: MECHANICAL PROPERTIES

Characteristics	Units	Requirements I	Test	Parameters	Test Method
Hydrostatic strength at 20°C	H	Failure time □ 100	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 1 h 9 Mpa, 12.4 Mpa, 20°C	ISO DIS 9356
Hydrostatic strength at 80°C	H	Failure time □ 165	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 12 h water-in-water 4.6 Mpa 5.5 Mpa 80°C	ISO DIS 9356
Hydrostatic strength at 80°C	H	Failure time □ 1000	End caps orientation conditioning time. Type of test circumferential (hoop) stress pipe PE 80, PE 100, Test temperature.	Type a) free 12 h water-in-water 4 Mpa, 5 Mpa, 80°C	ISO DIS 9356
Cohesive resistance	mm	Length of initiation of brittle fracture L/3	Test temperature choice of method	23°C	ISO 13954 (A) ISO 13955 (A) ISO 13956 (B)

Characteristics	Units	Requirements I	Test	Parameters	Test Method
Impact strength (B)		No failure No leakage	Test temperature Falling height Mass of the striker	20°C 23°C 5m 5k g	ISO DIS 13957

Pressure drop (B)	M ³ /h	0.5 mbar : dn ≤ 63 0.1 mbar : dn > 63	Air flow rate Test medium Test pressure	Indicated by the manufacturer Air source 25 mbar	PrEN 12117
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- (A) Electrofusion Socket Fittings
(B) Tapping Tees

For hydrostatic strength test at 80°C only brittle failure shall be taken into account. If ductile failure occurs before the required time, a lower stress shall be selected and the minimum test time will be obtained from the line through the stress/ time points given in Table – 7.

TABLE 7

Hydrostatic strength (80°C) – Stress/Minimum Failure Time Correlation

PE-80		PE-100	
Stress Mpa	Minimum Failure Time h	Stress Mpa	Minimum Failure Time h
4.6	165	5.5	165
4.5	219	5.4	233
4.4	293	5.3	332
4.3	394	5.2	476
4.2	533	5.1	688
4.1	727	5.0	1000
4.0	100	-	-

8.2 Physical Characteristics

When tested in accordance with the test methods as specified in Table 8 using the indicated parameters, the fittings shall have physical characteristics conforming to the requirements given in Table 8.

TABLE 8 : Physical Characteristics of Fittings

Property	Units	Requirements	Test Parameters	Test Method
Thermal Stability	Minutes	> 20	200 °C (1)	ISO TR 10837
Melt Mass- flow Rate (MFR)	g/10 min	0.2 □ MFR □ 1.4 and after processing maximum deviation of □ 20% of the value measured on the batch compound	Condition 18	ISO 4440.1

- (1) Test may be carried out at 210 °C providing that there is a clear correlation to the results at 200 °C, in case of dispute the reference temperature shall be 200°C.

8.3 Technical File

The manufacturer of the fittings shall make availability of a technical file (generally confidential) with all relevant data to prove the conformity of the fittings to this specification. It shall include all results of the type testing and shall conform to the specification relevant technical brochure (e.g. ISO 12093 for electro fusion fittings).

The technical description of the manufacturer shall include the following information:

1. Field of appliance (pipe and fitting temperature limits SDR's and out of roundness):
2. Assembly instructions:
3. Fusion instruction (fusion parameters with limits)
4. For saddles and tappingtee:
 - The means of attachment (tools and/ or underclamp).
 - The need to maintain the under clamp in position in order to ensure the performances of the assembly.

For electrofusion fitting, the format of the technical brochure shall conform to ISO DIS 12093.

In the event of modification of the fusion parameters, the manufacturer

shall ensure that the joint conforms to this standard.

9. **MARKING**

Following information shall be embossed upto height of 0.15 mm onto the fitting and also in the form of bar code:

- a) The manufacturer's identity
- b) The size of the fitting inmm
- c) Material and Designation
- d) The date of manufacturer (code may be used)
- e) Fusion time in seconds
- f) Cooling time in minutes
- g) Fusion parameters in BAR code
- h) Lot Number.

The information may be printed on a label associated with the fitting.

10. **PACKING**

The fittings shall be packaged in bulk or individually protected where necessary in order to prevent deterioration. Whenever possible, they shall be placed in airtight plastic bags in cardboard boxes or cartons.

The cartons and/or individual bags shall bear at least one label with the manufacturer's name, date of manufacturer, type and dimensions of the part, number of units in the box, and any special storage conditions and storage time limits.

Note:

All the fittings required shall be bar coded electrofusion fitting type. In case bidder is quoting for spigot fittings, the necessary electrofusion coupler for all non electrofusion ends shall be included in the complete package

The transition fittings shall also be bar coded electrofusion type for PE connection, NPT Female threading conforming to ANSI B 20.1 for G.I connection & butt welded for carbon steel end.

The carbon steel material of transition fittings shall be conforming to APL 5L x 42 and thickness shall be of 4.8 mm.

All the fittings shall be used for the network operating at 6.0 Bar(g) Pressure.

**TECHNICAL SPECIFICATION
FOR
PE BALL VALVES**

Contents

- 1.0 INTENT OF SPECIFICATION
- 2.0 MATERIAL SPECIFICATION FOR ISOLATION VALVES

Item:	:	PE BALLVALVE
Application	:	Natural Gas Distribution Services
Code	:	ASME B16.40/EN1555-4
Rating	:	PE100SDR11
Operating Pressure	:	6 bar (g)
Operating Temperature	:	0°C to 60°C
End Connection	:	PE materials (Spigot Type)
Stem Extension	:	Not Required
Valve Design	:	Full Bore
Ball position Indicator	:	Open/Close Limits required

INSPECTION / DOCUMENT

- i) Inspection shall be carried out as per client/consultant's approved Inspection Plan /QAP.
- ii) Third party inspection agency appointed by vendor on prior approval of owner shall carry out stage wise inspection during manufacturing / final inspection.
- iii) Vendor shall furnish all the material test certificates, proof of approval / licence from specified authority as per specified standard, if relevant, internal test / inspection reports as per owner Technical Specification and specified code for 100% material, at the time of final inspection of each supply lot of material.

PACKING Packing size to be mentioned to ensure uniformity in delivery condition of the material being procured. Bidder shall submit the packaging details during QAP and also compiled with at the time delivery

**TECHNICAL SPECIFICATION
FOR
ISOLATION & APPLIANCE BALL
VALVES**

<u>Sl.No.</u>	<u>Description</u>
1.0	INTENT OF SPECIFICATION
2.0	MATERIAL SPECIFICATION FOR ISOLATION VALVES
3.0	MATERIAL SPECIFICATION FOR APPLIANCE VALVES

1.0 INTENT OF SPECIFICATION

The intent of this specification is to establish minimum requirements to manufacture and supply of Isolation & Appliance Ball Valves used for supply of natural gas.

2 MATERIAL SPECIFICATION FOR ISOLATION VALVES

2.1 Technical Data Sheet

2.1.1 Item-Isolation Ball Valve with Full Bore, NPT Female (Confirming to ANSI B1.20.1) ends for natural gas application).

2.1.2 Sizes : ½", ¾" 1", 1½"

2.1.3 Body : Hot Pressed/ Forged Brass, Nickel/ Chrome Plated.

2.1.4 Ball : Hard Chrome/ Nickel Plated Hot Pressed/ Machined Brass Bar with Teflon Seat.

2.1.5 With operating Knob and locking **arrangement** with sealing wire and lead seal (Without Key). Valve full open/ close position shall be at 90°.

2.1.6 Maximum Operating Pressure : 4.0 Bar(g)

2.1.7 Hydrostatic Test Pressure : 6.0 Bar(g)

2.1.8 Markings

Markings shall be provided & shall include :

Manufacturer's name or trade mark Model designation. Rate working pressure in Bar.

Direction of flow, if necessary.

2.1.9 Leakage : The permissible external/ internal leakage shall be specified by the vendor, with reference to relevant code. However, in no case the leakage in both the cases shall exceed 1 ml/ min at maximum working pressure specified.

2.1.10 Mechanical Strength

The body of the valves shall be capable of withstanding without deformation or leakage 105 Nm, 225 Nm & 340 Nm torque for ½", ¾" & 1" respectively, as applied to a pipe being connected to the valve.

i) Valve shall be capable of withstanding without deformation or leakage

75 Nm, 100 Nm, 125 Nm bending moment for ½", ¾" & 1"

respectively for an angular displacement of 10° whichever occurs first, if applied to a pipe connected to the valve.

- ii) The valves shall be capable of withstanding 25Nm impact without breakage or leakage.

3.0 MATERIAL SPECIFICATION FOR APPLIANCE VALVES

3.1 Technical Data Sheet

3.1.1 Item

Application Ball Valve of Full Bore with ½” NPT (Confirming to ANSI B1.20.1) Female as an inlet and the outlet shall be having Ni/ Cr plated brass or steel a nozzle (Serrated to suit ¼” rubber tubing/ hose connection) and the material is required for Domestic Natural Gas Service.

3.1.2 Body : Total body including the nozzle shall be of Hot Pressed/ Forged Brass, Nickel/ Chrome Plated.

3.1.3 Ball - Hard Chrome/ Nickel Plated Hot Pressed/ Machined Brass Bar with Teflon Seat.

3.1.4 With a metallic operating/ knob/ lever for full open/ close at 90° position.

3.1.5 Maximum Operating Pressure : 35 milli Bar(g)

3.1.6 Hydrostatic Test Pressure : 1.0 Bar(g)

3.1.7 Markings

Markings shall be provided & shall include :

- i) Manufacturer's name or trademark
- ii) Model designation
- iii) Rate working pressure in Bar
- iv) Direction of flow, if necessary

3.1.8 Leakage

The permissible external/ internal leakage shall be specified by the vendor, with reference to relevant code. However, in no case the leakage in both the cases shall exceed 1ml/min at maximum working pressure specified.

3.1.9 Mechanical Strength

- i) The body of the valves shall be capable of withstanding without deformation or leakage 100Nm torque, as applied to a pipe being connected to the valve.
- ii) Valve shall be capable of withstanding without deformation or leakage 75Nm bending moment or an angular displacement of 10° whichever occurs first, if applied to a pipe connected to the valve.
- iii) The valves shall be capable of withstanding 25 Nm impact without breakage or leakage.

**TECHNICAL SPECIFICATION
FOR
WARNING MATS**

SPECIFICATION FOR THE NON-TRACEBLE WARNING MATS

Mechanical properties of HDPE:-

1. Tensile strength - min. 1.8kg/sq.cm
2. Elongation-Min.125%
 - Bundle length: 0.5mm thick warning mat shall be 100m
 - Test certificates: Vendor has to submit all test certificates
 - Inspection: Manufacturer has to submit the QAP

LAYING

The warning mat may be laid between a depth of 300-400mm from the ground level. Care must be taken so that no damage takes place in the tracing wire. All measures must be taken for maintaining the continuity of the tracing wire. For this purpose, an overlap length of 200mm must be provided between two separate mats. The overlap length of the mats must be crimped by using SS studs.

TECHNICAL SPECIFICATION
FOR
FLEXIBLE HOSE PIPE

Item	:	Flexible Hose Pipe (Type- A) Assembly for Natural Gas Service
Applicable Code	:	BS:6501Part-I:1991 Specification for Corrugated Hose Assemblies
Nominal Size	:	12mm
Total Length of Hose Assembly:		350mm end to end
Movement Required	:	Static
Design Pressure	:	0.25 bar(g) at 20°C
Temperature Range	:	0 –65°C
Cyclic Life	:	30 Bends when tested in accordance with Cl.14.4 of BS:6501Part-I
Static Bend Radius	:	25mm
Type & Material of End Fitting	:	¾” NPTCS Female Swivel Nut with Flat Seat Nipple with Rubber and second
Gasket/ O’Ring end shall be CS Male ¾” and NPT and threads shall be conforming to ANSI B20.1		CS Fittings shall be conforming to SA105/SA106Gr.B. CS Fittings shall be galvanized as per IS:4759-1985.
Material of rubber gasket	:	<u>Note:</u> TIG welding shall be carried out for welding CS fittings to corrugated hose. Polymer NBR/nitrite with Thickness 3- 4mm
Material of Hose	:	SS316 conforming to BS:1449Part- 2 (latest) & 0.3mm thickness
Product to be conveyed	:	Natural Gas

Heat Treatment Requirement	:	Parent sheet or the finished hose must undergo annealing
Tests	:	Pneumatic Test at a pressure of 1.0 bar(g) Type testing as per Cl.Nos.14.1,14.2,14.5 & 14.6 of BS:6501 Part-I
Cleaning & Packaging	:	As per Cl.No.17.0 of BS:6501 Part-I
Test Certificate	:	As per Cl.No.18.0 of BS:6501 Part-I

INSPECTION /DOCUMENTS

- i) Inspect shall be carried out as per GGPL Technical Specification and Inspection Plan/QAP.
- ii) GGPL representative or third party inspection agency appointed by GGPL shall carry out stage wise inspection during manufacturing/final inspection.
- iii) Vendor shall furnish all the material test certificates, proof of approval/ licence from specified authority as per specified standard, if relevant, internal test/inspection reports as per Gail Gas Ltd. Technical Specification and specified code for 100% material, at the time of final inspection of each supply lot of material.
- iv) Even after third party inspection, GGPL reserves the right to Select a sample of tube randomly from each manufacturing batch and have these independently tested. Should the results of these tests fall outside the limits specified in GGPL. Technical specification, GGPL reserves the rights to reject all production supplied from the batch.
- v) For any control test the date and place of inspection shall be provided by the vendor in writing to the Owner/Owner representative along with Production Schedule.

PACKING

Packing size to be mentioned to ensure uniformity in delivery condition of the material being procured. Bidder shall submit the packaging details during QAP and also compiled with at the time delivery.

**INSTALLATION OF MRS & INTERNAL PIPING
FOR COMMERCIAL & INDUSTRIAL
CUSTOMERS**

1.0 INTRODUCTION & SCOPE

The present document gives the specification to be adopted for procurement of CS pipes & fittings, fabrication, erection, installation, and commissioning of MRS (Meter Regulating Skid) along with internal piping (on request) on downstream of MRS to supply Natural Gas for commercial and industrial customers in NCT of Delhi and NCR complying with OISD standards & petroleum and Natural Gas Regularly Board (PNGRB) Guidelines.

A city gas distribution system, connection to commercial and industrial customers is a major activity and it consists of variety of gas equipment from high flow burners, simple furnace to complex thermo pack or boiler. PE line carrying gas at 4 bar pressure is laid underground from downstream of FRS/DRS to connect MRS (Meter regulator System) (installed at customer premise), which regulates the pressure and meters gas supply as per the customer requirement. The specification for PE laying is enclosed in tender document.

The selection of site for installation of MRS is key to safety and integrity of gas installation an public. it shall be installed in a well ventilated area and away from building, utilities or major installation with easy approach and access for maintenance.

The scope of contractor includes receiving, taking over, transportation and unloading of free issue material (Meter, Regulator and isolation brass valves) from GGPL's designated place to site or vice versa. It also included procurement and supply all materials (butt end or threaded) CS pipe & fittings, Ball valves, Rubber Hoses, Brass jets/Nozzles consumables like spiral wound & insulating gaskets, fasteners, painting material, cold applied tape, tools & tackles, clamps, pressure gauges, skilled and unskilled manpower etc, for satisfactory completion of the work.

The designing and installation procedures shall also provided by the contractor to GGPL before start of installation work.

1.1 PROCUREMENT & SUPPLY

The bidder / contractor shall procure & supply the following materials/items/equipments but not limited to:

- Procurement and supply of all items /material viz. pipes, ball valves, fittings and flanges, gaskets, fastners, clamps and supports (refer enclosed drawings),pressure gauges, Cold applied tapes, consumables and other tools and tackles for fabrication, erection, installation, Commissioning of MRS & internal piping.
- Supply of items/materials other than free issue materials for work like providing utilities (water compressed air, electricity, nitrogen gas etc),manpower (skilled and unskilled),consumables (welding rods, filler wires, lubricants/oils, waste cottons etc.) etc for fabrication of MRS & internal piping is included in the scope.
- Procurement & supply of steel /RCC structures for working platforms adders, pipe supports, cross over etc.

- Procurement & supply of personnel protective equipment (PPE).
- Procurement & supply of first aid facilities
- Procurement & supply of painting material as per specification of paintwork.
- Procurement & supply of any other items not listed above, but required to complete the entire scope of work.
 - All the above procurement and supply of listed items/material shall be in line with the specification, data sheets, GGPL's approved drawing, and QAP's and shall be procured of approved vendor makes as enclosed in tender document (Annexure-4).

2.0 APPLICABLE CODES & STANDARDS

2.1 General

Piping works shall be carried out in accordance with the requirement of this specification and other National/international relevant applicable standards like Oil India Safety Directorate (OISD) norms, PNRB, ASME B 31.3-Process Piping Systems, ASME B 31.8 "Gas transmission and distribution piping systems."

Minimum requirement shall be as per latest edition of following codes and standards

ASME STANDARDS

ASME B 16.5	Pipe flanges and flanged fittings up to 24"
ASME B16.34	Valves-flanged and Butt welding ends
ASME B 31.8 system	Gas transmissions and distribution piping
ASME VIII, DIV-I	Boiler and Pressure Vessel code
ASME B 16.9 fittings	Factory-made wrought steel butt welding
ASME B 31.3	Process piping

ASTM STANDARDS

ASTM A 53/A 53 M Welded and seamless	Pipe steel black and hot dipped, Zinc-Coated,
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ASTM A 105/A 105 M	Forgings, Carbon steel, for piping components
ASTM A106	Seamless carbon steel pipes for high temperature services
ASTM A193/A 193 M	Alloy steel and stainless steel bolting materials for high temperature services
ASTM A194/A194 M	Carbon and alloy steel nuts for bolts for high temperature services
ASTM A234/A 234 M	steel and alloy steel for piping, fitting, of wrought carbon moderate and elevated temperature
ASTM A 370	Mechanical testing of steel product
ASTM A 515	Pressure vessel plate, carbon steel for intermediate and higher temperature services
ASTM A 516	Pressure vessel plate, carbon steel for intermediate and higher temperature services
ASTM A 707/A 707 M	Flanges, forged, carbon and alloy steel for low temperature service
API Standards	
API 5L	Specification for line pipe
API 1104	Specification for welding pipeline and related facilities
API 6D	Specification for pipeline valves (Ball, Gate, Plug Ball and Check Valves)
API 6 FA (Spec 6 FA)	Specification for fire Test for valves
BS 5351	Specification of small size valves (Below 2")
ISO Standards	
ISO 148	determine the impact strength of steel and energy absorbed by charpy

ISO 9001

Quality Management Standards

OIL INDUSTRY SAFETY DIRECTORATE (OISD STANDARDS)

OISD-GGN-115

Guidelines on fire fighting,
Equipment and appliances in
Petroleum industry

OISD-standard-113

Hazardous area classification

OISD-Standard-163

Proces

s Control Room Safety In case of

contradiction, the most stringent will

apply

3.0 SYSTEM OF UNITS

The international system of Units (SI), also known as the “Metric system” shall be used.

The international Gas union (IGU) has also recommended, generalizing the use of the SI system in all matters relating to Gas and Gas facilities.

4.0 PROCESS PARAMETERS

Inlet pressure	:	Max. 4 barg
Out let pressure	:	0.1 barg-4 barg (Variable)
Operating temp	:	0 – 45 ⁰ C
Design Pressure	:	19 barg
Design temp. (min/max)	:	0/+60 ⁰ C
Hydrotest Test Pressure (MRS)	:	1.5 x Design Pressure (Hydrostatic Test) with minimum test duration of 4 hrs.
Pneumatic Leak Test	:	6 barg for minimum 4 hrs
Flow (m ³ /hr)	:	Up to 250 m ³ /hr (at 2 bar around 750 SCMH)
Process Fluid	:	Natural Gas

5.0 MATERIAL SPECIFICATION OF PIPING SYSTEM

Materials to be used for piping system shall comply with the minimum requirements of relevant standards & codes.

Pipes 1239 Heavy	ASTM A106 Gr. B (Seamless)/API 5L Gr.B/ IS-ASTM A 53/A53 M Gr.B
Flanges	ASTM A105/ A 105
Restricting Orifice* plate	SS 304
Rubber Gasket (washer)	High Nitrile Synthetic Rubber Grade 215
Fittings	ASTM A234 Gr WPB
Ball Valves	A 105/A 216 Gr WCB
Insulation	NA
Insulating gasket	Same as Pipe (Ring A 105)
Spiral Wound Gasket (washer)	ANSI B 16.20
Nuts and Bolts	AS per PMS
Rubber hose	Type-4 as per IS:9573
Painting	As per enclosed “

The size of orifice of restricting orifice plate shall be 11 mm for G10/G16/G25, 13mm for G40 and 15mm for G65 RPD meter.

The size of orifice of rubber gasket (washer) shall be 5mm for G4, 8mm for G6, 10mm for G10 & G16 and 13mm for G25 Diaphragm meter.

Note:- Over and above these specifications and materials, Please refer below the specifications,

1. For Piping material refer “ PMS-1C1”
2. All stud bolts and nuts shall hot dipped galvanized as per ASTM A53.

6 . Deleted

7. PIPE Design / Sizing:-

7.1 Coding of Piping Classes

Each Class is named by a code consisting in three of four

parts: First part

A figure designating the material:

- 1= 1500 lbs ANSI - PRESSURE – 18.75 bar g
- 3= 300 lbs ANSI - PRESSURE – 49.00 bar g
- 6= 600 lbs ANSI - PRESSURE - 98.00 bar g
- 9= 900 lbs

ANSI Second part

A letter designating the material:

- A= Allot steel
- C= Carbon steel
- F= Fibreglass reinforced plastic/epoxy (FRP)
- G= Galvanized
- P= Plastic (PEHD,)
- S= Stainless steel
- V=

PVC Third

part

A sequential number to differentiate two or more piping classes of the same rating and same material but presenting some differences related to the handled fluid

Fourth part

A letter designating the underground:

- U= Underground
- AG= Above Ground

7.2 Wall thickness

The wall thickness of pipe shall be as follows:

Wall thickness of pipe shall be calculated as specified in the applicable sections of:

- ANSI B 31.8 for classes covering the main process and auxiliary gas lines.
- ANSI B 31.3 for classes covering utilities lines.

7.3 Corrosion Allowance

The minimum corrosion allowances used to calculate wall thickness as follows:

- Carbon steel and ferritic alloys in classes calculated following ANSI B 31.8 : 1.6 mm
- Carbon steel and ferritic alloys in classed calculated following ANSI B 31.3 : 1.6 mm
- Stainless steel : 0 mm
- Plastic and PRP pipes : 0 mm

7.4 Wall Thickness Calculation

- a) Pipes for natural gas shall comply with ASME/ANSI B 31.8 code. Pipe wall thickness will be calculated as follows:

$$t = \frac{PD}{2xSxFxExT} + C$$

T = nominal wall thickness (mm)

P = design pressure (MPa)

S = minimum yield strength (Mpa)

F = design factor = 0.40

E = longitudinal joint factor

= 1.0 for API 5L (seamless or ERW or SAW)

T = temperature derating factor = 1.0

C = corrosion allowance (mm)

- a) Pipes for Utilities lines have a wall thickness complying with ASME/ANSI B 31.3 code:

$$t = \left\{ \frac{PD}{2xSxFxExT} + C \right\} x (1+a)$$

T = nominal wall thickness

(mm) S = allowable stress

(MPa)

- P = design pressure
(MPa) E = longitudinal
joint factor
Y = coefficient as per table 304.1.1 of
ANSI 31.3 C = corrosion allowance (mm)
A = negative fabrication tolerance (%)

8.0 Wall Thickness Calculation

1. Nitrogen at 7 kg/cm^2
2. Above utility data may change according site condition and availability of resources

9.0 SAFETY

All required Personal Protective Equipments (PPEs) for carrying out the jobs safely to be provided to the workers.

The agency has to ensure that potential safety factors, health and environment effects are assessed before execution of the job and necessary actions required for ensuring safety of human and environment are taken care of.

Jobs at customer locations are to be carried out as per safety Work Permit System of GGPL- i.e, permit will be issued at site every day after ensuring all safety precautions and execution of the job to be done in presence of representatives of GGPL's Technical, Fire & Safety and designated Contract Supervisor.

10.0 FABRICATION OF MRS AND INTERNAL PIPING:

This part covers fabrication, erection and installation of MRS, Common header for MRS installation, internal pipeline with fittings for supply natural gas to commercials and Industrial units from MRS till customer's appliances. Work for internal Piping shall be carried out as per instructions and after allotment of work by EIC. The Indicative diagram is shown in bid documents.

On allotment of work, Contractor shall carry out join survey along with GGPL/GGPL's representative of the customer's premises for finalization of location of MRS/Common header or route of internal Piping and as per requirement and shall subsequently submit construction plan to GGPL for Procurement of material

Ref no.: GGPLKGD/C&P/SR 2565/2019-20/06

(Pipe, fittings, consumables etc), Inspection, Fabrication Erection Installation Testing and Commissioning of MRS, Common header & Internal Piping as enclosed at Annexure – 3. The material procurement plan includes make of pipes & fittings to be procured as per the approved make list (enclosed in tender document at Annexure – 4) for approval from EIC.

After approval of plan from EIC and before start of fabrication, Contractor shall procure material and submit material test certificates (MTC'S) of all materials including pipes, fittings ball valves, consumables (incl. Electrodes) etc for review of EIC and shall subsequently arrange their physical inspection. Contractor shall also submit documents for welding procedure specifications (WPS) for the similar kind of job for GGPL's approval

GGPL may instruct the contractor to carry out survey of proposed customer and shall in turn submit the estimate for material and execution along with drawing without any changes

Welder shall be qualified for proposed WPS according to the applicable codes. If the same welder is doing the similar kind of job continuously for the last six months and qualified by reputed consulting organizations like EIL/MECON/TEPL, the welder shall be allowed to work on submission of welders qualification Certificate.

Only E6010/E7018 electrodes of reputed make (LINCOLN, ESAB etc) shall be used for welding of piping joints. The electrode E7018 shall be baked in mother oven before usage at site.

All flanges used shall be of welded neck type. No plate flanges made by Gas cutting shall be used. Flanges dimensions, ratings, facing, face finish and manufacturing shall be as per ANSI B16.5 unless otherwise specified. All fittings shall be seamless in construction unless otherwise specified. All fittings of size 1" and above shall have butt-welded ends and shall comply with attached piping class.

Mitre joint shall not be used and the same shall be replaced with a Standard Elbow with short radius ($<_1D$). Piping Spools (If required), Supports etc shall be pre-fabricated or shop fabricated. Pipe shall be supported on walls or Suitable supports (clamps, steel supports etc) and at adequate interval of space not less than 2 mtrs. The material and size of angles shall be MS and of minimum size 75 x 75x 8 mm.

End Preparation, alignment and fit up of the pipe length to be welded, pre heating, welding, post heating and heat treatment (if required) shall be as per OGL welding specification/design codes and standards. Pipe joints shall be butt-welded. However as per site requirement, flanged joints (if necessary) may also be used. Contractor to ensure provision for locking/ sealing arrangement for meter/valves to avoid misuse.

All (100%) root joints alignment & fit up shall be witnessed by GGPL/GGPL representative followed with a mandatory DP (Dry penetrate) test. In addition to the DP test. RT will be carried out in presence of GGPL's representative on at least 10% of joints in single MRs using unique joint no. The dimension tolerances for piping fabrication shall be as per GGPL's standards design codes and standards.

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Contractor shall carry out Hydro test for each MRS in their factory and shall carry out installation only after duly certification from GGPL/GGPL's representative. The test reports/certificates (DP test Rt, Hydro test, NDT) issued against a single MRs shall be presented to GGPL's site representative for verification and before start of installation. The format for DPT, RT, Hydro test, Welding inspection & NDT is attached at Annexure – 5,6, 7, 8 & 9 respectively.

For MRS, dimensions tolerance of 100% both ways against pre-defined length (refer drawings attached in tender) shall be included in fabrication & installation rates (payable as per SOR Item no.(12.1 to 12.5) and no separate charges shall be claimed in case of any additional joints, fittings etc used for completion of installation. The bidder shall quote rates against each SOR in correlation with drawings, tentative BOM (Bill of Materials) attached in tender document. Any installation/piping in excess/ short to predefined length of MRS shall be payable/ deductible through SOR item no. 15.3 to 15.5 as per size of pipe used. The length of the MRS shall be measured after installation and RFC and shall duly be certified in RFC card for payments. Contractor shall provide suitable locking arrangement in MRS with isolation valve by wire sealing as per instruction of Engineer In-charge.

The rates for internal piping (downstream of MRS) are payable through SOR item no. 15.1 to 15.7 and includes procurements, fabrications, welding and installation till commissioning. No separate charges are payable for any repair & modifications (on customer's request) even after installation & testing however before commissioning and are inclusive in rates. The ball valves installed in common header/Internal piping shall be payable separately through SOR item no. 14.4 to 14.9, depending upon the size of pipeline.

Laying of concealed pipeline in the cavity of the walls/ceiling/basement shall be avoided. In locations where the pipeline has to be laid in a covered trench or below ground level, it should be avoided however considering the minimal alternatives/ constraints at site, the laying is possible after written approval from EIC, cold wrap & coating shall be applied on the surface of the pipe followed by Holiday test. The pipe shall be properly supported on clamps/I supports with minimum clearance of 4" from ground level. GGPL may also instruct the contractor for installation/laying of MDPE pipeline and transition fittings for such below ground sections which shall be laid in correlation of technical specification of MDPE pipeline laying and payable as per the respective pipe SOR's.

Any preparation of the threads for installation, completion of MRS, common Header & internal piping is inclusive in rates. All the MRS shall be fabricated in the Contractors workshop and tested in presence of GGPL's representative before installation. After complete installation of the MRS at the allocated locations; the flange joints shall be tested online along with Meter & Regulator before commissioning.

The branches of the pipeline shall be using standard fittings. Also, branching on common header will be payable in running meters.

11.0 ERECTION OF MRS SKID

11.1 Cleaning of piping before Erection

Before erection, all pre-fabricated spool pieces, pipe, fittings etc shall be cleaned inside and outside by suitable means (Mechanical or chemical). The cleaning process shall include

- Removal of all foreign materials such as scale, sand, weld spatters, cutting chips etc by wire brush, cleaning tools and blowing out the foreign material with compressed air and/or flushing out with water.
- Special cleaning requirements (if any), shall be carried out as per GGPL specification/piping design codes/standards.

11.2 Pipe routing and Lay-out

Pipe routing and lay-out shall be as per GGPL approved pipe route, GAD, P&IDs and piping support drawings and applicable design code and standards. In case of fouling of a line with other piping, structure, equipments etc. The matter shall be brought to the notice of Engineer-in-charge and corrective action shall be taken as per his instructions. Above ground pipeline shall be laid either on MS clamps fixed on the wall or on the pipe supports with BOP more than 2 mtr height.

The selection of route of installation gas pipeline connection in the premises of the industry/ commercial establishment is key to safety and integrity of gas installation and public. It should be installed above ground having in well ventilated area and having easy approach.

All risers and lateral piping should be clamped to the building at intervals not exceeding one meter. Laying of concealed pipeline inside the cavity of the walls, ceiling, basement etc, should be avoided, Platform and cross-over shall be provided for ease of operation and maintenance of pipeline if required. All supports shall be installed strictly as per approved support drawing/instruction of engineer-in-charge,

While laying the pipeline, care should be taken that valves installed on the pipeline should be approachable for easy operation and maintenance.

11.3 Flanges Connections

While lifting up mating flanges, care shall be taken to properly align the pipe and to check the flanges for trueness so that the faces of the flanges can be pulled together without inducing any stresses in the pipe and the equipment.

The assembly of the flange joint shall be done in such a way that the spiral wound gasket between the two flange faces is uniformly compressed to achieve this bolt shall be tightened in a proper sequence. Copper strips/ jumpers shall be installed on all flange joints in order to provide earth continuity to MRS & internal piping.

11.4 Vents

Venting facilities shall be provided for any emergency evacuation of gas from the pipeline.

Vent line shall be fitted with a flapper and shall be at 3 meter height from the nearest operating platform, with ends at open space.

11.5 PAINTING

Alter installation of the above ground MRS & Internal piping system, painting of MRS/piping shall be done after RFC with proper surface preparation and application of primer and finish coat of paints as per GGPL painting specifications enclosed in **Annexure I**, to prevent atmospheric corrosion, The standard color code for Natural gas piping shall be 'Canary yellow'. The gas flow direction shall be marked "in Red" on the MRS or Internal Piping.

11.6 Valve Installation

Valve shall be installed in a position as specified in the valve manufacturer installation and O&M manual. Care shall be exercised to ensure that all hL11 bore ball valve shall be installed with the "Gas flow direction arrow" marked on the valve body pointing in the right direction after written consent from EIC.

11.7 Instruments

All the required instruments (PG, TG, flow control valves, interlocks, control panel etc) shall be installed on the pipeline as per attached MRS Drawings, Owner's approved installations procedure, applicable design code and standards, manufacturer's installation, O&M Manual after proper calibration, testing and inspection of the instruments as per manufacturer's calibration procedures. It is mandatory to install pressure gauges on the downstream internal piping at start and end point. Any installation of additional pressure gauge will be payable as per **SOR item No. 14.1 to 14.3** and subsequent fillet welding of socklets & installation of pressure gauge will be payable as per **SOR item no. 14.21, 14.22**

11.8 Rubber Hose

The length of Hose should be kept minimum but shall not exceed 1.50 meters. Hose shall be easily accessible to inspect. Hose shall not be used in conditions where ambient temperature exceeds its design temperature. Hose shall be so installed [hat it is not twisted, looped or kinked in and should be free from external pressure. Design and Construction of Hose shall be Type IV as per IS: 9573 (Latest revision).

11.9 SUPPORTS

Pipeline for PNG supply to Commercial/Industrial connection shall be adequately supported at suitable intervals as per piping design code and standard and good engineering practices. There are various types of clamp supports for supporting and suspending horizontal as well as vertical/riser pipes. The material & size of the angle shall be MS & minimum size ---75 x 75 x 8 mm.

11.10 Electrical Equipment

All the required Electrical equipments shall be installed as per Owner's approved

installation procedure, applicable design code (OISI). 149) and standards, manufacturer's installation / O&M Manual after proper calibration, testing and inspection of the equipments as per manufacturer's calibration procedures.

12.0 INSPECTION AND TESTING

a) Material Inspection

All materials, items and their parts shall be subjected to all mandatory as well as supplementary (wherever specified) inspection, testing and checks called for in the respective codes/standards/data sheets/GGPL approved manufacturer's QAP of Vendor at manufacturer's workshop/factory as well construction site. All fit-ups shall be checked for proper Root gap, surface cleaning and orientation etc. before starting the welding and inspected by GGPL/ GGPL's representative.

Dye-penetrant test shall be done after root welding for all the butt & Socket weld joints. As per the instruction of EIC/PMC, Radiography test may be performed randomly on joints for 10% (percentage) on random selection basis.

b) Execution Inspection

- Ensure availability of Work Permit and Fire permit
- Visual Inspection of installation of various equipments, instruments and their associated components, electrical equipments, pipe fitting and valves etc.
- Dimensional checking of equipment, pipe, fitting and valves etc.
- Inspection of Calibration of instruments
- Inspection of testing and commissioning of pipeline system
- Inspection and checking of DFT of painting of equipment, pipe, pipe supports etc.
- Inspection and checking of Mechanical completion of pipeline system with the approved construction drawing and work procedures for installation and erection of various equipment/pipeline.
- Ensure availability of First AID Box, PPE and fire extinguishers.
- Inspection of flushing, cleaning and Hydro testing of Piping system
- All welded joints shall be subjected to visual inspection according to ASME 1.3/31.8 and radiography according to API1104.
- Inspection test plan shall be as per ANNEXURE-2
- Verification/Inspection of all the mill and workshop test certificates applicable to related material. spare, equipment, pipe, fittings, valves, supports, paints, IJ etc.
- The entire piping system shall be subjected to hydrostatic testing or pneumatic strength testing.
- 10% RT shall be done for all the Butt joints on random selection basis. Overall decisions rests with the EIC to increase % (percentage) of RT on joints, in case of any additional RT (on instruction of EIC) rates shall be payable as per **SOR item no. 14.23 to 14.28.**
- The test pressure should be 1.5 times of design pressure in case of Hydrostatic testing or 1.1 times or the design pressure in case of Pneumatic testing. However test pressure and time duration may vary depending upon the application and flow.

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- Before commencement of strength Test, calibration reports of pressure gauges and equipments shall be reviewed by GGPL/GGPL's representative.
- Pressure gauge range shall be minimum 1.5 times and maximum 4 times of test pressure.
- Before starting hydrostatic testing, testing and inspection reports shall be submitted to GGPL for verification and only after getting formal clearance from GGPL, testing shall be carried out.
- The test pressure for the piping system shall be kept on hold for 4 hrs with no pressure drop. For internal piping with pipe length less than 25 mtrs, the test pressure shall be kept on hold for 4 hrs whereas if length more than 25 mtrs, minimum test pressure duration shall be minimum 12 hrs to max. 24 hrs depending upon customers/ site requirement.
- After hydro testing proper dewatering and purging shall be carried out.
- Care should be taken to ensure that the purge outlet is so located that vent gas cannot drift in the building.
- The method of purging should be such that no pockets of air left in any part of the piping.
- It should be ensured that the area is well ventilated and free from ignition source.
- Inspection and testing of Electrical, Civil and Instrumentation work shall be carried out by quality control inspector of related Engineering disciplines.
- All the MTC/TC, Inspection and test reports for mandatory as well as supplementary (wherever specified) shall be submitted to GGPL.

13.0 PRE-COMMISSIONING AND COMMISSIONING

The various acceptance criteria and handover of the MRS system shall comprise of the following 2 stages:

- Pre commissioning
- Commissioning/Start-up

13.1 Pre-Commissioning

GGPL representative shall carry out the following minimum check (including other relevant checks as may consider describe by manufacturer of meter, regulator, valves, etc to ensure that the MRS has been mechanically completed in all respect for pre-commissioning.

- A schedule of required activities for pre-commissioning/commissioning/performance guarantee test/handover shall be readily available
- Prior to pre-commissioning of MRS and associated facilities (piping, valves, instrumentation, electrical system) shall be mechanically completed to be ready for commissioning
- All the consumables, tools and tackles, utilities, etc. Are available.
- Fire fighting system and PPE are readily available.
- All the statutory permits are available.

- The emergency management plan is available.

Following are the minimum required pre-commissioning checks but not limited to:

13.2 System Check

Checking of piping /Mechanical System

The entire facilities/system shall be checked against the GGPL's/GGPL's representative latest approved P&I ds, GADs and other relevant design specified and codes.

Checking of utilities

Checking of all relevant utilities like, service water, compressed air, nitrogen, power, power back-up system etc to facilitate commissioning and safety.

13.3 Pneumatic testing

Air Flushing

The entire MRS and associated facilities shall be flushed and air cleaned to ensure readiness of the system for pneumatic test. Chemical cleaning may also be considered as per site requirements

Pressure Testing

Pneumatic testing shall be carried out a pressure of 6 bar g by means of compressed air. The test pressure shall be maintained to permit through inspection of all joints for leakage or signs of failure.

Any joint found leakage during the pressure test shall be re-tested to the specified pressure after repair.

13.4 Completion of Testing and Drying

After pneumatic test are completed, the pressure is released gradually without damaging the equipment, facilities and maintaining personnel safety measures. All vents and drains shall be kept opened till the entire system is completely drained. After draining, the system shall be completely dried using dry air.

13.5 Inertisation

The insertion operation should start immediately after drying is complete. The contractor shall submit a detailed purging procedure for approval of GGPL/GGPL's representative prior to its implementation.

During the insertion operation, the air left in the piping system shall be replaced by nitrogen before admitting the natural gas into the pipe system. The maximum allowable oxygen content inside the piping system shall be less than 1% by volume. No extra payment shall be made for nitrogen cylinders and is included in SOR.

13.6 Test Records

Ref no.: GGPKKD/C&P/SR 2565/2019-20/06

Records in triplicate shall be prepared and submitted by the contractor to the GGPL/GGPL's representative for each piping system/ facilities for the test performed.

13.7 Safety Review before start up of commissioning

A pre-start up safety review shall be carried out of the entire piping system before permitting natural gas into the new facility.

The following minimum safety review is envisaged:
Availability of all relevant design documents, welding

13.8 Commissioning

Once all pre-requisite activities (safety and pre-commissioning) test have been completed, clearance for commissioning the system shall be obtained from GGPL/GGPL's representative.

- The commissioning operation shall be controlled and supervised by authorize personnel who are fully known to their responsibilities during commissioning.
- The pipeline system shall be slowly charged with natural gas and pressurized gradually up to its operating conditions/parameters.
- The contractor shall obtain the GGPL/GGPL's representative approval of his commissioning procedure prior to starting commissioning operation.
- The pipeline system shall be slowly charged with natural gas and pressurized gradually up to its operating conditions / parameters.
- Commissioning of MRS system shall be considered completed and acceptable when the piping system is charged with natural gas at operating pressure and the MRS system is operated at normal operating conditions with all instruments/controls working satisfactorily at normal operating conditions.

GAS CHARGING IN INTERNAL PIPING

From safety point of view gas should be taken to the burners, section wise namely –

- Gas charging in internal piping
- Gas Charging in gas train burner

Sr. No	Activiti es	Precaution s
1	Confirm the closure of gas train inlet	Observe carefully closing mark

2	Crack open the MRS outlet valve and raise the section pressure to 1 or 2 bar g or as required	Keep valve key ON position and a man with walky-talky
3	Crack open the pressure gauge tapping valve near gas train Intel valve and vent out nitrogen	Do not inhale nitrogen gas Ensure No spark. No naked flame. Methane concentration in atmosphere should not increase more than 2% if required, do venting/draining intermittently
4	Measure methane percentage. It should match feed gas composition	
5	Close the pressure gauge tapping valve completely	
6	Open the MRS outlet valve fully and observe the system for 5-10 minutes	

14.0 Conversion

Conversion of Burners & supply of Rubber Hose

The work in this section shall be carried out along with the internal piping or on request i.e case to case basis and includes:

The changing of nozzles and associated controls in accordance with manufactures instructions for canteen, T-type, RV, imported burners/ovens/grills/hotplate etc. the and imported burners/ovens/grills/hotplate. The contractor shall supply the Reinforced rubber hoses at the time of conversions, Minimum size 8 mm dia per connection -- 1.5mtrs with fixing clamps, however the size may vary for type of burners converted on NG. The contractor has to supply all types of nozzles/jets required for all types or appliances including canteen, T-type, RV, imported burners, Grills, Ovens, without any extra charges to GGPL, All activities are inclusive and are payable through SOR. Item no. 17.1.

Cleaning and performing minor maintenance of appliances, during the tenure of the contract. Attend all complaints related to proper working of appliances, testing for gas escapes, soundness and performance of appliances. Instructing & educating customer for safe use of natural gas and for fixing of safety and conversion labels. Contractor must attend the complaints regarding appliances, leakage, fire etc, till the

total area is handed over to Owner's operation and maintenance.

All consumables (Nozzles, greases etc.), changing or repairing of any items damaged during conversion are in contractor's scope, The contractor will have to provide both pin gauges and standard sized nozzles, The payment will be released by GGPL only after submission of necessary documents i.e NGC card of the individual commercial/ industrial connection.

15.0 MODIFICATION IN EXISTING MRS

It includes taking shutdown of existing MRS, dismantling meters/ regulators, replacement/ Fixing of meters/regulators with associated inlet and outlet connections/fittings supply of pipes & fittings, pipe cutting, threading, welding & firmly fixing with approved meter clamps/ brackets and other supports by proper grouting. Restoring the area to the original condition as per the specifications and (0 complete satisfaction of consumer and me is also included in the scope.

Modifications / replacements (of meter or regulator or both) in MRS using threaded fittings/ flanged end (same size or bigger) shall be payable through SOR Item 16.1 to 16.6 depending upon the types and unit of meters and regulators replaced, The rates includes all as above along with testing of joints till re-commissioning. Wherever, there is modifications in MRS which can be carried out only through welding for same length of MRS or bigger upto 3.00 mtrs in addition to MRS length, the work is payable only through no. or joints welded for completion of modifications and no separate payments is applicable for additional pipe/fitting used and payable as per SOR Item no, 16.7 to 16.13 only. In case erected length after modification is more than 3.00 mtrs of original length of MRS, then the running meters shall be applicable and payable through SOR item no. 16.14 to 16.40 only.

Annexure 01

PAINT SYSTEM FOR ABOVE GROUND PIPING									
Paint system Nr.	Substrate	Exposure conditions	Surface preparations	1 st Coat	2 nd coat	3 rd coat	4 th coat	5 th coat	Nominal Total DFT
201	Bare carbon steel & ferritic alloys	T up to 65 ^o C	Sa3	Zinc rich ethyl silicate primer 75(μm)	Epoxy Sealer polyamide/ C 50 (μm)	High Build epoxy polyamide U/C recoatable 80(μm)	PU finish recoatable 50(μm)		255(μm)
201 P	As above but site touch-up	T up to 65 ^o C	Sa3 (spot blast)S03 only when blasting is not possible	Zinc rich two pack epoxy primer 50(μm)	Epoxy M.I.O. recoatable 80 (μm)	Epoxy HB U/C. recoatable 60 (μm)	PU finish 50μm		240(μm)
201 W	Bare carbon steel to be welded	T up to 65 ^o C	Sa 2.5 min.	Welding primer two components epoxy 20 (μm)	6 to 9 months after welding procedure cleaning of weld With 3 rd coat Touch-up If needed	HB M.I.O Epoxy Modified U/C 80μm	HB M.I.O Epoxy Modified U/C 80μm	PU finish 50μm	230(μm)

202	Bare carbon steel & ferritic alloys	T up to 65 ⁰ C	Sa3	Zinc rich ethyl silicate primer 75(μm)	Heat resist · Silic one Acrylic White 30μm	Heat resist · Silic one Acrylic White 30μm			135(μm)
202 P	As above but site touch-up	T up to 65 ⁰ C	Sa3 (spot blast)	Zinc ethyl silicate primer 75(μm)	Heat resist · Silic one Acrylic White 30μm	Heat resist · Silic one Acrylic White 30μm			135(μm)

ANNEXURE-2

**INSPECTION TEST PLAN FOR MRS FABRICATION AND
INTERNAL PIPING OF INDUSTRIAL & COMMERCIAL
CUSTOMER'S**

Sr.	Particulars	Type of Inspection	% of Inspection	Scope	
				Contractor	GGPL/TPI
1	Material Test Certificate verification	TC verification (Raw Material)	100%	Contractor	GGPL/TPI
2	Welding Procedure Specification	Document verification /approval	100%	P	R
3	Welders qualification Test	Document verification/ witness	100%	P	R
4	DP Test	DP rest on root	100%	P	R/W (in case of new welder)
5	Welding Inspection	Visual inspection	100%	P	RW(min 10%)
6	Radiography	Review of films	100%	P	RW(min 10%)
7	Hydro/Pneumatic Testing	Hydro/Pneumatic testing of entire pipeline	100%	P	W

Legend:

P- Perform, R-Review, RW- Random Witness (min 10%), W-Witness, TPI- Third Party Inspector

ANNEXURE - 04

LIST OF RECOMMENDED VENDORS							
S.No.	Item	Name of the vendor	Address	Phone No	Fax No	Remarks	
	CS Pipes (Seamless (ISMT/MSL make) Welded/Jindal, Surya Roshni, Vishal, Indus Tubes, Advance Tubes)	Apex Tubes Pvt. Ltd. (Trader)	Apex Tubes Pvt. Ltd. 1/6-B, Asaf Ali Road New Delhi - 110 802	Mr. Rahul Gaur 011-2323777/2323501, 2323470, 23236408	+91 (11) 23236408		
		Steel Tubes (India) (Trader)	526/36, Maulana Azad Road, 2nd Floor, Gulawadi Circle, MUMBAI - 400 004	+91 22 2389 5908 +91 22 2381 2564	+9122 23895906		
		Nagaras Kanji Shah (Trader)	176, Magazine Street, Darukhana, Mazgaon, Mumbai - 400 010	(022) 23721066/23724157,23781031	(022) 23781032		
			3242, 1st floor, Baba Bejnath Market, Gali Peepal Mahadev, Hauz Qazi, Chawri Bazar, New Delhi-110006	011-23243845, M- 9811377008, M-9350290172	011-23267475		
			Bakshi Ent. (Trader)	3505, Chawri Bazar New Delhi-110006	Mr Aman Bakshi,Mr Gahan 011-23241390/23267093 M- 9911221772, 9990899757	011- 23230027	
			Radiant Engineering Co.(Trader)	M-2, Sundaram, Sion Circle, Mumbai-400 022	Mr Jain Gandhi (022) 2409 2016, 24096036, +(91)-9324974185	(022) 24094832	
			Virgo Engineers Ltd,Pune	7/39, 2nd Floor, Vikram Vihar, Lajpat Nagar IV, New Delhi - 110024, India.	Binoj Nair (09818776283) +91 11 41729161	+91 11 41729164	Upto 24" class 600
			Oswal Industries Ltd	Oswal Industries Ltd. 404, Sakar-III Opp. Old High Court Ahmedabad - 390 014	Mr Rakesh Bokadia(Director) +(91)-79)-27540839, 27542782	+91)-79)- 27540839/27542786	Up to 12" class 600

LIST OF RECOMMENDED VENDORS						
S.No.	Item	Name of the vendor	Address	Phone No	Fax No	Remarks
2	BALL VALVES	Flow Chem Industries	Flowchem House, Near Sakin Mall, Science City Road, Solis, Ahmedabad - 380 060, Gujarat - India	+ 91-79-2771 2102 /2771 2103 +91-9727742104	+ 91-79-2771 2101	Up to 12" class 600
		Micro Finish Valves	Microfinish Valves Pvt. Ltd., Unit No. 410, Chokhani Square, Plot No. P-4, Sector-18, Noida 201301 (U.P)	Ajay Malhotra (09310270700) 91-120-3259966,2510145	0120-2510157	Up to 12" class 600
		Hawa Valves (India) Pvt. Ltd	4, Karmabhum Industrial Estate, Opp. Aji Mill Police Chowky, Rakhial Road, Ahmedabad	Manjula M. (099775 10008) 0836-2335132, 233285386	0836-2337152	Up to 8" class 600
3	Glove Valve	Flow Control Technologies (Type Flow Control)				
		L&T/Audco Valves	32, Shivaji Marg, New Delhi-110015Chennai	011-41419580		Up to 24" 600#
4	Steamer	WER BDK VALVES				
		HAWA VALVES (I) PVT. LTD.				
		L&T VALVES LTD. LEADER VALVES LTD. INDIA GM ENGINEERING				
		Bombay Chemical Equipments			022 - 28-73924 022 - 66964249	
		Gujarat Auto Field			079 - 25841602 079 - 25841164	
		Multitek Filtration Engineering Limited			079 - 25842719 011 - 42404040 9811793254	
		Grand Prix Engineering Limited			0129 - 4097700	

LIST OF RECOMMENDED VENDORS							
S.No.	Item	Name of the vendor	Address	Phone No	Fax No	Remarks	
5	Pipe Fittings (Elbow, Tee, Reducers)	Pipe Fit Engineers	496/1, GIDC, Industrial Estate, Makarpura, Boroda-390010 E-mail: pipefit@pipefit.net	Mr. Deepak Dadiya, Mr. Rajan +(91)-(265)-2636347, 2636345	0265-2636 546	upto 24" size, 600#	
		Swastik Lloyds Engineering Pvt. Ltd. Mumbai	Swastik Lloyds Engineering Pvt Ltd, 58, Islampura street., Mumbai-400 004	Mr. Madhulal Sanghavi (Managing Director), Mr. Nilesh Santhivaj (Marketing Manager) +(91)-(22)-23820222, 23860223, 66362115, 66362118, +(91)-9321160110, 9321160121, 9820007728, 9321160117	+(91)-(22)-2380501723860220	Up to 12" class 600	
		Steel Tubes (India)	Ashwinayak Building, Office No. 303, 3rd Floor, Sadarand Wadi, V. P. Road, Girgaum Mumbai - 400 004, Maharashtra, (India)	+(91)-(22)-61432000/23895908/23822821/66393996	+(91)-(22)-238959066	Up to 24" class 600	
		Dec-Development Engg. Ltd.	Village Tatarpur, Distt. Palwal-121102	01275-248229/ 248280	01275- 248314		
		Sawan Engineers	213, Akshanda complex, Opp. Bharat Petrol Pump, Akota - Munjmahada road, Vadodra - 390 020 (Gujrat, India, is@sawanengineers.com	91 - 265 -2341913 / 14	0265-2341915	Up to 24" class 600	
		SIDHARTH & GAUTAM ENGINEERS	Pyvada Road, Sikri, Ballabgarh, 121004, Haryana, India.	0129-4187100-19	0129-4187120		
		Gujarat Infa					
		Skyforge					
		ECHUJAY Forgings Ltd.	Kanjur Village Road, Kaminj Marg east, MUMBAI - 400 042	+(91)-(22)-25782461, 25782850, 25782298, 25782462 91 (22)-4077 0000	+(91)-(22)-25784962	Up to 24" class 600	

LIST OF RECOMMENDED VENDORS							
S.No.	From	Name of the vendor	Address	Phone No	Fax No	Remarks	
6	Flags	CHW Forge	PO Box 20, Near Hapur Road Opp. Power House GHAZIABAD	+91 120 4388000 +91 120 474 4921	+91 120 4376970 / 71 +91 120 479 2897	Up to 30" class 600	
		Sawan Engineers	213, Alakhnanda complex, Opp.Bharat Petrol Pump, Akota - Muzjmalhuda road, Vadodara - 390 020 Gujarat, India. rs@sawanengineers.com	91 - 265 -2341913 / 14	0265-234-1915	Up to 24" class 600	
		Swastik Lloyds Engineering Pvt. Ltd, Mumbai	Swastik Lloyds Engineering Pvt Ltd, 58, Istampura street, Mumbai-400 004	Mr.Marfatil Sanghavi(Managing Director)Mr Nilesh Sanbhav(Marketing Manager) +91)-(22)-23820222, 23860223, 66562115, 66562118, +91)-9521160110, 9521160121, 9820007728, 9321160117	+91)-(22)-23820222, 23860223, 66562115, 66562118, +91)-9521160110, 9521160121, 9820007728, 9321160117	+91)-(22)-2380501723860220	Up to 12" class 600
		Pipe Fit Engineers	496/1, GIDC Industrial Estate, Matkarpura, Baurda-390010 E-mail: pipefit@pipefit.net	0265-2636 547/545	0265-2636 546	upto 24" size, 600#	
		CD ENGINEERING COMPANY	C-199, BULANDSHAHR ROAD, INDUSTRIAL AREA, GHAZIABAD, UTTAR PRADESH - 201069, INDIA.	+91.120.2866315 - J7 0120-2866315 TO 318	+91.120.2866319 0120-2866319	upto 42" size, 600#	
		Punjab Steel Works	388, Mayapuri, Indl. Area, Phase-I, NEW DELHI - 110 064	+91-(11)-28111600, 28111700, 28111379 +91 11 513 0960	+91-(11)-28111300, 28112300 +91 11 513 74321	Up to 24" class 600	
7	Cold Applied Tapes	Denso GmbH	P.O.Box 15 01 20 • D-51344 Leverkusen, Germany	+49 214 2602-0	+49 214 2602-318		
		Reychem					

LIST OF RECOMMENDED VENDORS						
S.No.	Item	Name of the vendor	Address	Phone No	Fax No	Remarks
8	Stud Bolts with Nut	Multi Thread Fasteners, Baroda	Multi Thread Fasteners, 885/B GIDC Makarpur, Baroda - 390010	0265-26-7310	0265-26-42821	
		Darukhanwala	Mumbai			
		Precision Engineers, Baroda	Baroda	Mr. Modi 9924109639		
		Unbrako				
		TVS				
		H. Guru				
9	Pressure & Temperature Gauge	A.N. Instrument				
		Aschroff Instruments				
		Baner Instruments				
		General Instruments				
		Wika				
		Asian Paints (I) Ltd				
10	Paint	Berger Paints Ltd.				
		Goodless Nerolac Paints Ltd				
		Shalimar paints Ltd				
		Coromandal paints & Chemical Ltd.				
		Bombay Paints Ltd				
Note: If the vendor wants to go to any other vendor other than those appearing in recommended vendor list, he has to submit PTR & financial status of the same for Owner review & approval before commencing procurement.						

ANNEXURE - 05

DP TEST REPORT					
Client:	GGPL			REPORT NO.	
Project:				DATE	
MRS No.				PIPE MATERIAL	
S. No	Size	JOINT NO.	SEGMENT	INSPECTED BY	REMARKS
CONTRACTOR'S (Name & Signature)		TPIA (Name & Signature)		PMC (Name & Signature)	
				GGPL (Name & Signature)	

ANNEXURE - 06

RADIOGRAPHY TEST REPORT					
Client:	GGPL			REPORT NO.	
Project:				DATE	
				SITE	
S. No	JOINT NO.	PIPE SIZE	WELDING REPORT NO	RADIOGRAPHY REPORT NO	REMARKS
CONTRACTOR's (Name & Signature)		TPIA (Name & Signature)		PMC (Name & Signature)	
				GGPL (Name & Signature)	

ANNEXURE 07

HYDROTEST REPORT						
Client:	GGPL			REPORT NO.		
Project:				DATE		
				SITE		
S. No	TIME	PRESSURE (kg/cm ²)	TEMPERATURE (deg.C)	PRESSURE RELEASED (kg/cm ²)	PRESSURE DROPPED/INCREASED	REMARKS
CONTRACTOR's (Name & Signature)		TPIA (Name & Signature)		PMC (Name & Signature)		GGPL (Name & Signature)



Ref no.: GGPL/KKD/C&P/SR 2565/2019-20/06

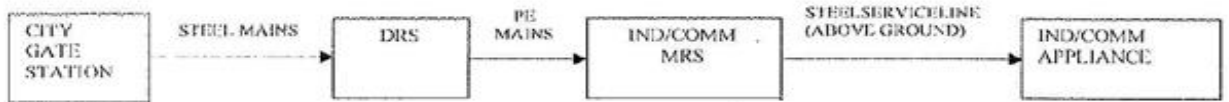
ANNEXURE - 08

WELDING INSPECTION REPORT										
Client:		GGPL				REPORT NO.				
Project:						DATE				
MRS NO						PIPE MATERIAL				
S. No	SIZE	PIPE / FITTING S	HEAT NO	LENGTH	JOINT NO	FIT UP CHECK	WELDER NO	VISUAL INSPECTION	REMARKS	
CONTRACTOR's (Name & Signature)		TPIA (Name & Signature)			PMC (Name & Signature)			GGPL (Name & Signature)		

ANNEXURE - 09

NDT REPORT					
Client:	GGPL			REPORT NO.	
Project:				DATE	
				SITE	
S. No	SIZE	JOINT NO	SEGMENT	INSPECTED BY	REMARKS
CONTRACTOR's (Name & Signature)		TPIA (Name & Signature)		PMC (Name & Signature)	GGPL (Name & Signature)

(TYPICAL PNG DISTRIBUTION SYSTEM FOR INDUSTRIAL / COMMERCIAL CUSTOMERS)



**FABRICATION,
SUPPLY AND
INSTALLATION OF
WIRDED CAGES FOR
MRS**

SCOPE OF WORK

Installation of single entry key lock arrangement in MRS and wall mounting meter installation Including structure fabrication, supply and installation with material and hardware, single key lock etc.

- a. Material for MRS cages used shall be as follows:

Sr. No.	Item	Material	Dimensions/size(mm)
1	Angle	MS	65 X 65 X6
2	Flat	MS	50 X 6
3	Wire mesh	MS	75 X 30 X 4

- b. Material for wall Mounted cages used shall be as follows:

Sr. No.	Item	Material	Dimensions/size(mm)
1	Angle	MS	40 X 40 X 5
2	Flat	MS	25 X 4
3	Wire mesh	MS	75 X 30 X 4

- i) The MRS shall be enclosed by MS wire net fencing. The fencing shall be supported by adequate angle iron frame work and shall have iron bracings of the angle iron frames. Framework of gates of the MRS skid shall be made up of M.S. plate and angles. Angles are jointed with nuts and bolts. The corner of the fencing joints must be permanent (welded). The complete fencing work shall be painted with two coats of primer and two coats of suitable weatherproof paint.
- ii) As per the requirement of fabrication & installation of fencing, the contractor will visit different sites for measurement /accessibility of the jobs. Once the measurement is done, fabrication and installation of fencing in proper size with reference to the skid, is the responsibility of the contractor.

At certain MRS skids where cages are already in place but require little modification shall also be in contractor's scope and payment shall be made accordingly.

- iii) For fabrication of fencing (cage) structure, all the essential jobs viz. cutting, welding,

grinding, finishing, painting including all materials like Angle, channel, wirenet, supportsheet, hardware, electrode, grinding, wheel, gascylinder, paint, primer, grouting equipment, tools, generator for power welding machine, accessory etc. is under contractor's scope.

- iv) All activities related to offsite fabrication of structure will be carried out contractor's work shop. Only after complete fabrication and painting (red oxide primer plus two coat of Canary yellow paint on wire mesh and green bus color paint on angle and flats). The structure will be installed to different sites of Delhi and NCR and is within the scope of contractor.
- v) Transportation and installation of fabricated structure/ fencing on different sites is under contractor's scope.
- vi) All loading and unloading related jobs are to be carried out by the contractor.
- vii) Contractor shall arrange own transport for movement of welding equipment, generator and man power.
- viii) All necessary PPE's (personal protective equipment) required for carrying out jobs at sites as per the safety norms of GGPL shall be provided by the contractor to their welder and helpers.
- ix) The contractor shall inform well in advance after completion of cage fabrication at the workshop, the date of installation of cage to the GGPL representative in order to arrange a shutdown of MRS at the customer's premises.
- x) The contractor has to complete all site jobs in one day at one site (Site jobs i.e. grouting of MRS cage /structure, fastening, installation, finishing, final painting, removal and disposal of waste items) after completion of jobs from customer's premises.
- xi) The cage shall cover the MRS from all four sides and top also. Door is to be provided of the size 2400x1000 mm to approach the MRS. Wall mounted installation doors will be of size by 600x600 mm.
- xii) In the MRS Cage ,following materials need to be used:

Welding of heavy duty handle with black color Teflon covers for opening and closing the door to the locking arrangement.
Installation of single entry key type lock (Harrison make 8 mm 5 lever lock with computerize key only).

Bolting of roof fame and side frame by 10 MM HT bolt and nut & washer and welded after fastening.
- xiii) Installation charges also includes providing 2 seats of welding machine, two welder teams And DG sets for site work.

- xiv) The complete cage should be well grouted and stable.

TECHNICAL SPECIFICATION

Civil, Structural & finishing works contents

· Civil & Structural Works

· Plain and reinforced cement concrete

· Structural steel works

· Synthetic enamel paint

Civil & Structural Works Material Specifications

Brick

Bricks for masonry work shall confirm to IS: 1077 specification for common burn clay building bricks and crushing strength not less than 75 kg/cm^2 . Specific requirement like dimensions, tolerances and other common requirements shall confirm to IS: 1077. Bricks shall have smooth rectangular faces with sharp corners and shall be well burn, sound hard, tough and uniform in color. These shall be free from cracks, chips, flaws and Florence. All tests shall confirm as per the requirements of IS 5454 and IS 3495. Water absorption shall not more than 20% by its dry weight when soaked in cold water for 24 hours.

Cement

Cement to be used for civil & structural work shall be of 43 grade/53 grade ordinary Portland Cement confirming to IS: 8812/IS: 12269 respectively.

Steel

All steel bars, sections, plates and other miscellaneous steel materials shall be free from rust, oil, mud, paint or other coatings. Reinforcement bars to be used for civil & Structural work shall be of high strength deformed steel bars of grade FE 415 confirming to IS: 1786.

Aggregates

Coarse & fine aggregates for civil & structural work shall confirm in all respects to IS: 383 latest.

Water

Water used for Civil & structural work shall be cleaned and free from injurious amount of oil, acids Alkalis, organic matters or other harmful substances which may be deleterious to concrete, masonry or steel. Potable water shall be considered satisfactory.

Tests on water samples shall be carried out in accordance with IS: 3025 and they will fulfil all the guide lines and requirements given in IS:456:2000.

Excavation & Backfilling for foundation, pits, walls etc.

Excavation shall be carried out to true line and levels in all types of soil and shall be carried out for all lifts as required by the work.

The Contractor shall provide suitable drainage arrangement to keep the pits dry. Contractor shall also carry out all de-watering required within the quoted rate.

If excavation is made in excess of the depth required, the contractor shall at his own expenses fill up the required level with lean concrete of mix 1:5:10 (1 cement: 5 coarse sand: 10 aggregate) or as decided by site-in-charge.

The contractor shall make necessary arrangements for lighting, fencing and other suitable measures for protection against risk of accidents due to open excavation at his own expense.

All shoring and strutting required holding the sides of excavation from collapse are included in the quoted rates.

No excavated material shall be deposited within 1.5M of edge of excavation.

The contractor shall not undertake any concreting in foundation until the excavation pit is approved by the site-in-charge.

The contractor shall not back fill around any work until it has been approved by the site-in-charge.

Backfilling shall be carried out of selected earth coming out of excavation. Backfilling shall be carried out in layers of 150 mm and compacted to achieve 95% maximum dry density of the soil being used. Any surplus earth generated shall be transported to areas designated by the Engineer-in-charge.

Sand filling in Plinth/Foundations

Filling shall be carried out in layers not exceeding 150 mm and shall be compacted mechanically or by saturation to specified grade and level and to obtain 90% laboratory maximum dry density or as specified in schedule of rates.

Compaction by flooding may be accepted at the discretion of the Engineer-in-charge, provide the required compaction is achieved.

The Contractor shall not commence filling in around any work until it has been permitted by the Engineer-in-charge.

Plain and Reinforced Cement Concrete.

The cement and steel reinforcement is in the contractor's scope of supply. Engineer-in-charge may require tests to be carried out by the contractor's as a part of his quoted rates to ensure conformity with the relevant standards.

Engineer-in-charge may reject such of the cement supplied in the event of either unsatisfactory tests or in the event of deterioration due to age, bad storage etc. Decision of Engineer-in-charge shall be final in this regard.

Water used for concreting work shall be suitable for drinking and shall conform to IS: 456:2000. It shall be free from injurious substances.

Source of Coarse and fine aggregates shall be approved by Engineer-in-charge.

- i. Contractor shall store each type and grade of aggregate separately. He shall maintain at site of work adequate quantities to ensure conformity of work. Wet aggregate delivered to site shall be stored for 24 hrs to facilitate drying before being used.
- ii. Admixtures shall be used only with the specific permission of Engineer-in-charge and where used shall be conforming to the instruction of the manufacturer of such extent as being undesirable the engineer-in-charge may reject the work totally and his decision shall be binding on the contractor. No extra payment shall be made for rectifying these defects. All burs and uneven faces shall be rubbed smooth by carborundum stone.
- iii. The Surface of non-shuttered faces shall be smoothed with a wooden float to give a finish equal to that of the rubbed down shuttered faces. Concealed concrete faces shall be left as from the shuttering except that honey combed surface shall be made good as detailed above. The floating shall not be executed to the extent of bringing excess fine material to the surfaces. The top faces of slab intended to be covered with screed, granolithic or similar surface shall be left with a rough finish. Sides and soffits to be later covered with plaster shall be suitably roughened.

Structure steel works

Steel works

All finished steel unless otherwise specified shall be well and clearly rolled to dimensions and weight as specified by ISI subject to permissible tolerances as per IS-1852-1973.

Material shall be free from cracks, surface, flaws, laminations, rough and imperfect edges and other harmful defects like excessive rust, scaling and pitting etc. Structural steel work shall conform to requirements depending upon the designation of steel that is being selected to be used for particular structural function as specified in drawings.

All structural steel girders, channels, plates and other rolled section shall conform to IS: 2062 grade-A Pipes shall conform to IS: 1161 – YST 240 MPa.

Electrodes required for metal arc welding shall be covered electrodes conforming to IS 814 – 1970. 88

Fabrication Steel section as required shall be straightened and cut to square and exact lengths. Cut ends exposed to view shall be finished smooth. No two pieces shall be otherwise welded or joined to make up the required length of the number.

If straightening, flattening or bending is necessary, shall be done in process that will not damage the material or impair its strength. Shearing, flame cutting or chipping shall be done carefully and accurately. Finished member shall be free from undue twists, bends, wrapping, distortion or other irregularities. Holes, where required shall be drilled to required size and not made nor enlarged by burning. Holes shall have their axis perpendicular to surface bored through. Any fabricated assembly shall be without the member being strained or forced into position and components shall meet at perfect angles. Where practicable, welds should preferably be made in flat position. Welds shall be free from cracks, discontinuity in welding or other defects categorized as such in relevant standards. Welds will be inspected and cost of the same shall be deemed to be included in the quoted rates. A defective weld, harmful to structural strength, shall be cut out and re-welded. All welds shall be cleaned of slag and other deposits after completion.

All structural steel works for canopy and other structures shall have butt welds between adjacent surfaces ground smooth. Items concealed from view need not require grinding of welds. Architectural metal work shall be well formed to shape and size with sharp lines, angles and true curves. Drilling and punches shall produce clean true line and surface. All site connections shall be preferably by permanent bolts. Welding at Site shall be done with the prior permission of engineer-in-charge. Exposed weld shall be ground smooth, exposed surfaces shall have smooth finish. Joints shall be milled to close fit and corner joints shall be well formed and in true alignment. Work shall be accurately fastened in place.

Painting shall be as described under the head "Painting".

Painting on Metal Work: Painting shall be done to meet the following specification,

ON STEEL MEMBERS

- 1) Surface preparation as per grade St – 2 according to Swedish Standard SIS055900.
- 2) Two coats of zinc phosphate in phenolic alkyd medium (DFT 35u / coat)
- 3) Two coats of synthetic enamel (DFT 25u / coat) conforming to IS : 2932-1974.

Surface Preparation & Primer

One coat of primer shall be applied on shop. The shop coated surface shall be rubbed down thoroughly with abrasive paper to remove dust, rust, other foreign matters and degreased cleaned with warm fresh water and air dried.

Primer coat of zinc phosphate primer shall be applied by brushing/spraying over the shop coat in a manner so as to ensure a continuous and uniform film throughout.

Final Paint

After the primer is hard dry, the surface shall be dusted of and one coat of synthetic enamel paint

of approved colour and shade (conforming to IS: 2932) shall be applied by brushing/ spraying to achieve the required DFT. Second coat will be applied after drying of previous one to give a uniform surface. Paints can be diluted by means of thinner as approved by paint manufacturer only.

White Washing with Whiting

Preparation of mix:

Whiting (ground white chalk) shall be dissolved in sufficient quantity of warm water and thoroughly stirred to form thin slurry which shall then be screened through a clean coarse cloth. Two kg of gum (DDL) and 0.4 kg of copper sulphate dissolved separately in hot water shall be added for every cum of the slurry which shall then be diluted with water to the consistency of milk so as to make a wash ready for use.

Preparation of surface

Before new work is white washed, the surface shall be thoroughly brushed free from mortar droppings and foreign matter.

Application:

The white wash shall be applied with moonj brushes to the specified number of coats. The operation for each coat shall consist of a stroke of the brush given from the top downward, another from the bottom upwards over the first stroke, and similarly one stroke horizontally from the right and another from the left before it dries.

Each coat shall be allowed to dry before the next one is applied. Further each coat shall be inspected and approved by the engineer-in-charge before the subsequent coat is applied. No portion of the surface shall be left out initially to be patched up later on.

For new work, three or more coats shall be applied till the surface presents a smooth and uniform finish through which the plaster does not show. The finished dry surface shall not show any signs of cracking and peeling nor shall it come off readily on the hand when rubbed.

Synthetic Enamel Paint

The shop coated surface shall be rubbed down thoroughly with abrasive paper to remove dust, rust. Other foreign matters and degreased cleaned with warm fresh water and air dried.

Primer coat of red-oxide zinc chromate primer conforming to IS: 2074 shall be applied by brushing/spraying over the shop coat in a manner so as to ensure a continuous and uniform film throughout.

Final Paint.

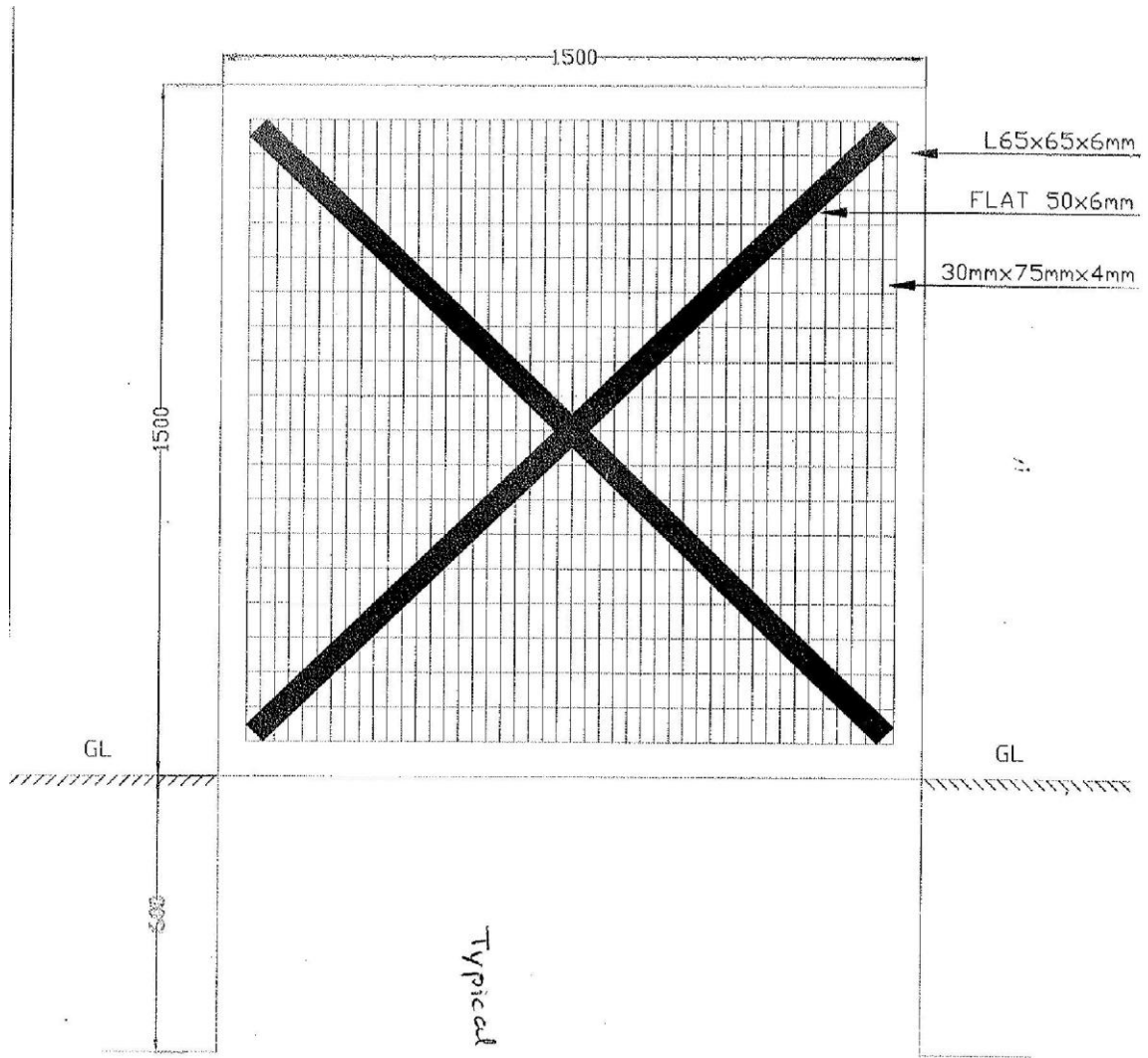
After the primer is hard dry the surface shall be dusted off and one coat of synthetic enamel paint

Ref no.: GGPL/KKD/C&P/SR 2565/2019-20/06

of approved color and shade (conforming to IS: 2932) shall be applied by brushing/spraying. The coats are applied after drying one after another to give a uniform surface. Paints can be diluted/thinning by means of thinner only as per the requirements of the finished paint surface.

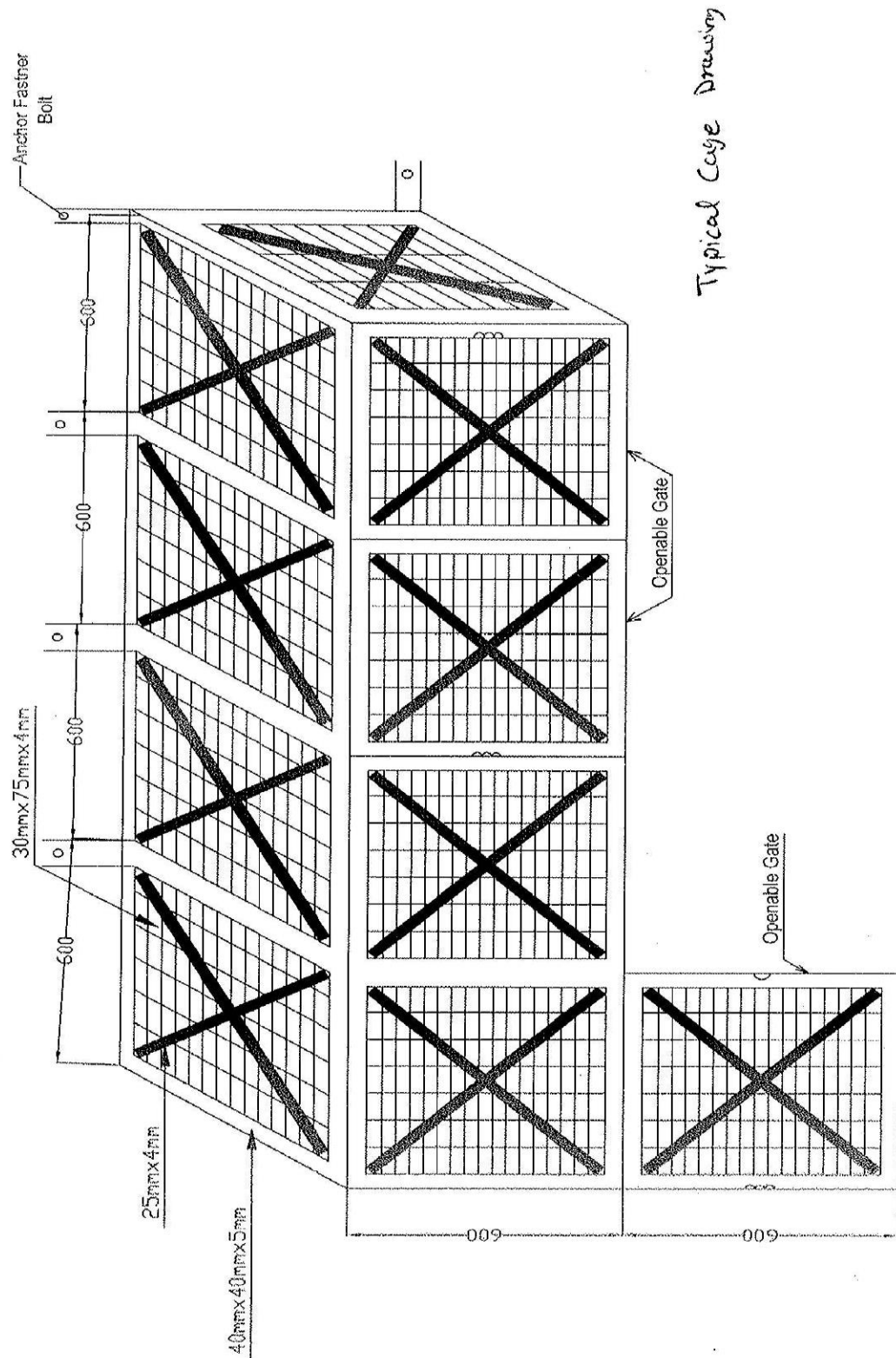
LIST OF APPROVED MAKES FOR CIVIL WORK

1. Ordinary Portland Cement (OPC)-ACC,DLF,JK,& Sarvshaktiman
2. Pozolona Portland cement (PPC) – Ultratech
3. Steel (Tor Steel) – Sail, Tisco & Rathi
4. Steel (Structural Steel) – Sail & Tisco
5. Bolts – Unbrako, TVS & GKW
6. Electrodes – ESAB, Advani, D&H
7. GI / MS Pipes (IS: 1239,IS : 3589) – Tata, Jindal, Prakash, Surya & TISCO
8. Paint – Asian Paints, ICI, Shalimar & Berger
9. Construction Chemicals – CICO,FOSROC,ROFFE,ST,MC & Pidilite



Typical Cage Drawing

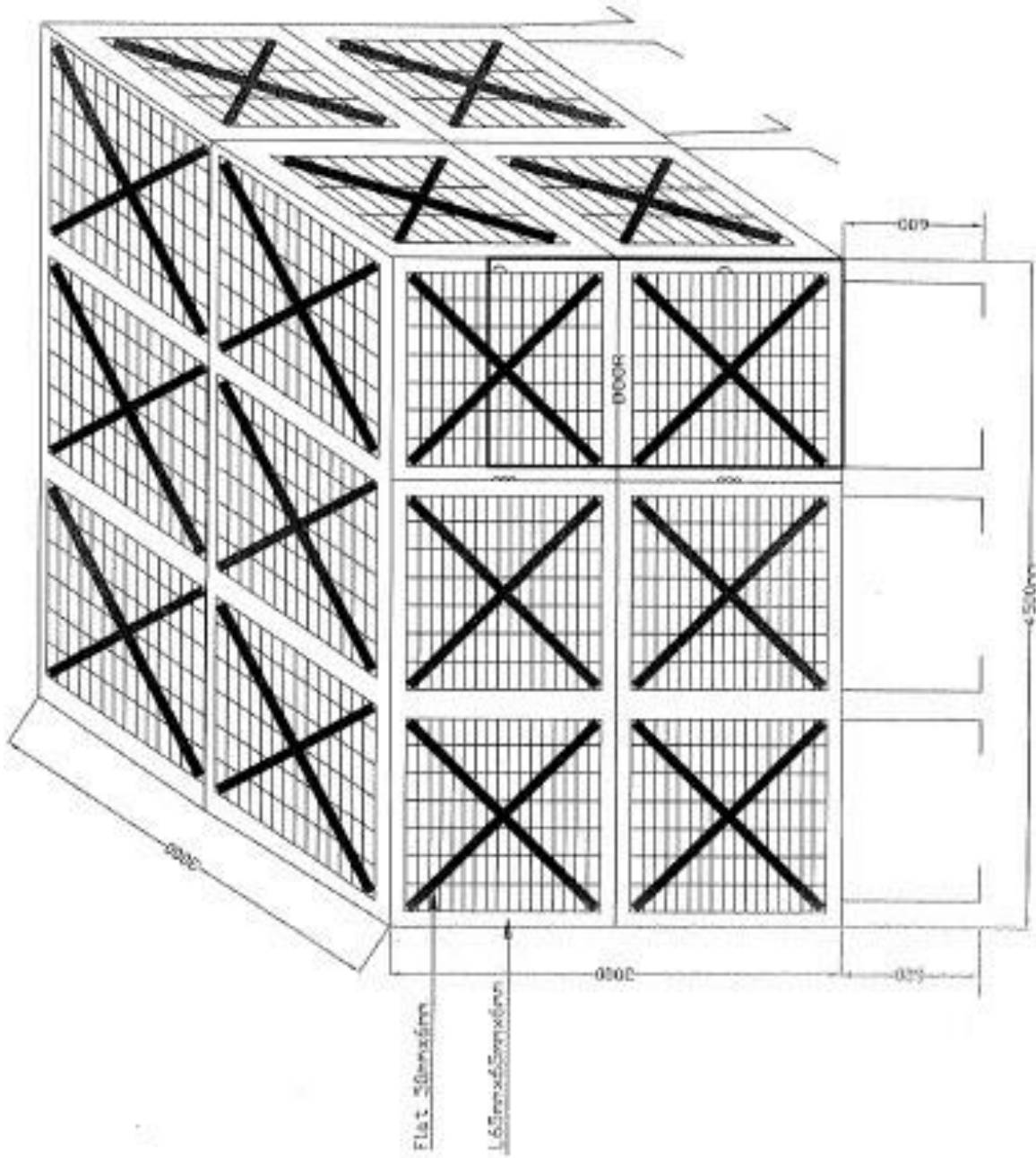
DRAWING - 01



Typical Cage Drawing

WALL MOUNTED 2 BAR MRS CAGING

DRAWING – 02



Skid Cage

Drawing 3

SPECIFICATION
FOR
QUALITY ASSURANCE SYSTEMS REQUIREMENTS

CONTENTS

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2.0	DEFINITIONS	1 - 2
3.0	CONTRACTORS SCOPE OF WORK	2 - 4
4.0	QUALITY ASSURANCE REQUIREMENTS	4 - 7

ATTACHMENTS

<u>TITLE</u>	<u>NUMBER</u>
FORMAT FORQUALITYPLAN	FORMAT00001
FORMAT FOR OBSERVATIONON	FORMAT00002

1.0 INTRODUCTION

This specification establishes the Quality Assurance Requirements to be met by the sub-contractors (including turnkey Contractors) and their sub-vendors.

In case of any conflict between this specification and other provisions of the contract/ purchase order, the same shall be brought to the notice of , at the stage of bidding and shall be resolved with , prior to the placement of order.

2.0 DEFINITION

Bidder

For the purpose of this specification, the word “Bidder” means the person(s), firm, company or organization who is under the process of being contracted by Owner for delivery of some products (including service). The word is considered synonymous to supplier, contractor or vendor.

Correction

Action taken to eliminate the detected non-conformity.

Refers to repair, rework or adjustment and relates to the disposition of an existing non-conformity.

Corrective Action

Action taken to eliminate the causes of an existing non-conformity, defect or other undesirable situation in order to prevent recurrence.

Preventive Action

Action taken to eliminate the causes of a potential non-conformity, defect or other undesirable situation in order to prevent its recurrence.

Process

Set of inter-related resources and activities which transform inputs into outputs.

Special Process

Processes requiring pre-qualification of their process capability.

3.0 CONTRACTORS SCOPE OF WORK

3.1 Prior to award of contract

The bidder shall understand scope of work, drawings, specifications and standards etc., attached to the tender/ enquiry document, before he makes an offer.

The bidder shall submit milestone chart showing the time required for each milestone activity and linkages between different milestone activities along with overall time period required to complete the entire scope of work.

The bidder shall develop and submit manpower and resource deployment chart.

The bidder shall submit, along with the bid, a manual or equivalent document describing/ indicating/ addressing various control/ check points for the purpose of quality assurance and the responsibilities of various functions responsible for quality assurance.

3.2 After the award of contract

The bidder shall submit the schedule for submission of following documents in the kick-off meeting or within two weeks of the placement of order, whichever is earlier.

- Detailed Bar Chart
- Quality plan for all activities, required to be done by the bidder, to accomplish offered scope of work.
- Inspection and test plans, covering various control aspects.
- Job procedures as required by Owner.
- Procurement schedule for items to be supplied by contractor covering inspection of the same.

Various documents submitted by the bidder shall be finalized in consultation with . Here it shall be presumed that ones a bidder has made an offer, he has understood the requirements given in this specification and agrees to comply with them in totality unless otherwise categorically so indicated during pre-award stage through agreed deviation/ exception request. All Quality Assurance Plan (QAP) documents shall be reviewed by concerned functional groups of and the bidder shall be required to incorporate all comments within the framework of this specification at this stage of the contract. It is also obligatory on the part of the bidder that obtains approval on every Quality Assurance Plan (QAP) documents, before he starts using a particular document for delivery of contracted scope of work. Participation of Owner in review/ approval of quality plan/ QAP documents does not absolve the contractor of his contractual obligations towards specified and intended use of the product (or service) provided/ to be provided by him under the contract.

3.3 During job execution

During job execution, the bidder shall fully comply with all quality document submitted and finalised/ agreed against the requirements of this specification. Approval of on all these documents shall be sought before start of work.

Bidder shall produce sufficient quality records on controlled/ agreed forms such that requirements given in this specification are objectively/ demonstrable.

Bidder shall facilitate Owner during quality/ technical audits at his works/ sites.

Bidder shall discharge all responsibilities towards enforcement of this specification on all his sub-contractors for any part of the scope which is sub- contracted.

4.0 QUALITY ASSURANCE SYSTEMREQUIREMENTS shall correspond only with the project manager of the bidder on all matters of the project. The project manager of the bidder shall be responsible for co-ordination and management of activities with bidder's organisation and all sub-vendors appointed by the bidder.

4.1 The bidder shall nominate an overall incharge of the contract titled as "Project Manager" for the scope of work of agreed contract. The name of this person shall be duly intimated to including all subsequent changes, if any After award of work, the bidder may review augmentation of manpower and resources deployment chart (submitted earlier), detail it out, if so consented by Owner and resubmit the same as "issued for effective implementation of the project".

4.2 The bidder shall plan the contract scope of work on quality plan format such that no major variation is expected during delivery of contract scope of work. These quality plan shall be made on enclosed format complete in all respect. The quality plan shall be assumed to be detailing bidder's understanding and planning for the contract/ offered scope of work. The bidder shall plan the type of resources including various work methodology which he agrees to utilize for delivery of contract scope ofwork.

4.3 The bidder is required to review the contract at all appropriate stages to evaluatehiscapabilitieswithrespecttotimelyandqualitycompletionofall activities pertaining to contracted scope of work and shall report for constraints, if any to Owner.

4.4 The design activities, if any, performed during delivery of contract scope of work shall be so controlled that the outputs is reliable enough. It is expected that during development of design, the bidder shall take recourse to detailed checking, inter departmental reviews and documented verification methods.

- 4.5 For all documents which the bidder is likely to utilise for delivery of contract scope of work, a system must exist which assures that latest/ required version(s) of the document(s) is available at all location/ point of use.
- 4.6 In case the bidder decides to sub-contract any part/ full of the contract scope of work (without prejudice to main Contractual condition), the bidder shall:
- Evaluate the technical and financial capabilities and past performance of the sub-contractor(s) and their products and/ or services before awarding them with the sub-contracted scope of work. Selection of a sub-contractor should meet approval in documented form.
 - Requirement of this specification shall be enforced on sub-contracted agency also. The bidder shall choose sub-contractor based on their capability to meet requirements of this specification also have a system meeting the requirements of this specification. In all such eventualities, bidder may lend his system to sub-contractor for the contract such that sub-contractor effectively meets the requirements of this specification. In all such cases shall be duly informed.
- 4.7 Bidder shall establish adequate methodology such that the materials supplied by the Owner/ shall be adequately preserved, handled and made use of for the purpose for which they are provided.
- 4.8 All output delivered against contract scope of work shall be suitably identified in such a manner that either through identification or some other means, sufficient traceability is maintained which permits effective resolution of any problem reported in the outputs.
- 4.9 Critical activities shall be identified and the bidder is required to have documented methodologies which he is going to utilize for carrying out such activities under the contract scope of work. Wherever it is difficult to fully inspect or verify the output (special process), bidder shall pre-qualify, the performers and methodologies.
- 4.14 All deficiencies noticed by Owner representative(s) shall be recorded on a controlled form (Format No. 00002). Such deficiencies shall be analysed by the bidder and effective and appropriate correction, corrective and preventive actions shall be implemented. Bidder shall intimate Owner of all such corrective and preventive action implemented by him.

- 4.15 Bidder shall establish appropriate methodologies for safe and effective handling, storage, preservation of various materials/ inputs encountered during delivery of contract scope of work.
- 4.16 Bidder shall prepare sufficient records for various processes carried out by him for delivery of contract scope of work such that requirements of this specification are objectively demonstrable. In case Owner finds that enough objective evidence/ recording is not available for any particular process, bidder shall be obliged to make additional records so as to provide sufficient objective evidence. The decision of Owner shall be final and binding on such issues.
- 4.17 The bidder shall arrange internal quality audits at quarterly intervals, to independently assess the conformance by various performers to the requirements of this specification. The findings of such assessment shall be duly recorded and a copy shall be sent to Owner for review.
- 4.18 For all special processes, bidder shall deploy only qualified performers. Wherever Owner observes any deficiency, the bidder shall arrange the adequate training to the performer(s) before any further delivery of work.

OBSERVATION OF QUALITY ASPECTS

FORMAT – 00002

Job No. and Description Issued to:M/s		No. : Date:
Location of Work : Item of Work :		
Details of Observation(Deficiency)	Recommended Course of Action	
	Time Allowed for Correction :	
Issued by: _____ Name of Signature of RCM, Site		
Corrective Action taken report by Contractor/ Vendor :		
Date:	Name and Signature	
Distribution (before resolution) :		
Project Manager Owner	Chief Business Executive Inspection Bangalore	Resident Construction Manager, Site
Verification of Resolution by :		
Date:	Name of Signature	
Distribution (before resolution) :		
Project Manager Construction Owner	Chief Business Executive Inspection Bangalore	Resident Manager, Site

Bidder's Quality Plan			Project Name :				PO/ Contract Ref:			
General			Performing Functions				Inspection Functions Audit Function			
Activity Description	Procedure Number	Code of Conformance	Performer	Checker	Reviewer/ Approver	Sampling Plan	Testing and Inspection Code	Type of (Approval) Surveillance	Audit Scope	Owner's/ Review/ Audit Requirement

Note:

- 1) The bidder ensures that the filled up format conforms to minimum requirements on Quality Plan/Quality Assurance, specified by on drawings/ standards/ specifications/write-up.
- 2) The bidder confirms that document is issued for information/approval of owner for the project implementation

SPECIFICATION FOR

HEALTH, SAFETY AND ENVIRONMENT (HSE)

MANAGEMENT

CONTENTS

Sl.No.	DESCRIPTION
01	SCOPE
02	REFERENCES
03	REQUIREMENT OF HEALTH, SAFETY & ENVIRONMENT (HSE) MANAGEMENT SYSTEM TO BE COMPLETED BY BIDDERS
04	DETAILS OF HSE MANAGEMENT SYSTEM BY CONTRACTOR
05	RECORDS
	ANNEXURE- A
	ANNEXURE-B
	ANNEXURE-C
	ANNEXURE-D
	ANNEXURE-E

1.0 SCOPE

This specification establishes the Healthy, Safety and Environment (HSE) management requirement to be complied with by the Contractors during construction.

This specification is not intended to replace the necessary professional judgement needed to design & implement an effective HSE system for construction activities and the contractor is expected to exceed requirements given in this specification.

Requirement stipulated in this specification shall supplement the requirement of HSE management given in relevant Act (S)/ legislations. General Condition of Contract(GCC) Special Condition of Contract (SCC) and Job Specifications. Where different documents stipulate different requirements, the most stringent shall be adopted.

2.0 REFERENCES

This document should be read in conjunction with following:

- General Conditions of Contract(GCC)
- Special Conditions of Contract(SCC)
- Building and other construction workers (regulation of employment and condition of service) Act,1996
- Job Specifications
- Relevant IS Codes (refer Annexure-A)
- Reporting Formats (refer Annexure-B)
- Statutory requirements

3.0 REQUIREMENT OF HEALTH, SAFETY & ENVIRONMENT (HSE) MANAGEMENT SYSTEM TO BE COMPLETED BY BIDDERS

Management Responsibility

The Contract should have a document HSE policy to cover commitment of the organization to ensure health, safety and environment aspects in their line of operations

The HSE management system of the Contractor shall cover HSE requirement including but not limited to what is specified under clause 1.0 & 2.0 mentioned above

Contractor shall be fully responsible for planning and implementing HSE requirement to the satisfaction of the company. Contractor as a minimum requirement shall designate/deploy the following to co-ordinate the above:

No. Of workers deployed Up to 250	Designate one safety supervisor who will guide the workers from time to time, as well as impart training basic guidelines at least weekly once.
Above 250 & up to 500	Deploy one qualified and experienced safety Engineer/ Officer who will guide the workers from time to time as well as impart basic guideline & raining at least weekly once. He / She shall possess are cognized Degree in any branch of engineering or technology or architecture and had a post qualification construction experience of minimum two years or possess a recognized Diploma in any branch of engineering or technology or Graduate in Science stream and had a post qualification construction experience of minimum five years
Above 50 (for every 500 or less)	One additional safety engineer/Officer whose function will be as mentioned above
Contractor shall indemnify and hold harmless OWNER/ & their representatives from any and all liabilities arising out of non fulfilment of HSE requirements	

Above is the minimum requirement and the Contractor shall ensure physical presence of a safety personnel at each place where Hot work permit is required. No work shall be started at site until above safety personnel are physically present at site. The contractor shall submit a safety organogram clearly indicating the lines of responsibility and reporting system. He shall furnish Bio- Data/Resume/Curriculum Vitae of the safety personnel he intends to mobilize, at least 1 month before the intended mobilization, for /Owner's approval

The Contractor shall ensure that the Health, Safety and Environment (HSE) requirements are clearly understood & faithfully implemented at all levels, at each and every site/workplace.

The Contractor shall promote and develop consciousness for Health, Safety and Environment among all personnel working for the Contractor. Regular awareness programs and fabrication shop/work site meeting shall be arranged on HSE activities to cover hazards involved in

various operations during construction.

Arrange suitable first aid measures such as First Aid Box, trained personnel to give First Aid, Stand by Ambulance or Vehicle and install fire protection measures such as: adequate number of steel buckets with sand and water and adequate fire extinguishers to the satisfaction of OWNER/ . In case the number of workers exceeds 500, the Contractor shall position an ambulance /vehicle on full time basis very close to the worksite

The Contractor shall evolve a comprehensive planned and documented system for implementation and monitoring of the HSE requirements. This shall be submitted to OWNER & for approval well in advance, prior to start of work. The monitoring for implementation shall be done by regular inspection and compliance to the observations thereof. The Contractor shall get similar HSE requirements implemented at his sub-contractor (s) work site/ Office. However, compliance of HSE requirement shall be the sole responsibility of the Contractor. Any review/ approval by OWNER/ shall not absolve the Contractor of his responsibility/ liability in relation to all HSE requirements

Non-Conformance on HSE by the Contractor (including his Sub-contractors) as brought out during review/ audit by OWNER representative shall be resolved forthwith by Contractor. Compliance report shall be submitted to OWNER at the earliest

The Contractor shall ensure participation of his Resident Engineer/Site-in-Charge in the Safety Committee/HSE Committee meetings arranged by OWNER/ . The compliance of any observation shall be arranged urgently. Contractor shall assist OWNER to achieve the targets set by them on HSE during the project implementation.

The contractor shall ensure that his staff members & workers (permanent as well casual) shall not be in a state of intoxication during working hours and shall abide by any law relating to consumption & possession of intoxicating drinks or drugs in force. Awareness about local laws on this issue shall form part of the Induction Training.

The contractor shall ensure that all personnel working for him comply with No smoking requirements of the owner as notified from time to time. Cigarettes, lighters, auto ignition tools or appliances shall not be allowed inside the plant complex. Smoking shall be permitted only inside smoking booths expressly designated & authorized by the Owner

The Contractor shall adhere consistently to all provisions of HSE requirements. In case of non-compliance or continuous failure in implementation of any of HSE provisions; OWNER/ may impose stoppage of work without any Cost & Time implication to Owner and/or impose a suitable penalty for non-compliance with a notice of suitable period, up to a cumulative limit of 1.0% (one percent) of Contract value with a ceiling of Rs. 10lakhs

0.2 % (Zerodecimal two percent) of the contract value for LSTK, EPC, EPCC or Package contracts with an overall ceiling of Rs. 1,00,00,000/- (Rupees one crore)

SL.NO	VIOLATION OR HSE NORMS	PENALTY AMOUNT
1.	For not using personal protective equipment (Helmet, shoes, goggles, gloves, full body harness, face shield, boiler suit etc.)	Rs.250/-per day/item/person
2.	Working without work permit clearance	Rs.5000/occasion
3.	Unsafe electrical practices (not installing ELCB, using poor joints of cables, using naked wire without top plug into socket, laying wire / cables on the roads, electrical jobs by incompetent person, etc.)	Rs.3000/per item per day
4.	Working at height without full body harness, using non-standard / rejected scaffolding and not arranging fall protection arrangement as required like Safety Nets	Rs.1000/per case per day
5.	Unsafe handling of compressed gas cylinders (No trolley, jubilee clips double gauge regulator, improper storage / handling)	Rs.100/per item per day
6	Use of domestic LPG for cutting purpose	Rs.1000/per occasion
7	No fencing/barricading of excavated areas	Rs.1000/per occasion
8	Not providing shoring/strutting/proper slope and not keeping the excavated earth at least 1.5m away from excavated area	Rs.5000/per occasion
9	Non display of caution boards, list of hospitals, emergency services available at work locations	Rs.500/ per occasion
10	Traffic rules violations like over speeding of vehicles, rash driving, wrong parking, not using seat belts, vehicles not fitted with reverse warning alarms.	Rs.1000/per occasion
11	Absence of Contractor's top most executive at site in the safety meetings whenever called by /Owner	Rs.1000/per occasion

12	Failure to maintain safety records by Contractor Safety personnel.	Rs.1000/per month
13	Failure to conduct daily safety site inspection, HSE meeting and HSE audit at predefined frequencies.	Rs.1000/per month
14	Failure to submit the monthly HSE report by 5 th of subsequent month to Engineer-in-Charge	Rs.1000/per month
15	Poor House Keeping	Rs.1000/per occasion and Rs.1000/per day for further delay
16	Failure to report & follow up accident (including Near Miss) reporting system.	Rs.10,000/per occasion
17	Degradation of environment (not confining toxic spill soil / lubricants onto ground)	Rs.1000/per occasion
18	Not medically examining the workers before allowing them to work at height, not providing ear muffs while allowing them to work in noise polluted areas, made them to work in air polluted areas without respiratory protective devices, etc	Rs.1000/per occasion
19	Violation of any other safety condition as per job HSE plan, work permit and HSE conditions of contract (using crowbar on cable trenches, improper welding booth, not keeping fire extinguisher ready at hot work site, unsafe rigging practices, non-availability of First-Aid box,etc.)	Rs.1000/per occasion
20	Any violation not covered above.	To be decided by /Client

This penalty shall be in addition to all other penalties specified else where in the contract. The decision of imposing stoppage of work, its extent & monetary penalty shall rest with /OWNER & binding on the Contractor.

All fatal accidents and other personnel accidents shall be investigated by a team of Contractor's senior personnel for root cause and recommend corrective and preventive actions. Findings shall be documented and suitable actions taken to avoid recurrences shall be communicated to OWNER / . OWNER / shall have the liberty to independently investigate such occurrences and Contractor shall extend all necessary help and co-operation in this regard. / Owner shall have the right to share the content

of this report with the outside world.

House Keeping

Contractor shall ensure that a high degree of house keeping is maintained and shall ensure the followings:

- a. All surplus earth and debris are removed/disposed off from the working site to identified location (s).
- b. Unused/Surplus Cables Steel items and steel scrap lying scattered at different places within the working areas are removed to identified location(s).
- c. All wooden scrap, empty wooden cable drums and other combustible packing materials shall be removed from work place to identified location(s).
- d. Roads shall be kept clear and materials like pipes, steel, sand, boulders, concrete chips and bricks, etc. shall not be allowed in the roads to obstructs free movement of men & machineries.
- e. Fabricated steel structural, pipes& piping materials shall be stacked properly for erection.
- f. Water logging on roads shall not be allowed.
- g. No parking of trucks/ trolleys, cranes and trailers etc. shall be allowed on of roads, which may obstruct the traffic movements.
- h. Utmost care shall be taken to ensure over all cleanliness and proper up keep of the working areas.
- i. Trucks carrying sand, earth and pulverized materials etc. shall be covered while moving within the plant areas.
- j. The contractor shall ensure that the atmosphere in plant area and on roads is free from particulate matter like dust, sand, etc. by keeping the top surface wet for ease inbreathing.
- k. At least two exits for any unit area shall be assured at all times.

Healthy, Safety and Environment

- a) The Contractor shall provide safe means of access to any working place including provision of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen, and OWNER/ . Contractor shall ensure deployment of appropriate equipment and appliances for adequate safety and healthy of the workmen and protection of surrounding areas.

Contractor shall ensure identification of all Occupational Health, Safety & Environmental hazards in the type of work he is going to undertake and enlist mitigation measures. Contractor shall carry out Job Safety Analysis (JSA) specifically for high risk jobs like working at height & in confined space, deep excavations, radiography jobs, electrical installations, blasting operations, demolishing / dismantling activities, welding / gas cutting jobs and submit the findings to / Owner. The necessary HSE measures devised shall be in place prior to start of an activity by the contractor.

- b) The Contractor shall ensure that all their staff workers including their sub- Contractor (s) shall wear Safety Helmet and Safety shoes. Contractor shall also ensure use of safety belt, protective goggles, gloves etc. by the personnel as per jobs requirements. All these gadgets shall conform to relevant IS specification equivalent

The Contractor shall ensure that all their staff, workers and visitors including their sub-contractor(s) have been issued (records to be kept) & wear appropriate PPEs like nape strap type safety helmets preferably with head & sweat band with ¾" cotton chin strap (made of industrial HDPE), safety shoes with steel toe cap and antiskid sole, full body harness (CE marked and conforming to EN361), protective goggles, gloves, ear muffs, respiratory protective devices, etc. All these gadgets shall conform to applicable IS Specifications / CE or other applicable international standards.

Owner may issue a comprehensive color scheme for helmets to be used by various agencies. The Contractor shall follow the scheme issued by the owner. All Safety / Fire personnel shall preferably wear red colour helmet so that workmen can approach them for guidance during emergencies.

For shot blasting, the usage of protective face shield and helmets, gauntlet and protective clothing is mandatory.

For offshore jobs/contracts, contractor shall provide PPEs (new) to & Owner's

personnel, at his (contractor's) cost. All personnel shall wear life jacket at all time.

An indicative list of HSE standards/codes is given under Appendix-A.

The contractor shall issue height permit for working at height after verifying and certifying the checkpoints as specified in the attached permit (Format No. HSE-6). He shall also undertake to ensure compliance to the conditions of the permit during the currency of the permit including adherence to personal protective equipments.

The permit shall be issued initially for one week or expected duration of an activity and extended further for the balance duration. This permit shall be applicable in areas where specific clearance from Owner's operation Deptt./SafetyDeptt.is not required. field Engineers / Safety Officers / Area Coordinators may verify and counter sign this permit (as an evidence of verification) during the execution of the job.

In case work is undertaken without taking sufficient precautions as given in the permit, Engineers may cancel the permit and stop the work till satisfactory compliance is arranged. Contractors are expected to maintain a register for issuance of permit and extensions thereof including preserving the used permits for verification during audits etc.

Contractor shall arrange (at his cost) and ensure use of Fall Arrester Systems by his workers. Fall arresters are to be used while climbing / descending tall structures. These arresters should lock automatically against the anchorage line, restricting free fall of the user. The device is to be provided with a double security opening system to ensure safe attachment or release of the user at any point of rope. In order to avoid shock, the system should be capable of keeping the person in vertical position in case of a fall.

Contractor shall ensure that Full body harnesses conforming EN361 and having authorized CC marking is used by all personnel while working at height. The lanyards and life lines should have enough tensile strength to take the load of the worker in case of a fall. One end of the lanyard shall be firmly tied with the harnesses and the other end with life line. The harness should be capable of keeping the workman vertical in case of a fall, enabling him to rescue himself.

Contractor shall provide Roof Top Walk Ladders for carrying out activities on sloping roofs in order to reduce the chances of slippages and falls.

Contractor shall ensure that a proper Safety Net System shall be used at appropriate locations. The safety net shall be located not more than 30 feet (9.0 metres) below the working surface at site to arrest or to reduce the consequences of possible fall of persons working at different heights.

Contractor shall ensure that flash back arrestors conforming to BS:6158 or equivalent are installed on all gas cylinders as well as at the torch end of the gas hose, while in use. All cylinders shall be mounted on trolleys and provided with a closing key. The burner and the hose placed downstream of pressure reducer shall be equipped with Flash Back Arrester/Non Return Valve device. The hoses for acetylene and oxygen cylinders must be of different colours. Their connections to cylinders and burners shall be made with a safety collar. At end of work, the cylinders in use shall be closed and hoses depressurized. All welding machines shall have effective earthing. In order to help maintain good housekeeping, and to reduce fire hazard, live electrode bits shall be contained safely and shall not be thrown directly on the ground.

The Contractor shall assign to his workmen, tasks commensurate with their qualification, experience and state of health for driving of vehicles, handling and erections of materials and equipment's. All lifting equipments shall be tested certified for its capacity before use. Adequate and suitable lighting at every work place and approach there to shall be provided by the contractor before starting the actual work/ operation at night.

Contractor shall ensure installation of Safe Load Indicator (SLI) on all cranes (while in use) to minimize overloading risk. SLI shall have capability to continuously monitor and display the load on the hook, and automatically compare it with the rated crane capacity at the operating condition of the crane. The system shall also provide visual and audible warnings at set capacity levels to alert the operator in case of violations.

The contractor shall be responsible for safe operations of different equipments mobilized and used by him at the workplace like transport vehicles, engines, cranes, mobile ladders, scaffoldings, work tools, etc.

- f) Hazardous and/or toxic material such as solvent coating or thinners shall be stored in appropriate containers.

- g) All hazardous materials shall be labeled with the name of the materials, the hazards associated with its use and necessary precautions to be taken.

The work place shall be checked prior to start of activities to identify the location, type and condition of any asbestos materials which could be disturbed during the work. In case asbestos material is detected, usage of appropriate PPEs by all personnel shall be ensured and the matter shall be reported immediately to / Owner.

- h) Contractor shall ensure that during the performance of the work all hazards to the health of personnel have been identified assessed and eliminated.
- i) Chemical spills shall be contained & cleaned up immediately to prevent further contamination.
- j) All personnel exposed to physical agents such as ionizing or non-ionizing radiation ultraviolet rays or similar other physical agents shall be provided with adequate shielding or protection commensurate with type of exposure involved. For ionizing radiation, requirements of Bhabha Atomic Research Centre (BARC)/Atomic Energy Regulatory Board (AERB) shall be followed.
- k) Where contract or exposure of hazardous materials could exceed limits or could otherwise have harmful effects, appropriate personal protective equipment's such as gloves, goggles, aprons, chemical resistant clothing and respirator shall be used.
- l) Contractor shall ensure the following facilities at worksites:
- m) A Crèche where 10 or more female workers are having children below the age of 6 years.
- n) Reasonable Canteen facilities are made available at appropriate location depending upon site conditions.
- o) Suitable facilities for toilet, drinking water, proper lighting shall be provided at site and labor camps, commensurate with applicable Laws/Legislation.
- p) Contractor shall ensure storage and utilization methodology of material that are not detrimental to the environment. Wherever required Contractor shall ensure that only the environment friendly material are selected.

Emphasize on recycling of waste materials such as metals, plastics, glass, paper, oil & solvents. The waste that cannot be minimized, reused or recovered shall be stored and disposed of safely. In no way, toxic spills shall be allowed to percolate into the ground. The contractor shall not use the empty areas for dumping the wastes.

All person deployed at site shall be knowledgeable of and comply with the environmental laws, rules & regulation relating to the hazardous materials substance and wastes. Contractor shall not dump, release or otherwise discharge or dispose off any such materials without the authorization of OWNER/ .

Suitable scaffoldings shall be provided to workmen for all works that cannot be safely done from the ground or from solid construction except such short period work that can be safely done using ladders. When a ladder is used, an extra workman shall be engaged for holding the ladder.

The contractor shall ensure that the scaffolds used during construction activities shall be strong enough to take the designed load. Owner / reserves the right to ask the contractor to submit certification and or design calculations from his Engineering regarding load carrying capacity of the scaffoldings.

All scaffolds shall be inspected by a Scaffolding Inspector of the contractor. He shall paste a GREEN tag on each scaffold found safe and a RED tag on each scaffold found unsafe. Scaffoldings with GREEN tag only shall be permitted to be used and RED ones shall immediately be removed from the site.

All electrical installations / connections shall be carried out as per provisions of latest revision of following codes/standards, in addition to the requirements of Statutory Authorities and IE / applicable international rules & regulations:

- OISO SID 173: Fire prevention & protection system for elec. installations
- SP 30 (BIS) : National Electric Code

All electrical installations shall be approved by the concerned statutory authorities.

The contractor shall meet the following requirements:

- i) Ensure that electrical systems and equipment including tools & tack lessed during construction phase are properly selected, installed, used and maintained as per provisions of the latest revision of the Indian Electrical / applicable

international regulations.

- ii) Shall deploy qualified & licensed electricians for proper & safe installation and for regular inspection of construction power distribution system / points including their earthing. A copy of the license shall be submitted to / Owner for records. Availability of at least one competent licensed electrician shall be ensured at site round the clock to attend to the normal / emergency jobs.
- iii) All switchboards / welding machines shall be kept in well-ventilated & covered shed. The shed shall be elevated to avoid water logging. No flammable materials shall be used for constructing the shed. Also flammable materials shall not be stored in and around electrical equipment / switchboard. Adequate clearances and operational space shall be provided around the equipment.
- iv) Fire extinguishers and insulating mats shall be provided in all power distribution centers.
- v) Temporary electrical equipment shall not be employed in hazardous area without obtaining safety permit.
- vi) Proper house keeping shall be done around the electrical installations.
- vii) All temporary installations shall be tested before energising, to ensure proper earthing, bonding, suitability of protection system, adequacy of feeders/cables etc.
- viii) All welders shall use hand gloves irrespective of hold voltage.
- ix) Multilingual (Hindi, English and local language) caution boards, shock treatment charts and instruction plate containing location of isolation point for incoming supply, name & telephone No. of contact person in emergency shall be provided in substations and near all distribution boards / local panels.
- x) Operation of earth leakage device shall be checked regularly by temporarily connecting series test lamp (2 bulbs of equal rating connected in series) between phase and earth.
- xi) Regular inspection of all installations (at least once in a month)

The following features shall also be ensured for all electrical installations during construction phase by the contractor:

- i) Each installation shall have a main switch with a protective device, installed in an enclosure adjacent to the metering point. The operating height of the main switch shall not exceed 1.5 M. The main switch shall be connected to the point of supply by means of armoured cable.
- ii) The outgoing feeders shall be double or triple pole switches with fuses / MCBs. Loads in a three phase circuit shall be balanced as far as possible and load on neutral should not exceed 20% of load in the phase.
- iii) The installation shall be adequately protected against overload, short circuit and earth leakage by the use of suitable protective devices. Fuses wherever used shall be HRC type. Use of rewirable fuses shall be strictly prohibited. The earth leakage device shall have an operating current not exceeding 30 mA.
- iv) All connections to the hand tools / welding receptacles shall be taken through proper switches, sockets and plugs.
- v) All single phase sockets shall be minimum 3 pin type only. All unused sockets shall be provided with socket caps.
- vi) Only 3 core (P+N+E) overall sheathed flexible cables with minimum conductor size of 1.5 mm² copper shall be used for all single phase hand tools.
- vii) Only metallic distribution boxes with double earthing shall be used at site. No wooden boxes shall be used.
- viii) All power cables shall be terminated with compression type cable glands. Tinned copper lugs shall be used for multistrand wires / cables.
- ix) Cables shall be free from any insulation damage.
- x) Minimum depth of cable trench shall be 750 mm for MV & control cables and 900 mm for HV cables. These cables shall be laid over a sand layer and covered with sand, brick & soil for ensuring mechanical protection. Cables shall not be laid in waterlogged area as far as practicable. Cable route markers shall be provided at every 25 M of buried trench route. When laid above ground, cables shall be properly cleated or supported on rigid poles of at least 2M high.

Minimum head clearance of 6 meters shall be provided at road

crossings.

xi) Underground road crossings for cables shall be avoided to the extent feasible. In any case no underground power cable shall be allowed to cross the roads without pipe sleeve.

xii) All cable joints shall be done with proper jointing kit. No taped / temporary joints shall be used.

xiii) An independent earthing facility should preferably be established within the temporary installation premises. All appliances and equipment shall be adequately earthed. In case of armoured cables, the armour shall be bonded to the earthing system.

xiv) All cables and wire rope used for earth connections shall be terminated through tinned copper lugs.

xv) In case of local earthing, earth electrodes shall be buried near the supply point and earth continuity wire shall be connected to local earth plate for further distribution to various appliances. All insulated wires for earth connection shall have insulation of green colour.

xvi) Separate core shall be provided for neutral. Earth / Structures shall not be used as a neutral in any case.

xvii) ON/OFF position of all switches shall be clearly designated / painted for easy isolation in emergency.

The contractor shall identify all operations that can adversely affect the health of its workers and issue & implement mitigation measures.

For surface cleaning operations, sand blasting shall not be permitted even if not explicitly stated elsewhere in the contract.

To eliminate radiation hazard, Tungsten electrodes used for Gas Tungsten Arc Welding shall not contain Thorium.

Appropriate respiratory protective devices shall be used to protect workmen from inhalation of air borne contaminants like silica, asbestos, gases, fumes, etc.

Workmen shall be made aware of correct methods for lifting, carrying, pushing & pulling of heavy loads. Wherever possible, manual handling shall be replaced by mechanical lifting equipments.

For jobs like drilling/demolishing/dismantling where noise pollution exceeds the specified limit of 85 decibels, ear muffs shall be provided to the workers.

To avoid upper limb disorders and backaches, Display Screen Equipments'

workplace stations shall be carefully designed & used with proper sitting postures. Power driven hand-held tools shall be maintained in good working condition to minimize their vibrating effects and personnel using these tools shall be taught how to operate them safely & how to maintain good circulation in hands.

The contractor shall arrange health check up for all the workers at the time of induction. Health check may have to be repeated if the nature of duty assigned to him is changed necessitating health check or doubt arises about his wellness. /Owner reserve the right to ask the contractor to submit test reports.

Weather Protection

Contractor shall take appropriate measures to protect workers from severe storms, solar radiations, poisonous gases, dust, etc. by ensuring proper usage of PPEs like Sun glasses, Sun screen lotions, respirators, dust masks, etc. and rearranging / planning the construction activities to suit the weather conditions.

Communication

All persons deployed at the work site shall have access to effective means of communications so that any untoward incident can be reported immediately and assistance sought by them.

All health & safety information shall be communicated in a simple & clear language easily understood by the local workforce.

Unsuitable Land Conditions

Contractor shall take appropriate measures and necessary work permits / clearances if work is to be done in or around marshy areas, river crossings, mountains, monuments, etc.

Under Water Inspection

Contractor shall ensure that boats and other means used for transportation, surveying & investigation works shall be certified seaworthy by a recognized classification society. It shall be equipped with all life saving devices like life jackets, adequate fire protection arrangements and shall possess communication facilities like cellular phones, wireless, walkie-talkie. All divers used for seabed surveys, underwater inspections shall have required authorized license, suitable life saving kit. Number of hours of work by divers shall be limited as per regulations. / Owner shall have the right to inspect the boat and scrutinize documents in this regard.

TOOL BOX MEETING (TBM)

Contractor shall conduct daily TBM with workers prior to start of work and shall maintain proper record of the meeting. A suggested format is given below. The TBM is to be conducted by the immediate supervisor of the workers.

TOOLBOX MEETING RECORDING SHEET

Date & Time

Subject

Presenter

Hazards involved

Precautions to be taken

Worker's Name

Signature

Section

Remarks, if any

The topics during TBM shall include

- Hazards related to work assigned on that day and precautions to be taken.
- Any forthcoming HSE hazards / events / instruction / orders, etc.

The above record can be kept in local language, which workers can read. These records shall be made available to / Owner whenever demanded.

TRAINING

Contractor shall ensure that all his personnel possess appropriate training to carry out the assigned job safely. The training should be imparted in a language understood by them and should specifically be trained about

- Potential hazards to which they may be exposed at their work place
- Measures available for prevention and elimination of these hazards.
- The topics during training shall cover, at the minimum;
- Education about hazards and precautions required
- Emergency and evacuation plan
- HSE requirements
- Fire fighting and First-Aid
- Use of PPEs
- Local laws on intoxicating drinks, drugs, smoking in force

Records of the training shall be kept and submitted to owner whenever demanded.

INSPECTION

The contractor shall carry out daily HSE inspection and record observations at a central location. These inspection records shall be freely accessible to Owner / representatives. The contractor shall also assist Owner / representatives during the HSE inspections conducted by them.

ADDITIONAL SAFETY REQUIREMENTS FOR WORKING INSIDE A RUNNING PLANT

As a minimum, the contractor shall ensure adherence to following safety requirements while working in or in the close vicinity of an operating plant :

- a) Contractor shall obtain permits for Hot work, Cold work, Excavation and Confined Space from Owner in the prescribed format.
- b) The contractor shall monitor, record and compile list of his workers entering the operational plant/unit each day and ensure & record their return after completing the job.

Ref no.: GGPL/KKD/C&P/SR 2565/2019-20/06

- c) Contractor's workers and staff members shall use designated entrances and proceed by designated routes to work areas only assigned to them. The workers shall not be allowed to enter units' area, tanks area, pump rooms, etc. without work authorization permit.
- d) Work activities shall be planned in such a way so as to minimize the disruption of other activities being carried out in an operational plant / unit and activities of other contractors.
- e) The contractor shall submit a list of all chemicals / toxic substances that are intended to be used at site and shall take prior approval of the Owner.
- f) Specific training on working in a hydrocarbon plant shall be imparted to the work force and mock drills shall be carried out for Rescue operations /First- Aid measures.
- g) Proper barricading/ cordoning of the operational units/plants shall be done before starting the construction activities. No unauthorized person shall be allowed to trespass. The height and overall design of the barricading structure shall be finalized in consultation with the Owner and shall be got approved from the Owner.
 - i) Care shall be taken to prevent hitting underground facilities such as electrical cables, hydrocarbon piping during execution of work.
 - i) Barricading with water curtain shall be arranged in specific/critical areas where hydrocarbon vapors are likely to be present such as near horton spheres or tanks. Positioning of fire tenders (from owner) shall also be ensured during execution of
 - j) Emergency evacuation plan shall be worked out and all workmen shall be apprised about evacuation routes. Mock drill operations may also be conducted.
 - k) Flammable gas test shall be conducted prior to any hot work using appropriate measuring instruments. Sewers, drains, vents or any other gas escaping points shall be covered with flame retardant tarpaulin.
 - l) Respiratory devices shall be kept handy while working in confined zones where there is a danger of inhalation of poisonous gases. Constant monitoring of presence of Gas / Hydrocarbon shall be done.
 - m) Clearance shall be obtained from all parties before starting hot tapping, patchwork on live lines and work on corroded tank roof.

- n) Positive isolation of line/equipment by blinding for welding/cutting/grinding shall be done. Closing of valve will not be considered sufficient for isolation.
- o) Welding spatters shall be contained properly and in no case shall be allowed to fall on the ground containing oil. Similar care shall be taken during cutting operations.
- p) The vehicles, cranes, engines, etc. shall be fitted with spark arresters on the exhaust pipe and got it approved from Safety Department of the Owner.
- q) Plant air should not be used to clean any part of the body or clothing or use to blow off dirt on the floor.
- r) Gas detectors should be installed in gas leakage prone areas as per requirement of Owner's plant operation personnel.
- s) An experienced full time safety personnel shall be exclusively deployed to monitor safety aspects in running plants.

HSE PROMOTION

The contractor shall encourage his workforce to promote HSE efforts at workplace by way of organizing workshops / seminars / training programmes, celebrating HSE awareness weeks & National Safety Day, conducting quizzes & essay competitions, distributing pamphlets, posters & material on HSE, providing incentives for maintaining good HSE practices and granting bonus for completing the job without any lost time accident.

04 DETAILS OF HSE MANAGEMENT SYSTEM BY CONTRACTOR

On Award of Contract

The Contractor shall prior to start of work submit his Health, Safety and Environment Manual of procedure and HSE Plans for approval by OWNER. The Contractor shall participate in the pre-start meeting with OWNER to finalize HSE plans including the following.

- Job procedure to be followed by Contractor for activities covering Handling of equipment's, Scaffolding, Electric Installation, describing the risks involved, actions to be taken and methodology for monitoring each.

- Organizations structure alongwith responsibility and authority records/ reports etc. on HSEactivities.

During job execution Implement approved Health, Safety and Environment management procedure including but not limited to as brought our under para 3.0. Contractor shall also ensure to:

- Arrange workmen compensation insurance, registration under ESI Act, third party liability insurance etc. as applicable.
- Arrange all HSE permits before start of activities (as applicable) like her work, confined space, work at heights, storage of Chemicals/explosives materials and its use and implement all precautions mentioned therein
- Submit timely the completed check list on HSE activities, Monthly HSE report, accident report, investigation report, etc. as per OWNER requirements. Compliance of instructions on HSE shall be done by Contractor and informed urgently to OWNER.
- Ensure that resident Engineers/Site-In-Charge of the Contractor shall amend all the Safety Committee/HSE meeting arranged by OWNER/ only in case of his absence from site, a seconds senior most person shall be nominated by him in advance and communicated to OWNER.
- Display at site office and work locations caution boards, list of hospitals for emergency services available.
- Provided posters, banners, for safe working to promote safety consciousness
- Carryout audits/inspection at sub Contractor work as per approved HSE documents & submit the reports for OWNER review.
- Assist in HSE audits by OWNER/ and submit compliance report.
- Generate & submit HSE records/ reports as per HSEPlan.
- Appraise OWNER on HSE activities atsite.

05 RECORDS

At the minimum, the contractor shall maintain/ submit HSE records in the following reporting formats:

- | | | |
|----|--|-------|
| 1. | Monthly HSE Checklist cum compliance report | HSE-1 |
| 2. | Accident /Incident Report | HSE-2 |
| 3. | Supplementary Accident / Incident Investigation report | HSE-3 |
| 4. | Near Miss Incident Report | HSE-4 |
| 5. | Monthly HSE Report | HSE-5 |
| 6. | Permit for working a theight | HSE-6 |
| 7. | Permit for working in confined space | HSE-7 |
| 8. | Permit for radiation work | HSE-8 |
| 9. | Permit for demolishing/dismantling | HSE-9 |

ANNEXURE-A

A. I.S. CODES ONHSE

SP:53 Safety code for the use, Care and protection of hand operated tools.

IS:818 Code of practice for safety and health requirements in electric and gas welding and cutting operations

IS:1179 Eye and Face precautions during welding, equipment etc.

IS:1860 Safety requirements for use, care and protection of abrasive grinding wheels.

IS: 1989(Part-I & II) Leather safety boots and shoes IS:2925Industrial Safety Helmets

IS:3016 Code of practice for fire safety precautions in welding and cutting operations.

IS:3043 Code of practice for earthing.

IS:3764 Code of safety for excavation work

IS:3786 Methods for computation of frequency and severity rates for industrial injuries and classification of industrial accidents.

IS:3996 Safety Code of scaffolds and ladders.

- IS:4082 Recommendation on stacking and storage of construction materials and components at site.
- IS:4770 Rubber gloves for electrical purposes
- IS:5121 Safety code for piling and other deep foundations
- IS:5216 (Part-I) Recommendations on Safety procedures and practices in electrical works
- IS:5557 Industrial and Safety rubber lined boots.
- IS:5983 Eye protectors
- IS:6519 Selection, care and repair of Safetyfootwear
- IS:6994 (Part-I) Industrial Safety Gloves (Leather & CottonGloves)
- IS:7293 Safety Code for working with construction Machinery IS: 8519 Guide for selection of industrial safety equipment for body
- IS: 9167 Ear protectors
- IS: 11006 Flash back arrestor (Flame arrestor)
- IS:1101 General and safety requirements for machine tools and their operation
- IS: 11057 Specification for Industrial safetynets
- IS: 11226 Leather safety footwear having direct moulded rubbersole
- IS: 11972 Code of practice for safety precaution to be taken when entering a sewerage system
- IS: 13367 Code of practice-safe use of cranes
- IS: 13416 Recommendations for preventive measures against hazards at working place

INTERNATIONAL STANDARDS ON HSE

Safety Glasses	:	ANSI Z 87.1, ANSI ZZ 87.1, AS 1337, BS 2092, BS 1542, BS 679, DIN 4646 / 58211
Safety Shoes	:	ANSI Z 41.1, AS 2210, EN 345 BS 1651
Hand Gloves	:	BS 6344, ANSI S 31.9
Ear Muffs	:	ANSI Z 89.1 / 89.2, AS 1808, BS 5240, DIN 4840 ANSI Z 87.1
Hard Hat	:	ANSI Z 89.1
Goggles	:	BS 4667, NIOSH ANSI Z 49.1
Face Shield	:	P-1 (Compressed Gas Association 1235 Jefferson Davis Highway, Arlington VA 22202 - USA)
Breathing Apparatus	:	
Welding & Cutting	:	
Safe handling of	:	

ANNEXURE-B

DETAILS OF FIRST AID BOX

SL. NO	DESCRIPTION	QUANTITY
1.	Small size Roller Bandages, 1 inch wide (Finger Dressing small)	6 Pcs.
2.	Medium size Roller Bandages, 2 inch wide (Hand and Foot Dressing)	6 Pcs.
3.	Large size Roller Bandages, 4 inch wide (Body Dressing Large)	6 Pcs.
4.	Large size Burn Dressing (Burn Dressing Large)	4 Pkts.
5.	Cotton wool (20 gms packing)	4 Pkts.
6.	Antiseptic Solution Dettol (100 ml.) or Savlon	1 Bottle
7.	Mercurochrome Solution (100 ml.) 2% in water	1 Bottle
8.	Ammonia Solution (20 ml.)	1 Bottle
9.	A Pair of Scissors	1 Piece
10.	Adhesive Plaster (1.25 cm x 5 m)	1 Spool
11.	Eye pads in Separate Sealed Packet	4 Pcs.
12.	Tourniquet	1 No.
13.	Safety Pins	1 Dozen
14.	Tinc. Iodine / Betadin (100 ml.)	1 Bottles
15.	Ointment for burns (Burnol 20 gms.)	1 Bottole
16.	Polythene Wash cup for washing eyes	1 No.
17.	Potassium Permanganate (20 gms.)	1 Pkt.
18.	Tinc. Benzoine (100 ml.)	1 Bottole
19.	Triangular Bandages	2 Nos.
20.	Band Aid Dressing	5 Pcs.
21.	Iodex / Moov (25 gms.)	1 Bottole
22.	Tongue Depressor	1 No.
23.	Boric Acid Powder (20 gms.)	2 Pkt.
24.	Sodium Bicarbonate (20 gms.)	1 Pkt.
25.	Dressing Powder (Nebasulf) (10 gms.)	1 Bottole
26.	Medicinal Glass	1 No.
27.	Duster	1 No.
28.	Booklet (English & Local Language)	1 No. each
29.	Soap	1 No.
30.	Toothache Solution	1 No.
31.	Eye Ointment	1 Bottle
32.	Vicks (22 gms.)	1 Bottle
33.	Forceps	1 No.
34.	Cotton Buds (5 nos.)	1 Pkt.
35.	Note Book	1 No.
36.	Splints	4 Nos.
37.	Lock	1 Piece
38.	Life Saving/Emergency/Over-the Counter Drugs	As decided at site
	Box size : 14" x 12" x 4"	

Note :The medicines prescribed above are only indicative. Equivalent medicines can also be used.

A prescription, in this regard, shall be required from a qualified Physician.

ANNEXURE - C

TYPE OF FIRES VIS-À-VIS FIRE EXTINGUISHERS

Fire Purpose	Fire Extinguishers				
	Water	Foam	CO ₂	Dry Powder	Multi (ABC)
Originated from paper, clothes, wood	√	√	Can control minor surface fires	Can control minor surface fires	√
Inflammable liquids like alcohol, diesel, petrol, edible oils, bitumen	x	√	√	√	√
Originated from gases like LPG, CNG, H ₂	x	x	√	√	√
Electrical Fires	x	x	√	√	√

Legend : √ Can be used
 X Not to be used

Note : Fire extinguishing equipment must be checked atleast once a year and after every use by an authorized person. The equipment must have an inspection label on which the next inspection date is given. Type of extinguisher shall clearly be marked on it.

ANNEXURE - D

Indicative List of Statutory Acts & Rules Relating to HSE

The Indian Explosives Act and Rules

The Motor Vehicle Act and Central Motor Vehicle Rules

The Factories Act and concerned Factory Rules

The Petroleum Act and Petroleum Rules

The Workmen Compensation Act

The Gas Cylinder Rules and the Static & Mobile Pressure Vessels Rules.

The Indian Electricity Act and Rules

The Indian Boiler Act and Regulations

The Water (Prevention & Control & Pollution) Act

The Water (Prevention & Control of Pollution) Cess Act

The Mines & Minerals (Regulation & Development) Act

The Air (Prevention & Control of Pollution) Act

The Atomic Energy Act

The Radiation Protection Rules

The Indian Fisheries Act

The Indian Forest Act

The Wild Life (Protection) Act

The Environment (Protection) Act and Rules

The Hazardous Wastes (Management & Handling) Rules

The Manufacturing, Storage & import of Hazardous Chemicals Rules

The Public Liability Act

The Building and Other Construction Workers (Regulation of Employment and Condition of service) Act

Other statutory acts Like EPE, ESIS, Minimum Wage Act

ANNEXURE - E

CONSTRUCTION HAZARDS, THEIR EFFECTS & PREVENTIVE MEASURES

ACTIVITY	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
(A) EXCAVATION Pit Excavation up to 3.0m	¼ Falling into pit	¼ Personal injury	¼ Provide guard rails/barricade with warning signal. ¼ Provide at least two entries/exits. ¼ Provide escape ladders.
	¼ Earth Collapse	¼ Suffocation / ¼ Breathlessness ¼ Buried	¼ Provide suitable size of shoring and strutting, if required. ¼ Keep soil heaps away from the edge equivalent to 1.5m or depth of pit whichever is more. ¼ Don't allow vehicles to operate too close to excavated areas. Maintain at least 2m distance from edge of cut. ¼ Maintain sufficient angle of repose. Provide slope not less than 1:1 and suitable bench of 0.5m width at every 1.5m depth of excavation in all soils except hard rock. ¼ Battering/benching the sides.
	¼ Contact with buried electric cables ¼ Gas/ Oil Pipelines	¼ Electrocutation ¼ Explosion	¼ Obtain permission from competent authorities, prior to excavation, if required. ¼ Locate the position of buried utilities by referring to plant drawings. ¼ Start digging manually to locate the exact position of buried utilities and thereafter use

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			mechanical means.
	¼ Same as above plus ¼ Flooding due to excessive rain/ underground water	¼ Can cause drowning situation	¼ Prevent ingress of water ¼ Provide ring buoys ¼ Identify and provide suitable size dewatering pump or well point system
	¼ Digging in the vicinity of existing Building/ Structure	¼ Building/ Structure may collapse ¼ Loss of health & wealth	¼ Obtain prior approval of excavation method from local authorities ¼ Use under-pining method ¼ Construct retaining wall side by side
	¼ Movement of vehicles / equipments close to the edge of cut.	¼ May cause cave-in or slides ¼ Persons may get buried	¼ Barricade the excavated area with proper lighting arrangements ¼ Maintain at least 2m distance from edge of cut and use stop block to prevent over-run. ¼ Strengthen shoring and strutting
	¼ Same as above plus ¼ Frequent cave-in or slides	¼ May cause severe injuries or prove fatal	¼ Battering/benching of sides ¼ Provide escape ladders
	¼ Flooding due to Hydrostatic testing	¼ May arise drowning situation	¼ Same as above plus ¼ Bail out accumulated water ¼ Maintain adequate ventilation
	¼ Improper handling of explosives	¼ May prove fatal	¼ Ensure proper storage, handling & carrying of explosives by trained personnel. ¼ Comply with the applicable explosive acts& rules.
	¼ Uncontrolled explosion	¼ May cause severe injuries or prove fatal	¼ Allow only authorized persons to perform blasting operations. ¼ Smoking and open

Dtd Document No.: MLEC/2565/01/31/14/EN001			
	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			flames are to be strictly prohibited.
	¼ Scattering of stone pieces in atmosphere	¼ Can hurt people	¼ Use PPE like goggles, face mask, helmets etc.
	¼ Entrapping of persons/ animals.	¼ May cause severe injuries or prove fatal	¼ Barricade the area with red flags and blow siren before blasting.
	¼ Misfire	¼ May explode suddenly	¼ Do not return to site for at least 20 minutes or unless announced safe by designated person.
	¼ Failure of pile-driving equipment	¼ Can hurt people	¼ Inspect Piling rigs and pulley blocks before the beginning of each shift.
	¼ Noise pollution	¼ Can cause deafness and psychological imbalance	¼ Use personal protective equipments like ear plugs, muffs, etc.
	¼ Extruding rods / casing	¼ Can hurt people	¼ Barricade the area ¼ an install sign boards ¼ Provide first-aid
	¼ Working in the vicinity of 'Live-Electricity'	¼ Can cause electrocution / asphyxiation	¼ Keep sufficient distance from Live-Electricity as per IS code. ¼ Shut off the supply, if possible ¼ Provide artificial/rescue breathing to he injured.
	¼ Air pollution by cement	¼ May affect Respiratory System	¼ Wear respirators or cover mouth and nose with wet cloth.
	¼ Handling of ingredients	¼ Hand s may get injured	¼ Use gloves and other PPE.
	¼ Protruding reinforcement rods.	¼ Feet may get injured	¼ Use Safety shoes. ¼ Provide platform above reinforcement for movement of workers.
	¼ Earthing of electrical mixers,	¼ Can cause electrocution / asphyxiation	¼ Ensure earthing of equipments and proper functioning of

Bid Document No.: MEC/2300/01/51/14/ER/001			
	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	vibrators, etc. not done		electrical circuit before commencement of work.
	¼ Falling of materials from height	¼ Persons may get injured	¼ Use hard hats ¼ Remove surplus material immediately from work place ¼ Ensure lighting arrangements during night hours.
	¼ Continuous pouring by same gang	¼ Cause tiredness of workers and may lead to accident.	¼ Insist on shift pattern ¼ Provide adequate rest to workers between subsequent pours.
	¼ Revolving or concrete mixer/ vibrators	¼ Parts of body or clothes may get entrapped.	¼ Allow only mixers with hopper ¼ Provide safety cages around moving motors ¼ Ensure proper mechanical locking of vibrator
	¼ Same as above plus ¼ Deflection in props or shuttering material	¼ Shuttering / props may collapse and prove fatal	¼ Avoid excessive stacking on shuttering material ¼ Check the design and strength of shuttering material before commencement of work ¼ Rectify immediately the deflection noted during concreting
	¼ Passage to work place	¼ Improperly tied and designed props / planks may collapse	¼ Ensure the stability and strength of passage before commencement of work ¼ Do not overload and under the passage.
	¼ Curtailment and binding of rods	¼ Persons may get injured	¼ Use PPE like gloves, shoes, helmets, etc. ¼ Avoid usage of shift tools
	¼ Carrying of rods for short distance/ at	¼ Workers may injure their hands and shoulders	¼ Provide suitable pads on shoulders and use safety

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	heights		<ul style="list-style-type: none"> ¾ gloves. ¾ Tie up rods in easily liftable bundles ¾ Ensure proper staging.
¾	Checking of clear distance/ cover with hands	¾ Rods may cut or injure the finger	¾ Use measuring devices tape, measuring rods, etc.
¾	Hitting projected rods and standing on cantilever rods	¾ Persons may get injured and fall down	<ul style="list-style-type: none"> ¾ Use safety shoes and avoid standing unnecessarily on cantilever rods ¾ Avoid wearing loose clothes
¾	Falling of material from height	¾ May prove fatal	<ul style="list-style-type: none"> ¾ Use helmets ¾ Provide safety nets
¾	Transportation of rods by trucks / trailers	¾ Protruded rods may hit the persons	<ul style="list-style-type: none"> ¾ Use red flags/lights at the ends ¾ Do not protrude the rods in front of or by the side of driver's cabin. ¾ Do not extend the rods 1/3rd of deck length or 1.5 m which is less
¾	Welding radiates invisible ultraviolet and infrared rays	¾ Radiation can damage eyes and skin.	<ul style="list-style-type: none"> ¾ Use specified shielding devices and other PPE of correct specifications ¾ Avoid throated tungsten electrodes for GTAW.
¾	Improper placement of oxygen and acetylene cylinders	¾ Explosion may occur	<ul style="list-style-type: none"> ¾ Move out any leaking cylinder ¾ Keep cylinder in vertical position ¾ Use trolley for transportation of cylinders and chain them ¾ Use flash back arrestors
¾	Leakage / cuts in hoses	¾ May cause fire	<ul style="list-style-type: none"> ¾ Purge regulators immediately and then turn off ¾ Never use grease or

	<i>TYPE OF HAZARD</i>	<i>EFFECT OF HAZARD</i>	<i>PREVENTIVE MEASURES</i>
			oil on oxygen line connections and copper fittings on acetylene lines $\frac{3}{4}$ Inspect regularly gas carrying hoses $\frac{3}{4}$ Always use red hose for acetylene & other fuel gases and black for oxygen.
	$\frac{3}{4}$ Opening-up of cylinder	$\frac{3}{4}$ Cylinder may burst	$\frac{3}{4}$ Always stand back from the regulator while opening the cylinder $\frac{3}{4}$ Turn valve slowly to avoid bursting $\frac{3}{4}$ Cover the lug terminals to prevent short circuiting.
	$\frac{3}{4}$ Welding of tanks, container or pipes storing flammable liquids	$\frac{3}{4}$ Explosion may occur	$\frac{3}{4}$ Empty & purge them before welding $\frac{3}{4}$ Never attach the ground cable to tanks, container or pipe storing flammable liquids $\frac{3}{4}$ Never use LPG for gas cutting
	$\frac{3}{4}$ Ionizing Radiation	$\frac{3}{4}$ Radiations may react with the skin and can cause cancer, skin irritation, dermatitis, etc.	$\frac{3}{4}$ Ensure safety regulations as per BARC/AERB before commencement of job. $\frac{3}{4}$ Cordon off the area and install Radiation warning symbols $\frac{3}{4}$ Restrict the entry of unauthorized persons $\frac{3}{4}$ Wear appropriate PPE and film badges issued by BARC/AERB
	$\frac{3}{4}$ Transportation and Storage of Radiography source	$\frac{3}{4}$ Same as above	$\frac{3}{4}$ Never touch or handle radiography source with hands $\frac{3}{4}$ Store radiography source inside a pit in an exclusive isolated

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<ul style="list-style-type: none"> storage room with lock and key arrangement. The pit should be approved by BARC/AERB ¾ Radiography source should never be carried either in passenger bus or in a passenger compartment of trains. ¾ BARC/AERB have to be informed before source movement. ¾ Permission from Director General of Civil Aviation is required for booking radio isotopes with airlines.
	¾ Loss of Radio isotope	¾ Same as above	<ul style="list-style-type: none"> ¾ Try to locate with the help of Survey Meter. ¾ Inform BARC/AERB(*) (*) Atomic Energy Regulatory Board (AERB), Bhabha Atomic Research Centre (BARC) Anushaktinagar, Mumbai - 400 094
	¾ Short circuiting	¾ Can cause Electrocution or Fire	<ul style="list-style-type: none"> ¾ Use rubberized hand gloves and other PPE ¾ Don't lay wires under carpets, mats or door ways. ¾ Allow only licensed electricians to perform on electrical facilities ¾ Use one socket for one appliance ¾ Ensure usage of only fully insulated wires or cables ¾ Don't place bare wire ends in a socket

Bid Document No.: MEC/ZSQQ/01/31/14/ER001

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<ul style="list-style-type: none"> ¼ Ensure earthing of machineries and equipments ¼ Do not use damaged cords and avoid temporary connections ¼ Use spark-proof/flame proof type field distribution boxes. ¼ Do not allow open/bare connections ¼ Provide all connections through ELCB ¼ Protect electrical cables / equipment's from water and naked flames ¼ Check all connections before energizing.
	<ul style="list-style-type: none"> ¼ Overloading of Electrical System 	<ul style="list-style-type: none"> ¼ Bursting of system can occur which leads to fire 	<ul style="list-style-type: none"> ¼ Display voltage and current ratings prominently with 'Danger' signs. ¼ Ensure approved cable size, voltage grade and type. ¼ Switch off the electrical utilities when not in use. ¼ Do not allow unauthorized connections. ¼ Ensure proper grid wise distribution of Power.
	<ul style="list-style-type: none"> ¼ Improper laying of overhead and underground transmission lines / cables 	<ul style="list-style-type: none"> ¼ Can cause electrocution and prove fatal 	<ul style="list-style-type: none"> ¼ Do not lay unarmored cable directly on ground, wall, roof of trees ¼ Maintain at least 3m distance from HT cables ¼ All temporary cables should be laid at least 750 mm below ground on 100 mm

	<i>TYPE OF HAZARD</i>	<i>EFFECT OF HAZARD</i>	<i>PREVENTIVE MEASURES</i>
			fine sand overlying by brick soling Provide proper sleeves at crossings/ intersections Provide cable route markers indicating the type and depth of cables at intervals not exceeding 30m and at the diversions / termination.
	Small fires can become big ones and may spread to the surrounding areas	Cause burn injuries and may prove fatal.	In case a fire breaks out, press fire alarm system and shout "Fire, Fire" Keep buckets full of sand & water/fire extinguishing equipment near hazardous locations Confine smoking to "Smoking Zones" only Train people for using specific type of fire equipments under different classes of fire Keep fire doors/ shutters, passages and exit doors unobstructed Maintain good house keeping and first-aid boxes (for detail refer Annex-2) Don't obstruct access to Fire extinguishers Do not use elevators for evacuation during fire Maintain lightning arrestors for elevated structures Stop all electrical motors with internal combustion. Move the vehicles from dangerous

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	¾ Short circuiting of electrical system	¾ Same as above ¾ Can cause Electrocutation	¾ Don't lay wires under carpets, mats or door ways ¾ Use one socket for one appliance ¾ Use only fully insulated wires or cables ¾ Do not allow open/bare connections ¾ Provide all connections through ELCB ¾ Ensure earthing of machineries and equipments
	¾ Crossing the Speed Limits (Rash driving)	¾ Personal injury	¾ Obey speed limits and traffic rules strictly ¾ Always expect the unexpected and be a defensive drive ¾ Use sat belts/helmets ¾ Blow horn at intersections and during overtaking operations. ¾ Maintain the vehicle in good condition ¾ Do not overtake on curves, bridges and slopes
	¾ Adverse weather condition	¾ Same as above	¾ Read the road ahead and ride to the left ¾ Keep the wind screen and lights clean ¾ Do not turn at speed ¾ Recognize the hazard, understand the defense and act correctly in time.
	¾ Consuming alcohol before and during he	¾ Same as above	¾ Alcohol and driving do not mix well. Either choose

Old Document No.: MEC/2565/01/3/14/ER001

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
	driving operation		<ul style="list-style-type: none"> ¼ alcohol or driving. ¼ If you have a choice between hitting a fixed object or an oncoming vehicle, hit the fixed object ¼ Quit the steering at once and become a passenger. Otherwise take sufficient rest and then drive. ¼ Do not force the driver to drive fast and round the clock ¼ Do not day dram while driving
	¼ Falling objects / Mechanical failure	¼ May prove fatal	<ul style="list-style-type: none"> ¼ Ensure effective braking system, adequate visibility for the drives, reverse warning alarm. ¼ Proper maintenance of the vehicle as per manufacturer instructions
	<ul style="list-style-type: none"> ¼ Bursting of piping ¼ Collapse of tanks ¼ Tanks flying off 	¼ May cause injury and prove fatal	<ul style="list-style-type: none"> ¼ Prepare test procedure & obtain CONSULTANT/ Owner's approval ¼ Provide separate gauge for pressurizing pump and piping/equipment ¼ Check the calibration status of all pressure gauges, dead weight testers and temperature recorders ¼ Take dial readings at suitable defined intervals and ensure most of them fall between 40-60% of the gauge scale range ¼ Provide safety relief valve (set at

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<p>pressure slightly higher than test pressure) while testing with air/nitrogen</p> <p>¼ Ensure necessary precautions, stepwise increase in pressure, tightening of bolts/ nuts, grouting, etc. before and during testing</p> <p>¼ Keep the vents open before opening any valve while draining out of water used for hydro testing of tanks</p> <p>¼ Pneumatic testing involves the hazard of released energy stored in compressed gas. Specific care must therefore be taken to minimize the chance of brittle failure during a pneumatic leak test. Test temperature is important in this regard and must be considered when the designer chooses the material of construction</p> <p>¼ A pressure relief device shall be provided, having a set pressure not higher than the test pressure plus the lesser of 345 KPa (50 psi) or 10% of the test pressure. The gas used as test fluid, if not air, shall be nonflammable and nontoxic.</p>
	¼ Person can fall down	¼ May sustain severe injuries or	¼ Provide guard rails/barricade at the

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
		prove fatal	work place ¼ Use PPE like safety belts, full body harness, life line, helmets, safety shoes, etc. ¼ Obtain a permit before starting the work at height above 3 meters ¼ Fall arrest systems like safety nets, etc. must be installed ¼ Provide adequate working space (min. 0.6 m) ¼ Tie/weld working platform with fixed support ¼ Use roof top walk ladder while working on a slopping roofs ¼ Avoid movement on beams
		¼ May hit the scrap / material stacked at the ground or in between	¼ Keep the work place neat and clean ¼ Remove the scrap immediately
	¾ Material can fall down	¼ May hit the workers working at lower levels and prove fatal.	¼ Same as above plus ¼ Do not throw or drop material or equipment from height ¼ All tools to be carried in a toolkit bags or on working uniform ¼ Remove scrap from the planks ¼ Ensure wearing of helmet by the workers at low level
	¼ Suffocation / drowning	¼ Unconsciousness, death	¼ Use respiratory devices, if required ¼ Avoid over crowding inside a confined space ¼ Provide Exhaust Fans for ventilation ¼ Do not wear loose clothes, neck ties,

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			etc. ¼ Fulfill conditions of the permit. ¼ Check for presence of hydrocarbons, O ₂ level ¼ Obtain work permit before entering a confined space ¼ Ensure that the connected piping of the equipment which is to be opened is pressure free, fluid has been drained, vents are open and piping is positively isolated by a blind flange
	¼ Presence of foul smell and toxic substances	¼ Inhalation can pose threat to life.	¼ Same as above plus ¼ Check for hydrocarbon and Aromatic compounds before entering a confined space ¼ Depute one person outside the confined space for continuous monitoring and for extending help in case of an emergency
	¼ Ignition / flame can cause fire	¼ Person may sustain burn injuries or explosion may occur	¼ Keep fire extinguishers at a hand distance ¼ Remove surplus material and scrap immediately ¼ Do not smoke inside a confined space ¼ Do not allow gas cylinders inside a confined space ¼ Use low voltage (24V) lamps for lighting ¼ Use tools with air motors or electric tools with max.

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			<ul style="list-style-type: none"> ¼ voltage of 24V Remove all equipments at the end of the day
	<ul style="list-style-type: none"> ¼ Failure of load lifting and moving equipments 	<ul style="list-style-type: none"> ¼ Can cause accident and prove fatal 	<ul style="list-style-type: none"> ¼ Avoid standing under the lifted load and within the operating radius of cranes ¼ Check periodically oil, brakes, gears, horns and tyre pressure of all moving machinery ¼ Check quality, size and condition of all chain pulley blocks, slings, U-clamps, D-shackles, wire ropes, etc. ¼ Allow crane to move only on hard, firm and leveled ground ¼ Allow lifting slings as short as possible and check gunny packings at the friction points ¼ Do not allow crane to tilt its boom while moving ¼ Install Safe Load Indicator ¼ Ensure certification by applicable authority.
	<ul style="list-style-type: none"> ¼ Overloading of lifting equipments 	<ul style="list-style-type: none"> ¼ Can cause electrocution and fire 	<ul style="list-style-type: none"> ¼ Safe lifting capacity of derricks and winches written on them shall be got verified. ¼ The max safe working load shall be marked on all lifting equipments ¼ Check the weight of columns and other heavy items painted on them and accordingly decide about the crane

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			capacity, boom and angle of erection Allow only trained operators and riggers during crane operation
	$\frac{3}{4}$ Overhead electrical wires	$\frac{3}{4}$ Can cause electrocution and fire	$\frac{3}{4}$ Do not allow boom or other parts of crane to come within 3 m reach of overhead HT cables $\frac{3}{4}$ Hook and load being lifted shall preferably remain in full visibility of crane operator.
	$\frac{3}{4}$ Person can fall down	$\frac{3}{4}$ Person may sustain severe injuries and prove fatal	$\frac{3}{4}$ Provide guard rails for working at height $\frac{3}{4}$ Face ladder while climbing and use both hands $\frac{3}{4}$ Ladders shall extend about 1m above landing for easy access and tying up purpose $\frac{3}{4}$ Do not place ladders against movable objects and maintain base at $\frac{3}{4}$ unit of the working length of the ladder $\frac{3}{4}$ Suspended scaffolds shall not be less than 500 mm wide and tied properly with ropes $\frac{3}{4}$ No loose planks shall be allowed $\frac{3}{4}$ Use PPE, like helmets, safety shoes, etc.
	$\frac{3}{4}$ Failure of scaffolding material	$\frac{3}{4}$ Same as above	$\frac{3}{4}$ Inspect visually all scaffolding materials for stability and anchoring with permanent structures. $\frac{3}{4}$ Design scaffolding

Doc Document No.: MEC/2565/01/31/14/EN/001

	TYPE OF HAZARD	EFFECT OF HAZARD	PREVENTIVE MEASURES
			for max. load carrying capacity Scaffolding planks shall not be less than 50x250 mm full thickness lumber or equivalent. These shall be cleared or secured and must extend over the end supports by at least 150mm and not more than 300 mm Don't overload the scaffolds Do not splice short ladders to make a longer one. Vertical ladders shall not exceed 6m.
	Material can fall down	Persons working at lower level gets injured.	Remove excess material and scrap immediately Carry the tools in a tool-kit bag only Provide safety nets
	Personal negligence and danger of fall	Can cause injury or casualty	Do not take rest inside rooms built for welding machines or electrical distribution system Avoid walking on beams at height Wear helmet with chin strap and safety belts when working at height Use hand gloves and goggles during grinding operations Cover or mark the sharp and projected edges Do not stand within the operating radius of cranes
	Lifting / slipping of	Same as above	Do not stand under the lifted load

	<i>TYPE OF HAZARD</i>	<i>EFFECT OF HAZARD</i>	<i>PREVENTIVE MEASURES</i>
	material		<ul style="list-style-type: none"> ¾ Stack properly all the materials. Avoid slippage during handling ¾ Control longer pieces lifted up by cranes from both ends ¾ Remove loose materials from height ¾ Ensure tightening of all nuts and bolts
	¾ Erection / lowering failure	¾ Can cause injury	<ul style="list-style-type: none"> ¾ Do not stand under the lifted Load ¾ Do not allow any person to come within the radii of the side boom handling pipes ¾ Check the load carrying capacity of the lifting tools and tackles ¾ Use safe Load Indicators ¾ Use appropriate PPEs
	¾ Other	¾ Same as above	<ul style="list-style-type: none"> ¾ Wear gum boots in marshy areas ¾ Allow only one person to perform signaling operations while lowering of pipes ¾ Provide night caps on pipes ¾ Provide end covers on pipes for stoppage of pigs while testing/cleaning operations.

FORMAT NO. : HSE-1,
REV. 0

HSE CHECKLIST CUM COMPLIANCE REPORT (1/6)

Project: _____

Contractor
: _____

Date: _____

Owner
: _____

Inspection By: _____

Report No.
: _____

SL. NO.	ITEM	YES	NO	REMARKS	ACTION
1	HOUSEKEEPING				
a)	Waste containers provided and used				
b)	Sanitary facilities adequate and clean				
c)	Passageways and Walkways clear				
d)	General neatness of working areas				
e)	Others				
2	PERSONNEL PROTECTIVE EQUIPMENT				
a)	Goggles; Shields				
b)	Face protection				
c)	Hearing protection				
d)	Safety shoes				
e)	Hand protection				
f)	Respiratory Masks etc.				
g)	Safety Belts				
h)	Safety Helmet/Hard Hat				
l)	Others				
3	EXCAVATIONS/OPENINGS				
a)	Openings properly covered or barricaded				
b)	Excavations shored				
c)	Excavations barricaded				
d)	Overnight lighting provided				
e)	Others				
4	WELDING & GAS CUTTING				
a)	Gas cylinders chained upright				
b)	Cables and hoses not obstructing				
c)	Screens or shields used				
d)	Flammable materials protected				
e)	Fire extinguisher(s) accessible				
f)	Others				
5	SCAFFOLDING				
a)	Fully decked platforms				
b)	Guard and intermediate rails in place				

ITEM	YES	NO	REMARKS	ACTIONS
Toe boards in place				
Adequate shoring				
Adequate access				
Others				
LADDERS				
Extension side rails 1m above				
Top of landing				
Properly secured				
Angle + 70 from horizontal				
Others				
HOISTS, CRANES AND DERRICKS				
Condition of cables and sheaves OK				
Condition of slings, chains, hooks and eyes OK				
Inspection and maintenance logs maintained				
Outriggers used				
Signs/barricades provided				
Signals observed and understood				
Qualified operators				
Others				
MACHINERY, TOOLS AND EQUIPMENT				
Proper instruction				
Safety devices				
Proper cords				
Inspection and maintenance				
Others				
VEHICLE AND TRAFFIC				
Rules and regulations observed				
Inspection and maintenance				
Licensed drivers				
Others				
TEMPORARY FACILITIES				
Emergency instructions posted				
Fire extinguishers provided				
Fire-aid equipment available				
Secured against storm damage				
General neatness				
In accordance with electrical requirements				
Others				
FIRE PREVENTION				
Personnel instructed				
Fire extinguishers checked				
No smoking in Prohibited Areas				

ITEM	YES	NO	REMARKS	ACTION
Others				
ELECTRICAL				
Use of 3-core armoured cables				
Usage of 'All insulated' or 'double insulated' electrical tools				
All electrical connection are routed through ELCB				
Natural Earthing at the source of power (main DB)				
Continuity and tightness of earth conductor				
Covering of junction boxes, panels and other energized wiring places				
Ground fault circuit interrupters provided				
Prevention of tripping hazards				
Others				
HANDLING AND STORAGE OF MATERIALS				
Properly stored or stacked				
Passageways clear				
Others				
FLAMMABLE GASES AND LIQUIDS				
Containers clearly identified				
Proper storage				
Fire extinguishers nearby				
Others				
WORKING AT HEIGHT				
Erection plan and work permit obtained				
Safety nets				
Full body harness and lanyards; chute lines				
Health Check record available for workers going up?				
Others				
CONFINED SPACE				
Work permit obtained				
Test for toxic gas and sufficient availability of oxygen conducted				
At least one person outside the confined space for monitoring deputed				
Availability of sufficient means of entry, exit and ventilation				
Fire extinguishers and first-aid facility ensured				
Lighting provision made by using 24V lamps				
Proper usage of PPEs ensured				
RADIOGRAPHY				
Proper storage and handling of source as per BARC / AREB guidelines				
Working permit obtained				
Cordoning of the area done				

	ITEM	YES	NO	REMARKS	ACTION
	Use of appropriate PPE's ensured				
	Proper training to workers/supervisors imparted				
	Minimum occupancy of workplace ensured				
	HEALTH CHECKS				
	Workers medically examined and found to fit for working : i) At heights ii) In confined space.				
	Availability of First-aid facilities				
	Proper sanitation at site, office and labour camps				
	Arrangement of medical facilities				
	Measures for dealing with illness				
	Availability of Portable drinking water for workmen & staff				
	Provision of crèches for children				
	Stand by vehicle available for evacuation of injured.				
	ENVIRONMENT				
	Chemical and other effluents properly disposed				
	Cleaning liquid of pipes disposed off properly				
	Seawater used for hydro-testing disposed off as per agreed procedure				
	Lubricant Waste/Engine oils properly disposed				
	Waste from Canteen, offices, sanitation etc. disposed properly				
	Disposal of surplus earth, stripping materials, oily rags and combustible materials done properly				
	Green belt protection				

Signature of Resident Engineer with Seal

FORMAT NO. : HSE-2, REV. 0

ACCIDENT / INCIDENT REPORT
(To be submitted by Contractor after every Accident / Incident within 24 hours)

Report No: _____
Date: _____

Name of Site:- _____
CONTRACTOR _____

Type of Accident / Incident : Fatal Other Lost Time Non Loss Time First-Aid case

NAME OF THE INJURED.....
AGE
FATHER'S NAME.....
SUB-CONTRACTOR M/S.....
DATE & TIME OF ACCIDENT.....
LOCATION

BRIEF DESCRIPTION OF ACCIDENT

CAUSE OF ACCIDENT

NATURE OF INJURY/DAMAGE

MEDICAL AID PROVIDED/ACTIONS TAKEN

INTIMATION TO LOCAL AUTHORITIES (IF APPLICABLE)

DATE:

SIGNATURE OF CONTRACTOR
WITH SEAL

To : OWNER.....
: RCM/SITE-IN-CHARGE, MECON

1 COPY
3 COPIES

FORMAT NO. : HSE-3, REV. 0

SUPPLEMENTARY ACCIDENT / INCIDENT INVESTIGATION REPORT

Supplementary to Report No: _____ (Copy enclosed)

Project: _____
Name of Work : _____
Contractor: _____

Site: _____
Date: _____
Work Order / LOI No. : _____

NAME OF THE INJURED
AGE :
SUB-CONTRACTOR M/S.....
DATE & TIME OF ACCIDENT / INCIDENT
LOCATION.....

BRIEF DESCRIPTION & CAUSE OF A ACCIDENT/ INCIDENT

NATURAL OF INJURY/DAMAGE

COMMENTS FROM MEDICAL PRACTITIONER WHO ATTENDED THE VICTIM/INJURED

SUGGESTED IMPROVEMENT IN THE WORKING CONDITION IF ANY

LOSS OF MANHOURS AND IMPACT ON SITE WORKS

ANY OTHER COMMENT BY SAFETY OFFICER.

DATE:

SIGNATURE OF CONTRACTOR
WITH SEAL

To : OWNER.....
: RCM/SITE-IN-CHARGE, MECON

1 COPY
3 COPIES

FORMAT NO. : HSE-4, REV. 0

NEAR MISS INCIDENT - SUGGESTED PROFORMA

Name of Site : _____ Report No: _____
Name of Work : _____ Date : _____
Contractor : _____

INCIDENT REPORTED BY : _____

DATE & TIME OF INCIDENT : _____

LOCATION : _____

BRIEF DESCRIPTION OF INCIDENT

PROBABLE CAUSE OF INCIDENT

SUGGESTED CORRECTIVE ACTION

STEPS TAKEN TO AVOID RECURRENCE

YES NO

DATE:

To : OWNER.....
: RCM/SITE-IN-CHARGE, MECON

SIGNATURE OF CONTRACTOR
WITH SEAL

1 COPY
3 COPIES

FORMAT NO. : HSE-5, REV. 0

MONTHLY HEALTH, SAFETY & ENVIRONMENT (HSE) REPORT
(To be submitted by each Contractor)

Actual work start Date: _____ For the Month of: _____
 Project: _____ Report No: _____
 Name of the Contractor: _____ Status as on: _____
 Name of Work: _____ Name of Safety officer: _____

ITEM		UPTO PREVIOUS MONTH	THIS MONTH	CUMULATIVE
a)	Average number of Staff & Workmen (average daily headcount, not man days)			
b)	Manhours Worked			
c)	Number of HSE meeting organized at site			
d)	Number of HSE awareness programmes conducted at site			
e)	Number of Lost Time Accidents (LTA)	Fatal		
		Other LTA		
f)	Number of Loss time Injuries (LTI)	Fatalities		
		Other LTI		
g)	Number of Loss Time Accidents			
h)	Number of First Aid Cases			
i)	Number of Near Miss Incidents			
j)	Man-days lost due to accidents			
k)	LTA Free Manhours i.e. Number of LTA free manhours from the Lst LTA			
l)	Compensation cases raised with Insurance			
m)	Compensation case resolved and paid to workmen			
n)	Whether workmen compensation policy taken	Y/N		
o)	Whether workmen compensation policy valid	Y/N		
p)	Whether workmen registered under ESI Act	Y/N		

Remark

DATE: _____ Safety Officer /Resident Engineer
(Signature and Name)

To : OWNER
: RCM, MECON (2 COPIES)

PERMIT FOR WORKING AT HEIGHT (ABOVE 2 METER)

Project Site : Sr. No.:
 Name of the work: Date:
 Name of Contractor : Nature of Work :
 Total No.of Workers: Exact location of work :
 Duration of work: from to

The following items have been checked and compliance shall be ensured during the currency of the permit:

Sl.	ITEM	DONE	NOT REQD.
1.	Equipment/Work Area inspected	<input type="checkbox"/>	<input type="checkbox"/>
2.	Considered hazard from other routine/non-routine operations and concerned person alerted	<input type="checkbox"/>	<input type="checkbox"/>
3.	ELCB provided	<input type="checkbox"/>	<input type="checkbox"/>
4.	Proper lighting provided	<input type="checkbox"/>	<input type="checkbox"/>
5.	Area cordoned off.	<input type="checkbox"/>	<input type="checkbox"/>
6.	Precautions against public traffic taken	<input type="checkbox"/>	<input type="checkbox"/>
7.	Sound Scaffolding provided	<input type="checkbox"/>	<input type="checkbox"/>
8.	Adequate protected Platform provided	<input type="checkbox"/>	<input type="checkbox"/>
9.	Acces and Exit to the area (Ladder properly fixed)	<input type="checkbox"/>	<input type="checkbox"/>
10.	Floor Openings covered	<input type="checkbox"/>	<input type="checkbox"/>
11.	Safety Net provided	<input type="checkbox"/>	<input type="checkbox"/>
12.	Heath check of personnel	<input type="checkbox"/>	<input type="checkbox"/>

A. Following personal protective equipment are provided (mark) and used as relevant Safety helmet/Gloves/Goggles/Shoes/Face Shield/Life Line/Safety Belt/Safety Harness.

B. This permit shall be available at the work site at all times.

- C. Permit shall be issued for maximum one week only (Monday to Sunday).
- D. This permit shall be applicable in non-operational areas.
- E. After completion of the work, used permits shall be preserved for record purposes.
- F. Additional precautions, if any

Permission is granted to work (See overleaf) = Yes/No

Name of Contractor’s Supervisor
(Initiator)

Name of Contractor’s Safety Officer
(Issuing Authority)

GRANT OF PERMIT AND EXTENSIONS

Sl. No.	Validity Period From To	Work time FromHrs. ToHrs.	Initiator (Supervisor of Contractor)	Issuing Authority (Safety Officer) of Contractor	Verification by CONSULTANT with date

Additional safety instructions, if any.

CONFINED SPACE ENTRY PERMIT

Project Site : Sr. No.:
 Name of the work: Date:
 Name of Contractor : Nature of Work :
 Exact location of work :

Safety Requirements : POSITIVE ISOLATION OF THE VESSEL IS MANDATORY

(A) Has the equipment been ?

Y NR isolated from power / steam / air isolated from liquid or gases depressurized&/or drained blanked / blinded / disconnected	Y NR water flushed &/or steamed Manways open & ventilated cont. inset gas flow arranged adequately cooled	Y NR radiation sources removed Proper lighting provided
---	---	---

(B) Expected Residual Hazards

Y NR lack of O ₂ corrosive chemicals Heat / steam / frost	Y NR combustible gas / liquid pyrophoric iron / scales high humidity	Y NR H ₂ S / toxic gases electricity / static ionizing radiation
---	---	--

(C) Protective Measures

Y NR gloves protective clothing Grounded air educater / blower / AC Fire fighting arrangements	Y NR ear plug / muff dust / gas / air line mask attendant with SCBA / air mask safety harness & lifeline	Y NR goggles / face shield personal gas alarm rescue equipment / team communication equipment
--	--	---

Authorization / Renewal (It is safe to enter the confirmed space)

Date	No. of Persons Allowed	Name of Persons allowed	Signature		Time		Signature e Workman
			Contractor's Supervisor	Contractor's Safety Officer	From	To	

Permit Closure :

- | | | | | | | |
|-----|--|------------|--|--------------------|--|------------------|
| (A) | Entry | was closed | | stopped | | will continue on |
| (B) | Site left in a safe condition
Housekeeping done | | | | | |
| (C) | Multi lock | removed | | key transferred | | |
| | Ensured all men have come out | | | Manways barricaded | | |

FORMAT NO. : HSE-8, REV. 0

RADIATION WORK PERMIT

Project : Sr. No.:
 Name of the work : Date:
 Name of Contractor : Job No. :

Location of work :
 Source Strength :
 Cordoned distance (m) :

Name of Radiographing agency : Approved by Owner / MECON

The following items have been checked & compliance shall be ensured during currency of the permit :

S. No.	Item Description	Done
1.	Safety regulations as per BARC/AERB ensured while source in use/ in transit & during storage.	<input type="checkbox"/>
2.	Area cordoned off.	<input type="checkbox"/>
3.	Lighting arrangements for working during nights ensured.	<input type="checkbox"/>
4.	Warning signs / flash lights installed.	<input type="checkbox"/>
5.	Cold work permit taken (if applicable)	<input type="checkbox"/>
6.	PPEs like film badges, dosimeters used.	<input type="checkbox"/>

Additional precautions, if any _____

(Radiography Agency's BARC / AREB authorized Supervisor) (Contractor's Safety Officer)

Permission is granted.

Permit is valid from _____ AM/PM _____ Date to _____ AM/PM _____
 Date

(Signature of permit issuing authority)

Name : _____ Designation : _____ Date : _____

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Permit renewal :

Permit extended upto		Additional precautions required, if any.	Sign of issuing authority with date
Date	Time		

Work completed / stopped / area cleared at _____ Hrs. of Date _____

(Sign of permit issuing authority)
Name :

RADIATION WORK PERMIT

Project : Sr. No.:
 Name of the work : Date:
 Name of Contractor : Job No. :

Name of Contractor :

Line No. / Equipment No. /Structure to be dismantled :

Location details of dismantling / demolition with sketch : (Clearly indicate the area)
--

The following items have been checked & compliance shall be ensured during currency of the permit :

S. No.	Item Description	Done	Not Applicable
1.	Services like power, gas supply, water, etc. disconnected.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Dismantling / Demolishing method reviewed & approved.	<input type="checkbox"/>	<input type="checkbox"/>
3.	Usage of appropriate PPEs ensured.	<input type="checkbox"/>	<input type="checkbox"/>
4.	Precautions taken for neighboring structures	<input type="checkbox"/>	<input type="checkbox"/>
5.	First-Aid arrangements made	<input type="checkbox"/>	<input type="checkbox"/>
6.	Fire fighting arrangements ensured	<input type="checkbox"/>	<input type="checkbox"/>
7.	Precautions taken for blasting	<input type="checkbox"/>	<input type="checkbox"/>

(Contractor's Supervisor)

(Contractor's Safety Officer)

Permission is granted.

(Permit issuing authority)

Name :

Date :

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Completion Report :

Dismantling / Demolishing is completed on _____ Date at _____ Hrs.

Materials / debris transported to identified location

Tagging completed (as applicable)

Services like power, gas supply, water, etc. restored

(Permit issuing authority)

SECTION - V

SPECIAL

CONDITIONS OF CONTRACT

(SCC)

ANNEXURES TO SCC

CONTENTS

Annexure-1	:	Scope of Work
Annexure-2	:	Scope of Supply
Annexure-3	:	Time Schedule
Annexure-4	:	Measurement of Work
Annexure-5	:	Terms of Payment
Annexure-6	:	Voids
Annexure-7 material	:	Conditions for issue & reconciliation of
Annexure-8	:	Construction equipment to be deployed
Annexure-9	:	Schedule of Labour Rate
Annexure-10	:	Schedule of Equipment Hourly Rental Rate

SCOPE OF WORK

ANNEXURE-1 TO SCC

1.1 PROJECT DESCRIPTION

Godavari Gas Pvt. Limited, a JV company of M/s APGDC and M/s HPCL, is engaged in development of CNG & City Gas Distribution Networks (CGDN) in Geographical Areas in East and West Godavari Dist. for distribution of CNG and PNG to various consumer segments.

Presently, Godavari Gas is planning to implement CNG & City Gas Distribution Network (CGDN) to supply Natural Gas to domestic, Commercial, Industrial and Automobile Consumers in the towns of Rajahmundry, Amalapuram, Bhimavaram, Tadepalligudem, Eluru, Tanuku, Tuni, Nidadavole/Kothapeta/Ravulapaem, Draksharamam/Mandapeta/Ramachandrapuram, Narsapur/Palacollu in the Geographical Area (GA) of East and West Godavari Dist..

This tender deals the extension of pipeline network in East Godavari & West Godavari for supplying Natural Gas to Commercial & Industrial consumers. It is proposed to execute the work of MDPE Pipe laying, Supply of CS Pipe & Fittings for MRS erection, fabrication, modification & installation for industrial and commercial connections.

1.2 SCOPE OF WORK

The present document gives the specification to be adopted for procurement of CS pipes & fittings, fabrication, erection, installation, and commissioning of MRS (Meter Regulating Skid) along with internal piping (on request) on downstream of MRS to supply Natural Gas for commercial and industrial customers in East Godavari and West Godavari complying with OISD standards & petroleum and Natural Gas Regularly Board (PNGRB) Guidelines..

A city gas distribution system, connection to commercial and industrial customers is a major activity and it consists of variety of gas equipment from high flow burners, simple furnace to complex thermo pack or boiler. PE line carrying gas at 4 bar pressure is laid underground from downstream of FRS/DRS to connect MRS (Meter regulator System) (installed at customer premise), which regulates the pressure and meters gas supply as per the customer requirement. The specification for PE laying is enclosed in tender document.

The selection of site for installation of MRS is key to safety and integrity of gas installation and public. It shall be installed in a well-ventilated area and away from building, utilities or major installation with easy approach and access for maintenance.

The scope of contractor includes receiving, taking over, transportation and unloading of free issue material (Meter, Regulator and isolation brass valves) from GGPL's designated place to site or vice versa. It also includes procurement and supply of all materials (butt end or threaded) CS pipe & fittings, Ball valves, Rubber Hoses, Brass jets/Nozzles

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consumables like spiral wound & insulating gaskets, fasteners, painting material, cold applied tape, tools & tackles, clamps, pressure gauges, skilled and unskilled manpower etc, for satisfactory completion of the work.

The designing and installation procedures shall also be provided by the contractor to GGPL before start of installation work.

The bidder/ contractor shall procure & supply the following materials/ items/ equipment but not limited to:

Procurement and supply of all items /material viz. pipes, ball valves, fittings and flanges, Brass Valves, Globe Valves, gaskets, fasteners, clamps and supports (refer enclosed drawings), pressure gauges, Cold applied tapes, consumables and other tools and tackles for fabrication, erection, installation, commissioning of MRS & internal piping.

Procurement & Supply of MDPE Fittings, HDPE pipes, SS tubing, and warning mat.

Procurement & Supply of safety devices Gas Detector, solenoid valves and slam shutoff valves etc.

Supply of items/ materials other than free issue materials (MDPE Pipe, Meter & Regulator) for work like providing utilities (water compressed air, electricity, nitrogen gas etc.) manpower (skilled and unskilled), consumables (welding rods, filler wires, lubricants/oils, waste cottons etc.) etc. for fabrication of MRS & internal piping is included in the scope.

Procurement & supply of steel /RCC structures for working platforms adders, pipe supports, cross over etc.

Procurement & supply of personnel protective equipment (PPE).

Procurement & supply of first aid facilities.

Procurement & supply of painting material as per specification of paintwork.

Procurement & supply of any other items not listed above, but required to complete the entire scope of work. All the above procurement and supply of listed items/material shall be in line with the specification. Data sheets, GGPL approved drawing and QAP and shall be procured of approved vendor makes as enclosed in tender documents.

Contractor shall be liable for supply and installation of required fittings, tubing etc. necessary for installation of PT / RT / Flow input for EVC / Data Logger and commissioning shall be deemed complete only after the complete installation of PT / RT / Flow Input along with EVC / Data logger.

SCOPE OF SUPPLY

(ANNEXURE-2 TO SPECIAL CONDITIONS OF CONTRACT)

1.0 SCOPE OF SUPPLY

1.1 Owner's Scope of Supply (Free Issue Item)

Owner's scope of supply shall be as specified in Particular Job Specification, Technical Specifications, Schedule of Rates & various other parts of the Bidding Document.

Free Issue Materials shall be issued to the Contractor from the designated store(s) of Gail Gas Ltd. Contractor shall be responsible for lifting the free issue materials from Owner's storage point(s) and transporting the same to work site(s) at his own cost within the GAs of East & West Godavari Districts.

Conditions for Issue and Reconciliation of Materials shall be as per Document enclosed as Annexure-7 to Special Conditions of Contract.

1.2 Contractor's Scope of Supply

All materials except what is under Owner's scope of supply as mentioned in Clause No. 1.1 above, and required for successful completion of works in all respects shall be supplied by the Contractor and the cost of such supply shall be deemed to have been included in the quoted price without any additional liability on the part of Owner.

TIME SCHEDULE

(ANNEXURE-3 TO SPECIAL CONDITIONS OF CONTRACT)

Name of Work:

RATE CONTRACT FOR MRS FABRICATION AND INTERNAL PIPING WORK FOR INSTALLATION OF INDUSTRIAL & COMMERCIAL CONNECTIONS

AS DETAILED IN SOR FOR CITY GAS DISTRIBUTION PROJECT IN EAST & WEST GODAVARI GAS

Time of Completion:

Two years from date of issue of Fax/Letter of intimation and extendable upto 6 months under same rates & terms & conditions.

The above time schedule is inclusive of mobilization period. The mobilization is to be done within two weeks of time or as directed by EIC.

Note:

1. The time of completion shall be reckoned from the date of award of contract, which shall be the date of issue of letter/ Fax of Intent.
2. The time indicated is for completing all the works in all respects as per specifications, codes, drawings and instructions of Engineer-in-charge.
3. It should be noted that the period of construction given above includes preparation of drawings (if required), procurement and supply of materials including their inspection & testing, mobilization at site, construction, laying, fabrication, erection inspection, any re-working, re-routing, testing, rectification (if any), pre-commissioning, commissioning and demobilization works etc. complete in all respects to the entire satisfaction of Owner/ Engineer-in-charge.

MEASUREMENT OF WORK

(ANNEXURE-4 TO SPECIAL CONDITIONS OF
CONTRACT - TECHNICAL)

1.0 GENERAL

1.1 The mode of measurement shall be as mentioned in relevant standard specification incorporated in the Bidding Document. Any other mode of measurements not covered in above specifications shall be followed in accordance with relevant BIS codes/ Schedule of Rates/ Specifications etc. and/ or as decided by Engineer-in-charge.

1.2 Payment will be made on the basis of joint measurements taken by Contractor and certified by Engineer-in-charge. Measurement shall be based on “Approved for Construction” drawings, to be the extent that the work conforms to the drawings and details are adequate.

1.3 Wherever work is executed based on instructions of Engineer-in-charge or details are not adequate in the drawings, physical measurements shall be taken by Contractor in the presence of Engineer-in-charge.

1.4 Measurements of weights shall be in kg or metric tonnes corrected to the nearest Kilogram. Linear measurements shall be in meters corrected to the nearest centimeters.

1.5 The weights mentioned in the drawing or shipping list shall be the basis for payment. If mountings for panels etc. are packed separately, their erection weights shall include all mountings.

1.6 Welds, bolts, nuts, washers etc. shall not be measured. Rates for structural steelwork shall be deemed to include the same.

1.7 No other payment either for temporary works connected with this Contractor for any other item such as weld, shims, packing plates etc. shall be made. Such items shall be deemed to have been included for in the rates quoted.

1.8 Measurement will be made for various items under schedule of rates on the following basis as indicated in the unit column.

- i) Weight: MT or Kg
- ii) Length: M (Meter)
- iii) Number: No.
- iv) Volume : Cu.M
- v) Area : Sq.M

2.0 PIPING

2.1 Length of pipes shall be measured along the curvilinear centre of the pipelines laid/installed and shall include all types of fittings, bends etc. but excluding all types of valves. Length of valves shall be excluded from piping measurement and shall be considered on number basis.

PAYMENT TERMS

(ANNEXURE-5 TO SPECIAL CONDITIONS OF CONTRACT)

Pending completion of the whole works, provisional progressive payments for the part of work executed by the contractor shall be made by Owner on the basis of said work completed and certified by the Owner's representative as per the agreed milestone payment schedule and the percentage break-ups given below.

Contractor shall submit his invoices to the Owner's representative fortnightly in the manner as instructed by Owner. Each invoice will be supported by documentation acceptable to Owner and certified by the Owner's representative.

Payments made by owner to the contractor for any part of the work shall not deemed as an acceptance of the work by the Owner.

Payment shall be made as per the following terms:

PE and Related work

- i) 70 % on completion of laying work including jointing of pipeline, backfilling and compaction for the completed stretch as per scope of work and on submission of DPR/WPR and graphs.
- ii) 20 % on testing & commissioning of completed network and submission of #As Built, As Graph Drawing# subject to installation of permanent markers in the network area.
- iii) Balance on PO closure and submission of all documents as per contract and reconciliation of free issue material.

CS Pipe & Fitting, Supply, Fabrication & Installation work

- i) 90% after installation, testing & commissioning of MRS & internal piping work.
- ii) Balance on PO closure and submission of all documents as per contract and reconciliation of free issue material.

Liaisoning Work Payment for the liaisoning work shall be made for the actual length of network laid as follows:

- i) 90% payment for the actual length of network laid (for which permission letter from statutory bodies is obtained and submitted to GGPL).
- ii) Balance on PO closure and submission of all documents as per contract and reconciliation of free issue material.

Restoration Work

- i) 80 % after completion of restoration and certification by Third Party Inspection Agency nominated by GGPL.
- ii) 10 % after obtaining NOC from respective local authorities / Third party agencies designated by land owning agencies / Resident Welfare Association etc..
- iii) Balance after completion of all works and closure of PO.

Other Works (Not Covered Above)

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- i) 90% progressively on completion of individual item work as certified in monthly progress bill.
- ii) Balance on completion of all works in all respects and acceptance thereof by Engineer-in-Charge and closure of PO.

Note: Further breakup of each activity for the payment purpose can be done depending upon the site situation/requirement after due approval from GGPL / Consultant.

3. Payment Methodology

- I. The Contractor shall raise invoices on fortnightly basis. Bidder shall enclose all documents as per checklist issued by GGPL/ MECON including during Kickoff meeting
- II. The payment of the contractor will be released within 30 days from the date of receipt of complete invoice as per terms and condition of the contract.
- III. Employer will release payment through e-payments only as detailed in bidding document.
- IV. All payments against running bills are advance against the work and shall not be taken as Final acceptance of work / measurement carried out till the final bill.
- V. Further break-up of Lumpsum Prices, if deemed necessary, for any progressive payment of individual item may be considered for approval after such proposal with due details for such requirement is put forward by the contractor.
- VI. Bills shall be raised by contractor in line with check list attached in Tender document.

**CONDITIONS FOR ISSUE AND RECONCILIATION
OF MATERIAL**

(ANNEXURE-7 TO SPECIAL CONDITIONS OF CONTRACT)

1.0 CONDITIONS FOR ISSUE OF MATERIALS

Whenever any material is issued by Owner, following conditions for issue of material in addition to other conditions specified in the contract shall be applicable.

1.1 Necessary indents will have to be raised by the Contractor as per procedure laid down by the Engineer-in-charge from time to time, when he requires the above material for incorporation in permanent works.

1.2 Materials will be issued only for permanent works and not for temporary works, enabling works etc. unless specifically approved by the Engineer-in-charge and the same shall not be taken into account for the purpose of materials reconciliation.

1.3 The contractor shall bear all other cost including lifting, carting from issue points to work site/ contractor's store, custody and handling etc. and return of surplus/ serviceable scrap materials to Owner's storage points to be designated by the Engineer-in-charge etc. No separate payment for such expenditure will be made.

1.4 The contractor shall be responsible for proper storage, preservation and watch& ward of the materials.

1.5 For Free Issue material, the scope covers receiving and transporting to a distance up to 60 km from Client's store i.e. anywhere in the Geographical Areas of East & West Godavari districts.

1.6 Reconciliation of Owner supplied materials

1.6.1 Every month, the contractor shall submit an account for all materials issued by Owner in the pro-forma prescribed by the Engineer-in-charge. On completion of the work the contractor shall submit "Material Appropriation Statement" for all materials issued by the Owner in the pro-forma prescribed for the project.

Waste materials like part lengths of pipes and other partly used items are the property of GGPL and must be returned to the store with the appreciate documentation so that they can be considered as part of the material reconciliation.

Item	Unaccountable	Scrap
Regulators	0%	0%
Meters	0%	0%
PE Pipes	2%	2% (less than 2 Mtr.)

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Consumables (free issue, if any)	Discretionary	
----------------------------------	---------------	--

* In case supplied by Owner

Unaccountable wastage/ scrap shall be at actual as per site assessment subject to maximum as stated above.

The percentage allowance shall be accounted on the basis of final measurement book.

1.6.2 All unused, scrap materials and salvageable materials shall be the property of the Owner and shall be returned by the Contractor category-wise at his cost to the Owner's designated store yard(s). In case the Contractor fails to do so/ or exceeds the limits of allowances specified above for scrap/ serviceable materials, then recovery for such quantities not returned as well as returned in excess of permitted limit by the Contractor will be done at the penal rate i.e. 125% of landed cost at the time of final bill/ closing of contract by Engineer-in-charge shall be effected from the Contractor's bill(s) or from any other dues of the Contractor to the Owner. Contractor shall be responsible for the adjustment/ weight/ measurement of the surplus materials to be returned to the store. Contractor shall also be responsible for suitable segregation of returned materials into separate stacks of serviceable and scrap materials.

1.6.3 Wherever certain material is covered under Contractor's scope of supply whether part or in full for any item of work covered under SOR, no allowance towards wastage/ scrap etc. shall be accounted for during execution stage.

CONSTRUCTION EQUIPMENT TO BE DEPLOYED
(ANNEXURE-8 TO SPECIAL CONDITIONS OF CONTRACT)**ANNEXURE-8**

S. No.		Min. Qty. to be deployed
1	Electro-fusion machine with Bar Code and control box with leads	1
2	Moling Equipment	As required
3	PE Squeeze Tools for 20mm to 125 mm Pipes	1
4	Universal pipe scrapper 20mm, 32mm, 63 mm, 90mm, 125 mm / hand scrappers	1
5	Tapping tools for PE service tees	1
6	PE pipe cutter/ Guillotine	1
7	Gas detection equipment, wherever required	As required
8	Cable and pipe locator	As required
9	PE closure plugs/ test ends for 20mm / 32mm/ 63mm / 90mm / 125mm pipes	As required
10	Towing heads	As required
11	Pipe alignment clamps, jointing of elbow, tee, top loading clamps for top tee	1
12	Jumping Jack compactor	As required
13	Roller for asphaltting	As required
14	Water tanker	As required
15	Hammer Drill	1
16	Power Generator 2.5 kVA	1
17	Piston Drill	As required
18	Conversion Kit	As required

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19	Pneumatic Test Pumps	1
20	Die sets for thread preparation	1
21	Soldier Torch	1
22	Cleaning pads	1
23	Cleaning Brush	1
24	Lacquer and thinner	As required
25	Voltage Stabilizer	1
26	Calibrated Pressure Gauge (0-6 Bar)	2

Notes:

1. The contractor shall plan for deployment of the above equipment and deploy it progressively in such a manner that the working at site does not get hampered due to shortage of equipment.
 2. Any other equipment required for completion of pipeline laying work but not specifically mentioned hereinabove, shall be deployed by the contractor without any additional cost to Owner. Contractor shall deploy above mentioned equipment in good working condition.
 3. Mobilization shall be considered complete only after equipment having quantity specifically mentioned hereinabove (in the min. qty. to be deployed column), are made available at site in good working condition as verified by EIC.
- * Number of equipment indicated hereinabove is a minimum requirement, however for completion of job, if additional equipment is required, same shall be deployed by the contractor at site without any additional cost to Owner.

SCHEDULE OF LABOUR RATES FOR EXTRA WORKS
(ANNEXURE-9 TO SPECIAL CONDITIONS OF CONTRACT)

- The Labour rates are “all inclusive”. These rates include but are not limited to all payroll costs and allowances, payroll taxes, fringe benefits, protective and/or special clothing, construction supplies required for work of a nature included in this contract, overhead, profit, insurance, transportation and travel time.
- The rates are inclusive of providing hand tools and consumables such as electrodes, filler wire, gases, grinding wheels where the concerned category of labour is expected to use in execution of the job but exclusive of all major equipment and machineries.
- The normal time labour rates shall apply for all hours worked up to eight (8) hours in a day and the payment for part of the day shall be made on pro-rata basis.

S. No.	Classification	Rates per day (INR)
1	Engineer	1360
2	Surveyor Foreman	1160
3	Pipe Fitter	960
4	Pipe Welder	1350
5	Gas Cutter	680
6	Grinder	580
7	Mason	690
8	Plumber	690
9	Carpenter	690
10	Painter	770
11	Electrician	770
12	Cable Jointer	575
13	Instrument Technician	770
14	Rigger	575
15	Watchman/Helper	460

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16	Concrete Mixer Operator	460
17	Heavy Machine Operator	770
18	Fusion Operator / Jointer	500
19	Supervisor	760
20	Unskilled worker	460

NOTE: Above rates are final and Bidder has to sign only without deviation. The recovery rates shall be the rates provided above plus 20% (twenty percent).

EQUIPMENT HOURLY RENTAL RATES FOR EXTRA WORKS
(ANNEXURE-10 TO SPECIAL CONDITIONS OF CONTRACT)

S. No.	Equipment Description	Hourly Rental Rates including consumables (INR)
1	Excavator	8000
2	Moling machine	12000
3	Compressors 300 CFM	7000
4	Compressors Above 300 CFM	15000
5	Dewatering Pumps	1000
6	Fusion Jointing Machine	1000
7	Diesel operated power generators 62.5 kVA to 200 kVA	3000
8	Gas cutting set with cylinders	1500
9	Trucks	4000
10	Car/Jeep	2000
11	Tractor with trolley	4000
12	Tripod with 5 Tons Chain Pulley Block	700
13	Pipe Trailor (FB/ Semi Low Bed)	10000
14	Dumper	11000
15	HDD machine	40000
16	Pneumatic Rock Breaker	4000

NOTES:

- 1) Rates are final and Bidder has to sign only without deviation.
- 2) Rates are inclusive of operators / drivers as applicable
- 3) Rates are inclusive of contractor's overhead & profit
- 4) The recovery rate shall be the rates provided above plus 20%.

ANNEXURE-11

Temporary Works

All temporary works, ancillary works, enabling works, including dewatering of surface and subsoil water, temporary drains at the work site, preparing approaches to working areas, wherever required, for execution of the work, shall be the responsibility of Contractor.

Temporary Fencing

The Contractor shall, at his own costs and expenses, erect and maintain in good condition temporary fences and gates along the boundaries of the site assigned to him wherever required as per instruction of Engineer-in-charge. Wherever trenching is being done specially at crossing site near habitation and public movement. The contractor shall provide barricading as per sketch enclosed and provide proper night light as per requirement and to the satisfaction of EIC. The Contractor shall, except when authorized by the Engineer-in-Charge, confine his men, materials and plant etc. within the site of which he is given possession. The Contractor shall not use any part of the site for purpose not connected with the works unless prior written permission or consent of the Owner/Engineer-in-Charge has been obtained. Access to site shall be made only through the approved gateways. The Contractor shall maintain sufficient watchmen at site to the satisfaction of the Owner/Engineer-in-Charge.

Contractor's Temporary Structure

The Contractor may, at his own costs and expenses and subject to the approval of the Engineer-in-Charge and statutory authorities, construct offices, stores, workshop and remove the same as per the orders of the Engineer-in-Charge on completion of the contract. Whenever required the Contractor shall furnish such details of his temporary works as may be called for by the Owner/Engineer-in-Charge as to their safety and efficiency. The Owner/Engineer-in-Charge may direct those temporary works which he considers unsafe or, inefficient be removed and replaced in a satisfactory manner. The Contractor shall immediately follow Owner/Engineer-in-Charge's direction/instruction, on maintenance of all the equipment and he shall ensure that they are suitable for the work and is maintained in such a manner as to ensure their efficient working. The Owner/Engineer-in-Charge, may if they deem fit, direct the Contractor to remove from site any equipment which are not efficient and/or prejudicial to the quality of work to be replaced by equipment to their satisfaction. The Contractor shall immediately follow Owner/Engineer-in-Charge's direction/instruction.

Statutory Approvals

All associated activities required for obtaining necessary clearances, permissions, approvals, all licenses from all concerned authorities in respect of pipeline crossing & all related works shall be the responsibility of the Contractor and the cost of the same shall be deemed to have been included in the quoted prices. The approval from any authority required as per statutory rules and regulations of Central/State Government shall be the Contractor's responsibility unless otherwise specified. The application on behalf of the

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Owner for submission to relevant authorities along with copies of required certificate complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction of the work is not delayed for want of the approval/inspection by concerned authorities. The inspection of the works by the authorities shall be arranged by the Contractor and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. However statutory fees paid, if any, for all inspections and approvals by such authorities shall be reimbursed at actual by the Owner to the Contractor on production of documentary evidence.

Any change/addition required to be made to meet the requirements of the statutory authorities shall be carried out by the Contractor free of charge. The inspection and acceptance of the work by statutory authorities shall however, not absolve the Contractor from any of his responsibilities under this Contract.

Quality Assurance

Bidder shall include in his offer the quality assurance programme containing the overall quality management and procedures, which is required to be adhered to during the execution of contract. After the award of contract detailed quality assurance program shall be prepared by the contractor for the execution of Contract for various works, which will be mutually discussed and agreed to.

The Contractor shall establish document and maintain an effective quality assurance system as outlined in recognized codes.

Quality Assurance System plans/procedures of the Contractor shall be furnished in the form of QA manual. This document should cover details of the personnel responsible for the quality assurance, plans or procedures to be followed for quality control in respect of Design, Engineering, Procurement, Supply, Installation, Testing and Commissioning.

The quality assurance system should indicate organizational approach for quality control and quality assurance of the construction activities, at all stages of work at site as well as at manufacturer's works and dispatch of materials.

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

The Contractor has to ensure the deployment of quality Assurance and Quality Control Engineer(s) depending upon the quantum of work. This QA /QC group shall be fully responsible to carryout the work as per standards and all code requirements. In case Engineer- in-charge feels that contractor's QA/QC Engineer (s) are incompetent or insufficient, contractor has to deploy other experienced Engineer(s) as per site requirement and to the full satisfaction of engineer-in- charge.

In case contractor fails to follow the instructions of Engineer –in-charge with respect to above clauses, next payment due to him may not be released unless until he complies with the instructions to the full satisfaction of Engineer –in – charge.

The contractor shall adhere to the quality assurance system as per specification enclosed in the bidding document as Annexure-6.

Notice and Licenses

The Contractor shall at his costs and expenses give to the Municipal or Panchayat, Police and other authorities all notices etc., that may be required in law to be given and obtain all necessary permissions and licenses etc., for temporary obstructions, enclosures and pay all fees, taxes charges etc. which may be leviable by such authorities for that purpose. The Contractor shall make good any damage to the adjoining property whether public or private.

Working Hours

Depending upon the requirements, time schedule/ drawn up programs and the target set to complete the job in time the works may have to continue beyond normal working hours to the extent of round the clock and on holidays also for which no extra claim shall be entertained.

Responsibility of Contractor

Preparing approaches and working area for the movement and operation or the cranes, leveling the area for assembly and erection shall also be the responsibility of the Contractor. The Contractor shall acquaint himself with access availability, facilities such as railway siding, local labour etc. The procurement and supply in sequence and at the appropriate time of all materials and consumables covered under Contractor's scope of supply shall be entirely the Contractor's responsibility. Contractor shall not use any of the equipment or materials issued to him by Owner for temporary works, manufacturing erection aids etc. Misuse of materials will be seriously viewed and deduction at penal rates will be made from the Contractors bill for such quantities that are misused. Contract Price is deemed to be inclusive of all expenses towards above responsibilities.

Additional Works/Extra Works

Owner reserve their right to execute any additional works/ extra works, during the execution of Work, either by themselves or by appointing any other agency, even though such works are incidental to and necessary for the completion of works awarded to the Contractor. In the event of such decisions taken by Owner, Contractor is required to extend necessary cooperation and act as per the instructions of Engineer-in-Charge.

Compensation for Idle Time

The owner shall make every reasonable effort to have the materials and working front available so as not to delay laying activities. No idle time claim shall be entertained under any circumstances.

Power and Water Connection

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The Purchaser/Consultant will not provide any power and water during construction period. Contractor shall apply and obtain necessary power and water during connection from relevant authority and will pay its usage charge or arrange the same from the other sources.

3.0 CONSTRUCTION

OWNER reserves the right to inspect all phases of Contractor's operations to ensure conformity to the SPECIFICATIONS. Owner will have Engineers, Inspectors or other duly authorized representatives, made known to the Contractor present during progress of the WORK and such representatives shall have free access to the WORK at all times. The presence or absence of an Owner's representative does not relieve the Contractor of the responsibility for quality control in all phases of the WORK. In the event that any of the WORK being done by the Contractor or any Sub-Contractor is found by Owner's representatives to be unsatisfactory or not in accordance with the DRAWINGS, procedures and SPECIFICATIONS, the Contractor shall, upon verbal notice of such, revise the work in a manner to conform to the relevant DRAWINGS, procedures and SPECIFICATIONS.

Rules and Regulations

Contractor shall observe in addition to Codes specified in respective specification, all national and local laws, ordinances, rules and regulations and requirements pertaining to the work and shall be responsible for extra costs arising from violations of the same.

Procedures

Various procedures and method statements to be adopted by Contractor during the construction as required in the respective specifications shall be submitted to the Engineer-in-Charge in due time for approval. No construction activity shall commence unless approved by Engineer-in-Charge in writing.

Security

Wherever the work is being carried out in protected area, entry into the work area shall be restricted and governed by issue of photo gate passes by the Security/CISF/incumbent authority. The Contractor shall arrange to obtain through the Engineer-in-Charge, well in advance, all necessary entry permits/gate pass for his staff and labour and entry and exit of his men and materials shall be subject to vigorous check by the security staff. The Contractor shall not be eligible for any claim or extension of time whatsoever on this account.

Drawings and Documents

The drawings accompanying the bid document (if any) are of indicative nature and issued for bidding purpose only. Purpose of these drawing is to enable the bidder to make an offer in line with the requirements of the Employer/Consultant. However no extra claim whatsoever, shall be entertained for variation in the "Approved for Construction" and "Bid document drawings" regarding any changes/units. Construction shall be as per

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drawings/specifications issued/approved by the Engineer-in-Charge during the course of execution of work. Detailed construction drawings (wherever required) on the basis of which actual execution of work is to proceed will be prepared by the contractor.

The drawings and documents to be submitted by the Contractor to Employer/Consultant after award of the work as per the requirements enlisted in the bidding document shall be for Employer/Consultant's review, information and record. The Contractor shall ensure that drawings and documents submitted to Employer/Consultant are accompanied by relevant calculations, data as required and essential for review of the document/drawings. MECON shall review and give comments/ approval to the drawings/documents within ten days from the date of submission provided the same are accompanied with relevant calculations, data as required and essential for review.

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

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

Copies of all detailed working drawing relating to the works shall be kept at the contractors' office at the site and shall be made available to the Engineer-in- Charge / Employer / Consultant at any time during execution of the contract. However no extra claim whatsoever shall be entertained for any variation in the "approved/issued for construction drawings" and "tender drawings" regarding any changes/units unless otherwise agreed.

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

Excavation by blasting

Excavation by blasting is not permitted wherever required in hard strata other mechanical tools shall be used.

Construction Equipment & Mechanization of Construction Activities

Contractor shall, without prejudice to his overall responsibility to execute and complete the Work as per specifications and time schedule, adopt as far as practicable, mechanized construction techniques for major site activities. However, Contractor agrees that he will deploy the required numbers and types of the part & machinery applicable for different activities in consultation with the Engineer-In-Charge during execution of works.

The Contractor shall mechanize the construction activities to the maximum extent by deploying all necessary construction equipment/machinery in adequate numbers and capacities.

Wherever Structural/Piping works are included in the scope, the Contractor's responsibilities shall include establishing and maintaining of a proper fabrication workshop with transportation facilities to site to carryout fabrication of steel structures, piping specials etc., preparing approaches working areas for the movement/operation of cranes and leveling the areas for assembly/erection to ensure effective mechanization on the works. The Contractor shall acquaint himself with availability of access, facilities such as railway siding, local labour etc. and the Contractor may have to build temporary access roads to aid his work and the quoted and agreed rates shall be deemed to include the same. It may be noted that all fabrication work shall be carried out in fully mechanized workshops to reduce site fabrication to minimum.

For speedy execution of work, Contractor shall also ensure use of computer software for at least the following:

- (i) Billing
- (ii) Planning & Scheduling
- (iii) Progress Reporting
- (iv) Material Control & Warehousing
- (v) Safety Records
- (vi) Resource Deployment
- (vii) Communication

Contractor further agrees that Contract price is inclusive of all the associated costs) which he may incur for actual mobilization, required in respect of use of mechanized construction techniques and that the Owner/Consultant in this regard shall entertain no claim whatsoever.

Site Organization

The Contractor shall provide all necessary superintendence during the design and execution of the Works and as long thereafter as the Engineer-in-Charge may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. Such superintendence shall be given by sufficient persons having adequate knowledge of the operations to be carried out including the methods and techniques required the hazards likely to be encountered and methods of preventing accident for the satisfactory and safe execution of the Work. The workmen deployed, by the Contractor should also possess the necessary license etc., if required under any law, rules and regulations.

Subject to the provisions in the Contract Document and without prejudice to Contractor's liabilities and responsibilities to provide adequate qualified and skilled personnel on the

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Work, Contractor shall augment the same as decided by the Engineer-in-Charge depending on the exigencies of Work.

SUPERVISION

All construction work will be carried out as per direction of EIC, and this will be the primary point of contact between the Contractor and GGPL on site. All work will be issued and sanctioned through the EIC and site control exercised by site engineers. The Contractor shall ensure that technical quality standards are maintained, that construction is carried out cost effectively and that a good customer and public image is maintained for GGPL.

The Contractor will appoint his own supervisors of minimum number instructed by EIC. These personnel will be responsible to the SE for monitoring construction standards and for ensuring that all detailed technical requirements are met on each and every job which is undertaken. The Contractor's supervisor(s) will have day to day liaison with the SE, and will provide the SE with technical reports and audits, and other management information as is required on work progress and construction quality standards.

The Contractor's supervisor shall have mobile telephones or pagers to ensure that they can be contacted at all times. The Contractor will also nominate one person who can be contacted if necessary out of hours, for the duration of the works. The Contractor's supervisor will have access to transport at all times to allow them to visit sites and attend meetings with GGPL as is required. The normal day to day issue of work instructions, communication between GGPL and the Contractor's supervisor and the SE. No deviation from the approved technical specification / issued construction drawings shall be undertaken without written approval of EIC.

Health Safety and Environment (HSE) Management

After the award of the contract, detailed Health, Safety and Environment (HSE) program to be followed for execution of contract under various divisions of works will be mutually discussed and agreed between Contractor, Client & PMC.

The Contractor shall establish document and maintain an effective Health, Safety and Environment (HSE) management system.

In case contractor fails to follow the instructions of Engineer-in-charge with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of Engineer-in- charge.

The Contractor shall adhere to the Health, Safety and Environment (HSE) management system as per GGPL Specification and General Conditions of Contract.

It will be the Contractor's responsibility to acquaint his site staff and operatives of all current safety legislation, statutory requirements and GGPL safety standards. In addition, and before any work takes place, all the Contractor's operatives shall be given training in site safety by the trained person under supervision of GGPL.

If the Contractor wishes to start any new operatives on site, he must first inform the SE, who will arrange for such training to be arranged.

General Guidelines During and Before Erection

The Contractor shall be responsible for organizing the lifting of the structural element, equipment in the proper sequence, that orderly progress of the work is ensured and access routes for erecting the other structures/ equipment are kept open.

During the performance of the work the Contractor at his own cost, shall keep structures, materials and equipment adequately braced by guys, struts or otherwise approved means which shall be Supplied and installed by the Contractor as required till the installation work is satisfactorily completed. Such guys, shoring, bracing, strutting, planking supports etc. shall not interfere with the work of other agencies and shall not damage or cause distortion to other works executed by him or other agencies.

Manufacturer's recommendations and detailed specifications for the installation of the various equipment and machines shall be fulfilled by the Contractor.

Various tolerances required as marked on the drawings and as per specifications and instructions of the Engineer-in-Charge, shall be maintained. Verticality shall be maintained. Verticality shall be verified with the Theodolite / advanced instruments.

Construction Photographs

The Owner desires to have two sets of monthly progress reports with photographs showing the progress of construction. Before utilizing any photograph for publicity, the Contractor shall obtain prior approval of the Owner.

Schedule Rate of Labour & Equipment

Schedule of Labour Rates attached as **Annexure-9** to SCC shall be used for analysing rates for extra items.

Schedule of equipment rates attached as **Annexure-10** to SCC shall be used for analysing rates for extra items.

Construction Equipment

Minimum construction equipment to be deployed is enclosed as **Annexure-8** to SCC. However, any other equipment required for completion of pipeline laying work but not specifically mentioned here, shall be deployed by contractor without any additional cost. The list of equipment mentioned in **Annexure-8** is the minimum to be deployed by contractor and contractor shall ensure the availability at site of listed equipment in good working condition.

Specific Requirements

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Specific requirements spelt out in various technical parts of the Bidding Document shall be followed by Contractor.

SITE CLEANING

The BIDDER shall take care for cleaning the working site from time to time for easy access to work site and also from safety point of view.

Working site should be always kept cleaned up to the entire satisfactions of the Engineer-in-charge.

Before handing over and work to owner, the BIDDER in addition to other formalities to be observed as detailed in the document shall clear the site to the entire satisfaction of Engineer-in-charge.

SURVEY OF WORK

Before the WORK or any part thereof are begun, the Contractor's agent and the Engineer-in-Charge's representative shall together survey the SITE and decide the tentative route considering all obstructions on which the pipeline is to be laid and on which measurements of the WORK are to be based. Such particulars shall be plotted by the BIDDER and trial pits started thereon.

The Contractor shall be entirely responsible for the correctness of every part of the WORK and shall rectify any errors or imperfections therein. Such rectifications shall be carried out by the Contractor at his own cost, when instructions are issued to this effect by the Engineer-in-Charge or his representative.

WORK shall be suspended for such times as necessary for checking lines and levels on any part of the WORK.

The Contractor shall at his own expense provide all assistance, which the Engineer-in-Charge may require for checking the setting out to WORKS. Before commencement of any activity, Contractor's quality control set up duly approved by company must be available at site.

TESTS, INSPECTION AND COMPLETION

Tests and Inspection of Material under Contractor's Scope

Inspection and test prior to shipment of material and at final acceptance shall be as specified in Technical Specification. However, without prejudice to the provision of Technical Specification following shall hold good.

The Owner/Consultant or its representative shall have the right to inspect and or to test the material to conform their conformity to the specification.

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If any inspected or tested material fail to conform the specification, the Owner/Consultant may reject them and the contractor shall either replace the rejected materials or make all the alteration necessary to meet the specification, free of cost to the purchaser/consultant.

The Purchaser / Consultant's right to inspect , test and wherever necessary reject the material after the material's arrival in the purchaser / consultant site shall in no way be limited to or waived by reason of the material having previously been inspected , tested and passed by the purchaser/ Consultant or their representative prior to the material shipment from the material supplier.

Tests and Inspection during execution

The Contractor shall carry out the various tests as enumerated in the technical specifications of this Bidding Document and technical documents that will be furnished to him during the performance of the work at no extra cost to the Owner.

All the tests either on the field or at outside laboratories concerning the execution of the work and supply of materials by the Contractor shall be carried out by Contractor at his own cost from duly approved laboratories.

The work is subject to inspection at all times by the Engineer-in-Charge and Site Engineers. The Contractor shall follow all instructions given during inspection and shall ensure that the work is being carried out according to the technical specifications of this Bidding Document, the technical documents that will be furnished to him during performance of work and the relevant codes of practice.

The Contractor shall provide for purposes of inspection arrange access ladders, lighting equipment for testing, necessary instruments etc. at his own cost, low voltage lighting equipment for tray fixing and inspection work. Compressed air for carrying out works shall be arranged by the Contractor at his own cost.

For material supplied by Owner, Contractor shall carryout the tests, if required by the Engineer-in-Charge, and the cost of such tests shall be reimbursed by the Owner at actual to the Contractor on production of documentary evidence.

Contractor shall inspect carefully all equipment before receiving them from Owner for installation purposes. Any damage or defect noticed shall be brought to the notice of Engineer-in- Charge immediately.

All results of inspection and tests will be recorded in the inspection reports, pro- forma of which will be approved by the Engineer-in-Charge. These reports shall form part of the completion documents. Any work not conforming to execution drawings, specifications or codes shall be rejected and the Contractor shall carryout the rectifications at his own cost.

Inspection and acceptance of the work shall not relieve the Contractor from any of his responsibilities under this Contract.

Documentation

As - Built Drawings

Notwithstanding the provisions contained in standard specifications, upon completion of commissioning, the CONTRACTOR shall complete all of the related approved drawings along with bill of materials to the "AS BUILT" stage provide to a **scale of 1:200** and submit to GAIL GAS LTD., the following:

- a) Two complete set of Soft Copy in CD of all original drawings.
- b) Four complete sets of approved prints in A2 / A3 sizes.

Completion Document

The following documents shall be submitted in hard binder by the BIDDER in FOUR sets, as a part of completion documents:

- a) Copies of the Inspection reports, Laying Graphs, HDD Profiles (IF ANY) and valve pit drawings (IF ANY).
- b) Pre testing, final Hydrostatic / pneumatic and other Test results and reports.
- c) Consumption statements of PE / GI certified by Owner's Site Engineer.
- d) Material Reconciliation, stores issue & return statements.
- e) All other requirements as specified in the respective specifications.
- f) Completion Certificate issued by Owner's Site Engineer.
- g) No claim certificate by the BIDDER.
- h) Completion certificate for embedded and covered up works wherever Applicable
- i) Recovery statement, if any.
- j) Deviation statement.
- k) Statement for reconciliation of all the payments and recoveries made in the progress bills.
- l) Copies of deviation statement and order of extension of time, if granted.
- m) Any other contractual documents required on completion.

Statement of Final Bills-Issue of No Demand Certificate

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The final bill of Contractor shall be accompanied by no-demand certificate from the following departments of the Owner:

- i) Administration & Personnel Department regarding vacation of land, housing accommodation, recovery of tents etc.
- ii) Fire and Safety Officer and CISF.

The Contractor shall obtain such no-demand certificates from the concerned authorities and furnish the same to the Engineer-in-Charge.

COORDINATION WITH OTHER AGENCIES

Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the Contractor. Proper coordination with other agencies will be Contractor's responsibility. In case of any dispute, the decision of Engineer-in-Charge shall be final and binding on the Contractor.

ROYALTY

Contractor's quoted rate should include the royalty on different applicable items as per the prevailing Government rates. In case, Employer is able to obtain the exemption of Royalty from the State Government, the contractor shall pass on the same to Employer for all the items involving Royalty.

THE FACILITIES FOR WORKMEN

Following facilities are to be ensured at all work places where workmen are deployed/engaged by Contractor & any other, as required by law at the time of execution.

- Arrangement of first aid
- Arrangement for clean drinking water.
- Toilets
- Canteen where tea & snacks are available
- A crèche where 10 or more women workmen are having children below the age of 6 years.

PROJECT PLANNING, SCHEDULING AND MONITORING SYSTEM

The Contractor shall follow Project Planning, Scheduling and Monitoring system as approved.

CHECKING OF LEVELS

The Contractor shall be responsible for checking levels, orientation plan of all foundations, foundation bolts, etc., well in advance of taking up the actual erection work and bring to the notice of Engineer-in-Charge discrepancies, if any. In case of minor variations in levels etc. the Contractor shall carry out the necessary rectifications to the foundations within his quoted price.

The Contractor shall also be responsible for checking with templates, wherever necessary, the disposition of foundation bolts with the corresponding bases of structure and shall effect rectifications, as directed, within his quoted rate.

STORAGE FACILITIES

The Contractor shall maintain wherever required an air-conditioned room for the storage of the instruments as well as for calibration and testing of the instruments at his own cost. The contractor shall provide these facilities within the quoted price.

ABNORMALLY HIGH RATED ITEMS (AHR ITEMS)/ Abnormal Low Rate (ALR) items

The bidder is expected to quote rate for each item after careful analysis of cost involved for the performance of the complete item considering all specifications and Conditions of Contract. In case it is noticed that the rate quoted by the bidder of individual items rates are higher or lower by more than 50% of the estimated rates then such items shall be considered abnormally high or low rated items i.e. AHR /ALR items.

Abnormal High Rate (AHR) items

The quantity of high rate items shall be restricted to the SOR quantities Execution of AHR items beyond the SOR quantities shall be made at the least of the following rates:

- A) Average rates of the item of all the qualified bidders
- B) The rate estimated at the time of tendering.
- C) In case the overall quote of the qualified L-1 bidder is less than the overall estimate, then the rate of contractor arrived after applying the same percentage of difference by which his overall quote was lower than the overall estimate.

Abnormal Low Rate (ALR) items

The quantity of abnormality low rate items shall be restricted to the SOR quantities Execution of ALR items beyond the SOR quantities shall be made at the least of the following rates:

- A) Average rates of the item of all the qualified bidders
- B) The rate estimated at the time of tendering.
- C) In case the overall quote of the qualified L-1 bidder is less than the overall estimate, then the estimated rate arrived after applying the same percentage of difference by which his overall quote was lower than the overall estimate.

For item rate tenders if, the rates quoted by the lowest bidder for certain items of the SOR quantities of the tender are found to be abnormally high or low in comparison to GGPL's estimate for the items at the time of tendering in such case "The contractor has to inform the Engineer – incharge immediately in writing on execution of 70% of the SOR / ordered quantity by them for AHR / ALR items."

However, in order to establish that the bidder has quoted a balance price for item vis-à-vis the internal estimated rates for all items shall be compared. In case the total estimated price of ALR items are more than 50% of the total estimated price of the complete job, such bid shall be considered as having imbalance pricing as such bid will be rejected.

BANK GUARANTEES

The provision relating to submission of Bank Guarantee from any Nationalized Bank wherever appearing in above documents stand replaced by the following:

- i) Bank guarantees towards Bid Security from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in case of Indian bidder and from any reputed International Bank or Indian scheduled bank in case of foreign bidder, may be accepted. However, other than the Nationalized Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs.100 Crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head.
- ii) Similarly, bank guarantees towards Performance and Advance Payments may be accepted from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in case of Indian bidder as well as foreign bidder. However, other than the Nationalized Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs.100 Crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head.
- iii) Guarantee towards Bid Security/Contract and Equipment Performance / Advance Payment may also be acceptable from All India Level Public Financial Institution on case to case basis meeting the following criteria:
 - a) The Institution is All India Level Public Financial Institution.
 - b) It should be rated AAA by any rating agency like CRISIL.
 - c) The Institution should be authorized by way of Law/its memorandum to issue such guarantee.

CENVAT BENEFITS - DELETED

COMPUTERIZED BILLS

Contractor shall submit computerized bills with duly printed GSTN no. etc.

ORDER PLACEMENT OF BOUGHT OUT ITEMS

The contractor is required to place firm order for all bought out items of adequate quantity (including 1st lot in those cases where items are required to be procured in more than one lot, if so stated in SOR/ SCC) within 15 days from the date of placement of order, failing which owner reserves the right to procure the same at the risk & cost of the contractor. However the contractor shall always take prior approval of owner and consultant for items required to be procured. Further lots (for those cases where items are required to be procured in more than one lot, if so stated in SOR/ SCC) shall be procured after suitable period so as to ensure adequate availability of material at site throughout the execution period).

REQUIREMENTS FOR CONTRACTOR AT SITE

Contractor shall establish site office in the respective areas with adequate facilities like tables, chairs, telephone, and computer with mailing facility etc. for effective communication and documentation.

Contractor shall provide as and when required a wagon(s) suitable for soil removal, for the delivery or reinstatement materials and for the transport of pipe to and from site.

Contractor shall supply transport for their technical staff and operatives to move from site to site, and to move tools and equipment from site to site, this vehicle will also be fitted with a tow bar suitable for the towing of a mobile air compressor or pipe trailer.

Contractor shall make appropriate arrangements to ensure that their supervisor(s) are adequately mobile and can attend sites or meeting with GGPL / Consultant & other authorities or customers as required, without any undue delay.

Contractors shall provide cell phones to their supervisors for day to day communication with GGPL / Consultant and site representatives of GGPL / Consultant.

The RCM/ site in-charge must be a permanent employee of the contractor having desired qualification and work experience, Any change in key persons working at site shall be informed to the Owner promptly.

Owner will not allow switching/ swapping of key personnel of any contractor working at site from one contractor to another during the continuity of the contract.

COMPLIANCE WITH LAWS

The Contractor shall abide by all applicable rules, regulations, statutes, laws governing the performance of works in India, including but not limited to the following:

- i) Contract Labour (Regulation & Abolition) Act 1970 & the centre rules, 1971 framed there under.
- ii) Payment of Wages Act.
- iii) Minimum Wages Act.
- iv) Employer's Liability Act.
- v) Factory Act.
- vi) Apprentices Act.
- vii) Workman's Compensation Act.
- viii) Industrial Dispute Act.

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- ix) Environment Protection Act.
- x) Wild life Act.
- xi) Maritime Act.
- xii) Any other Statute, Act, Law as may be applicable.
- xiii) PNGRB Act.

NOTES TO SCHEDULE OF RATES (SOR)

- i) The SOR items would be operable as per job requirement.
- ii) The quantities stated in SOR are tentative and may vary considerably on \pm side depending upon site condition, methodology adopted as per site requirement. The payment will be made as per actual certified Measurement at site.
- iii) The scope as mentioned in the SOR is of **indicative nature only** and shall include all activities as detailed in the relevant clauses of the specifications attached and other relevant documents enclosed with tender.
- iv) Any other materials & activities not mentioned/covered in SOR, but otherwise required for satisfactory completion/safety of work as defined in tender has to be supplied /done by contractor within the specified schedule at no extra cost to owner.
- v) Contractor shall be required to deploy adequate no. of plumbing teams to ensure domestic conversions expeditiously. In this regard, requirement no. of independent teams shall be assessed by Engineer-in-charge.

INSURANCE

All kind of Insurances including transit Insurance shall be borne & arranged by the bidder in line with clause no. 101 of GCC-Works. Price quoted in SOR shall be inclusive of this cost. Clause no. 16 of GCC-Goods, in this respect, shall stand superseded to this extent.

PRICE REDUCTION SCHEDULE

The Price reduction schedule shall be applicable as per clause no. 27 of GCC-Works. The Contract/order value shall exclude GST for the purpose of Price reduction schedule.

DIRECT PAYMENTS TO SUB-VENDORS/ SUPPORTING AGENCIES OF MAIN CONTRACTOR

Normally, the payment is to be made to vendor/ contractor only as per provision of contract. During execution, in case of financial constraints, GGPL may make direct payment to their sub-vendor/ supporting agencies as an exception from the amounts due to the vendors/ contractors from any of their bills under process upon certification by EIC subject to receipt

of such request from the vendor/ contractor. Further, the request for direct payments to the sub-vendor/ sub-contractor shall be considered in performance evaluation of such vendor/ contractor.

SUB-LETTING OF WORKS

Pursuant to Clause No. 37 of GCC-Works:

The contractor shall not, save with previous consent in writing of the Engineer-in-charge, sublet, transfer or assign the contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract. However, subletting of **WHOLE WORKS** is prohibited. Vendor/ Contractor shall submit undertaking to this effect along with each invoice/ bill.

The bidder shall submit an affidavit that under no circumstances the works shall be Sublette or out sourced. For such a default the contract shall be terminated and the PBG shall be forfeited and the company shall be debarred for tender participation for a period of 2 years.

BONUS FOR EARLY COMPLETION

The Clause 27.3 of GCC-Works stands replaced as under:

In case the Contractor completes 1000 / 500 Domestic Connectivities (awarded quantity) in the awarded GA ahead of contractual period, ½% per week of early completion or part thereon will be paid as bonus over and above the contractual payment. However, the maximum ceiling of bonus will be 2 ½ % of the Contract value.

NOTES to BIDDERS

For laying of MDPE pipeline, through existing RCC/BW trench etc. which is provided with top RCC cover, the scope includes removal of prevailing RCC cover from channel,, laying of pipeline , jointing, testing and sand filling including supply (if required) and re-fixing the top cover of pipe trench.

Moling: Survey of underground utilities, execution of the work as per specification, including excavation of adequate size pits at both the sides, manual or machine moling with the hole size (to the extent possible) not exceeding 20% of the pipe dia, insertion of PE pipe, jointing, testing & commissioning and restoration of the pits to original condition, submission of As-Built Graph as per specifications and as per the instruction of Engineer-in-charge. In case any asphalt or concrete road surface is damaged during moling, same has to be restored to the full satisfaction of the authority and GGPL / Consultant.

Since some of the Cities / Towns are traffic congested / roads are narrow, it may be required to carry out the trenching, laying and other related works in night time also. There shall **not** be any additional payment paid separately for working at night. All arrangements such as caution light / diversion sign boards, PPE to work at night for carrying out the work should be arranged by the contractor.

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There are some conditions stipulated by the Government agencies for laying the pipeline in other GAs, which are indicated below for compliance, if applicable. However the conditions may vary while issuing permissions, which have to be essentially complied by Contractor:

- (a) The concerned ward engineer shall supervise the work and ensure that the conditions imposed are complied with.
- (b) Before commencement of the work, the Agency must give prior written intimation to the Jurisdictional /Zonal and Road Infrastructure Engineers and keep them informed during erection of work.
- (c) As far as newly asphalted roads are concerned, work should be carried out strictly by intimating and in co-ordination with Major Road/Road Infrastructure division.
- (d) At start, during and after the execution of work, the Agency must inform office of the Chief Engineer OFC-Cell.
- (e) HDD Pits must be restored on the same day itself. Any delay is liable for penalty.
- (f) Excavation must be as per the instructions of the concerned Zonal /Road Infrastructure Engineers.
- (g) Any over burden debris/earth should be removed immediately and conveyed to the designated dumping yards failing which, a penalty may be levied on daily basis by the concerned ward engineer, which shall be paid by Contractor.
- (h) Strictly follow the procedure laid down in road opening and restoration protocol.
- (i) During execution of work, care must be taken not to cause any damages to other properties of land owning agencies like drains, Name boards, etc. In case of such damage, commensurate penalty to be paid by Contractor.
- (j) Absolutely no deviations from the permitted route is allowed. If deviation is found, not only penalty would be levied, the cable on the deviation portion would be confiscated /destroyed.
- (k) During execution, any damage caused to the limb or life of public, damage caused to any Government / Private parties, the responsibility lies solely with the executing Agency and any claims/compensation should be borne by the executing Agency alone.
- (l) If the restoration of pits is not done as per Specification, the cost of Same will be recovered by forfeiting the Security Deposit.

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- (m) During Rainy season, extra care should be taken to ensure that the pits are properly barricaded keeping in mind the safety of pedestrian and vehicular traffic.
- (n) The proposed gas pipe line should be laid with a minimum cover of 1.0 m and maximum up to 1.5 m from the road level. However if required by authorities specifically for any additional cover due to site requirement the same needs to be done without any additional cost.
- (o) Damage to utilities & restoration: Any utilities damaged during execution to be restored without loss of time. In case it is not done by the contractor, the same shall be restored through the other agencies at the contractor's risk & cost.

MONITORING / EXECUTION METHODOLOGY:

- The contractor has to submit the schedule with bar chart for the area allotted to the contractor for execution. Weekly schedule / plan is also to be submitted in accordance with the plan.
- If the progress is not as per the schedule / plan, he has to submit the catch up plan to achieve the target with additional deployment of manpower / machinery.
- In case of failure to achieve the catch up plan & schedule, GGPL / Consultant shall allot the work to the other party who is working in the same part after issuing the notice.

1.0. GENERAL INFORMATION

- 1.1. Special Condition of Contract shall be read in Conjunction with the General Conditions of Contract, specification of work, Drawing and any other documents forming part of this contract wherever the context so requires.
- 1.2. Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.
- 1.3. Where any portion of the General Condition of Contract is repugnant, to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Condition of Contract and shall to the extent of such repugnancy, or variations, prevail.
- 1.4. Wherever it is mentioned in the specifications that the Contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his cost and the value of contract shall be deemed to have included cost of such performance and provisions, so mentioned.
- 1.5. In case of an irreconcilable conflict between Indian and other applicable standards, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings or Schedule of Rates, the decision of EIC shall be final.
- 1.6. It will be Contractor's responsibility to bring to the notice of Engineer-In-Charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists
- 1.7. In the absence of any specifications covering any, material, design of work(s) the same shall be performed/supplied/ executed in accordance with Standard Engineering Practice as per the instructions/directions of the Engineer-In Charge, which will be binding on the Contractor.

2. SPECIFIC INSTRUCTIONS TO CARRY OUT THE JOB & STATUTORY OBLIGATIONS:

- a) Payment of adequate compensation: In case of any accident resulting in injury or death in respect of the personnel deployed by the CONTRACTOR during the execution of the work, the CONTRACTOR shall be solely responsible for payment of adequate compensation, insurance amount, etc. to the person injured/next kith and kin of the deceased. CONTRACTOR shall indemnify GGPL from such liabilities.
- b) The CONTRACTOR/contracting firm shall indemnify GGPL against all claims, demands, actions, cost and charges etc. brought by any Court, Competent Authority /

Statutory Authorities against any act or acts of the CONTRACTOR/contracting firm or his workers.

c) Plant Gate Pass: The CONTRACTOR/contracting firm shall issue proper identity cards to all the workers who are to be engaged for the job. The identity cards shall be signed by the CONTRACTOR or his authorized representative. The CONTRACTOR/contracting firm shall also be responsible for obtaining the gate passes from the concerned if required for their personnel.

d) Supervision: The supervision of the personnel shall be done by the CONTRACTOR/contracting firm through their authorized representative and the name of the supervisor shall be invariably intimated to the Engineer-In-Charge at the commencement of contract.

e) Disciplined Operating crew: The CONTRACTOR shall be solely responsible for discipline of the personnel deployed by him. Further, he shall ensure that none of his workers create any nuisance or indulge in anti-social and criminal activities during the entire period of contract. In case, anybody is found indulging in such activities, then he will have to be immediately removed without any prejudice to further necessary action as deemed fit.

f) Boarding & Lodging: No accommodation will be provided to the CONTRACTOR/contracting firm. Travelling and local conveyance will also be in Vendor's scope.

g) Work Permits: If applicable, before undertaking the jobs, CONTRACTOR shall obtain all necessary permits from concerned/Engineer-in-charge to carry out the assigned jobs and same shall be returned after completion of job.

h) Technicians/ supervisors deployed by the CONTRACTOR should be technically qualified for fulfilling the contractual obligation.

i) The CONTRACTOR shall indemnify GGPL against all claims, demands, actions, cost & charges, etc. brought by any court, competent authority / statutory authorities against any act of or acts of the CONTRACTOR or his CONTRACTOR or his workers.

3. PERIOD OF LIABILITY/ DEFECT LIABILITY:

The contractor shall guarantee the work done for a period of Twelve months from the date of completion of contract. Any damage or defect which may arise or lie undiscovered at the time of issue of completion certificate, connected in any way with the equipment or material maintained by him, or in the workmanship shall be rectified or replaced by the contractor at their own expense as deemed necessary by the GGPL or in case of default the GGPL may ask the same to be made good by any other agency and the expenses for same shall be deducted from the contractor's bill (of which the certificate of EIC shall be final) or from the security deposit).

4. PRS AGAINST MOBILIZATION & COMPLETION OF JOBS:

In case, CONTRACTOR fails to mobilize required resources within the mobilization period or delay in completion of work in all respects, a penalty shall be imposed at the rate of 0.5% per week or part thereof limited to 5% of the total contract value.

5. PENALTY CLAUSE FOR SAFETY VIOLATION:

Repeated violation of safety rules & regulation by the CONTRACTOR shall attract penalty as per details below:

- a) For first time violation of safety rules & regulation by CONTRACTOR, EIC will issue a warning letter to CONTRACTOR under intimation to Managing Director, GGPL.
- b) In case of second time violation of safety rules & regulations by same CONTRACTOR, EIC will call CONTRACTOR in person and will have a meeting to discuss reason for repetitive violation. A warning letter will also be issued by EIC to CONTRACTOR.
- c) In case of further violation, punitive fines will be imposed on CONTRACTOR; Amount of fine will be decided as per severity of violation of safety. However, minimum fine would be Rs.10,000/- and in multiple of Rs.10,000/-, thereafter. This will be limited to 5% of contract value, as maximum cumulative penalty.
- d) In case of consistent violation of safety rules & regulation by CONTRACTOR, GGPL reserves the right to take suitable action against CONTRACTOR including forfeiture of security deposit and termination of the contract and upon such termination the GGPL shall have the right to remove the CONTRACTOR's materials from site.

6. GUIDELINES FOR IMPOSITION OF PUNITIVE FINES AGAINST REPETITIVE VIOLATION OF SAFETY RULES & REGULATIONS DURING EXECUTION OF JOBS:

- a) CONTRACTOR shall provide safety gears such as Helmet, Safety shoes, Cotton Uniform (Dangri) etc. No technician, helper will be allowed on duty without wearing the uniform and necessary safety wears.
- b) CONTRACTOR shall maintain first aid facility for his employees, however first aid available with GGPL will be provided by GGPL if available. Remaining expenditure towards treatment of CONTRACTOR's employee will be borne by CONTRACTOR.
- c) The CONTRACTOR shall have to take adequate security measure for security of their office, equipment, machinery, tool & tackles and material. In the case of theft or loss GGPL will not be held responsible.
- d) All the employee of CONTRACTOR should observe the security and safety related rules and regulations introduced from time to time by GGPL, RAJAHMUNDRY management.

7. MANDATORY RESPONSIBILITY OF CONTRACTOR FOR COMPLIANCE OF LABOUR & INDUSTRIAL LAWS:

1. The Contractor/contracting firm shall obtain comprehensive insurance policy covering all risks such as accidents, injuries and death likely to be caused to his workers or -to a third person including loss to the properties of Owner /GGPL or to some other agency. The premium amount should be deposited with the insurance agency by the contractor regularly and without any delay.
2. In case of any accident resulting in injury or death in respect of the personnel deployed by the contractor during the execution of the work, the contractor shall be solely responsible for payment of adequate compensation, insurance amount, etc. to the person injured/next kith and kin of the deceased. Contractor shall indemnify GGPL from such liabilities.
3. The contractor/contracting firm shall not employ any person suffering from any contagious, loathsome or infectious disease. The contractor/contracting firm shall get examined his employees / workers through a Government Doctor before deployment.
4. No worker of contractor/contracting firm and contractor himself shall be allowed to consume alcoholic drinks or any narcotics within the plant premises. If found under the influence of above, the contractor/contracting firm shall have to change/replace him, failing which, GGPL may terminate the contract.
5. While conforming to any of these conditions, the contractor should ensure that no law of state regarding labour, their welfare, conduct etc. is violated. The contractor shall indemnify GGPL for any action brought against him for violation, non-compliance of any Act, rules and regulations of center/ state/ local statutory Authorities/ any court against any act or acts of the contractor/contracting firm or his workers.
6. The contractor/contracting firm shall deploy the workers after verification of their character and antecedents. In case any worker is found having criminal record, he shall have to be immediately replaced without any delay.
7. The persons to be deployed should be on rolls of the contractor/contracting firm.
8. The contractor/contracting firm shall issue proper identity cards to all the workers who are to be engaged for the job. The identity cards shall be signed by the contractor or his authorized representative. The contractor/contracting firm shall also be responsible for obtaining the gate passes from CISF in respect of all their personnel.
9. The supervision and control of the personnel/ contract worker alongwith their work/ assignment/ performance etc under the contract shall be regularly done by the contractor/contracting firm through their Authorized Representative/ Supervisor and the name of the Supervisor/ Authorized Representative shall be invariably intimated to the Engineer-InCharge at the commencement of contract.
10. The contractor shall be solely responsible for disciplining the personnel deployed by him. Further, he shall ensure that none of his workers create any nuisance or indulge in anti-social and criminal activities during the entire period of contract. In case, anybody is

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found indulging in such activities, then he will have to be immediately removed without any prejudice to further necessary action as deemed fit.

11. The contractor/contracting firm shall be required to obtain labour license from Licensing Officer and Assistant Labour Commissioner (Central), if he engages 20 or more workmen/labours.

12. The contractor/contracting firm shall pay the wages to the workers latest by 7th of the subsequent month at the rates as per the Minimum Wages Act and as notified by the Regional/Assistant Labour Commissioner (Central), from time to time in the presence of authorized representative of the Principal Employer i.e. Engineer–In-Charge (EIC). The Engineer Incharge shall ensure that the contractor/contracting firm is making payment of wages to its labours not less than the wages notified by the appropriate authority from time to time.

13. The contractor/ contracting firm shall make payment of wages by crediting the same in the bank account of concerned contract workers through online banking/ e-payment etc., for which a written authorization will also be obtained in accordance with the provision under Sec.6 of payment of Wages Act 1936.

14. The contractor/contracting firm shall have a separate Provident Fund Code allotted in his name by the Regional Provident Fund Commissioner. The contractor must ensure deduction of PF, if applicable from the contract workers and deposit the PF of employer contribution to the concern contract workers deployed by him for the assigned job and submit the copy of Electronic Challan cum Return (ECR) for the amount deposited towards Provident Fund along with a list of his labours/workers to the Engineer In charge.

15. The contractor/contracting firm shall be required to deposit contribution towards ESI, if applicable, or any other statutory payments to be made in respect of his workers well in time and submit a copy of challan to owner/Engineer In-charge in monthly/quarterly basis failing which GGPL will deduct from his bills the amount equivalent to such deductions along-with penalty as per the provisions of the applicable Act.

16. The contractor/contracting firm shall strictly comply with the various provisions of Factories Act 1948 and Uttar Pradesh Factories Rules 1950, Payment of Wages Act, 1936, Payment of Bonus Act, 1965, Employees Compensation Act, 1923, Minimum Wages Act, 1948, Contract Labour (Regulation & Abolition) Act, 1970, Employees' Provident Fund and Miscellaneous Provisions Act, 1952, BOCW Act, 1996, etc. and deposition of cess as per Act, if the work is covered under BOCW Act, 1996 and other labour legislations as in existence (at present in India) and as amended from time to time. The contractor/contracting firm shall have to discharge obligations as provided under the above Act, Rules and Regulations enforced from time to time.

17. The contractor shall have his own PF code no. with the RPFC as required under Employee PF & Misc. Provisions Act, 1952 and extended benefits of Provident Fund, Employee Deposit Linked Insurance and Employee Pension Scheme, 1995.

18. No contract workers below the age of 18 years shall be deployed on the work.

19. The personnel to be deputed by the contractor shall observe all security, fire & safety rules of GGPL while at the site/ work. His work/ services will be supervised by the supervisor of the Contractor. Contractor has to be strictly adhering to guidance, instructions whenever required.

20. While conforming to any of these conditions, the contractor should ensure that no law of state regarding labour, their welfare, conduct etc. is violated. The contractor shall indemnify GGPL for any action brought against him for violation, non-compliance of any Act, rules and regulations of center/ state/ local statutory Authorities.

21. No accommodation will be provided to the contractor/contracting firm as per guidelines of GGPL Corporate Office, Rajahmundry.

22. At the time of closure of contract, an Indemnity Bond of Rs.100/- duly notarized from the Notary indemnifying GGPL from all the liabilities w.r.t the persons engaged by the contractor regarding payment of wages, Provident Fund, Gratuity payment, Bonus, Insurance coverage, Overtime and other statutory payment/ penalty payment/ fines concerning various labour laws. Proforma of Indemnity Bond is enclosed at Annexure-II.

8. GENERAL:

Ignorance of this will not be considered after award of work. The contractor will be responsible to complete the entire job in all respects as per the Scope of works mentioned in Schedule of Rates and any other work necessary to complete job though specifically not covered in the Scope of Work.

- 8.1 All works shall be carried out as per the standard and the best engineering practices and as per Technical specifications enclosed herewith to the satisfaction of Engineer-in-charge. Decision of GGPL regarding acceptability of specification shall be final and binding.
- 8.2 The work is to be carried out in restricted area and Contractor will have to undertake the job as per instructions of Engineer-in-charge.
- 8.3 The contractor at his own expense, extend insurance to all his employees as may be required.
- 8.4 The Contractor and his work force will abide by all the safety Rules and Regulations of GGPL. The Contractor shall have to provide various safety equipment such as safety shoes, helmet, hand gloves, gum shoes etc. as per the requirement of plant and satisfaction of GGPL safety Engineer/Officer.
- 8.5 The rates agreed to here-in shall remain fixed till the expiry of the contract and the Contractor shall not be entitled to any increase or revision or any other right or claim whatsoever by way of representation, explanation or statement or alleged representation or any understanding or assurance given or alleged to have been by any employee of the

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company or due to Contractor's own ignorance or on account of any difficulties or hardships faced by him.

- 8.6 The company shall not be liable for or in respect of damages or compensation for any injury or for any occupation disease peculiar to the employment to any person (s) engaged through the Contractor and the Contractor shall keep the Company indemnified thereof.
- 8.7 During the currency of the Contract, if the work progress is not commensurate with the time elapsed in respect of any person/persons engaged, the Contractor shall be liable to pay the Company compensation as may be considered/fixed by the Company/Engineer-in-charge.
- 8.8 All disputes and difference arising between the CONTRACTOR and the COMPANY (The settlement or adjustment of which is not here-in-before provided) as to interpretation of any of the provisions of this agreement of the rights and obligations of the respective parties hereto or with any other matter or things concerning or arising out of this agreement shall be referred to a sole Arbitrator who shall be "The General Manager of the Company", and on the parties and this clause shall in all respects, be deemed and constructed as reference to Arbitration within and meaning of Indian Arbitration & Conciliation Act, 1996 and the provisions of the said Act or any statutory modification(s) or re-enactment thereof for the time being in force shall apply to such reference and the decision of the sole arbitrator shall be final and binding on both the parties.
- 8.9 The Contractor shall make his own arrangement for the transportation of his men to respective place of work. The company shall have no obligation in this respect.
- 8.10 The Contractor shall deploy adequate number of qualified and experienced persons to discharge its obligations under the contract.
- 8.11 The rates are to be quoted in words & figures against each item and amount of each items shall also be calculated along with page wise total & grand total, failing which the tender will be treated as incomplete.
- 8.12 Each page of the tender must be signed & stamped by the tenderer.
- 8.13 In execution of the services contracted out herein the EIC or the site engineer in their capacity as the monitoring authority and being technical expertise, shall from time to time whenever required on request issue necessary guidelines to the contractor.
- 8.14 The job under this contract shall not be sub-contracted to another party without prior permission of GGPL.
- 8.15 The rates quoted under this tender shall be firm and valid for two years and no escalation shall be permissible for any reason, whatsoever, after award or the contract.

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- 8.16 Only those tenders who fulfill all required conditions will be acceptable, any attempt for canvassing will debar the offer resulting into its summary rejection.
- 8.17 Contractor shall arrange for full insurance of the workers, engaged on the jobs as per relevant act, rules and regulations etc under workmen's compensation insurance.
- 8.18 Any expenses incurred by GGPL on account of a liability arising due to the contractor's workers shall be recovered from the contractor's bills.
- 8.19 Contractor shall be responsible for all acts of their workers and loss or damage caused to GGPL's property or to any third party in any form shall be chargeable to their account. If any liability is thrust upon GGPL which is attributable to contractor's staff, it will be charged to contractor's account or recovered from contractor's bills.
- 8.20 The terms and conditions mutually agreed upon with respect of this agreement shall be subject to force majeure. Neither the contractor nor the company shall be considered in the performance of its obligations hereunder if such performance is prevented or delayed because of war, epidemic, accidents, fire, wind, and flood or because of any law, order proclamation regulation of ordinance of Government or act of god. One or both parties should be prevented from fulfilling their contractual obligations by a state of force majeure lasting continuously for a period of one week, the two parties should consult each other regarding future implication of the contract.
- 8.21 Contractor shall comply with all applicable safety laws and other laws including but not limited to the contract Labour (R&A) Act, 1970, etc. Contractor should be conversant with labour laws and regulations in practice and shall keep GGPL, harmless and indemnified against any action brought against it for any violation / non-compliance of any act etc. contractor's should be registered with the Labour Commissioner and such details be submitted to GGPL, at contractor's own cost.
- 8.22 The contractor shall make his own arrangement for removal of old as well as unused material from work site to the place indicated by the EIC, after completion of work.
- 8.23 Boarding, Lodging and transportation facilities for contractor's personnel for carrying out the work at site to be made and borne by the contractor at his own cost.
- 8.24 The decision of Engineer-in-charge for determining the category of work with reference to material of an item not mentioned in scope of work shall be final.
- 8.25 In the schedule of rates, annexed here to, the contractor is supposed to quote his rate after taking into account of all his liabilities like supervision, wages, overtime, bonus, expenses on safety gadgets, PF Contribution, ESI Contribution, expenses on tools and tackles, profit and overheads and all other statutory payments for his all employees engaged.
- 8.26 If the quoted amount by the tender for of Schedule of Rates is less than the sum of minimum wages, ESI, PF, cost of tools & tackles and reasonable profit, the tender may be rejected.

9. TERMINATION OF CONTRACT:

- A) GGPL may without prejudice to its right against the contractor in respect of any delay of otherwise or any claims for damage, in respect of any breach of the terms of the contract and without prejudice to any right or remedies under any of the provisions of this contract or otherwise, by notice in writing absolutely terminate the contract with immediate effect in any of the following cases:

In the event of the contractor going into liquidation or winding up his business or making arrangement with his creditors, GGPL shall have the right to terminate the contract without prejudice to any other right/remedies.

In the event, if it is found that contract has been procured by submitting incorrect or incomplete statements by the contractor or by making any misrepresentation.

If in the opinion of GGPL, the contractor has delayed or suspended the execution of work, the facilities and Vehicles etc., offered by the contractor to be inadequate for effective completion of the job.

In the event of any breach of the terms and conditions of the contract by the contractor or if the contractor is found to be indulging in activity subversive to GGPL's interest or activity prejudicial to the interest of GGPL and for any other good or sufficient reasons.

Up to such termination of the contract the security Deposit/Bank Guarantee are liable to be forfeited / invoked to satisfy the outstanding claims of GGPL.

Notwithstanding anything contained above, GGPL may, as its sole discretion, terminate this contract by giving the contractor 30 days written notice to the effect, without assigning any reasons whatsoever. The contract shall be deemed to have expired on expiry of the original period unless extended.

B) SUMMARY OF TERMINATION OF CONTRACT DUE TO SUBMISSION OF FALSE DOCUMENTS:

Bidders are required to furnish the complete and correct information / documents required for evaluation of their bids. If the information / documents forming basis of evaluation is found to be false/forged, the same shall be considered adequate group for rejection of the Bids and forfeiture of Earnest Money Deposit.

In case, the information/documents furnished by the contractor forming basis of evaluation of his bid is found to be false/forged after the award of the contract, GGPL shall have full right to terminate the contract immediate and get the remaining job executed at the risk & cost of such contractor without any prejudice to the other rights available to GGPL under the contract such as forfeiture of Security Deposits, withholding of payments etc.

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In case of the issue of submission of false document comes to the notice after execution of the work, GGPL shall have full right to forfeit any amount due to the contractor along with forfeiture of Security Deposit furnished by the contractor.

Further, such contractor/bidder shall be blacklisted for future business with GGPL

10. PRICE:

- 10.1 The initial contract price shall be arrived at by considering the jobs description as per the SOR and the rate quoted by the bidder. Even in the event of large variation of the contract value arising from non execution of certain SOR items including optional items/addition/deletion of SOR items, the unit rate as quoted by the party shall remain the same and no revision in rates whatsoever will be applicable during the present tenure of contract or extension thereof.
- 10.2 The rate quoted by the bidder shall remain firm throughout the period of the contract. Schedule of rates shall be deemed to include and cover all costs, expenses, liabilities **taxes and duties, salary of Supervisor and including work contract tax** of every description and all risk of every kind to be taken in executing and completing the work.
- 10.3 The unit rate quoted shall include all expenditure envisaged by the bidder.

11. CONTRACT VALUE:

The value of work under this contract shall be as per attached schedule of quantities. Actual work may vary to any extent plus or minus to the attached schedule of rates, minimum value of work is not guaranteed.

12. OTHER TERMS AND CONDITIONS:

- 12.1 Contractor shall provide their staff with appropriate tools required for proper execution of the job.
- 12.2 If any part of equipment provided by GGPL is damaged by contractor, the cost of the same shall be recovered from the contractor as per the values appearing in GGPL record books.

13. TAXES & DUTIES:

The quoted rates shall be inclusive of all taxes and duties applicable during the contract period except for applicable GST thereon and contractor shall not be eligible for any compensation on this account till the completion of the contract. Contractor shall be liable for timely payment of all taxes, duties & levies imposed by any Government / Government Dept. / Agency / Body, including local autonomous bodies, from time to time without any extra claim from GGPL. However, GST payable by the Contractor, if any, shall be reimbursed on production of receipt thereof. GGPL shall have no liability on these accounts and Contractor shall indemnify GGPL from any such liability, even if it arises in future.

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Income Tax deductions shall be made from all payments to the Contractor as per rules and regulations in force in accordance with the "Income Tax Act" prevailing from time to time. However, Contractor shall be entitled to get the "TDS Certificate" for the amount so deducted in the format prescribed by the Income Tax Department.

GST thereon shall be paid extra as applicable as per GST Act and Rules w.e.f. 01st July, 2017. The rate of GST as applicable for this contract is given in the SOR as well as RFQ. The rate should not be changed by the contractor.

If the Bidder is falling under the exempted category, the bidder is requested to confirm the same by way of letter duly signed and notarized along with supporting documents if any.

The bidder shall indicate in the bid, the GST registration number along with a copy of registration certificate, in case the GST registration number is not available, the bidder will give confirmation for obtaining registration with a copy of application for registration.

The contractor / bidder liable to pay GST for the work/services rendered to GGPL, shall specifically mention the GST registration numbers of GGPL also in their invoices. Further, the amount and rate of service tax shall be separately and distinctly specified in the invoice as per rates indicated in the SOR.

For reimbursement of GST, serially numbered invoice/bill shall be issued by service provider and should also specify the following:-

- I. The name, address of the service provider.
- II. The name and address of the recipient of the taxable service.
- III. GST Registration no. of Service Provider and GGPL.
- IV. Description, SAC Code & value of taxable service provided.
- V. The GST payable on such services.

The contractor shall be liable to file monthly returns for under the GST Act, 2017 and submit the copy of the same with Invoice. The contractor shall also be liable for the Reconciliation of outward supplies/services provided to GAIL with the Inward supplies/services received by GGPL from the contractor. In case of statutory variation in GST rate during currency of the Contract, Contractor shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the date of submission of Bid and on the date of revision.

As mentioned in GCC, in case delay in supply/ execution of contract, supplier/ contractor/ service provider will raise invoice for reduced value as per Price Reduction Clause. If supplier/ contractor/ service provider has raised the invoice for full value, then supplier/ contractor/ service provider will issue Credit Note towards the applicable PRS amount.

In case supplier/ contractor/ service provider fails to submit the invoice for reduced value or does not issue credit note as mentioned above, GGPL will release the payment to supplier/ contractor/ service provider after effecting the PRS clause.

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In the event of any financial implication arises on GGPL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of supplier/ contractor/ service provider

MODE OF PAYMENT:

Payment shall be made by Finance, through e-banking. Further payment shall also be released through RTGS / NEFT provided the bidder should submit the dully filled attached format. In no case payment shall be released by way of Cheque / Demand Draft / Bankers Cheque. In the absence of requisite supporting documents, Finance department will return the bill.

Necessary recoveries and all statutory deductions shall be made at the relevant rates [as per rules and Regulations of the Government] from the payments to the Contractor.

- 1) GGPL will entertain no claim of interest for any delay on billed amount. GGPL reserves the right to recover from the bill(s) and security deposit of the contractor the amounts due to the GGPL against any PRS or as a result of any claim(s)/compensation(s) or due to any statutory imposition etc., without prior notice. GGPL also reserves the right to withhold any payment to safeguard the interest of the GGPL against any due(s) claim(s) etc. No interest shall be payable on withheld amounts. Accounts Department shall deduct the Income Tax applicable as per Income Tax Act from the bills.
- 2) **GST payments shall be made on receipt of invoices in proper format, and also GST Remittance Challan of previous month are to be attached along with the Current Bill/Invoice.**

14. Abnormally High rate Items (AHR)

In item rate contract where the quoted rates for the item exceeds 50% of the owners estimated rates, such items will be considered as Abnormally High Rated items(AHR) and payment of AHR items beyond the stipulated quantities included in the schedule of rates shall be made at the least of the following rates:

- 1) Rate as per SOR, quoted by the contractor.
- 2) rate of the item, which shall be derived as follows:
 - a) Based on rate of machine and labour as available from the contract (which includes 10% covered towards contractor's profit overhead and other expenses)
 - b) Based on prevailing market rate of machine material and labour plus 10% to cover supervision, contractor's profit & overheads, when the rates are not available in the contracts.

15. SECURITY DEPOSIT:

- 15.1 "Contract Performance Security / Security Deposit' is to be remitted by the 'successful Bidder / Contractor' within 'Thirty [30] days' of issue of "Letter of Acceptance [LOA]". However, 'Bid Security' remitted by the 'successful Bidder / Contractor' can be converted / adjusted towards 'Contract Performance Security / Security Deposit', only if submitted in the form of 'Demand Draft' / 'Banker's Cheque'.
- 15.2 No interest shall be payable by the GGPL to the Contractor for the amount of 'Contract Performance Security / Security Deposit' remitted by him for fulfilment of the terms and conditions of the Contract.
- 15.3 The 'Contract Performance Security / Security Deposit' shall be in the form of either 'Banker's Cheque' or 'Demand Draft' or Bank Guarantee, and shall be in the currency of the Contract.
- 15.4 The CONTRACTOR shall furnish to the EMPLOYER, within 15 days from the date of notification of award, a security in the sum of 10% of the accepted value of the tender or the actual value of work to be done whichever is applicable due to any additional work or any other reasons, in the form of a Bank draft/Banker's cheque or Bank Guarantee or irrevocable Letter of credit (as per proforma enclosed) as Contract Performance Security with the EMPLOYER which will be refunded after the expiry of DEFECTS LIABILITY PERIOD. However where the contract is for two years or more , in this case, contractor has to deposit security deposit 7.5% of annualized contract value and where the contract value is up to 25 lacs, initially SD is to be deposited 2.5% and remaining 5% to be recovered from RA Bills. Contract/Order value as mentioned above shall be exclusive of taxes and duties. The SD will be valid for the period of contract + 90 days beyond the contract period/duration and applicable Warranty/Guarantee/Defect Liability Period (if any).
- 15.5 CONTRACTOR can furnish the Contract Performance Security in the form of Demand Draft or through a Bank Guarantee or through an irrevocable Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, other than the Nationalised Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bank guarantee or the Letter of Credit shall be submitted in the prescribed format.
- 15.6 The 'Contract Performance Security / Security Deposit' as above, after adjustment of any dues to GGPL, which may arise during the execution of the Contract, shall be refunded after expiry of the "Defect Liability Period [DLP]".
- 15.7 The 'Contract Performance Security / Security Deposit' of the Contractor shall be forfeited, if any statement / document(s) furnished by the 'successful Bidder / Contractor' are found false and/or fabricated.

16. RECOVERY:

- 16.1** Income tax shall be deducted from Contractor's RA bills while releasing the payment as per income tax rules. Cost of any damage / loss of the property of GGPL, by the contractor shall be recovered. GGPL's decision in this regard shall be final, binding and conclusive.
- 16.2** Contractor shall be responsible for safe custody of any equipment handed over to him In case of loss/ theft, the purchase cost of the equipment plus 25% departmental charges shall be recovered from the contractor. GGPL's decision in this regard shall be final, binding and conclusive.
- 16.3** The contractor shall have to carry out the specific job as per time schedule specified by the EIC and agreed upon by the contractor for that particular job and if the contractor fails to complete that specific job within that specified time period, the contractor shall be liable to reduce their invoice @ 1/2 % per week delay or part thereof of the total price for that item (i.e. total SOR quantity x unit price).
- 16.4** The above recoveries will be in addition to recovery under Price Reduction Schedule specified elsewhere in the tender.

17. Engineer-in-charge's status:

The Engineer-in-charge shall look after general supervision and direction of the work. He will be authorized to stop the work, the contract. He shall also have authority to reject all work which do not confirm to the specification. The Engineer-in-charge reserves the right to suspend the work or part thereof at any time and no claim whatsoever on this account will be entertained. In case of any decision shall be final and binding.

18. ARBITRATION:

As per GCC

19. JURISDICTION:

As per GCC

20. AGREEMENT:

The successful tenderer shall be required to execute an agreement with GGPL within 15 days after receipt and acceptance of the work order. The agreement to be executed will be in prescribed agreement format of GGPL.

21. APPLICABLE CODES AND SPECIFICATIONS:-

- 21.1** The job shall conform to the Relevant Indian standard specifications code of practice as modified up to data and CPWD specifications as applicable.
- 21.2** Any other standard not mentioned above but otherwise considered necessary for the satisfactory performance of the job shall also be applicable.
- 21.3** For the smooth execution of the services contracted out herein, it is expected that the contractor will deploy personnel, if any, who has the proper qualification, experience and

expertise as normally required under the norms followed and also meets the statutory requirements.

- 21.4 The contractor will also be required to take repair work according to the priorities fixed by the EIC from time to time.

22. MEASUREMENT AND BILLING:-

The works executed shall be checked from time to time and measurements recorded. Measurement sheets are to be jointly signed by EIC as well as Contractor or his representative.

a. MEASUREMENT OF BILL

Where GGPL Executive is Engineer-In-Charge (EIC) (e.g. O&M Contracts):

- a) Site-in-charge/ Site Engineer will check 100% measurements of executed work.
- b) EIC will further check measurements at least 15% of bill value. In case, Site-in-Charge/ Site engineer is not available. EIC will check 100% measurements of executed work.
- c) An officer in the department at least one level above EIC upto level of E-7, will check measurements of 5% of bill value. In case, above mentioned higher level officer is EIC, he will check measurements of 20% of bill value.

Note: (i) in case of service/ consultancy contract which are generally not meant to create any new physical asset/ work, the measurement checks after receipt of bills as mentioned herein above should be done on the basis of document specified in the contract in absence of any physical evidence for checking. However in service contract if there is some supply of materials or some other physical evidence for checking of measurement, then the normal provision of test check measurement will be applicable.

While exercising test check of 5%, 15% level and on random basis as above, it may be ensured that high rate items. AHR items, items exceeding SOR quantity and concealed items have been covered in the items selected for checking.

The superior officer should preferably check such items/ quantities other than those already checked by GGPL executives at lower levels and should also ensure that the subordinate officer/ officers have exercised the requisite percentage check as stipulated in the procedure. All concerned officers should indicate the measurements of SOR items checked by them and marked as "Checked and Verified".

23. PAYMENT OF ADVANCE:

No advance in any case will be paid for the contract.

24. COMPLETION CERTIFICATE & FINAL BILL:-

The Engineer-in-charge shall normally issue to the contractor, the completion certificate within one month after receiving an application thereof from the contractor after verifying from the completion documents and satisfying himself that the work has been completed in all respect in accordance with the instructions, specifications of the contract documents.

The contractor after obtaining the completion certificate is eligible to present the final bill for the work executed by him. The final bill shall be prepared on the basis of the final measurements entered in the measurement book / sheets. The final bill shall be prepared in the prescribed proforma with reference to total work covered by the contract, such bill to be drawn up by applying the applicable rates, specified in the schedule or rates to the relative measured quantities. The final bill shall also include all additional claims of the contractor and will be considered as conclusive.

25. FINAL CERTIFICATE:-

Within fifteen days of the contractor's application after the expiry of the period of defect liability provided in the contract, the Engineer-in-charge shall issue final certificate to the contractor certifying that the contractor has performed his obligations in respect of the defect liability period and until, issue of such final certificate, the contractor shall be deemed not to have performed such liabilities not withstanding issue of the completion certificate or payment of the final bill by GGPL.

26. INSURANCE AND LIABILITIES:-

The contractor agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed and further agrees to defend, indemnify and hold Owner harmless for any liability or penalty which may be imposed by the Central, State or Local Authority also from all claims, suits or proceedings that may be brought against the Owner arising under, growing out of or by reason of the work provided for by this contract whether brought by employees of the contractor, by third parties or any central Government, State Government or Local Authority for the following Act (s) and liability(s).

Employees State Insurance Act. Workmen compensation and Employer's Liability Insurance Any other insurance required under law or regulations or by owner Accident or injury to workmen Transit Insurance Damages to property or to any persons or any third party.

The contractor shall take insurance under – Workmen compensation act for all his workmen to be deployed for the work and submit a copy of the Policy before commencement of work, if awarded.

The contractor shall indemnify and keeps the Owner harmless of all claims, damages or compensation payable at law in respect or in consequence of any accident, or damages arising under or by reason of this agreement or execution of contract.

27. RESPONSIBILITIES OF THE CONTRACTOR FOR COMPLIANCE WITH LABOUR/INDUSTRIAL LAWS:

A. The contractor has to pay following wage components to the persons engaged by him in GGPL subject to time to time revisions:

Sl. No.	Wage components	Rates
1.	Minimum wage	As notified by Central Government or State Government from time to time (whichever is

		higher)
2.	PF contribution	12 % of wage (The contractor has to ensure deposit of PF contribution @ 12% of wages irrespective of rate of wages)
3.	ESI contribution or Insurance under Employee's Compensation Act, 1923	Employee's Contribution - 0.75% Employer's Contribution - 3.25%
4.	Employee Deposit Linked Insurance(EDLI)	0.5% of wage
5.	Administration charges to PF Organization	0.5 % of wage
6.	Bonus	8.33% of wage.
7.	Death Gratuity	Gratuity will be payable only in cases of death during the currency of contract as per Payment of Gratuity Act, 1972.
8.	Cost of uniform for plants/factories	6% of wage
9.	Leave wages (1.3 days wage for working 26 days in a month)	8.33% of wage
10	Overtime for working extra work	As applicable under Factories Act, 1948 or Shops and Establishment Acts of respective State.

B. Other Compliances under various Labour Laws:

i. The Employees Provident & Miscellaneous Provisions Act 1952:

- a) The contractor shall have his own PF code no. with the RPFC as required under Employee PF & Miscellaneous Provisions Act 1952 and extend benefits of Employees Provident Fund 1952, Employee Deposit Linked Insurance 1976 and Employee Pension Scheme 1995 to contract workers deployed.
- a) The contractor has to ensure compliance under EPF 1952, EPS 1995 &, EDLI 1976.
- b) The contractor should submit copies of separate e-Challans / ECR, in respect of contract employees employed by them in GGPL through this contract only, with acknowledgement from PF office, on a monthly basis as a compliance of communication received from PF Authorities vide 24.03.2014 wherein it was observed by PF Authorities that depositing one single challan for labour supplied at various establishments keeps Principal Employers in dark and gives opportunity to contractors to cheat Principal Employer and Contract Employees both. Hence, such common challans would not be acceptable in GGPL.
- d) PF is mandatory irrespective of the wages paid by the Contractor to workers i.e. even workers drawing wages more than Rs. 15,000/- pm has to be made member. The exclusion is carried out as per provisions of EPF Scheme 1952.

ii. The Payment of Wages Act 1936:

- a) Ensure Monthly timely disbursement of Wages, avoid illegitimate deductions and maintained records /returns as prescribed.
- b) The contractor shall be solely responsible for the payment of wages and other dues to the personnel, if any, deployed by him latest by 7th day of the subsequent month in the presence of Engineer In-Charge.
- c) After disbursement of wages the authorized representative and Engineer In-Charge have to certify the payment of wages to the contract workers and sign the wage register with specific seal detailing name/designation/Company.
- d) In case the payment / disbursement carried out through net banking, certification be done based on Bank Statement in the same manner.

iii. The Minimum Wages Act 1948:

Ensure the Minimum wages as prescribed in the Schedule above monthly without further bifurcation of the same .The Minimum Wages in case of revision shall be revised and paid to the Contractor workers and claim to be submitted by the Contractor for disbursement of differential and other statutory compliance under EPF Act and ESIC. The rates of Minimum Wages declared by Central Labour Department or State Labour Department, whichever is higher, shall be made applicable during the tenure of contract.

iv. The Employees State Insurance Act 1948:

- a) The contractor shall have his own ESI code No. allotted by Employee State Insurance Corporation (ESIC) as required under Employee State Insurance Act 1948.
- b) The contractors shall submit the **Separate e-Challans / ECR** along with bank receipt/bank statement on monthly basis as a part of compliance and proof of depositing of ESI contribution with ESI Authorities.
- c) All workers to be covered and extended the benefits as prescribed.
- d) The contractor is required to deposit ESI contributions through banks with Employee State Insurance Corporation on monthly basis and has to arrange Smart Cards to contract labours engaged by him from the Corporation.

v. The Employees Compensation Act 1923:

In case the WORK PLACE is out of the notified area under ESIC i.e. ESIC non-implemented area and in case of excluded employees under ESIC (i.e. wages more than Rs. 15,000/-), the Contractor is required to take a POLICY from IREDA approved Insurance Company taking into consideration the maximum liability under Employee Compensation (i.e.EC) and Medical Policy in lieu of ESI @ 4.75 % of wages and seek reimbursement from GGPL the EMPLOYER annually extending coverage to all workers.

- vi. The Maternity Benefit Act 1918:**
In case of any woman employee Eligible for benefit under the ACT, Contractor should abide by the regulation and should not remove her name from muster roll during the period.
- vii. The Payment of Bonus Act, 1962:**
This should be regulated annually. Contractor should pay the minimum prescribed Bonus to all Eligible workers and submit bill along with proof of payment of Bonus. Bonus is mandatory and as per regulation it should be paid on or before 30th September every year.
- viii. The Inter State Migrant Workmen (RECS) Act 1979:**
All Migrant Workmen should be paid Displacement Allowance and Journey Allowance before commencement and after completion of the work and other benefits as prescribed.
- ix. The Payment of Gratuity Act 1972 :**
In case of Death or disablement of a Contract worker during execution of work under the CONTRACT, Contractor has to pay the GATUITY as per provision under the Payment of Gratuity Act 1972 and claim for the same along with proof of disbursement.
- x. Factories Act, 1918 / Shops & Establishment Act:**
Casual Leave/ Earned leave / Gazetted Holiday are regulated in terms of Shops and Establishment Act /factories Act / Model/ PL Standing Order.
- xi. Provision of Compensatory Off/Overtime Wages:**
Compensatory Off/Overtime Wages are Mandatory provisions and be regulated as per the regulation and paid to the Contractor workers regularly. Contractor to ensure maintain records and register as prescribed.
- xii. Industrial Dispute Act 1947:**
The provisions under Industrial Dispute Act 1947 pertaining to Lay-Off should be observed and lay-off compensation should be ensured to effected workmen.
- xiii. Building and Other Construction Workers (Regulation of Employment and conditions of Services) Act 1996:**
The provision under building and Other Construction Workers (Regulation of Employment and conditions of Services) Act 1996 along with Rules 1998 with Cess Act and Rules should be ensured through Contractor exclusively for PROJECT WORK.
- xiv. Mines Act 1952:**
The Provisions under the Mines Act 1952 and Rules 1955/85 must be regulated through the Contractor exclusively for work undertaken by E&P Group.
- xv. Contract Labour (R&A) Act, 1970:**

- a. The contractor is required to obtain Labour license under the provisions of Contract Labour (R&A) Act, 1970 from the office of Licensing Officer, Central Labour Authority, Ministry of Labour and Employment, Govt. of India having jurisdiction of the Region.
- b. The contractor shall discharge obligations as provided under Contract labour (R&A) Act, 1970 rules and regulations framed under the same and enforced from time to time.
- c. The Contractor shall ensure Regular and effective supervision and control of personnel, if any, deployed by him and give suitable direction for undertaking the Contractual Obligation and meeting all statutory obligation for genuineness and non-camouflaged state of the Contract.
- d. Contractor shall provide proper identification cards for his employees to be deputed by him for Work/Services, duly signed by the contractor or authorized person on behalf of contractor.

C. Additional Responsibilities of the Contractor;

- i. The contractor shall be solely responsible and indemnify the GGPL against all charges, dues, claim etc. arising out of the disputes relating to the dues and employment of personnel, if any, deployed by him.
- ii. The contractor shall indemnify GGPL against all losses or damages, if any, caused to it on account of acts of the personnel, if any, deployed by him.
- iii. Contractor shall ensure payment of wages to the personnel employed and meet all statutory obligations of payment as per minimum wages act 1948 and payment of wages Act 1936.

“Unless otherwise specifically mentioned in the Special conditions in the Contract, the contractor shall bear any upward revision in the rate of Minimum Wages, including but not limited to any kind of unprecedented or steep hike over and above the half yearly revisions of variable dearness allowance from time to time at its own cost during the Contract Period.”

- iv. While engaging the contractual manpower, Contractors are required to make efforts to provide opportunity of employment to the people belonging to scheduled caste and weaker sections of the society also in order to have a fair representation of these sections.
- v. All personnel deployed by the contractor should be on the rolls of the contractor.
- vi. No contract worker below the age of 18 years shall be deployed on the work.

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- vii. The personnel to be deputed by the contractor shall observe all security, fire and safety rules of GGPL while at the site/work. His Work/Services will be supervised by the supervisors of contractor. Contractor has to be strictly adhering to guidance, instructions whenever required.
- viii. Also the contractor should obtain entry passes from Security Dept. through Engineer-In- Charge for his employees.
- ix. Contractor has to deploy the personnel with no past criminal records. Also the contractor has to provide police verification for all the persons deployed by him.
- x. While confirming to any of these conditions, the contractor should ensure that no law of state regarding labor, their welfare, conduct etc. is violated. The contractor shall indemnify GGPL for any action brought against him for violation, non-compliance of any act, rules & regulation of center / state /local statutory authorities.
- xi. All existing and amended safety / fire rules of GGPL are to be followed at the work site.
- xii. Contractor shall ensure payment of wages to the personnel employed and meet all statutory obligations of payment as per Minimum Wages act 1948 and payment of wages Act 1936.
- xiii. In case of accident, injury and death caused to the employee of the contractor while executing the Work under the contract, the contractor shall be solely responsible for payment of adequate compensation, insurance money etc. to the next kith & kin of injured/ diseased. Contractor shall indemnify GGPL from such liabilities.
- xiv. The contractor shall not employ or permit to be employed any person suffering from any contagious, loathsome or infectious disease. The contractor shall get examined his employees / persons deployed from a civil govt. doctor.
- xv. No employees or person of contractor (including contractor) be allowed to consume alcoholic drinks or any narcotics within the plant premises. If found under the influence of above, the owner / GGPL will terminate the contract immediately and may refer the case to police.
- xvi. The contractor hereby agrees to indemnify owner / GGPL and harmless from all claims, demands, actions, cost and charges etc. brought by any court, competent authority / statutory authorities against owner/GGPL.

D. Compliance of Government of India directives:

- i. Payment through Aadhar Payment Bridge and Employment of Aadhar Card Holder:**

As per communication received from Ministry of Petroleum and Natural Gas vide letter dated 03.06.2013, Contractors are required to give preference to those employees who either have Aadhar Card or have applied for Aadhar Card or agreed to apply for Aadhar Card to establish their genuineness and payments may be made to them through Net Banking/Aadhar Payment Bridge to the extent possible.

ii. Labour Identification Number (i.e. LIN) Registration

The Unified Shram Suvidha Portal, developed by Government of India, facilitates reporting of Inspections & submission of Returns and has also been envisaged as a single point of contact between employer, employee and enforcement agencies bringing in transparency in their day-to-day interactions. For integration of data among various enforcement Agencies, the Contractor, as an inspectable unit is required to register and obtain Labour Identification Number (i.e. LIN) from Shram Suvidha Portal and submit the same in GGPL.

iii. Pradhan Mantri Suraksha Bhima Yojna & Pradhan Mantri Jeevan Jyoti Bhima Yojana for contract workers

As per communication received from Ministry of Petroleum and Natural Gas vide letter dated 26.08.2015, Contractors are required to take PMSBY PMJJBY compulsorily. Upon compliance of this aspect, documentary evidence may be submitted by the contractors to the Principal Employer, i.e. GGPL.

iv. Propagation of Pradhan Mantri Suraksha Bima Yojna amongst contract workers

As per communication received from Ministry of Petroleum and Natural Gas vide letter Dated 26.08.2015, Contractors are required to motivate the Casual / Contractual / informal outsourced labours for joining the Scheme of Pradhan Mantri Suraksha Bima Yojna (PMSBY). Upon compliance of this aspect, documentary evidence may be submitted by the contractors to the Principal Employer, i.e. GGPL.

v. Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) Scheme

In order to support the Government of India's Initiative on Employment Generation, the contractor must register for Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) Scheme. Compliance made under this scheme and any benefits drawn may be informed to GGPL so as to drive the legitimate Employer's PF Contribution and adjustment thereon.

II. SAFETY CONDITIONS APPLICABLE TO ALL WORKS CARRIED IN PLANT/PIPELINE/PROJECTS

A. Safety conditions applicable to all works carried in plant/pipeline/projects by consultants, contractors or other third parties

1. Compliance with statutory requirement.

Consultants, contractors or other third parties in the plant/pipeline shall abide by

- a. The safety regulation of the plant/ pipeline as mentioned in the Fire & Safety Regulations (Latest revision).
- b. Provisions of the Factories Act 1948 and the rules framed thereunder in the respective State Factory Rules including all amendments thereto.

- c. Provisions of Employees' Compensation Act, 1923 &, Employee State Insurance Act, 1948 including all amendments thereto.
- d. Provisions of The Building and Other Construction Workers (Regulation of Employment and Condition of Service) Act, 1996.
- e. Applicable Environment Regulations in force and also the systems and procedures in the Plant/ pipeline related to environment.

2. Health Assurance /Age:

- a. Contractors will ensure that workers including Supervisors before deployment of the job are medically examined by a certified Surgeon/ Occupational Health Physician having minimum qualification of MBBS + AFIH as per respective State Factory Rules.
- b. Only medically sound persons as certified by the afore-mentioned medical practitioner would be allowed on the job.
- c. Workmen deployed on high risk job like working in confined space, working at height, working under water etc. must also be certified as medically fit for such jobs.
- d. The medical certificate older by more than six months will not be accepted.
- e. Health Assurance Certificates submitted by the contractor would be periodically checked at random by the plant/ pipeline Doctor.
- f. Age: No one below 18 years or more than 58 years will be employed in the plant/pipeline.

3. Training

3.1 Mandatory Training

Training in Fire & Safety is mandatory for all contractors' employees before start of any work in the Plant/Pipeline.

3.2 Training of contractors, Proprietors, Partners, Directors, Managers and In charges Of Contractor

- a. The proprietors, Partners, Directors, Managers and In-Charges of Contractors who have ultimate responsibility for their work in the plant/pipeline must undergo a one day comprehensive safety familiarization programme.
- a. This programme will be conducted by Fire & Safety Dept. at the Fire Station Training Hall and the schedule shall be notified well in advance.

- b. On completion of the program a Certificate of Attendance, will be issued to each participant, which will be required for issue of entry pass for supervision of the Hot Work.
- d. The passing certificate issued to the supervisor would remain valid for one year.

3.3 Training of Supervisors

- a. Contractor's supervisors will have to undergo two days training on "Health, safety and Environment (HSE) in Plant/Pipeline" followed by one day training on " Work Permit System".
- b. At the end of the each of the above two training modules, there will be a written test.
- c. Passing Certificate would be issued on the last day of the month to the Supervisors who successfully pass these tests.
- d. The Passing Certificate issued to a Supervisor would remain valid for a year.
- e. Plant Entry pass will not be issued to any supervisor without a valid Passing Certificate.

3.4 Training of Workers

- a. Contractor's workmen will have to undergo one day's class room training on "Safety in Plant/Pipeline" before commencement of the job.
- b. On completion of this training, "Certificate of Attendance" would be issued by Safety Selection.
- c. This "Certificate of Attendance" would remain valid for a period of one year'
- d. Plant Entry Pass would be issued only on production of this certificate.
- e. It is obligatory that contractor supervisor who is trained by Safety Dept. should conduct spot training for his workers.
- f. Additionally Contract workmen will have to undergo training on "Safety in Plant/Pipeline" on the spot.

3.5 Refresher Training

- a) Supervisor's workmen will be required to undergo Refresher Training from time to time as required by the safety section.
- b) The Coverage and Methodology of the Refresher Training would be same as the initial training.

3.6 Administration of Training:

- (1) The Plant/ Pipeline Fire & Safety Department shall conduct this mandatory training programme at the Auditorium/ Conference Hall/ any other venue as decided by GGPL free of cost.
- (2) One three-day training programme around the middle of every month for supervisors and three one-day training programme for workmen at an interval of 10 days will be conducted.
- (3) Notice giving schedule of exact dates of training for the current month would be issued to Concerned Departments and HR by 25th of the previous month for notification to the contractors.

3.7 Contractor's Responsibility for Training of his employees:

- i. Contractor must ensure that all his supervisors have undergone safety training and keep documents of such training. He shall also ensure that each of his employees has received and understood from his supervisor's necessary training on safety for working in the Plant/ Pipeline.
- ii. Contractor must maintain records of training provided by him to his employees. Such records must clearly mention (i) what training has been provided (ii) date, time and duration of such training (iii) who has provided the training (iv) names of workers who attended such training etc.
- iii. The records maintained in the form of a register must be available for examination by the Engineer-In-Charge for his representative who will sign on the register as a token of his approval.
- iv. The training provided by the contractor must be as frequent as possible but there should not be more than 15 days gap in between two training programs.
- v. The training provided by the contractor is expected to be on-the-job training and must not be less than at least one hour duration. Duration such training, Contractor must make himself present and facilitate the process of training.

4. OBLIGATION TO FOLLOW WORK PERMIT SYSTEM

- a) Do not carry out any work without valid work permit issued by authorized person in the Plant/ Pipeline as per Work Permit System
- b) After obtaining a valid work permit and before the actual commencement of the work, also obtain a clearance certificate from the officer of the unit/ plant where the work is to be carried out
- c) Register permit and clearance at Plant Fire Station as required under the Work Permit System

- d) Comply with all the Fire/Safety/Excavation/Radiography permit conditions specified in the permit and the clearance
- e) Prepare a safety action plan specific to the work before starting the work. Also ensure that all supervisors and workers involved in the work, properly understand and follow the safety action plan.
- f) Display permit at site for checking by Plant/Pipeline officials whenever required.

5. REQUIREMENTS OF SUPERVISION

- i. Contractor will not carry out any work without having supervisor at site. If it is required to work simultaneously in more than one location under the same contract, one supervisor must be put in each of the locations. If a supervisor has to leave his site for any reason, he must stop his activities for that period of time.
- ii. For hot work permit the supervisor must have valid Training Certificate from Plant/ Pipeline safety department.
- iii. Contractor must provide at least one full time safety Supervisor when the contractor has engaged manpower in excess of 50 in contract activities in the Plant/ Pipeline. If the manpower is less than 50, the on-site safety coordination responsibilities shall be assumed by any one of the contractor's other supervisory staff. In both the cases, the contractor must specify in writing the name of such person to the Engineer-in-charge and Manger – Safety.
- iv. Contractor's safety coordinator or his supervisor responsible for safety as the case may be shall conduct at his work-site and document formal safety inspections and audits at least once in a week. Such documents are to be submitted to Engineer-in-Charge for his review and record.
- v. Contractor's safety supervisor or the supervisor responsible for safety, shall maintain separate safety register which will include (i) List of activities being carried out at site (ii) Safety Training details of all supervisors and workmen (iii) Records of all accidents (iv) Records of all PPE's being used at site (v) Records of lifting tools and tackles including slings of all types (vi) Records of pressure vessels if any at his site (vii) Records of all welding machines, gas cutting sets, compressors, generators, pressure regulators, portable power tools, hand tools etc. (viii) Copies of safety inspection reports made by the Contractor safety supervisor as well as by the GGPL representative
- vi. The contractors whose safety records are not satisfactory will be viewed seriously and necessary action (viz cancellation of registration/ contracts) shall be taken against him.

6. Use of personal protective equipment

- a. Contractor's all supervisors and workmen must wear the following Personal Protective Equipment's (PPE's) without which the permission to work will be denied.

- b. Basic PPE's should be provided by the contractor.
- c. Basic PPE requirements for all jobs:
 - i. Hard hat (Safety helmet)
 - ii. Safety Shoes / Gum Boots (civil work)
 - iii. Rubber Hand Gloves (electrical grade of 33 KV/6.6KV/660V operating potential and tested at higher potential with test reports).
 - iv. Safety Belt as applicable
- d. Specific Requirements as per job requirements:
 - i. Eye Protection Goggles
 - ii. Face & Body Protection
- e. The above two sets of basic PPE's shall be of standard quality and BIS / ISI approved and supplied on replenishment basis on the basis of expiry/ damage.
- f. Other specific PPEs/ special operative equipment like "Breathing Apparatus Set' and Fire Extinguishers will be issued by GGPL to the contractor, on loan basis. If the same is not returned after completion of the contract or damaged beyond repair, recovery as appropriate will be made from his dues, from the company.

7. HAZARD COMMUNICATION

- a) Contractor must familiarize himself from GGPL Engineer-in-charge about all know potential fire, explosion or toxic release hazards related to his contact. He in turn will ensure that same information has been passed to his supervisors and workman. Proper record of such dissemination of information must be made by the contractor and submit to the engineer-in-charge, on demand, falling which further continuation of work may be withheld.
- b) In the event, any contractor employee spot a fire or any serious hazards in plan/ pipe line premises, he shall dial Extn_____, identify himself and report location of fire when fire Station operator is on line. He shell wait until the fire message is repeated by the fire Operator and location confirmed.
- c) Pill box communication can also be used by contractor workmen.
- d) The contractor must ensure that each one of his employees clearly understands this fire Communication requirement, i.e. in case of fire siren is sounded they should assemble at designated assembly location. This may be ensured by contractor while providing on the Job training.

8. INJURY NOTIFICATION & INVESTIGATION

- a) Report to GGPL supervisor on the job, any injury sustained by any of his employees or any near-miss or any hazardous/dangerous incident at his worksite within the plant/pipe line premises. Hiding any accident or near miss would be viewed as serious misconduct.
- b) Arrange to provide first-Aid immediately to injured employee.
- c) Keep and maintain proper records of all such incidents in respect of his personal/work site.
- d) Submit to Engineer-in-charge a first information Report within 4 Hours of incident.
- e) Arrange to immediately investigate the incident and furnish within 24 Hours a written Investigation report to plant/pipe safety dept.

9. PARTICIPATION IN SAFTY ACTIVITIES

Contractor must attend all scheduled safety meetings as would be intimated to him by the Engineer-in-charge, Contractor also must ensure that all his employees participate in Safety promotional activities organized by the plant/pipe line.

10. POLICE VERIFICATION:

Contractor who engages laborer for his jobs in the plant/ pipeline must submit police verification of antecedents of labourers engaged by him.

11. SAFETY WHILE WORKING IN SCAFFOLDINGS

The work of erecting and dismantling scaffold as well as working on scaffolding platform involves serious injury hazards. In order to provide fall protection to the workers involved in these activities following must be ensured in addition to the existing work permit procedures.

- a) The scaffold should be double box type.
- b) The workers engaged in scaffolding must wear safety belt with double lifeline. This is intended to ensure that lifeline is secured all the time, even the person is moving.
- c) Safety nets must be deployed first 10 feet elevation and every 20feet elevation. These nets should be inside scaffold box as well as extend outwards.
- d) It should be ensured that only trained and experienced workers are engaged in scaffolding work.

NOTE: In addition to the above any new/ improved Safety Practices that is being directed by GGPL to be followed strictly.

SECTION – VI

GENERAL CONDITIONS OF

CONTRACT(GCC)

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FOR
GENERAL CONDITIONS OF CONTRACT

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GENERAL CONDITIONS OF CONTRACT

SECTION- I DEFINITIONS

1. Definition of Terms:

1.1 In this **CONTRACT** (as here-in-after defined) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise required.

1.1.1. The **EMPLOYER/COMPANY/GGPL** means GGPL (INDIA) LTD., a public limited company, incorporated under the Company's act 1956 and having its Registered office at D. No. 85-06-23/2, 2nd floor, 40th Ward, Morampudi Junction, Rajahmahendravaram-533 103, East Godavari Dist, A.Pand includes its successors and assigns.

1.1.2. The "**CONTRACTOR**" means the person or the persons, firm or Company or corporation whose tender has been accepted by the EMPLOYER and includes the CONTRACTOR's legal Representatives his successors and permitted assigns.

1.1.3. The **ENGINEER/ENGINEER-IN-CHARGE**" shall mean the person designated from time to time by the GGPL and shall include those who are expressly authorized by him to act for and on his behalf for operation of this CONTRACT.

1.1.4. The "**WORK**" shall mean and include all items and things to be supplied/ done and services and activities to be performed by the CONTRACTOR in pursuant to and in accordance with CONTRACT or part thereof as the case may be and shall include all extra, additional, altered or substituted works as required for purpose of the CONTRACT.

1.1.5. The "**PERMANENTWORK**" means and includes works which will be incorporated in and form a part of the work to be handed over to the EMPLOYER by the CONTRACTOR on completion of the CONTRACT.

1.1.6. "**CONSTRUCTIONEQUIPMENT**" means all appliances/equipment and things whatsoever nature for the use in or for the execution, completion, operation, or maintenance of the work or temporary works (as hereinafter defined) but does not include materials or other things intended to form or to be incorporated into the WORK, or camping facilities.

1.1.7. "**CONTRACTDOCUMENTS**" means collectively the Tender Documents, Designs, Drawings, Specification, Schedule of Quantities and Rates, Letter of Acceptance and agreed variations if any, and such other documents constituting the tender and acceptance thereof.

1.1.8. **CONSULTANT**: means ----- who are the consulting engineer to the Employer for this project and having registered office at -----

1.1.9. The "**SUB-CONTRACTOR**" means any person or firm or Company (other than the CONTRACTOR) to whom any part of the work has been entrusted by the CONTRACTOR.

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with the written consent of the ENGINEER-IN-CHARGE, and the legal representatives, successors and permitted assigns of such person, firm or company.

1.1.10. The "**CONTRACT**" shall mean the Agreement between the EMPLOYER and the CONTRACTOR for the execution of the works including therein all contract documents.

1.1.11. The "**SPECIFICATION**" shall mean all directions the various technical specifications, provisions attached and referred to the Tender Documents which pertain to the method and manner of performing the work or works to the quantities and qualities of the work or works and the materials to be furnished under the CONTRACT for the work or works, as may be amplified or modified by the GGPL or ENGINEER-IN-CHARGE during the performance of CONTRACT in order to provide the unforeseen conditions or in the best interests of the work or works. It shall also include the latest edition of relevant Standard Specifications including all addenda/corrigenda published before entering into CONTRACT.

1.1.12. The "**DRAWINGS**" shall include maps, plans and tracings or prints or sketches thereof with any modifications approved in writing by the ENGINEER- IN-CHARGE and such other drawing as may, from time to time, be furnished or approved in writing by the ENGINEER-IN-CHARGE.

1.1.13. The "**TENDER**" means the proposal along with supporting documents submitted by the CONTRACTOR for consideration by the EMPLOYER.

1.1.14. The "**CHANGEORDER**" means an order given in writing by the ENGINEER-IN-CHARGE to effect additions to or deletion from and alteration in the works.

1.1.15. The "**COMPLETIONCERTIFICATE**" shall mean the certificate to be issued by the ENGINEER-IN-CHARGE when the works have been completed entirely in accordance with CONTRACT DOCUMENT to his satisfaction.

1.1.16. The "**FINALCERTIFICATE**" in relation to a work means the certificate regarding the satisfactory compliance of various provision of the CONTRACT by the CONTRACTOR issued by the ENGINEER-IN- CHARGE/EMPLOYER after the period of liability is over.

1.1.17. "**DEFECTLIABILITYPERIOD**" in relation to a work means the specified period from the date of COMPLETION CERTIFICATE upto the date of issue of FINAL CERTIFICATE during which the CONTRACTOR stands responsible for rectifying all defects that may appear in the works executed by the CONTRACTOR in pursuance of the CONTRACT and includes warranties against Manufacturing/Fabrication/ Erection/Construction defects covering all materials plants, equipment, components, and the like supplied by the CONTRACTOR, works executed against workmanship defects.

1.1.18. The "**APPOINTINGAUTHORITY**" for the purpose of arbitration shall be the CHAIRMAN and MANAGING DIRECTOR or any other person so designated by the EMPLOYER.

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1.1.19. "**TEMPORARYWORKS**" shall mean all temporary works of every kind required in or about the execution, completion or maintenance of works.

1.1.20. "**PLANS**" shall mean all maps, sketches and layouts as are incorporated in the CONTRACT in order to define broadly the scope and specifications of the work or works, and all reproductions thereof.

1.1.21. "**SITE**" shall mean the lands and other places on, under, in or through which the permanent works are to be carried out and any other lands or places provided by the EMPLOYER for the purpose of the CONTRACT.

1.1.22. "**NOTICEINWRITINGORWRITTENNOTICE**" shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received by the addressee) by registered post to the latest known private or business address or registered office of the addressee and shall be deemed to have been received in the ordinary course of post it would have been delivered.

1.1.23. "**APPROVED**" shall mean approved in writing including subsequent written confirmation of previous verbal approval and "**APPROVAL**" means approval in writing including as aforesaid.

1.1.24. "**LETTEROFINTENT/FAXOFINTENT**" shall mean intimation by a Fax/Letter to Tenderer(s) that the tender has been accepted in accordance with the provisions contained in the letter.

1.1.25. "**DAY**" means a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.

1.1.26. "**WORKINGDAY**" means any day which is not declared to be holiday or rest day by the EMPLOYER.

1.1.27. "**WEEK**" means a period of any consecutive seven days.

1.1.28. "**METRICSYSTEM**" - All technical documents regarding the construction of works are given in the metric system and all work in the project should be carried out according to the metric system. All documents concerning the work shall also be maintained in the metric system.

1.1.29. "**VALUEOFCONTRACT**" or "**TOTALCONTRACTPRICE**" shall mean the sum accepted or the sum calculated in accordance with the prices accepted in tender and/or the CONTRACT rates as payable to the CONTRACTOR for the entire execution and full completion of the work, including change order.

1.1.30. "**LANGUAGEFORDRAWINGSANDINSTRUCTION**" All the drawings, titles, notes, instruction, dimensions, etc. shall be in English Language.

1.1.31. "**MOBILIZATION**" shall mean establishment of sufficiently adequate infrastructure by the CONTRACTOR at "**SITE**" comprising of construction equipments, aids, tools tackles

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including setting of site offices with facilities such as power, water, communication etc. establishing manpower organization comprising of Resident Engineers, Supervising personnel and an adequate strength of skilled, semi-skilled and un-skilled workers, who with the so established infrastructure shall be in a position to commence execution of work at site(s), in accordance with the agreed Time Schedule of Completion of Work. "MOBILISATION" shall be considered to have been achieved, if the CONTRACTOR is able to establish infrastructure as per Time Schedule, where so warranted in accordance with agreed schedule of work implementation to the satisfaction of ENGINEER-IN-CHARGE/EMPLOYER.

1.1.32. "**COMMISSIONING**" shall mean pressing into service of the system including the plant(s), equipment(s), vessel(s), pipeline, machinery(ies), or any other section or sub-section of installation(s) pertaining to the work of the CONTRACTOR after successful testing and trial runs of the same. "COMMISSIONING" can be either for a completed system or a part of system of a combination of systems or sub-systems and can be performed in any sequence as desired by EMPLOYER and in a manner established to be made suited according to availability of pre-requisites. Any such readjustments made by EMPLOYER in performance of "COMMISSIONING" activity will not be construed to be violating CONTRACT provisions and CONTRACTOR shall be deemed to have provided for the same.

SECTION-II GENERAL INFORMATION

2. General Information

2.1 a) **Location of Site:** The proposed location of Project site is defined in the Special Conditions of Contract.

b) **Access by Road:** CONTRACTOR, if necessary, shall build other temporary access roads to the actual site of construction for his own work at his own cost. The CONTRACTOR shall be required to permit the use of the roads so constructed by him for vehicles of any other parties who may be engaged on the project site. The CONTRACTOR shall also facilitate the construction of the permanent roads should the construction there of start while he is engaged on this work. He shall make allowance in his tender for any inconvenience he anticipates on such account. Non-availability of access roads, railway siding and railway wagons for the use of the CONTRACTOR shall in no case condone any delay in the execution of WORK nor be the cause for any claim for compensation against the EMPLOYER.

2.2 **Scope of Work:** The scope of WORK is defined in the Technical Part of the tender document. The CONTRACTOR shall provide all necessary materials, equipment, labour etc. for the execution and maintenance of the WORK till completion unless otherwise mentioned in the Tender Document.

2.3 **Water Supply:** Contractor will have to make his own arrangements for supply of water to his labour camps and for works. All pumping installations, pipe net work and distribution system will have to be carried out by the Contractor at his own risk and cost.

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Alternatively the Employer at his discretion may endeavour to provide water to the Contractor at the Employer's source of supply provided the Contractor makes his own arrangement for the water meter which shall be in custody of the Employer and other pipe net works from source of supply and such distribution pipe network shall have prior approval of the Engineer-in-Charge so as not to interfere with the layout and progress of the other construction works. In such case, the rate for water shall be deducted from the running account bills. However, the Employer does not guarantee the supply of water and this does not relieve the Contractor of his responsibility in making his own arrangement and for the timely completion of the various works as stipulated.

2.4 Power Supply:

2.4.1 Subject to availability, EMPLOYER will supply power at 400/440 V at only one point at the nearest sub-station, from where the CONTRACTOR will make his own arrangement for temporary distribution. The point of supply will not be more than 500 m away from the CONTRACTOR'S premises. All the works will be done as per the applicable regulations and passed by the ENGINEER-IN-CHARGE. The temporary line will be removed forthwith after the completion of work or if there is any hindrance caused to the other works due to the alignment of these lines, the CONTRACTOR will re-route or remove the temporary lines at his own cost. The CONTRACTOR at his cost will also provide suitable electric meters, fuses, switches, etc. for purposes of payment to the EMPLOYER which should be in the custody and control of the EMPLOYER. The cost of power supply shall be payable to the EMPLOYER every month for Construction Works power which would be deducted from the running account bills. The EMPLOYER shall not, however, guarantee the supply of electricity nor have any liability in respect thereof. No claim for compensation for any failure or short supply of electricity will be admissible.

2.4.2 It shall be the responsibility of the CONTRACTOR to provide and maintain the complete installation on the load side of the supply with due regard to safety requirement at site. All cabling, equipment, installations etc. shall comply in all respects with the latest statutory requirements and safety provisions i.e., as per the Central/State Electricity Acts and Rules etc. The CONTRACTOR will ensure that his equipment and Electrical Wiring etc., are installed, modified, maintained by a licensed Electrician/Supervisor. A test certificate is to be produced to the ENGINEER-IN-CHARGE for his approval, before power is made available.

2.4.3 At all times, IEA regulations shall be followed failing which the EMPLOYER has a right to disconnect the power supply without any reference to the CONTRACTOR. No claim shall be entertained for such disconnection by the ENGINEER-IN-CHARGE. Power supply will be reconnected only after production of fresh certificate from authorized electrical supervisors.

2.4.4 The EMPLOYER is not liable for any loss or damage to the CONTRACTOR's equipment as a result of variation in voltage or frequency or interruption in power supply or other loss to the CONTRACTOR arising therefrom.

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2.4.5 The CONTRACTOR shall ensure that the Electrical equipment installed by him are such that average power factors does not fall below 0.90 at his premises. In case power factor falls below 0.90 in any month, he will reimburse to the EMPLOYER at the penal rate determined by the EMPLOYER for all units consumed during the month.

2.4.6 The power supply required for CONTRACTOR's colony near the plant site will be determined by the EMPLOYER and shall be as per State Electricity Board's Rules and other statutory provisions applicable for such installations from time to time. In case of power supply to CONTRACTOR's colony, the power will be made available at a single point and the CONTRACTOR shall make his own arrangement at his own cost for distribution to the occupants of the colony as per Electricity Rules and Acts. The site and colony shall be sufficiently illuminated to avoid accidents.

2.4.7 The CONTRACTOR will have to provide and install his own lights and power meters which will be governed as per Central/State Government Electricity Rules. The metres shall be sealed by the EMPLOYER.

2.4.8 In case of damage of any of the EMPLOYER's equipment on account of fault, intentional or unintentional on the part of the CONTRACTOR, the EMPLOYER reserves the right to recover the cost of such damage from the CONTRACTOR's bill. Cost of HRC Fuses replaced at the EMPLOYER's terminals due to any fault in the CONTRACTOR's installation shall be to CONTRACTOR's account at the rates decided by the ENGINEER-IN-CHARGE.

2.4.9 Only motors upto 3 HP will be allowed to be started direct on line. For motors above 3 HP and upto 100 HP a suitable Starting device approved by the ENGINEER- IN-CHARGE shall be provided by the CONTRACTOR. For motors above 100 HP slipring induction motors with suitable starting devices as approved by the ENGINEER- IN-CHARGE shall be provided by the CONTRACTOR.

2.4.10 The CONTRACTOR shall ensure at his cost that all electrical lines and equipment and all installations are approved by the State Electricity Inspector before power can be supplied to the EMPLOYER.

2.4.11 The total requirement of power shall be indicated by the tenderer alongwith his tender.

2.5 Land for Contractor's Field Office, Godown and Workshop: The EMPLOYER will, at his own discretion and convenience and for the duration of the execution of the work make available near the site, land for construction of CONTRACTOR's Temporary Field Office, godowns workshops and assembly yard required for the execution of the CONTRACT. The CONTRACTOR shall at his own cost construct all these temporary buildings and provide suitable water supply and sanitary arrangement and get the same approved by the ENGINEER-IN-CHARGE. On completion of the works undertaken by the CONTRACTOR, he shall remove all temporary works erected by him and have the SITE cleaned as directed by ENGINEER-IN-CHARGE. If the CONTRACTOR shall fail to comply with these

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requirements, the ENGINEER-IN-CHARGE may at he expenses of the CONTRACTOR remove such surplus, and rubbish materials and dispose off the same as he deems fit and get the site cleared as aforesaid; and CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such surplus materials disposed off as aforesaid. But the EMPLOYER reserves the right to ask the CONTRACTOR any time during the pendency of the CONTRACT to vacate the land by giving 7 days notice on security reasons or on national interest or otherwise. Rent may be charged for the land so occupied from contractor by the Employer. The CONTRACTOR shall put up temporary structures as required by them for their office, fabrication shop and construction stores only in the area allocated to them on the project site by the EMPLOYER or his authorised representative. No tea stalls/canteens should be put up or allowed to be put up by any CONTRACTOR in the allotted land or complex area without written permission of the EMPLOYER. No unauthorised buildings, constructions or structures should be put up by the CONTRACTOR anywhere on the project site. For uninterrupted fabrication work, the CONTRACTOR shall put up temporary covered structures at his cost within Area in the location allocated to them in the project site by the EMPLOYER or his authorised representative. No person except for authorised watchman shall be allowed to stay in the plant area/CONTRACTOR's area after completion of the day's job without prior written permission from ENGINEER-IN-CHARGE.

2.6 Land for Residential Accommodation:-:No Land shall be made available for residential accommodation for staff and labour of CONTRACTOR.

SECTION-III GENERAL INSTRUCTIONS TO TENDERERS

3. Submission of Tender:

3.1 TENDER must be submitted without making any additions, alterations, and as per details given in other clauses hereunder. The requisite details shall be filled in by the TENDERER at space provided under "Submission of Tender at the beginning of GCC of Tender Document. The rate shall be filled only in the schedule given in this Tender Document.

3.2 Addenda/Corrigenda to this Tender Document, if issued, must be signed, submitted alongwith the Tender Document. the tenderer should write clearly the revised quantities in Schedule of Rates of Tender Document and should price the WORK based on revised quantities when amendments of quantities are issued in addenda.

3.3 Covering letter alongwith its enclosures accompanying the Tender Document and all further correspondence shall be submitted in duplicate.

3.4 Tenderers are advised to submit quotations based strictly on the terms and conditions and specifications contained in the Tender Documents and not to stipulate any deviations.

3.5 Tenders should always be placed in double sealed covers, superscribing ["QUOTATION DO NOT OPEN" Tender for _____ Project of GODAVARI GAS (P) LTD due for opening on _____].

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Name, Address and Telegraphic Address, Fax No. of the Tenderers shall be written on the bottom left hand corner of the sealed cover.

4. Documents:

4.1 General: The tenders as submitted, will consist of the following:

- (i) Complete set of Tender Documents (Original) as sold duly filled in and signed by the tenderer as prescribed in different clauses of the Tender Documents.
- (ii) Earnest money in the manner specified in Clause 6 hereof.
- (iii) Power of Attorney or a true copy thereof duly attested by a Gazetted Officer in case an authorised representative has signed the tender, as required by Clause 14 hereof.
- (iv) Information regarding tenderers in the proforma enclosed.
- (v) Details of work of similar type and magnitude carried out by the Tenderer in the proforma provided in the tender document.
- (vi) Organisation chart giving details of field management at site, the tenderer proposes to have for this job.
- (vii) Details of construction plant and equipments available with the tenderer for using in this work.
- (viii) Solvency Certificate from Scheduled Bank to prove the financial ability to carry out the work tendered for.
- (ix) Latest Balance Sheet and Profit & Loss Account duly audited.
- (x) Details of present commitment as per proforma enclosed to tender.
- (xi) Data required regarding SUB-CONTRACTOR(s)/ Supplier/ Manufacturers and other technical informations the tenderer wish to furnish.
- (xii) Provident fund registration certificate
- (xiii) List showing all enclosures to tender.

4.2 All pages are to be Initialed: All signatures in Tender Documents shall be dated, as well as, all the pages of all sections of Tender Documents shall be initialed at the lower right hand corner and signed wherever required in the tender papers by the TENDERER or by a person holding power of attorney authorising him to sign on behalf of the tenderer before submission of tender.

4.3 Rates to be in Figures and Words: The tender should quote in English both in figures as well as in words the rates and amounts tendered by him in the Schedule of Rates of Tender submitted by the CONTRACTOR for each item and in such a way that interpolation is not

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possible. The amount for each item should be worked out and entered and requisite total given of all items, both in figures and in words. The tendered amount for the work shall be entered in the tender and duly signed by the Tenderer. If some discrepancies are found between the RATES in FIGURES and WORDS or the AMOUNT shown in the tender, the following procedure shall be followed:

- a) When there is difference between the rates in figures and words, the rate which corresponds to the amount worked out by the tenderer shall be taken as correct.
- b) When the rate quoted by the tenderer in figures and words tally but the amount is incorrect the rate quoted by the tenderer shall be taken as correct.
- c) When it is not possible to ascertain the correct rate by either of above methods, the rate quoted in words shall be taken as correct.

4.4 **Corrections and Erasures:** All correction(s) and alteration(s) in the entries of tender paper shall be signed in full by the TENDERER with date. No erasure or over writing is permissible.

4.5 **Signature of Tenderer:**

4.5.1 The TENDERER shall contain the name, residence and place of business of person or persons making the tender and shall be signed by the TENDERER with his usual signature. Partnership firms shall furnish the full names of all partners in the tender. It should be signed in the partnership's name by all the partners or by duly authorised representatives followed by the name and designation of the person signing. Tender by a corporation shall be signed by an authorised representative, and a Power of Attorney in that behalf shall accompany the tender. A copy of the constitution of the firm with names of all partners shall be furnished.

4.5.2 When a tenderer signs a tender in a language other than English, the total amount tendered should, in addition, be written in the same language. The signature should be attested by at least one witness.

4.6 **Witness:** Witness and sureties shall be persons of status and property and their names, occupation and address shall be stated below their signature.

4.7 **Details of Experience:** The tenderer should furnish, alongwith his tender, details of previous experience in having successfully completed in the recent past works of this nature, together with the names of Employers, location of sites and value of contract, date of commencement and completion of work, delays if any, reasons of delay and other details alongwith documentary evidence(s).

4.8 **Liability of Government of India:** It is expressly understood and agreed by and between Bidder or/Contractor and M/s GODAVARI GAS (P) LTD, and that M/s GGPL (India) Ltd., is entering into this agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that M/s GGPL (India) Ltd. is an independent legal entity with power and authority to enter into contracts solely on its own

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behalf under the applicable Laws of India and general principles of Contract Law. The Bidder/Contractor expressly agrees, acknowledges and understands that M/s GGPL (India) Ltd. is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the contract. Accordingly, Bidder/Contractor hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Government of India arising out of this contract and covenants not to sue to Government of India as to any manner, claim, cause of action or thing whatsoever arising of or under this agreement.

5. Transfer of Tender Documents:

5.1 Transfer of Tender Documents purchased by one intending tenderer to another is not permissible.

6. Earnest Money:

6.1 The bidder must pay Earnest Money as given in the letter /notice inviting tenders and attach the official receipt with the tender failing which the tender is liable to be rejected and representatives of such tenderers will not be allowed to attend the tender opening. Earnest Money can be paid in Demand Drafts or Bank Guarantee or Banker's Cheque or Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, other than the Nationalised Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bid guarantee shall be submitted in the prescribed format .

Note: The Bank Guarantee so furnished by the tenderer shall be in the proforma prescribed by the EMPLOYER. No interest shall be paid by the EMPLOYER on the Earnest Money deposited by the tenderer. The Bank Guarantee furnished in lieu of Earnest Money shall be kept valid for a period of "SIX MONTHS" from the date of opening of tender.(TWO MONTHS beyond the bid validity). The Earnest Money deposited by successful tenderer shall be forfeited if the Contractor fails to furnish the requisite Contract Performance Security as per clause 24 hereof and /or fails to start work within a period of 15 days or fails to execute the AGREEMENT within 15 days of the receipt by him of the Notification of Acceptance of Tender.

Note: The Earnest Money of the unsuccessful bidder will be returned by EMPLOYER/CONSULTANT, directly to the tenderer (s), within a reasonable period of time but not later than 30 days after the expiration of the period of bid validity prescribed by EMPLOYER.

7 Validity:

7.1 Tender submitted by tenderers shall remain valid for acceptance for a period of "4 MONTHS" from the date of opening of the tender. The tenderers shall not be entitled during

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the said period of 4 months, without the consent in writing of the EMPLOYER, to revoke or cancel his tender or to vary the tender given or any term thereof. In case of tender revoking or canceling his tender or varying any term in regard thereof without the consent of EMPLOYER in writing, the EMPLOYER shall forfeit Earnest Money paid by him alongwith tender.

8 Addenda/Corrigenda

8.1 Addenda/ Corrigenda to the Tender Documents will be issued in duplicate prior to the date of opening of the tenders to clarify documents or to reflect modification in design or CONTRACT terms.

8.2 Each addenda/ corrigendum issued will be issued in duplicate to each person or organisation to whom set of Tender Documents has been issued. Recipient will retain tenderer's copy of each Addendum/Corrigendum and attach original copy duly signed along with his offer. All Addenda/Corrigenda issued shall become part of Tender Documents.

9 Right of Employer to Accept or Reject Tender:

9.1 The right to accept the tender will rest with the EMPLOYER. The EMPLOYER, however, does not bind himself to accept the lowest

tender, and reserves to itself the authority to reject any or all the tenders received without assigning any reason whatsoever. At the option of the Employer, the work for which the tender had been invited, may be awarded to one Contractor or split between more than one bidders, in which case the award will be made for only that part of the work, in respect of which the bid has been accepted. The quoted rates should hold good for such eventualities. Tenders in which any of the particulars and prescribed information are missing or are incomplete in any respect and/or the prescribed conditions are not fulfilled are liable to be rejected. The Tender containing uncalled for remarks or any additional conditions are liable to be rejected. Canvassing in connection with tenders is strictly prohibited and tenders submitted by the Tenderers who resort to canvassing will be liable to rejection.

10 Time Schedule

10.1 The WORK shall be executed strictly as per the TIME SCHEDULE specified in TENDER/CONTRACT Document. The period of construction given in Time Schedule includes the time required for mobilisation as well as testing, rectifications if any, retesting and completion in all respects to the entire satisfaction of the ENGINEER-IN- CHARGE.

10.2 A joint programme of execution of the WORK will be prepared by the ENGINEER-IN-CHARGE and CONTRACTOR based on priority requirement of this project. This programme will take into account the time of completion mentioned in 10.1 above and the time allowed for the priority works by the ENGINEER-IN-CHARGE.

10.3 Monthly/Weekly construction programme will; be drawn up by the ENGINEER-IN-CHARGE jointly with the CONTRACTOR, based on availability of work fronts and the joint construction programme as per 10.2 above. The CONTRACTOR shall scrupulously adhere to

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these targets /programmes by deploying adequate personnel, construction tools and tackles and he shall also supply himself all materials of his scope of supply in good time to achieve the targets/programmes. In all matters concerning the extent of targets set out in the weekly and monthly programmes and the degree of achievements the decision of the ENGINEER-IN-CHARGE will be final and binding on the CONTRACTOR.

11 Tenderer's Responsibility

11.1 The intending tenderers shall be deemed to have visited the SITE and familiarised submitting the tender. Non-familiarity with the site conditions will not be considered a reason either for extra claims or for not carrying out the works in strict conformity with the DRAWINGS and SPECIFICATIONS or for any delay in performance.

12 Retired Government or Company Officers

12.1 No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the States/ Central Government or of the EMPLOYER is allowed to work as a CONTRACTOR for a period of two years after his retirement from Government Service, or from the employment of the EMPLOYER without the previous permission of the EMPLOYER. The CONTRACT, if awarded, is liable to be cancelled if either the CONTRACTOR or any of his employees is found at any time to be such a person, who has not obtained the permission of the State/Central Government or of the EMPLOYER as aforesaid before submission of tender, or engagement in the CONTRACTOR'S service as the case may be.

13 Signing of the Contract:

13.1 The successful tenderer shall be required to execute an AGREEMENT in the proforma attached with TENDER DOCUMENT within 15 days of the receipt by him of the Notification of Acceptance of Tender. In the event of failure on the part of the successful tenderer to sign the AGREEMENT within the above stipulated period, the Earnest Money or his initial deposit will be forfeited and the acceptance of the tender shall be considered as cancelled.

14 Field Management & Controlling/Coordinating Authority:

14.1 The field management will be the responsibility of the ENGINEER-IN-CHARGE, who will be nominated by the EMPLOYER. The ENGINEER-IN-CHARGE may also authorize his representatives to assist in performing his duties and functions.

14.2 The ENGINEER-IN-CHARGE shall coordinate the works of various agencies engaged at site to ensure minimum disruption of work carried out by different agencies. It shall be the responsibility of the CONTRACTOR to plan and execute the work strictly in accordance with site instructions to avoid hindrance to the work being executed by other agencies.

15 Note to Schedule of Rates:

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15.1 The Schedule of Rates should be read in conjunction with all the other sections of the tender.

15.2 The tenderer shall be deemed to have studied the DRAWINGS, SPECIFICATIONS and details of work to be done within TIME SCHEDULE and to have acquainted himself of the condition prevailing at site.

15.3 Rates must be filled in the Schedule of Rates of original Tender Documents. If quoted in separate typed sheets no variation in item description or specification shall be accepted. Any exceptions taken by the tenderer to the Schedule of Rates shall be brought out in the terms and conditions of the offer.

15.4 The quantities shown against the various items are only approximate. Any increase or decrease in the quantities shall not form the basis of alteration of the rates quoted and accepted.

15.5 The EMPLOYER reserves the right to interpolate the rates for such items of work falling between similar items of lower and higher magnitude.

16 Policy for Tenders Under Consideration:

16.1 Only Those Tenders which are complete in all respects and are strictly in accordance with the Terms and Conditions and Technical Specifications of Tender Document, shall be considered for evaluation. Such Tenders shall be deemed to be under consideration immediately after opening of Tender and until such time an official intimation of acceptance /rejection of Tender is made by GGPL to the Bidder.

16.2 **Zero Deviation:** Bidders to note that this is a ZERO DEVIATION TENDER. GGPL will appreciate submission of offer based on the terms and conditions in the enclosed General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Instructions to Bidders (ITB), Scope of Work, technical specifications etc. to avoid wastage of time and money in seeking clarifications on technical/ commercial aspects of the offer. Bidder may note that no technical and commercial clarifications will be sought for after the receipt of the bids. In case of any deviation/nonconformity observed in the bid, it will be liable for rejection.

17 Award of Contract:

17.1 The Acceptance of Tender will be intimated to the successful Tenderer by GGPL either by Telex/ Telegram/ Fax or by Letter or like means-defined as LETTER OF ACCEPTANCE OF TENDER.

17.2 GGPL will be the sole judge in the matter of award of CONTRACT and the decision of GGPL shall be final and binding.

18 Clarification of Tender Document:

18.1 The Tender is required to carefully examine the Technical Specifications, Conditions of Contract, Drawings and other details relating to WORK and given in Tender Document and fully inform himself as to all conditions and matters which may in any way affect the WORK or the cost thereof. In case the Tenderer is in doubt about the completeness or correctness of any of the contents of the Tender Documents he should request in writing for an interpretation/clarification to GGPL in triplicate. GGPL will then issue interpretation/clarification to Tenderer in writing. Such clarifications and or interpretations

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shall form part of the Specifications and Documents and shall accompany the tender which shall be submitted by tenderer within time and date as specified in invitations to tender.

18.2 Verbal clarification and information given by GGPL or its employee(s) or its representatives shall not in any way be binding on GGPL.

19 Local Conditions:

19.1 It will be imperative on each tenderer to inform himself of all local conditions and factors which may have any effect on the execution of WORK covered under the Tender Document. In their own interest, the tenderer are requested to familiarise themselves with the Indian Income Tax Act 1961, Indian Companies Act 1956, Indian Customs Act 1962 and other related Acts and Laws and Regulations of India with their latest amendments, as applicable GGPL shall not entertain any requests for clarifications from the tenderer regarding such local conditions.

19.2 It must be understood and agreed that such factors have properly been investigated and considered while submitting the tender. No claim for financial or any other adjustments to VALUE OF CONTRACT, on lack of clarity of such factors shall be entertained.

20 Abnormal Rates:

20.1 The tenderer is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all specifications and Conditions of Contract. This will avoid loss of profit or gain in case of curtailment or change of specification for any item. In case it is noticed that the rates quoted by the tenderer for any item are unusually high or unusually low, it will be sufficient cause for the rejection of the tender unless the EMPLOYER is convinced about the reasonableness after scrutiny of the analysis for such rate(s) to be furnished by the tenderer (on demand).

SECTION-IV GENERAL OBLIGATIONS

21 Priority of Contract Documents

21.1 Except if and the extent otherwise provided by the Contract, the provisions of the General Conditions of Contract and Special Conditions shall prevail over those of any other documents forming part of the CONTRACT. Several documents forming the CONTRACT are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the ENGINEER-IN-CHARGE who shall thereupon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows :

- (i) The Contract Agreement ;
- (ii) The Letter of Acceptance;

- (iii) The (Instructions to Bidders)ITB;
- (iv) Special Conditions of Contract (SCC);
- (v) General Conditions of Contract (GCC)
- (vi) Any other document forming part of the Contract. Works shown in the DRAWING but not mentioned in the SPECIFICATIONS OR described in the SPECIFICATIONS without being shown in the DRAWINGS shall nevertheless be deemed to be included in the same manner as if they had been specifically shown upon the DRAWINGS and described in the SPECIFICATIONS.

21.2 Headings and Marginal Notes: All headings and marginal notes to the clauses of these General Conditions of Contract or to the SPECIFICATIONS or to any other Tender Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof the CONTRACT.

21.3 Singular and Plural: In CONTRACT DOCUMENTS unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.

21.4 Interpretation: Words implying 'Persons' shall include relevant 'Corporate Companies / Registered Associations/ Body of Individuals/ Firm of Partnership' as the case may be.

22 Special Conditions of Contract:

22.1 Special Conditions of Contract shall be read in conjunction with the General Conditions of Contract, specification of Work, Drawings and any other documents forming part of this CONTRACT wherever the context so requires.

22.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.

22.3 Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.

22.4 Wherever it is mentioned in the specifications that the CONTRACTOR shall perform certain WORK or provide certain facilities, it is understood that the CONTRACTOR shall do

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so at his cost and the VALUE OF CONTRACT shall be deemed to have included cost of such performance and provisions, so mentioned.

22.5 The materials, design and workmanship shall satisfy the relevant INDIAN STANDARDS, the JOB SPECIFICATIONS contained herein and CODES referred to. Where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.

23 Contractor to obtain his own Information:

23.1 The CONTRACTOR in fixing his rate shall for all purpose whatsoever reason may be, deemed to have himself independently obtained all necessary information for the purpose of preparing his tender and his tender as accepted shall be deemed to have taken into account all contingencies as may arise due to such information or lack of same. The correctness of the details, given in the Tender Document to help the CONTRACTOR to make up the tender is not guaranteed. The CONTRACTOR shall be deemed to have examined the CONTRACT DOCUMENTS, to have generally obtained his own information in all matters whatsoever that might affect the carrying out of the works at the schedules rates and to have satisfied himself to the sufficiency of his tender. Any error in description of quantity or omission therefrom shall not vitiate the CONTRACT or release the CONTRACTOR from executing the work comprised in the CONTRACT according to DRAWINGS and SPECIFICATIONS at the scheduled rates. He is deemed to have known the scope, nature and magnitude of the WORKS and the requirements of materials and labour involved etc., and as to what all works he has to complete in accordance with the CONTRACT documents whatever be the defects, omissions or errors that may be found in the DOCUMENTS. The CONTRACTOR shall be deemed to have visited surroundings, to have satisfied himself to the nature of all existing structures, if any, and also as to the nature and the conditions of the Railways, Roads, Bridges and Culverts, means of transport and communication, whether by land, water or air, and as to possible interruptions thereto and the access and egress from the site, to have made enquiries, examined and satisfied himself as to the sites for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials, the available accommodation as to whatever required, depots and such other buildings as may be necessary for executing and completing the works, to have made local independent enquiries as to the sub-soil, subsoil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters effecting these works. He is deemed to have acquainted himself as to his liability of payment of Government Taxes, Customs duty and other charges, levies etc. Any neglect or omission or failure on the part of the CONTRACTOR in obtaining necessary and reliable information upon the foregoing or any other matters affecting the CONTRACT shall not relieve him from any risks or liabilities or the entire responsibility from completion of the works at the scheduled rates and times in strict accordance with the CONTRACT. It is, therefore, expected that should the CONTRACTOR have any doubt as to the meaning of any portion of the CONTRACT DOCUMENT he shall set forth the particulars thereof in writing to EMPLOYER in duplicate, before submission of tender. The EMPLOYER may provide

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such clarification as may be necessary in writing to CONTRACT, such clarifications as provided by EMPLOYER shall form part of CONTRACT DOCUMENTS. No verbal agreement or inference from conversation with any effect or employee of the EMPLOYER either before, during or after the execution of the CONTRACT agreement shall in any way affect or modify and of the terms or obligations herein contained. Any change in layout due to site conditions or technological requirement shall be binding on the CONTRACTOR and no extra claim on this account shall be entertained.

24 Contract Performance Security:

24.1 The CONTRACTOR shall furnish to the EMPLOYER, within 15 days from the date of notification of award, a security in the sum of 10% of the accepted value of the tender or the actual value of work to be done whichever is applicable due to any additional work or any other reasons, in the form of a Bank draft/Banker's cheque or Bank Guarantee or irrevocable Letter of credit (as per proforma enclosed) as Contract Performance Security with the EMPLOYER which will be refunded after the expiry of DEFECTS LIABILITY PERIOD. However where the contract is for two years or more , in this case, contractor has to deposit security deposit 7.5% of annualized contract value and where the contract value is up to 25 lacs, initially SD is to be deposited 2.5% and remaining 5% to be recovered from RA Bills. Contract/Order value as mentioned above shall be exclusive of taxes and duties. The SD will be valid for the period of contract + 90 days beyond the contract period/duration and applicable Warranty/Guarantee/Defect Liability Period (if any).

24.2 CONTRACTOR can furnish the Contract Performance Security in the form of Demand Draft or through a Bank Guarantee or through an irrevocable Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, other than the Nationalised Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bank guarantee or the Letter of Credit shall be submitted in the prescribed format.

24.3 If the CONTRACTOR/SUB-CONTRACTOR or their employees or the CONTRACTOR's agents and representatives shall damage, break, deface or destroy any property belonging to the EMPLOYER or others during the execution of the CONTRACT, the same shall be made good by the CONTRACTOR at his own expenses and in default thereof, the ENGINEER-IN-CHARGE may cause the same to be made good by other agencies and recover expenses from the CONTRACTOR (for which the certificate of the ENGINEER- IN-CHARGE shall be final).

24.4 All compensation or other sums of money payable by the CONTRACTOR to the EMPLOYER under terms of this CONTRACT may be deducted from or paid by the encashment or sale of a sufficient part of his Contract Performance Security or from any

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sums which may be due or may become due to the CONTRACTOR by the EMPLOYER of any account whatsoever and in the event of his Contract Performance Security being reduced by reasons of any such deductions or sale of aforesaid, the CONTRACTOR shall within ten days thereafter make good in cash, bank drafts as aforesaid any sum or sums which may have been deducted from or realised by sale of his Contract Performance Security, or any part thereof. No interest shall be payable by the EMPLOYER for sum deposited as Contract Performance Security.

24.5 Failure of the successful bidder to comply with the requirements of this Clause shall constitute sufficient grounds for the annulment of the award and the forfeiture of bid security.

25 Time of Performance:

25.1 **Time for Mobilization:** The work covered by this CONTRACT shall be commenced within fifteen (15) days, the date of letter/Fax of Intent and be completed in stages on or before the dates as mentioned in the TIME SCHEDULE OF COMPLETION OF WORK. The CONTRACTOR should bear in mind that time is the essence of this agreement. Request for revision of construction time after tenders are opened will not receive consideration. The above period of fifteen (15) days is included within the overall COMPLETION SCHEDULE, not over and above the completion time to any additional work or any other reasons.

25.2 Time Schedule of Construction:

25.2.1 The general Time Schedule of construction is given in the TENDER DOCUMENT. CONTRACTOR should prepare a detailed monthly or weekly construction program jointly with the ENGINEER-IN-CHARGE within 15 days of receipt of LETTER/FAX OF INTENT or ACCEPTANCE OF TENDER. The WORK shall be executed strictly as per the Time Schedule given in the CONTRACT DOCUMENT. The period of construction given includes the time required for mobilisation testing, rectifications, if any, retesting and completion in all respects in accordance with CONTRACT DOCUMENT to the entire satisfaction of the ENGINEER-IN-CHARGE.

25.2.2 The CONTRACTOR shall submit a detailed PERT network within the time frame agreed above consisting of adequate number of activities covering various key phases of the WORK such as design, procurement, manufacturing, shipment and field erection activities within fifteen (15) days from the date of LETTER/FAX OF INTENT. This network shall also indicate the interface facilities to be provided by the EMPLOYER and the dates by which such facilities are needed.

25.2.3 CONTRACTOR shall discuss the network so submitted with the EMPLOYER and the agreed network which may be in the form as submitted with the EMPLOYER or in revised form in line with the outcome of discussions shall form part of the CONTRACT, to be signed within fifteen (15) days from the date of LETTER OF ACCEPTANCE OF TENDER. During the performance of the CONTRACT, if in the opinion of the EMPLOYER

proper progress is not maintained suitable changes shall be made in the CONTRACTOR's operation to ensure proper progress. The above PERT network shall be reviewed periodically and reports shall be submitted by the CONTRACTOR as directed by EMPLOYER.

26 Force Majeure:

26.1 **CONDITIONS FOR FORCE MAJEURE:** In the event of either party being rendered unable by Force Majeure to perform any obligations required to be performed by them under the CONTRACT the relative obligation of the party affected by such Force Majeures shall upon notification to the other party be suspended for the period during which Force Majeures event lasts. The cost and loss sustained by the either party shall be borne by the respective parties. The term "Force Majeures" as employed herein shall mean acts of God, earthquake, war (declared or undeclared), revolts, riots, fires, floods, rebellions, explosions, hurricane, sabotage, civil commotions and acts and regulations of respective Government of the two parties, namely the EMPLOYER and the CONTRACTOR. Upon the occurrence of such cause(s) and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing immediately but not later than 72 (Seventy-two) hours of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of its claim. Time for performance of the relative obligation suspended by the Force Majeures shall then stand extended by the period for which such cause lasts. If deliveries of bought out items and/or works to be executed by the CONTRACTOR are suspended by Force Majeure conditions lasting for more than 2 (two) months the EMPLOYER shall have the option to terminate the CONTRACT or re-negotiate the contract provisions.

26.2 OUTBREAK OF WAR

26.2.1 If during the currency of the CONTRACT there shall be an out-break of war whether declared or not, in that part of the World which whether financially or otherwise materially affect the execution of the WORK the CONTRACTOR shall unless and until the CONTRACT is terminated under the provisions in this clause continue to use his best endeavour to complete the execution of the WORK, provided always that the EMPLOYER shall be entitled, at any time after such out-break of war to terminate or re-negotiate the CONTRACT by giving notice in writing to the CONTRACTOR and upon such notice being given the CONTRACT shall, save as to the rights of the parties under this clause and to the operation of the clauses entitled settlement of Disputes and Arbitration hereof, be terminated but without prejudice to the right of either party in respect of any antecedent breach thereof.

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26.2.2 If the CONTRACT shall be terminated under the provisions of the above clause, the CONTRACTOR shall with all reasonable diligence remove from the SITE all the CONTRACTOR's equipment and shall give similar facilities to his SUB-CONTRACTORS to do so.

27 Price reduction schedule:

27.1 Time is the essence of the CONTRACT. In case the CONTRACTOR fails to complete the WORK within the stipulated period, then, unless such failure is due to Force Majeure as defined in Clause 26 here above or due to EMPLOYER's defaults, the Total Contract price shall be reduced by ½ % of the total Contract Price per complete week of delay or part thereof subject to a maximum of 5 % of the Total Contract Price, by way of reduction in price for delay and not as penalty. The said amount will be recovered from amount due to the Contractor/ Contractor's Contract Performance Security payable on demand. The decision of the ENGINEER-IN-CHARGE in regard to applicability of Price Reduction Schedule shall be final and binding on the CONTRACTOR.

27.2 All sums payable under this clause is the reduction in price due to delay in completion period at the above agreed rate.

27.3 Bonus For Early Completion (*)

BONUS FOR EARLY COMPLETION If the Contractor achieves completion of Works in all respect prior to the time schedule stipulated in the SCC, the Employer shall pay to the Contractor the relevant sum, if mentioned specifically in SCC, as bonus for early completion. The bonus for early completion, if provided specifically in SCC, shall be payable to the maximum ceiling of 2 ½ % of the total contract price.

(*) Partial earlier completion may not always produce net benefits to the Employer, for example where utilization of the completed Works requires (a) the fulfillment of all parts of the Contract (e.g. the training of personnel); or (b) the completion of all Sections (e.g. in pipeline laying, where early completion of the laying of pipeline would not be useful if the compressor is still under installation); or (c) certain seasonal effects to take place (e.g. onset of the rainy season, for impounding a reservoir); or (d) other circumstances. Also a more rapid drawdown of budgeted funds may be required. All such factors should be considered prior to the inclusion of a bonus clause in the Contract.

28 Rights of the employer to forfeit contract performance security:

28.1 Whenever any claim against the CONTRACTOR for the payment of a sum of money arises out or under the CONTRACT, the EMPLOYER shall be entitled to recover such sum by appropriating in part or whole the Contract Performance Security of the CONTRACTOR. In the event of the security being insufficient or if no security has been taken from the CONTRACTOR, then the balance or the total sum recoverable, as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the CONTRACTOR. The CONTRACTOR shall pay to the EMPLOYER on demand any balance remaining due.

29 Failure by the contractor to comply with the provisions of the contract:

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

a) TO DETERMINE THE CONTRACT in which event the CONTRACT shall stand terminated and shall cease to be in force and effect on and from the date appointed by the EMPLOYER on that behalf, whereupon the CONTRACTOR shall stop forthwith any of the CONTRACTOR's work then in progress, except such WORK as the EMPLOYER may, in writing, require to be done to safeguard any property or WORK, or installations from damage, and the EMPLOYER, for its part, may take over the work remaining unfinished by the CONTRACTOR and complete the same through a fresh contractor or by other means, at the risk and cost of the CONTRACTOR, and any of his sureties if any, shall be liable to the EMPLOYER for any excess cost occasioned by such work having to be so taken over and completed by the EMPLOYER over and above the cost at the rates specified in the schedule of quantities and rate/prices.

b) WITHOUT DETERMINING THE CONTRACT to take over the work of the CONTRACTOR or any part thereof and complete the same through a fresh contractor or by other means at the risk and cost of the CONTRACTOR The CONTRACTOR and any of his sureties are liable to the EMPLOYER for any excess cost over and above the cost at the rates specified in the Schedule of Quantities/ rates, occasioned by such works having been taken over and completed by the EMPLOYER.

29.2 In such events of Clause 29.1(a) or (b) above.

a) The whole or part of the Contract Performance Security furnished by the CONTRACTOR is liable to be forfeited without prejudice to the right of the EMPLOYER to recover from the CONTRACTOR the excess cost referred to in the sub-clause aforesaid, the EMPLOYER shall also have the right of taking possession and utilising in completing the works or any part thereof, such as materials equipment and plants available at work site belonging to the CONTRACTOR as may be necessary and the CONTRACTOR shall not be entitled for any compensation for use or damage to such materials, equipment and plant.

b) The amount that may have become due to the CONTRACTOR on account of work already executed by him shall not be payable to him until after the expiry of Six (6) calendar months reckoned from the date of termination of CONTRACT or from the taking over of the WORK or part thereof by the EMPLOYER as the case may be, during which period the responsibility for faulty materials or workmanship in respect of such work shall, under the CONTRACT, rest exclusively with the CONTRACTOR This amount shall be subject to

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deduction of any amounts due from the CONTRACT to the EMPLOYER under the terms of the CONTRACT authorised or required to be reserved or retained by the EMPLOYER.

29.3 Before determining the CONTRACT as per Clause 29.1(a) or (b) provided in the judgement of the EMPLOYER, the default or defaults committed by the CONTRACTOR is/are curable and can be cured by the CONTRACTOR if an opportunity given to him, then the EMPLOYER may issue Notice in writing calling the CONTRACTOR to cure the default within such time specified in the Notice.

29.4 The EMPLOYER shall also have the right to proceed or take action as per 29.1(a) or (b) above, in the event that the CONTRACTOR becomes bankrupt, insolvent, compounds with his creditors, assigns the CONTRACT in favour of his creditors or any other person or persons, or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the EMPLOYER to give any prior notice to the CONTRACTOR

29.5 Termination of the CONTRACT as provided for in sub- clause 29.1(a) above shall not prejudice or affect their rights of the EMPLOYER which may have accrued upto the date of such termination.

30 Contractor remains liable to pay compensation if

30.1 In any case in which any of the powers conferred upon the EMPLOYER BY CLAUSE 29.0 thereof shall have become action not taken under clause 29: exercisable and the same had not been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in .the event of any further case of default by the CONTRACTOR for which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his Contract Performance Security, and the liability of the CONTRACTOR for past and future compensation shall remain unaffected. In the event of the EMPLOYER putting in force the power under above sub-clause (a), (b) or (c) vested in him under the preceding clause he may, if he so desired, take possession of all or any tools, and plants, materials and stores in or upon the works or the site thereof belonging to the CONTRACTOR or procured by him and intended to be used for the execution of the WORK or any part thereof paying or allowing for the same in account at the CONTRACT rates or in case of these not being applicable at current market rates to be certified by the ENGINEER-IN-CHARGE whose certificate thereof shall be final, otherwise the ENGINEER-IN- CHARGE may give notice in writing to the CONTRACTOR or his clerk of the works, foreman or other authorized agent, requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice), and in the event of the CONTRACTOR failing to comply with any such requisition, the ENGINEER-IN-CHARGE may remove them at the CONTRACTOR's expense or sell them by auction or private sale on account of the CONTRACTOR and at his risk in all respects without any further notice as to the date, time or place of sale and the certificate of the ENGINEER-IN-CHARGE as to the

expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the CONTRACTOR.

31 Change in constitution:

31.1 Where the CONTRACTOR is a partnership firm, the prior approval of the EMPLOYER shall be obtained in writing, before any change is made in the constitution of the firm. Where the CONTRACTOR is an individual or a Hindu undivided family business concern, such approval as aforesaid shall, likewise be obtained before such CONTRACTOR enters into any agreement with other parties, where under, the reconstituted firm would have the right to carry out the work hereby undertaken by the CONTRACTOR. In either case if prior approval as aforesaid is not obtained, the CONTRACT shall be deemed to have been allotted in contravention of clause 37 hereof and the same action may be taken and the same consequence shall ensure as provided in the said clause.

32 Termination of contract

32.1 **TERMINATION OF CONTRACT FOR DEATH:** If the CONTRACTOR is an individual or a proprietary concern and the individual or the proprietor dies or if the CONTRACTOR is a partnership concern and one of the partner dies then unless, the EMPLOYER is satisfied that the legal representative of the individual or the proprietary concern or the surviving partners are capable of carrying out and completing CONTRACT, he (the EMPLOYER) is entitled to cancel the CONTRACT for the uncompleted part without being in any way liable for any compensation payment to the estate of the deceased CONTRACTOR and/or to the surviving partners of the CONTRACTOR'S firm on account of the cancellation of CONTRACT. The decision of the EMPLOYER in such assessment shall be final and binding on the parties. In the event of such cancellation, the EMPLOYER shall not hold the estate of the deceased CONTRACTOR and/or the surviving partners of the CONTRACTOR'S firm liable for any damages for non-completion of CONTRACT.

32.2 **TERMINATION OF CONTRACT IN CASE OF LIQUIDATION / BANKRUPTCY ETC.** If the Contractor shall dissolve or become bankrupt or insolvent or cause or suffer any receiver to be appointed of his business or any assets thereof compound with his Creditors, or being a corporation commence to be wound up, not being a member's voluntary winding up for the purpose of amalgamation or reconstruction, or carry on its business under a Receiver for the benefits of its Creditors any of them, EMPLOYER shall be at liberty :- To terminate the contract forthwith upon coming to know of the happening of any such event as aforesaid by notice in writing to the Contractor or to give the Receiver or liquidator or other person, the option of carrying out the contract subject to his providing a guarantee upto an amount to be agreed upon by EMPLOYER for due and faithful performance of the contract.

33.2 TERMINATION OF CONTRACT FOR NON-PERFORMANCE AND SUBSEQUENTLY PUTTING THE CONTRACTOR ON HOLIDAY:

In case of termination of CONTRACT herein set forth (under clause 29.0) except under conditions of Force Majeure and termination after expiry of contract, the CONTRACTOR shall be put under holiday [i.e. neither any enquiry will be issued to the party by GGPL (India) Ltd. against any type of tender nor their offer will be considered by GGPL against any ongoing tender (s) where contract between GGPL and that particular CONTRACTOR (as a bidder) has not been finalized] for three years from the date of termination by GGPL (India) Ltd. to such CONTRACTOR.

33 Members of the employer not individually liable :

33.1 No Director, or official or employee of the EMPLOYER/ CONSULTANT shall in any way be personally bound or liable for the acts or obligations of the EMPLOYER under the CONTRACT or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

34 Employer not bound by personal representations:

34.1 The CONTRACTOR shall not be entitled to any increase on the scheduled rates or any other right or claim whatsoever by reason of any representation, explanation statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

35 Contractor's office at site:

35.1 The CONTRACTOR shall provide and maintain an office at the site for the accommodation of his agent and staff and such office shall be open at all reasonable hours to receive instructions, notice or other communications. The CONTRACTOR at all time shall maintain a site instruction book and compliance of these shall be communicated to the ENGINEER-IN CHARGE from time to time and the whole document to be preserved and handed over after completion of works.

36 Contractor's subordinate staff and their conduct

36.1 The CONTRACTOR, on or after award of the WORK shall name and depute a qualified engineer having sufficient experience in carrying out work of similar nature, to whom the equipments, materials, if any, shall be issued and instructions for works given. The CONTRACTOR shall also provide to the satisfaction of the ENGINEER-IN- CHARGE sufficient and qualified staff to superintend the execution of the WORK, competent sub-agents, foremen and leading hands including those specially qualified by previous experience to supervise the types of works comprised in the CONTRACT in such manner as will ensure work of the best quality, expeditious working. Whenever in the opinion of the ENGINEER-IN- CHARGE additional properly qualified supervisory staff is considered necessary, they

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shall be employed by the CONTRACTOR without additional charge on accounts thereof. The CONTRACTOR shall ensure to the satisfaction of the ENGINEER-IN-CHARGE that SUB- CONTRACTORS, if any, shall provide competent and efficient supervision, over the work entrusted to them.

36.2 If and whenever any of the CONTRACTOR's or SUB- CONTRACTOR'S agents, sub-agents, assistants, foremen, or other employees shall in the opinion of ENGINEER-IN-CHARGE be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties of that in the opinion of the EMPLOYER or the ENGINEER-IN-CHARGE, it is undesirable for administrative or any other reason for such person or persons to be employed in the works, the CONTRACTOR, is so directed by the ENGINEER-IN-CHARGE, shall at once remove such person or persons from employment thereon. Any person or persons so removed from the works shall not again be employed in connection with the WORKS without the written permission of the ENGINEER-IN-CHARGE. Any person so removed from the WORK shall be immediately re-placed at the expense of the CONTRACTOR by a qualified and competent substitute. Should the CONTRACTOR be requested to repatriate any person removed from the works he shall do so and shall bear all costs in connection herewith.

36.3 The CONTRACTOR shall be responsible for the proper behaviour of all the staff, foremen, workmen, and others, and shall exercise a proper degree of control over them and in particular and without prejudice to the said generality, the CONTRACTOR shall be bound to prohibit and prevent any employees from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighborhood and in the event of such employee so trespassing, the CONTRACTOR shall be responsible therefore and relieve the EMPLOYER of all consequent claims or actions for damages or injury or any other grounds whatsoever. The decision of the ENGINEER-IN-CHARGE upon any matter arising under this clause shall be final. The CONTRACTOR shall be liable for any liability to EMPLOYER on account of deployment of CONTRACTOR's staff etc. or incidental or arising out of the execution of CONTRACT. The CONTRACTOR shall be liable for all acts or omissions on the part of his staff, Foremen and Workmen and others in his employment, including misfeasance or negligence of whatever kind in the course of their work or during their employment, which are connected directly or indirectly with the CONTRACT.

36.4 If and when required by the EMPLOYER and CONTRACTOR's personnel entering upon the EMPLOYER's premises shall be properly identified by badges of a type acceptable to the EMPLOYER which must be worn at all times on EMPLOYER's premises. CONTRACTOR may be required to obtain daily entry passes for his staff/employees from EMPLOYER to work within operating areas. These being safety requirements, no relaxations on this account shall be given to CONTRACTOR

37 Sub-letting of works:

37.1 No part of the CONTRACT nor any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the CONTRACTOR directly or indirectly by any

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person, firm or corporation whatsoever without the consent in writing, of the ENGINEER/EMPLOYER except as provided for in the succeeding sub-clause.

i) **SUB-CONTRACTS FOR TEMPORARY WORKS ETC.:** The EMPLOYER may give written consent to Sub- contract for the execution of any part of the WORK at the site, being entered in to by CONTRACTOR provided each individual Sub- contract is submitted to the ENGINEER-IN-CHARGE before being entered into and is approved by him.

ii) **LIST OF SUB-CONTRACTORS TO BE SUPPLIED:** At the commencement of every month the CONTRACTOR shall furnish to the ENGINEER-IN- CHARGE list of all SUB-CONTRACTORS or other persons or firms engaged by the CONTRACTOR and working at the SITE during the previous month with particulars of the general nature of the Subcontract or works done by them.

iii) **CONTRACTOR'S LIABILITY NOT LIMITED BY SUB- CONTRACTORS:** Notwithstanding any sub-letting with such approval as aforesaid and notwithstanding that the ENGINEER-I N-CHARGE shall have received copies of any Subcontracts, the contractor shall be and shall remain solely responsible for the quality, proper and expeditious execution of the Contract in all respects as if such sub-letting or Subcontracting had not taken place, and as if such work had been done directly by the CONTRACTOR. The CONTRACTOR shall bear all responsibility for any act or omission on the part of sub-contractors in regard to work to be performed under the CONTRACT.

iv) **EMPLOYER MAY TERMINATE SUB-CONTRACTS:** If any SUB-CONTRACTOR engaged upon the works at the site executes any works which in the opinion of the ENGINEER-IN-CHARGE is not in accordance with the CONTRACT documents, the EMPLOYER may by written notice to the CONTRACTOR request him to terminate such subcontract and the CONTRACTOR upon the receipt of such notice shall terminate such Subcontract and dismiss the SUB-CONTRACTOR(S) and the later shall forthwith leave the works, failing which the EMPLOYER shall have the right to remove such SUB-CONTRACTOR(S) from the site.

v) **NO REMEDY FOR ACTION TAKEN UNDER THIS CLAUSE:** No action taken by the EMPLOYER under the clause shall relieve the CONTRACTOR of any of his liabilities under the CONTRACT or give rise to any right or compensation, extension of time or otherwise failing which the EMPLOYER shall have the right to remove such SUB-CONTRACTOR(S) from the site.

38 Power of entry:

38.1 If the CONTRACTOR shall not commence the WORK in the manner previously described in the CONTRACT documents or if he shall at any time in the opinion of the ENGINEER-I N-CHARGE.

- i) fail to carry out the WORK in conformity with the CONTRACT documents, or
- ii) fail to carry out the WORK in accordance with the Time Schedule, or
- iii) substantially suspend work or the WORK for a period of fourteen days without authority from the ENGINEER

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IN-CHARGE, or

iv) fail to carry out and execute the WORK to the satisfaction of the ENGINEER-IN-CHARGE, or

v) fail to supply sufficient or suitable construction plant, temporary works, labour, materials or things, or vi) Commit, suffer, or permit any other breach of any of the provisions of the CONTRACT on his part to be performed or observed or persist in any of the above mentioned breaches of the CONTRACT for fourteen days, after notice in writing shall have been given to the CONTRACTOR by the ENGINEER-IN-CHARGE requiring such breach to be remedied, or

vi) if the CONTRACTOR shall abandon the WORK , or

vii) If the CONTRACTOR during the continuance of the CONTRACT shall become bankrupt, make any arrangement or composition with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction then in any such case, the EMPLOYER shall have the power to enter upon the WORK and take possession thereof and of the materials, temporary WORK, construction plant, and stock thereon, and to revoke the CONTRACTOR's license to use the same, and to complete the WORK by his agents, other CONTRACTORS or workmen or to relate the same upon any terms and to such other person, firm or corporation as the EMPLOYER in his absolute discretion may think proper to employ and for the purpose aforesaid to use or authorise the use of any materials, temporary work, CONSTRUCTION PLANT, and stock as aforesaid, without making payment or allowance to the CONTRACTOR for the said materials other than such as may be certified in writing by the ENGINEER-IN-CHARGE to be reasonable, and without making any payment or allowance to the CONTRACTOR for the use of the temporary said works, construction plant and stock or being liable for any loss or damage thereto, and if the EMPLOYER shall by reason of his taking possession of the WORK or of the WORK being completed by other CONTRACTOR (due account being taken of any such extra work or works which may or be omitted) then the amount of such excess as certified by the ENGINEER-IN- CHARGE shall be deducted from any money which may be due for work done by the CONTRACTOR under the CONTRACT and not paid for. Any deficiency shall forthwith be made good and paid to the EMPLOYER by the CONTRACTOR and the EMPLOYER shall have power to sell in such manner and for such price as he may think fit all or any of the construction plant, materials etc. constructed by or belonging to and to recoup and retain the said deficiency or any part thereof out of proceeds of the sale.

39 Contractor's responsibility with the mechanical, electrical, intercommunication system, air conditioning contractors and other agencies:

39.1 Without repugnance of any other condition, it shall be the responsibility of the CONTRACTOR executing the work of civil construction, to work in close cooperation and coordinate the WORK with the Mechanical, Electrical, Air-conditioning and

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Intercommunication Contractor's and other agencies or their authorized representatives, in providing the necessary grooves, recesses, cuts and opening etc., in wall, slabs beams and columns etc. and making good the same to the desired finish as per specification, for the placement of electrical, intercommunication cables, conduits, air-conditioning inlets and outlets grills and other equipments etc. where required. For the above said requirements in the false ceiling and other partitions, the CONTRACTOR before starting-up the work shall in consultation with the Electrical, Mechanical, Intercommunication, Air-conditioning contractor and other agencies prepare and put-up a joint scheme, showing the necessary openings, grooves, recesses, cuts, the methods of fixing required for the WORK of the aforesaid, and the finishes therein, to the ENGINEER-IN-CHARGE and get the approval. The CONTRACTOR before finally submitting the scheme to the ENGINEER-IN-CHARGE, shall have the written agreement of the other agencies. The ENGINEER- IN-CHARGE, before communicating his approval to the scheme, with any required modification, shall get the final agreement of all the agencies, which shall be binding. No claim shall be entertained on account of the above. The CONTRACTOR shall confirm in all respects with provision of any statutory regulations, ordinances or byelaws of any local or duly constituted authorities or public bodies which may be applicable from time to time to the WORK or any temporary works. The CONTRACTOR shall keep the EMPLOYER indemnified against all penalties and liabilities of every kind, arising out of non- adherence to such stains, ordinances, laws, rules, regulations, etc.

40 Other agencies at site:

40.1 The CONTRACTOR shall have to execute the WORK in such place and conditions where other agencies will also be engaged for other works such as site grading, filling, and leveling, electrical and mechanical engineering works, etc. No claim shall be entertained due to WORK being executed in the above circumstances.

41 Notice:

41.1 TO THE CONTRACTOR: Any notice hereunder may be served on the CONTRACTOR or his duly authorized representative at the job site or may be served by registered mail direct to the address furnished by the CONTRACTOR. Proof of issue of any such notice could be conclusive of the CONTRACTOR having been duly informed of all contents therein.

41.2 TO THE EMPLOYER: Any notice to be given to the EMPLOYER under the terms of the CONTRACTOR shall be served by sending the same by Registered mail to or delivering the same at the respective site offices of M/S. GGPL (INDIA) LTD. addressed to the HEAD/SITE-IN-CHARGE.

42 Right of various interests:

42.1 The EMPLOYER reserves the right to distribute the work between more than one agency(ies). The CONTRACTOR shall cooperate and afford other agency(ies) reasonable

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opportunity for access to the WORK for the carriage and storage of materials and execution of their works.

42.2 Wherever the work being done by any department of the EMPLOYER or by other agency(ies) employed by the EMPLOYER is contingent upon WORK covered by this CONTRACT, the respective rights of the various interests involved shall be determined by the ENGINEER-IN-CHARGE to secure the completion of the various portions of the work in general harmony.

43 Patents and royalties:

43.1 The CONTRACTOR, if licensed under any patent covering equipment, machinery, materials or compositions of matter to be used or supplied or methods and process to be practiced or employed in the performance of this CONTRACT, agrees to pay all royalties and license fees which may be due with respect thereto. If any equipment, machinery, materials, composition of matters, be used or supplied or methods and processes to be practiced or employed in the performance of this CONTRACT, is covered by a patent under which the CONTRACTOR is not licensed then the CONTRACTOR before supplying or using the equipment, machinery materials, composition method or processes shall obtain such licenses and pay such royalties and license fees as may be necessary for performance of this CONTRACT. In the event the CONTRACTOR fails to pay any such royalty or obtain any such license, any suit for infringement of such patents which is brought against the CONTRACTOR or the EMPLOYER as a result such failure will be defended by the CONTRACTOR at his own expense and the CONTRACTOR will pay any damages and costs awarded in such suit. The CONTRACTOR shall promptly notify the EMPLOYER if the CONTRACTOR has acquired the knowledge of any plant under which a suit for infringement could be reasonably brought because of the use by the EMPLOYER of any equipment, machinery, materials, process, methods to be supplied hereunder. The CONTRACTOR agrees to and does hereby grant to EMPLOYER, together with the right to extend the same to any of the subsidiaries of the EMPLOYER as irrevocable, royalty free license to use in any country, any invention made by the CONTRACTOR or his employee in or as result of the performance of the WORK under the CONTRACT.

43.2 All charges on account of royalty. toilage, rent, octroi terminal or GST and/or other duties or any other levy on materials obtained for the work or temporary work or part thereof (excluding materials provided by the EMPLOYER) shall be borne by the CONTRACTOR.

43.3 The CONTRACTOR shall not sell or otherwise dispose of or remove except for the purpose of this CONTRACT, the sand, stone, clay, ballast, earth, rock or other substances, or materials obtained from any excavation made for the purpose of the WORK or any building or produce upon the site at the time of delivery of the possession thereof, but all such substances, materials, buildings and produce shall be the property of the EMPLOYER provided that the CONTRACTOR may with the permission of the ENGINEER-IN-

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CHARGE, use the same for the purpose of the work by payment of cost of the same at such a rate as may be determined by the ENGINEER-IN- CHARGE.

43.4 The EMPLOYER shall indemnify and save harmless the CONTRACTOR from any loss on account of claims against CONTRACTOR for the contributory infringement of patent rights arising out and based upon the claim that the use of the EMPLOYER of the process included in the design prepared by the EMPLOYER and used in the operation of the plant infringes on any patent right. With respect to any subcontract entered into by CONTRACTOR pursuant to the provisions of the relevant clause hereof, the CONTRACTOR shall obtain from the SUB-CONTRACTOR an undertaking to provide the EMPLOYER with the same patent protection that CONTRACTOR is required to provide under the provisions of this clause.

44 Liens:

44.1 If, at any time there should be evidence or any lien or claim for which the EMPLOYER might have become liable and which is chargeable to the CONTRACTOR, the EMPLOYER shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the EMPLOYER against such lien or claim and if such lien or claim be valid, the EMPLOYER may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the CONTRACTOR. If any lien or claim remain unsettled after all payments are made, the CONTRACTOR shall refund or pay to the EMPLOYER all money that the latter may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses. EMPLOYER reserves the right to do the same.

44.2 The EMPLOYER shall have lien on all materials, equipments including those brought by the CONTRACTOR for the purpose of erection, testing and commissioning of the WORK.

44.3 The final payment shall not become due until the CONTRACTOR delivers to the ENGINEER-IN-CHARGE a complete release or waiver of all liens arising or which may arise out of his agreement or receipt in full or certification by the CONTRACTOR in a form approved by ENGINEER-IN-CHARGE that all invoices for labour, materials, services have been paid in lien thereof and if required by the ENGINEER-IN-CHARGE in any case an affidavit that so far as the CONTRACTOR has knowledge or information the releases and receipts include all the labour and material for which a lien could be filled.

44.4 CONTRACTOR will indemnify and hold the EMPLOYER harmless, for a period of two years after the issue of FINAL CERTIFICATE, from all liens and other encumbrances against the EMPLOYER on account of debts or claims alleged to be due from the CONTRACTOR or his SUB-CONTRACTOR to any person including SUB-CONTRACTOR and on behalf of EMPLOYER will defend at his own expense, any claim or litigation brought against the EMPLOYER or the CONTRACTOR in connection therewith. CONTRACTOR shall defend or contest at his own expense any fresh claim or litigation by

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any person including his SUB-CONTRACTOR, till its satisfactory settlement even after the expiry of two years from the date of issue of FINAL CERTIFICATE.

45 Delays by employer or his authorized agents:

45.1 In case the CONTRACTOR's performance is delayed due to any act or omission on the part of the EMPLOYER or his authorized agents, then the CONTRACTOR shall be given due extension of time for the completion of the WORK, to the extent such omission on the part of the EMPLOYER has caused delay in the CONTRACTOR's performance of his WORK.

45.2 No adjustment in CONTRACT PRICE shall be allowed for reasons of such delays and extensions granted except as provided in TENDER DOCUMENT, where the EMPLOYER reserves the right to seek indulgence of CONTRACTOR to maintain the agreed Time Schedule of Completion. In such an event the CONTRACTOR shall be obliged for working by CONTRACTOR's personnel for additional time beyond stipulated working hours as also Sundays and Holidays and achieve the completion date/interim targets.

46 Payment if the contract is terminated:

46.1 If the CONTRACT shall be terminated as per Tender pursuant to Clause no. 29 of GCC, the CONTRACTOR shall be paid by the EMPLOYER in so far as such amounts or items shall not have already been covered by payments of amounts made to the CONTRACTOR for the WORK executed and accepted by ENGINEER-IN-CHARGE prior to the date of termination at the rates and prices provided for in the CONTRACT and in addition to the following:

- i) The amount payable in respect of any preliminary items, so far as the Work or service comprised therein has been carried out or performed and an appropriate portion as certified by ENGINEER-IN-CHARGE of any such items or service comprised in which has been partially carried out or performed.
- ii) Any other expenses which the CONTRACTOR has expended for performing the WORK under the CONTRACT subject to being duly recommended by ENGINEER-IN-CHARGE and approved by EMPLOYER for payment, based on documentary evidence of his having incurred such expenses.

46.2 The CONTRACTOR will be further required to transfer the title and provide the following in the manner and as directed by the EMPLOYER.

- a) Any and all completed works.
- b) Such partially completed WORK including drawings, information and CONTRACT rights as the CONTRACTOR has specially performed, produced or acquired for the performance of the CONTRACTOR.

47 No waiver of rights:

47.1 Neither the inspection by the EMPLOYER or any of their officials, employees, or agents nor any order by the EMPLOYER for payment of money or any payment for or acceptance of the whole or any part of the Work by the EMPLOYER nor any extension of time, nor any possession taken by EMPLOYER shall operate as a waiver of any provision of the CONTRACT, or of any power herein reserved to the EMPLOYER, or any right of the CONTRACTOR.

damages herein provided, nor shall any waiver of any breach in the CONTRACT be held to be a waiver of any other subsequent breach.

48 Certificate not to affect right of employer and liability of contractor:

48.1 No interim payment certificate(s) issued by the Engineer-in- Charge of the EMPLOYER, nor any sum paid on account by the EMPLOYER, nor any extension of time for execution of the work granted by EMPLOYER shall affect or prejudice the rights of the Employer against the CONTRACTOR or relieve the CONTRACTOR of his obligations for the due performance of the CONTRACT, or be interpreted as approval of the WORK done or of the equipment supplied and no certificate shall create liability for the EMPLOYER to pay for alterations, amendments, variations or additional works not ordered, in writing, by EMPLOYER or discharge the liability of the CONTRACTOR for the payment of damages whether due, ascertained, or certified or not or any sum against the payment of which he is bound to indemnify the EMPLOYER.

49 Language and measures:

49.1 All documents pertaining to the CONTRACT including Specifications, Schedules, Notices, Correspondence, operating and maintenance Instructions, DRAWINGS, or any other writing shall be written in English language. The Metric System of measurement shall be used in the CONTRACT unless otherwise specified.

50 Transfer of title:

50.1 The title of Ownership of supplies furnished by the CONTRACTOR shall not pass on to the EMPLOYER for all Supplies till the same are finally accepted by the EMPLOYER after the successful completion of PERFORMANCE TEST and GUARANTEE TEST and issue of FINAL CERTIFICATE.

50.2 However, the EMPLOYER shall have the lien on all such works performed as soon as any advance or progressive payment is made by the EMPLOYER to the CONTRACTOR and the CONTRACTOR shall not subject these works for use other than those intended under this CONTRACT.

51 Release of information:

51.1 The CONTRACTOR shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs, or other reproduction of the Work under this CONTRACT or description of the site dimensions, quantity , quality or other information, concerning the Work unless prior written permission has been obtained from the EMPLOYER.

52 Brand names:

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52.1 The specific reference in the SPECIFICATIONS and documents to any material by trade name, make or catalogue number shall be construed as establishing standard or quality and performance and not as limited competition. However, TENDERER may offer other similar equipments provided it meets the specified standard design and performance requirements.

53 Completion of contract:

53.1 Unless otherwise terminated under the provisions of any other relevant clause, this CONTRACT shall be deemed to have been completed at the expiration of the PERIOD OF LIABILITY as provided for under the CONTRACT.

54 Spares:

54.1 The CONTRACTOR shall furnish to the EMPLOYER all spares required for COMMISSIONING of the plants, recommendatory and/or mandatory spares, which are required essential by the manufacturer/supplier. The same shall be delivered at SITE, 3(Three) months before COMMISSIONING. Also the CONTRACTOR should furnish the manufacturing drawings for fast wearing spares.

54.2 The CONTRACTOR guarantees the EMPLOYER that before the manufacturers of the equipments, plants and machineries go out of production of spare parts for the equipment furnished and erected by him, he shall give at least twelve (12) months' advance notice to the EMPLOYER, so that the latter may order his requirement of spares in one lot, if he so desires.

SECTION-V PERFORMANCE OF WORK

55 Execution of work:

55.1 All the Works shall be executed in strict conformity with the provisions of the CONTRACT Documents and with such explanatory detailed drawings, specification and instructions as may be furnished from time to time to the CONTRACTOR by the ENGINEER-IN-CHARGE whether mentioned in the CONTRACT or not. The CONTRACTOR shall be responsible for ensuring that works throughout are executed in the most substantial, proper and workmanlike manner with the quality of material and workmanship in strict accordance with the SPECIFICATIONS and to the entire satisfaction of the ENGINEER-IN-CHARGE. The CONTRACTOR shall provide all necessary materials equipment labour etc. for execution and maintenance of WORK till completion unless otherwise mentioned in the CONTRACT.

56 Co-ordination and inspection of work:

56.1 The coordination and inspection of the day-to-day work under the CONTRACT shall be the responsibility of the ENGINEER-IN-CHARGE. The written instruction regarding any particular job will normally be passed by the ENGINEER-IN-CHARGE or his authorized representative. A work order book will be maintained by the CONTRACTOR for each sector

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in which the aforesaid written instructions will be entered. These will be signed by the CONTRACTOR or his authorized representative by way of acknowledgement within 12 hours.

57 Work in monsoon and dewatering:

57.1 Unless otherwise specified elsewhere in the tender, the execution of the WORK may entail working in the monsoon also. The CONTRACTOR must maintain a minimum labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such work in monsoon.

57.2 During monsoon and other period, it shall be the responsibility of the CONTRACTOR to keep the construction work site free from water at his own cost.

58 Work on Sundays and Holidays:

58.1 For carrying out Work on Sundays, and Holidays, the CONTRACTOR will approach the ENGINEER-IN-CHARGE or his representative at least two days in advance and obtain permission in writing. The CONTRACTOR shall observe all labour laws and other statutory rules and regulations in force. In case of any violations of such laws, rules and regulations, consequence if any, including the cost thereto shall be exclusively borne by the CONTRACTOR and the EMPLOYER shall have no liability whatsoever on this account.

59 General conditions for construction and erection work:

59.1 The working time at the site of work is 48 hours per week. Overtime work is permitted in cases of need and the EMPLOYER will not compensate the same. Shift working at 2 or 3 shifts per day will become necessary and the CONTRACTOR should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the EMPLOYER on this account. For carrying out work beyond working hours the CONTRACTOR will approach the ENGINEER-IN-CHARGE or his authorized representative and obtain his prior written permission.

59.2 The CONTRACTOR must arrange for the placement of workers in such a way that the delayed completion of the WORK or any part thereof for any reason whatsoever will not affect their proper employment. The EMPLOYER will not entertain any claim for idle time payment whatsoever.

59.3 The CONTRACTOR shall submit to the EMPLOYER/ENGINEER-IN-CHARGE reports at regular intervals regarding the state and progress of WORK. The details and Proforma of the report will mutually be agreed after the award of CONTRACT. The CONTRACTOR shall provide display boards showing progress and labour strengths at worksite, as directed by the ENGINEER-IN-CHARGE.

60 Alterations in specifications, design and extra works:

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60.1 The WORK covered under this CONTRACT having to be executed by the CONTRACTOR on a lumpsum firm price/item rate quoted by him, the EMPLOYER will not accept any proposals for changes in VALUE OF CONTRACT or extension in time on account of any such changes which may arise to the CONTRACTOR's scope of WORK as a result of detailed Engineering and thereafter during the execution of WORK. The only exception to this will be a case where the EMPLOYER requests in writing to the CONTRACTOR to upgrade the SPECIFICATIONS or the size of any major pieces of equipments, plant or machinery beyond what is normally required to meet the scope of WORK as defined in the CONTRACT DOCUMENT. In such cases, a change order will be initialed by the CONTRACTOR at the appropriate time for the EMPLOYER's prior approval giving the full back-up data for their review and for final settlement of any impact on price within 30 (thirty) days thereafter.

60.2 The ENGINEER-IN-CHARGE shall have to make any alterations in, omission from, additions to or substitutions for, the Schedule of Rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the WORK and the CONTRACTOR shall be bound to carry out the such altered/ extra/ new items of WORK in accordance with any instructions which may be given to him in writing signed by the ENGINEER-IN- CHARGE, and such alterations, omissions, additions or substitutions shall not invalidate the CONTRACT and any altered, additional or substituted work which the CONTRACTOR may be directed to do in the manner above specified as part of the WORK shall be carried out by the CONTRACTOR on the same conditions in all respects on which he agreed to do the main WORK. The time of completion of WORK may be extended for the part of the particular job at the discretion of the ENGINEER-IN- CHARGE, for only such alterations, additions or substitutions of the WORK, as he may consider as just and reasonable. The rates for such additional, altered or substituted WORK under this clause shall be worked out in accordance with the following provisions:-

I. For Item Rate Contract

a) If the rates for the additional, altered or substituted WORK are specified in the CONTRACT for the WORK, the CONTRACTOR is bound to carry on the additional, altered or substituted WORK at the same rates as are specified in the CONTRACT.

b) If the rates for the additional, altered or substituted WORK are not specifically provided in the CONTRACT for the WORK, the rates will be derived from the rates for similar class of WORK as are specified in the CONTRACT for the WORK. The opinion of the ENGINEER-IN- CHARGE, as to whether or not the rates can be reasonably so derived from the items in this CONTRACT will be final and binding on the CONTRACTOR

c) If the rates for the altered, additional or substituted WORK cannot be determined in the manner specified in sub-clause(s) and (b) above, then the CONTRACTOR shall, within 7 days of the date of receipt of order to carry out the WORK, inform the ENGINEER-IN-

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CHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-IN-CHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 10% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER- IN-CHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR

d) Where the item of work will be executed through nominated specialist agency as approved by the ENGINEER-IN-CHARGE, then the actual amount paid to such nominated agency supported by documentary evidence and as certified by ENGINEER-IN-CHARGE shall be considered plus 10% (ten percent) to cover all contingencies, overhead, profits to arrive at the rates.

e) Provisions contained in the Sub-clause (a) & (d) above shall, however, not apply for the following:- Where the value of additions of new items together with the value of alterations, additions/deletions or substitutions does not exceed by or is not less than plus/minus (+)25% of the VALUE OF CONTRACT. The item rates in the Schedule of Rates shall hold good for all such variations between the above mentioned limits, irrespective of any increase/decrease of quantities in the individual items of Schedule of Rates. Where the value of addition of new items together with the value of alterations, additions/deletions or substitutions reduces more than 25% of the contract value but is within the following limits the tenderer shall be paid compensation for decrease in the value of work, as follows: S.No. Range of Variation Percentage compensation for decrease in the value of work in the respective range. a) Beyond (+) 25% No increase and/or upto& inclusive of decrease shall be (+) 50% applicable for the Schedule of Rates (The rates quoted for this increase shall be valid). b) Beyond (-) 25% upto&For reduction beyond inclusive of (-) 50% 25%contractor shall be compensated by an amount equivalent to 10% of the reduction in value of the contract as awarded. For example if the actual contract value is 70% of awarded value then compensation shall be 10% of (75-70) i.e. 0.5% of awarded contract value.

II. For Lump sum Contracts: CONTRACTOR shall, within 7 days of the date of receipt of order to carry out the WORK, inform the ENGINEER-IN- CHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-IN-CHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 10% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER- IN-CHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR.

61 **Drawings to be supplied by the employer**

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61.1 The drawings attached with tender are only for the general guidance to the CONTRACTOR to enable him to visualize the type of work contemplated and scope of work involved. The CONTRACTOR will be deemed to have studied the DRAWINGS and formed an idea about the WORK involved.

61.2 Detailed working drawings on the basis of which actual execution of the WORK is to proceed, will be furnished from time to time during the progress of the work. The CONTRACTOR shall be deemed to have gone through the DRAWINGS supplied to him thoroughly and carefully and in conjunction with all other connected drawings and bring to the notice of the ENGINEER-IN-CHARGE discrepancies, if any, therein before actually carrying out the Work.

61.3 Copies of all detailed working drawings relating to the WORK shall be kept at the CONTRACTOR's office on the site and shall be made available to the ENGINEER-IN-CHARGE at any time during the CONTRACT. The drawings and other documents issued by the EMPLOYER shall be returned to the EMPLOYER on completion of the WORK.

62 Drawings to be supplied by the contractor:

62.1 The drawings/date which are to be furnished by the CONTRACTOR are enumerated in the special conditions of contract, and shall be furnished within the specified time.

62.2 Where approval/review of drawings before manufacture/ construction/fabrication has been specified, it shall be CONTRACTOR's responsibility to have these drawings prepared as per the directions of ENGINEER-IN-CHARGE and got approved before proceeding with manufacture/construction/fabrication as the case may be. Any change that may have become necessary in these drawings during the execution of the work shall have to be carried out by the CONTRACTOR to the satisfaction of ENGINEER-IN-CHARGE at no extra cost. All final drawings shall bear the certification stamp as indicated below duly signed by both the CONTRACTOR and ENGINEER-IN-CHARGE.

_____ "Certified true for
(Name of Work) Agreement
No. _____ Signed: _____ (CONTRACTOR)
(ENGINEER-IN-CHARGE)

62.3 The DRAWINGS submitted by the CONTRACTOR shall be reviewed by the ENGINEER-IN-CHARGE as far as practicable within 3 (Three) weeks and shall be modified by the CONTRACTOR, if any modifications and/or corrections are required by the ENGINEER-IN-CHARGE. The CONTRACTOR shall incorporate such modifications and/or corrections and submit the final drawings for approval. Any delays arising out of failure by the CONTRACTOR to rectify the drawing in good time shall not alter the Contract Completion Time.

62.4 As built drawings showing all corrections, adjustments etc. shall be furnished by the CONTRACTOR in six copies and one transparent for record purposed to the EMPLOYER.

63 Setting out works:

63.1 The ENGINEER-IN-CHARGE shall furnish the CONTRACTOR with only the four corners of the Works site and a level bench mark and the CONTRACTOR shall set out the

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Works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.

63.2 The CONTRACTOR shall provide, fix and be responsible for the maintenance of all stakes, templates, level marks, profiles and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance should the same take place and for their efficient and timely reinstatement. The CONTRACTOR shall also be responsible for the maintenance of all existing survey marks, boundary marks, distance marks and center line marks, either existing or supplied and fixed by the CONTRACTOR. The work shall be set out to the satisfaction of the ENGINEER-IN-CHARGE. The approval there of joining with the CONTRACTOR by the ENGINEER- IN-CHARGE in setting out the work, shall not relieve the CONTRACTOR of any of his responsibility.

63.3 Before beginning the Works, the CONTRACTOR shall at his own cost, provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the works in accordance with the schemes for bearing marks acceptable to the ENGINEER-IN-CHARGE. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the centre to enable theodolite to be set over it. No work shall be started until all these points are checked and approved by the ENGINEER-IN-CHARGE in writing but such approval shall not relieve the CONTRACTOR of any of his responsibilities. The CONTRACTOR shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.

63.4 Pillars bearing geodetic marks located at the sites of units of WORKS under construction should be protected and fenced by the CONTRACTOR

63.5 On completion of WORK, the CONTRACTOR must submit the geodetic documents according to which the WORK was carried out.

64 Responsibility for level and alignment:

64.1 The CONTRACTOR shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the WORK and shall rectify effectively any errors or imperfections therein, such rectifications shall be carried out by the CONTRACTOR, at his own cost, when instructions are issued to that effect by the ENGINEER- IN-CHARGE.

65 Materials to be supplied by contractor:

65.1 The CONTRACTOR shall procure and provide within the VALUE OF CONTRACT the whole of the materials required for the construction including steels, cement and other building materials, tools, tackles, construction plant and equipment for the completion and maintenance of the WORK except the materials which will be issued by the EMPLOYER and shall make his own arrangement for procuring such materials and for the transport thereof. The EMPLOYER may give necessary recommendation to the respective authority if so desired by the CONTRACTOR but assumes no further responsibility of any nature. The

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EMPLOYER will insist on the procurement of materials which bear ISI stamp and/or which are supplied by reputed suppliers.

65.2 The CONTRACTOR shall properly store all materials either issued to him or brought by him to the SITE to prevent damages due to rain, wind, direct exposure to sun, etc. as also from theft, pilferage, etc. for proper and speedy execution of his works. The CONTRACTOR shall maintain sufficient stocks of all materials required by him.

65.3 No material shall be dispatched from the CONTRACTOR's stores before obtaining the approval in writing of the ENGINEER-IN-CHARGE.

66 Stores supplied by the employer:

66.1 If the SPECIFICATION of the WORK provides for the use of any material of special description to be supplied from the EMPLOYER's stores or it is required that the CONTRACTOR shall use certain stores to be provided by the ENGINEER-IN-CHARGE, such materials and stores, and price to be charged there for as hereinafter mentioned being so far as practicable for the convenience of the CONTRACTOR, but not so as in any way to control the meaning or effect of the CONTRACT, the CONTRACTOR shall be bound to purchase and shall be supplied such materials and stores as are from time to time required to be used by him for the purpose of the CONTRACT only. The sums due from the CONTRACTOR for the value of materials supplied by the EMPLOYER will be recovered from the running account bill on the basis of the actual consumption of materials in the works covered and for which the running account bill has been prepared. After the completion of the WORK, however, the CONTRACTOR has to account for the full quantity of materials supplied to him as per relevant clauses in this document.

66.2 The value of the stores/materials as may be supplied to the CONTRACTOR by the EMPLOYER will be debited to the CONTRACTOR's account at the rates shown in the schedule of materials and if they are not entered in the schedule, they will be debited at cost price, which for the purpose of the CONTRACT shall include the cost of carriage and all other expenses whatsoever such as normal storage supervision charges which shall have been incurred in obtaining the same at the EMPLOYER's stores. All materials so supplied to the CONTRACTOR shall remain the absolute property of the EMPLOYER and shall not be removed on any account from the SITE of the WORK, and shall be at all times open for inspection to the ENGINEER-IN-CHARGE. Any such materials remaining unused at the time of the completion or termination of the CONTRACT shall be returned to the EMPLOYER's stores or at a place as directed by the ENGINEER-IN-CHARGE in perfectly good condition at CONTRACTOR's cost.

67 Conditions for issue of materials:

67.1 Materials specified as to be issued by the EMPLOYER will be supplied to the CONTRACTOR by the EMPLOYER from his stores. It shall be responsibility of the CONTRACTOR to take delivery of the materials and arrange for its loading, transport and

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unloading at the SITE of WORK at his own cost. The materials shall be issued between the working hours and as per the rules of the EMPLOYER as framed from time to time.

67.2 The CONTRACTOR shall bear all incidental charges for the storage and safe custody of materials at site after these have been issued to him.

67.3 Materials specified as to be issued by the EMPLOYER shall be issued in standard sizes as obtained from the manufacturers.

67.4 The CONTRACTOR shall construct suitable Godowns at the SITE of WORK for storing the materials safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.

67.5 It shall be duty of the CONTRACTOR to inspect the materials supplied to him at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered by the EMPLOYER, it shall be the responsibility of the CONTRACTOR to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/or replaced by him at his own cost according to the instructions of the ENGINEER-IN-CHARGE.

67.6 The EMPLOYER shall not be liable for delay in supply or non-supply of any materials which the EMPLOYER has undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstances beyond the control of the EMPLOYER. In no case, the CONTRACTOR shall be entitled to claim any compensation or loss suffered by him on this account.

67.7 It shall be responsibility of the CONTRACTOR to arrange in time all materials required for the WORK other than those to be supplied by the EMPLOYER. If, however, in the opinion of the ENGINEER-IN-CHARGE the execution of the WORK is likely to be delayed due to the CONTRACTOR's inability to make arrangements for supply of materials which normally he has to arrange for, the ENGINEER-IN-CHARGE shall have the right at his own discretion to issue such materials, if available with the EMPLOYER or procure the materials from the market or as elsewhere and the CONTRACTOR will be bound to take such materials at the rates decided by the ENGINEER-IN-CHARGE. This, however, does not in any way absolve the CONTRACTOR from responsibility of making arrangements for the supply of such materials in part or in full, should such a situation occur nor shall this constitute a reason for the delay in the execution of the WORK.

67.8 None of the materials supplied to the CONTRACTOR will be utilized by the CONTRACTOR for manufacturing item which can be obtained as supplied from standard manufacturer in finished form.

67.9 The CONTRACTOR shall, if desired by the ENGINEER- IN-CHARGE, be required to execute an Indemnity Bond in the prescribed form for safe custody and accounting of all materials issued by the EMPLOYER.

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67.10 The CONTRACTOR shall furnish to the ENGINEER-IN- CHARGE sufficiently in advance a statement showing his requirement of the quantities of the materials to be supplied by the EMPLOYER and the time when the same will be required by him for the works, so as to enable the ENGINEER-IN-CHARGE to make necessary arrangements for procurement and supply of the material.

67.11 Account of the materials issued by the EMPLOYER shall be maintained by CONTRACTOR indicating the daily receipt, consumption and balance in hand. This account shall be maintained in a manner prescribed by the ENGINEER-IN-CHARGE along with all connected papers viz. requisitions, issues, etc., and shall be always available for inspection in the CONTRACTOR's office at SITE.

67.12 The CONTRACTOR should see that only the required quantities of materials are got issued. The CONTRACTOR shall not be entitled to cartage and incidental charges for returning the surplus materials, if any, to the stores wherefrom they were issued or to the place as directed by the ENGINEER-IN-CHARGE.

67.13 Materials/Equipment(s) supplied by EMPLOYER shall not be utilized for any purpose(s) than issued for.

68 Material procured with assistance of employer/return of surplus:

68.1 Notwithstanding anything contained to the contrary in any or all the clauses of this CONTRACT where any materials for the execution of the CONTRACT are procured with the assistance of the EMPLOYER either by issue from EMPLOYER's stock or purchases made under order or permits or licenses issued by Government, the CONTRACTOR shall hold the said materials as trustee for the EMPLOYER and use such materials economically and solely for the purpose of the CONTRACT and not dispose them off without the permission of the EMPLOYER and return, if required by the ENGINEER-IN-CHARGE, shall determine having due regard to the condition of the materials. The price allowed to the CONTRACTOR, however, shall not exceed the amount charged to him excluding the storage charges, if any. The decision of the ENGINEER-IN-CHARGE shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the CONTRACTOR shall, in terms of the licenses or permits and/or criminal breach of trust, be liable to compensate the EMPLOYER at double rate or any higher rate, in the event of those materials at that time having higher rate or not being available in the market, then any other rate to be determined by the ENGINEER-IN-CHARGE and his decision shall be final and conclusive.

69 Materials obtained from dismantling:

69.1 If the CONTRACTOR in the course of execution of the WORK is called upon to dismantle any part for reasons other than those stipulated in Clauses 74 and 77 hereunder, the materials obtained in the WORK of dismantling etc., will be considered as the EMPLOYER's property and will be disposed off to the best advantage of the EMPLOYER.

70 Articles of value found:

70.1 All gold, silver and other minerals of any description and all precious stones, coins, treasure relics, antiquities and other similar things which shall be found in, under or upon the SITE, shall be the property of the EMPLOYER and the CONTRACTOR shall duly preserve the same to the satisfaction of the ENGINEER-IN-CHARGE and shall from time to time deliver the same to such person or persons indicated by the EMPLOYER.

71 Discrepancies between instructions:

71.1 Should any discrepancy occur between the various instructions furnished to the CONTRACTOR, his agent or staff or any doubt arises as to the meaning of any such instructions or should there be any misunderstanding between the CONTRACTOR's staff and the ENGINEER-IN- CHARGE's staff, the CONTRACTOR shall refer the matter immediately in writing to the ENGINEER-IN-CHARGE whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts, or misunderstanding shall in any event be admissible.

72 Action where no specification is issued:

72.1 In case of any class of WORK for which there is no SPECIFICATION supplied by the EMPLOYER as mentioned in the Tender Documents such WORK shall be carried out in accordance with Indian Standard Specifications and if the Indian Standard Specifications do not cover the same, the WORK should be carried out as per standard Engineering Practice subject to the approval of the ENGINEER-IN-CHARGE.

73 Inspection of works:

73.1 The ENGINEER-IN-CHARGE will have full power and authority to inspect the WORK at any time wherever in progress either on the SITE or at the CONTRACTOR's premises/workshops wherever situated, premises/ workshops of any person, firm or corporation where WORK in connection with the CONTRACT may be in hand or where materials are being or are to be supplied, and the CONTRACTOR shall afford or procure for the ENGINEER-IN- CHARGE every facility and assistance to carry out such inspection. The CONTRACTOR shall, at all time during the usual working hours and at all other time at which reasonable notice of the intention of the ENGINEER-IN- CHARGE or his representative to visit the WORK shall have been given to the CONTRACTOR, either himself be present or receive orders and instructions, or have a responsible agent duly accredited in writing, present for the purpose. Orders given to the CONTRACTOR's agent shall be considered to have the same force as if they had been given to the CONTRACTOR himself. The CONTRACTOR shall give not less than seven days notice in writing to the ENGINEER-IN-CHARGE before covering up or otherwise placing beyond reach of inspection and measurement of any work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at CONTRACTOR's expense for carrying out such measurement or inspection.

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73.2 No material shall be dispatched from the CONTRACTOR's stores before obtaining the approval in writing of the Engineer-in-Charge. The CONTRACTOR is to provide at all time during the progress of the WORK and the maintenance period, proper means of access with ladders, gangways etc. and the necessary attendance to move and adopt as directed for inspection or measurements of the WORK by the ENGINEER- IN-CHARGE.

73.3 The CONTRACTOR shall make available to the ENGINEER-IN- CHARGE free of cost all necessary instruments and assistance in checking or setting out of WORK and in the checking of any WORK made by the CONTRACTOR for the purpose of setting out and taking measurements of WORK.

74 Tests for quality of work:

74.1 All workmanship shall be of the respective kinds described in the CONTRACT DOCUMENTS and in accordance with the instructions of the ENGINEER-IN-CHARGE and shall be subjected from time to time to such test at CONTRACTOR's cost as the ENGINEER-IN-CHARGE may direct at the place of manufacture or fabrication or on the site or at all or any such places. The CONTRACTOR shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the ENGINEER-IN-CHARGE.

74.2 All the tests that will be necessary in connection with the execution of the WORK as decided by the ENGINEER- IN-CHARGE shall be carried out at the field testing laboratory of the EMPLOYER by paying the charges as decided by the EMPLOYER from time to time. In case of non- availability of testing facility with the EMPLOYER, the required test shall be carried out at the cost of CONTRACTOR at Government or any other testing laboratory as directed by ENGINEER-IN-CHARGE.

74.3 If any tests are required to be carried out in conjunction with the WORK or materials or workmanship not supplied by the CONTRACTOR, such tests shall be carried out by the CONTRACTOR as per instructions of ENGINEER-IN-CHARGE and cost of such tests shall be reimbursed by the EMPLOYER.

75 Samples for approval:

75.1 The CONTRACTOR shall furnish to the ENGINEER-IN-CHARGE for approval, when requested or if required by the specifications, adequate samples of all materials and finished to be used in the WORK. Such samples shall be submitted before the WORK is commenced and in ample time to permit tests and examinations thereof. All materials furnished and finishes applied in actual WORK shall be fully equal to the approved samples.

76 Action and compensation in case of bad work:

76.1 If it shall appear to the ENGINEER-IN-CHARGE that any work has been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior description, or that any materials or articles provided by the CONTRACTOR for the execution of the WORK are unsound, or of a quality inferior to that contracted for, or

otherwise not in accordance with the CONTRACT, the CONTRACTOR shall on demand in writing from the ENGINEER-IN-CHARGE or his authorized representative specifying the WORK, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the WORK so specified and provide other proper and suitable materials or articles at his own cost and in the event of failure to do so within the period specified by the ENGINEER-IN-CHARGE in his demand aforesaid, the CONTRACTOR shall be liable to pay compensation at the rate of 1 % (One percent) of the estimated cost of the whole WORK, for every week limited to a maximum of 10% (ten percent) of the value of the whole WORK, while his failure to do so shall continue and in the case of any such failure the ENGINEER-IN-CHARGE may on expiry of notice period rectify or remove and re-execute the WORK or remove and replaced with others, the materials or articles complained of to as the case may be at the risk and expense in all respects of the CONTRACTOR. The decision of the Engineering-in-charge as to any question arising under this clause shall be final and conclusive.

77 Suspension of works:

77.1 Subject to the provisions of sub-para (ii) of this clause, the CONTRACTOR shall, if ordered in writing by the ENGINEER-IN-CHARGE, or his representative, temporarily suspend the WORKS or any part thereof for such written order, proceed with the WORK therein ordered to be suspended until, he shall have received a written order to proceed therewith. The CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of the WORKS aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the WORKS as aforesaid will be granted to the CONTRACTOR should he apply for the same provided that the suspension was not consequent to any default or failure on the part of the CONTRACTOR.

77.2 In case of suspensions of entire WORK, ordered in writing by ENGINEER-IN-CHARGE, for a period of more than two months, the CONTRACTOR shall have the option to terminate the CONTRACT.

78 Employer may do part of work:

78.1 Upon failure of the CONTRACTOR to comply with any instructions given in accordance with the provisions of this CONTRACT the EMPLOYER has the alternative right, instead of assuming charge of entire WORK, to place additional labour force, tools, equipments and materials on such parts of the WORK, as the EMPLOYER may designate or also engage another CONTRACTOR to carry out the WORK. In such cases, the EMPLOYER shall deduct from the amount which otherwise might become due to the CONTRACTOR, the cost of such work and material with ten percent (10%) added to cover all departmental charges and should the total amount thereof exceed the amount due to the CONTRACTOR, the CONTRACTOR shall pay the difference to the EMPLOYER.

79 Possession prior to completion:

79.1 The ENGINEER-IN-CHARGE shall have the right to take possession of or use any completed or partially completed WORK or part of the WORK. Such possession or use shall not be deemed to be an acceptance of any work completed in accordance with the CONTRACT agreement. If such prior possession or use by the ENGINEER-IN-CHARGE delays the progress of WORK, equitable adjustment in the time of completion will be made and the CONTRACT agreement shall be deemed to be modified accordingly.

80 Defects Liability Period (Twelve months period of liability from the date of issue of completion certificate):

80.1 The CONTRACTOR shall guarantee the installation/WORK for a period of 12 months from the date of completion of WORK as certified by the ENGINEER-IN-CHARGE which is indicated in the Completion Certificate. Any damage or defect that may arise or lie undiscovered at the time of issue of Completion Certificate, connected in any way with the equipment or materials supplied by him or in the workmanship, shall be rectified or replaced by the CONTRACTOR at his own expense as deemed necessary by the ENGINEER-IN-CHARGE or in default, the ENGINEER-IN-CHARGE may carry out such works by other work and deduct actual cost incurred towards labour, supervision and materials consumables or otherwise plus 100% towards overheads (of which the certificate of ENGINEER-IN-CHARGE shall be final) from any sums that may then be or at any time thereafter, become due to the CONTRACTOR or from his Contract Performance Security, or the proceeds of sale thereof or a sufficient part on thereof.

80.2 If the CONTRACTOR feels that any variation in WORK or in quality of materials or proportions would be beneficial or necessary to fulfill the guarantees called for, he shall bring this to the notice of the ENGINEER-IN-CHARGE in writing. If during the period of liability any portion of the WORK/equipment, is found defective and is rectified/ replaced, the period of liability for such equipment/ portion of WORK shall be operative from the date such rectification/ replacement are carried out and Contract Performance Guarantee shall be furnished separately for the extended period of liability for that portion of WORK/ equipment only. Notwithstanding the above provisions the supplier's, guarantees/warrantees for the replaced equipment shall also be passed on to the EMPLOYER.

80.3 LIMITATION OF LIABILITY Notwithstanding anything contrary contained herein, the aggregate total liability of CONTRACTOR under the Agreement or otherwise shall be limited to 100% of Agreement / Contract Value. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

81 Care of works:

81.1 From the commencement to completion of the WORK, the CONTRACTOR shall take full responsibility for the care for all works including all temporary works and in case any damages, loss or injury shall happen to the WORK or to any part thereof or to any

temporary works from any cause whatsoever, shall at his own cost repair and make good the same so that at completion the WORK shall be in good order and in conformity in every respects with the requirement of the CONTRACT and the ENGINEER-IN- CHARGE's instructions.

81.2 DEFECTS PRIOR TO TAKING OVER: If at any time, before the WORK is taken over, the ENGINEER-IN-CHARGE shall: a) Decide that any works done or materials used by the CONTRACTOR or by any SUB-CONTRACTOR is defective or not in accordance with the CONTRACT, or that the works or any portion thereof are defective, or do not fulfill the requirements of CONTRACT (all such matters being hereinafter, called 'Defects' in this clause), and b) As soon as reasonably practicable, gives to the CONTRACTOR notice in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then the CONTRACTOR shall at his own expenses and with all speed make good the defects so specified. In case CONTRACTOR shall fail to do so, the EMPLOYER may take, at the cost of the CONTRACTOR, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by the EMPLOYER will be recovered from the amount due to the CONTRACTOR. The decision of the ENGINEER-IN-CHARGE with regard to the amount to be recovered from the CONTRACTOR will be final and binding on the CONTRACTORAs soon as the WORK has been completed in accordance with the CONTRACT (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance there of provided in clause 80.1 of General Conditions of Contract) and have passed the tests on completion, the ENGINEER-IN-CHARGE shall issue a certificate (hereinafter called Completion Certificate) in which he shall certify the date on which the WORK have been so completed and have passed the said tests and the EMPLOYER shall be deemed to have taken over the WORK on the date so certified. If the WORK has been divided into various groups in the CONTRACT, the EMPLOYER shall be entitled to take over any group or groups before the other or others and there upon the ENGINEER-IN-CHARGE shall issue a Completion Certificate which will, however, be for such group or groups so taken over only. In such an event if the group /section/ part so taken over is related, to the integrated system of the work, notwithstanding date of grant of Completion Certificate for group/ section/ part. The period of liability in respect of such group/ section/ part shall extend 12 (twelve) months from the date of completion of WORK.

81.3 DEFECTS AFTER TAKING OVER: In order that the CONTRACTOR could obtain a COMPLETION CERTIFICATE he shall make good, with all possible speed, any defect arising from the defective materials supplied by the CONTRACTOR or workmanship or any act or omission of the CONTRACT or that may have been noticed or developed, after the works or groups of the works has been taken over, the period allowed for carrying out such WORK will be normally one month. If any defect be not remedied within a reasonable time, the EMPLOYER may proceed to do the WORK at CONTRACTOR's risk and expense and deduct from the final bill such amount as may be decided by the EMPLOYER. If by reason of any default on the part of the CONTRACTOR a COMPLETION CERTIFICATE

has not been issued in respect of any portion of the WORK within one month after the date fixed by the CONTRACT for the completion of the WORK, the EMPLOYER shall be at liberty to use the WORK or any portion thereof in respect of which a completion certificate has not been issued, provided that the WORK or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of Completion Certificate.

82 Guarantee/transfer of guarantee:

82.1 For works like water-proofing, acid and alkali resisting materials, pre-construction soil treatment against termite or any other specialized works etc. the CONTRACTOR shall invariably engage SUB-CONTRACTORS who are specialists in the field and firms of repute and such a SUB-CONTRACTOR shall furnish guarantees for their workmanship to the EMPLOYER, through the CONTRACTOR. In case such a SUB-CONTRACTOR/ firm is not prepared to furnish a guarantee to the EMPLOYER, the CONTRACTOR shall give that guarantee to the EMPLOYER directly.

83 Training of employer's personnel:

83.1 The CONTRACTOR undertakes to provide training to Engineering personnel selected and sent by the EMPLOYER at the works of the CONTRACTOR without any cost to the EMPLOYER. The period and the nature of training for the individual personnel shall be agreed upon mutually between the CONTRACTOR and the EMPLOYER. These engineering personnel shall be given special training at the shops, where the equipment will be manufactured and/ or in their collaborator's works and where possible, in any other plant where equipment manufactured by the CONTRACTOR or his collaborators is under installation or test to enable those personnel to become familiar with the equipment being furnished by the CONTRACTOR. EMPLOYER shall bear only the to and fro fare of the said engineering personnel.

84 Replacement of defective parts and materials:

84.1 If during the progress of the WORK, EMPLOYER shall decide and inform in writing to the CONTRACTOR, that the CONTRACTOR has manufactured any plant or part of the plant unsound or imperfect or has furnished plant inferior to the quality specified, the CONTRACTOR on receiving details of such defects or deficiencies shall at his own expenses within 7 (seven) days of his receiving the notice, or otherwise within such time as may be reasonably necessary for making it good, proceed to alter, re-construct or remove such work and furnish fresh equipments upto the standards of the specifications. In case the CONTRACTOR fails to do so, EMPLOYER may on giving the CONTRACTOR 7 (seven) day's notice in writing of his intentions to do so, proceed to remove the portion of the WORK so complained of and at the cost of CONTRACTOR's, perform all such works or furnish all such equipments provided that nothing in the clause shall be deemed to deprive the EMPLOYER of or affect any rights under the CONTRACT, the EMPLOYER may otherwise have in respect of such defects and deficiencies.

84.2 The CONTRACTOR's full and extreme liability under this clause shall be satisfied by the payments to the EMPLOYER of the extra cost, of such replacements page 196

including erection/installation as provided for in the CONTRACT; such extra cost being the ascertained difference between the price paid by the EMPLOYER for such replacements and the CONTRACT price portion for such defective plants and repayments of any sum paid by the EMPLOYER to the CONTRACTOR in respect of such defective plant. Should the EMPLOYER not so replace the defective plant the CONTRACTOR's extreme liability under this clause shall be limited to the repayment of all such sums paid by the EMPLOYER under the CONTRACT for such defective plant.

85 Indemnity

85.1 If any action is brought before a Court, Tribunal or any other Authority against the Employer or an officer or agent of the EMPLOYER, for the failure, omission or neglect on the part of the CONTRACTOR to perform any acts, matters, covenants or things under the CONTRACT, or damage or injury caused by the alleged omission or negligence on the part of the CONTRACTOR, his agents, representatives or his SUB- CONTRACTOR's, or in connection with any claim based on lawful demands of SUB-CONTRACTOR's workmen suppliers or employees, the CONTRACTOR, shall in such cases indemnify and keep the EMPLOYER and/or their representatives harmless from all losses, damages, expenses or decrees arising out of such action.

86 Construction aids, equipments, tools & tackles:

86.1 CONTRACTOR shall be solely responsible for making available for executing the WORK, all requisite CONSTRUCTION EQUIPMENTS, Special Aids, Barges, Cranes and the like, all Tools, Tackles and Testing Equipment and Appliances, including imports of such equipment etc. as required. In case of import of the same the rates applicable for levying of Custom Duty on such Equipment, Tools, & Tackles and the duty drawback applicable thereon shall be ascertained by the CONTRACTOR from the concerned authorities of Government of India. It shall be clearly understood that EMPLOYER shall not in any way be responsible for arranging to obtain Custom Clearance and/or payment of any duties and/or duty draw backs etc. for such equipments so imported by the CONTRACTOR and the CONTRACTOR shall be fully responsible for all taxes, duties and documentation with regard to the same. Tenderer in his own interest may contact, for any clarifications in the matter, concerned agencies/Dept./Ministries of Govt. of India. All clarifications so obtained and interpretations thereof shall be solely the responsibility of the CONTRACTOR

SECTION-VI CERTIFICATES AND PAYMENTS

87 Schedule of rates and payments:

87.1 **CONTRACTOR'S REMUNERATION:** The price to be paid by the EMPLOYER to CONTRACTOR for the whole of the WORK to be done and for the performance of all the obligations undertaken by the CONTRACTOR under the CONTRACT DOCUMENTS shall be ascertained by the application of the respective Schedule of Rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly for the WORK

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actually executed and approved by the ENGINEER-IN-CHARGE. The sum so ascertained shall (excepting only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of the CONTRACTOR under the CONTRACT and no further or other payment whatsoever shall be or become due or payable to the CONTRACTOR under the CONTRACT.

87.2 SCHEDULE OF RATES TO BE INCLUSIVE: The prices/rates quoted by the CONTRACTOR shall remain firm till the issue of FINAL CERTIFICATE and shall not be subject to escalation. Schedule of Rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind to be taken in executing, completing and handing over the WORK to the EMPLOYER by the CONTRACTOR. The CONTRACTOR shall be deemed to have known the nature, scope, magnitude and the extent of the WORK and materials required though the CONTRACT DOCUMENT may not fully and precisely furnish them. Tenderer's shall make such provision in the Schedule of Rates as he may consider necessary to cover the cost of such items of WORK and materials as may be reasonable and necessary to complete the WORK. The opinion of the ENGINEER-IN-CHARGE as to the items of WORK which are necessary and reasonable for COMPLETION OF WORK shall be final and binding on the CONTRACTOR, although the same may not be shown on or described specifically in CONTRACT DOCUMENTS. Generality of this present provision shall not be deemed to cut down or limit in any way because in certain cases it may and in other cases it may not be expressly stated that the CONTRACTOR shall do or perform a work or supply articles or perform services at his own cost or without addition of payment or without extra charge or words to the same effect or that it may be stated or not stated that the same are included in and covered by the Schedule of Rates.

87.3 SCHEDULE OF RATES TO COVER CONSTRUCTION EQUIPMENTS, MATERIALS, LABOUR ETC.: Without in any way limiting the provisions of the preceding sub-clause the Schedule of Rates shall be deemed to include and cover the cost of all construction equipment, temporary WORK (except as provided for herein), pumps, materials, labour, insurance, fuel, consumables, stores and appliances to be supplied by the CONTRACTOR and all other matters in connection with each item in the Schedule of Rates and the execution of the WORK or any portion thereof finished, complete in every respect and maintained as shown or described in the CONTRACT DOCUMENTS or as may be ordered in writing during the continuance of the CONTRACT.

87.4 SCHEDULE OF RATES TO COVER ROYALTIES, RENTS AND CLAIMS: The Schedule of Rates (i.e., VALUE OF CONTRACT) shall be deemed to include and cover the cost of all royalties and fees for the articles and processes, protected by letters, patent or otherwise incorporated in or used in connection with the WORK, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the WORK and shall include an indemnity to the EMPLOYER which the CONTRACTOR hereby gives against all actions, proceedings, claims, damages, costs and expenses arising from the

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incorporation in or use on the WORK of any such articles, processes or materials, octroi or other municipal or local Board Charges, if levied on materials, equipment or machineries to be brought to site for use on WORK shall be borne by the CONTRACTOR

87.5 SCHEDULE OF RATES TO COVER TAXES AND DUTIES: No exemption or reduction of Customs Duties, GST , GST on works Contract quay or any port dues, transport charges, stamp duties or Central or State Government or local Body or Municipal Taxes or duties, taxes or charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Schedule or Rates. The CONTRACTOR shall also obtain and pay for all permits or other privileges necessary to complete the WORK.

87.6 SCHEDULE OF RATES TO COVER RISKS OF DELAY: The Schedule of Rates shall be deemed to include and cover the risk of all possibilities of delay and interference with the CONTRACTOR's conduct of WORK which occur from any causes including orders of the EMPLOYER in the exercise of his power and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.

87.7 SCHEDULE OF RATES CANNOT BE ALTERED: For WORK under unit rate basis, no alteration will be allowed in the Schedule of Rates by reason of works or any part of them being modified, altered, extended, diminished or committed. The Schedule of Rates are fully inclusive of rates which have been fixed by the CONTRACTOR and agreed to by the EMPLOYER and cannot be altered. For lumpsum CONTRACTS, the payment will be made according to the WORK actually carried out, for which purpose an item wise, or work wise Schedule of Rates shall be furnished, suitable for evaluating the value of WORK done and preparing running account bill. Payment for any additional work which is not covered in the Schedule of Rates, shall only be released on issuance of change order.

88 Procedure for measurement and billing of work in progress:

88.1 BILLING PROCEDURE: Following procedures shall be adopted for billing of works executed by the CONTRACTOR.

88.1.1 All measurements shall be recorded in sextuplicate on standard measurement sheets supplied by EMPLOYER and submitted to EMPLOYER/CONSULTANT for scrutiny and passing.

88.1.2 EMPLOYER/CONSULTANT shall scrutinize and check the measurements recorded on the sheets and shall certify correctness of the same on the measurement sheets.

88.1.3 ENGINEER-IN-CHARGE shall pass the bills after carrying out the comprehensive checks in accordance with the terms and conditions of the CONTRACTS, within 7 days of submission of the bills, complete in all respects and send the same to the Employer to effect payment to the CONTRACTOR

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88.1.4 GGPL shall make all endeavor to make payments of undisputed amount of the bills submitted based on the joint measurements within 15 (Fifteen) days from the date of certification by the Engineer-in-Charge.

88.1.5 Measurements shall be recorded as per the methods of measurement spelt out in EMPLOYER/CONSULTANT SPECIFICATIONS / CONTRACT DOCUMENT. EMPLOYER/CONSULTANT shall be fully responsible for checking the measurements quantitatively and qualitatively as recorded in the Measurement Books/ Bills.

88.1.6 While preparing the final bills overall measurements will not be taken again. Only volume of work executed since the last measured bill alongwith summary of final measurements will be considered for the final bill. However, a detailed check shall be made as to missing measurements and in case there are any missing items or measurements the same shall be recorded.

88.1.7 **COMPUTERISED BILLING SYSTEM:** GODAVARI GAS (P) LTD has introduced Computerised Billing System whereby when the Bills are submitted in GGPL by a Contractor, a receipt number is generated. The Contractor can know the status of the Bill through GGPL's website.

88.2 **SECURED ADVANCE ON MATERIAL:** Unless otherwise provided elsewhere in the tender, no 'Secured Advance' on security of materials brought to site for execution of contracted items(s) shall be paid to the Contractor whatsoever.

88.3 **DISPUTE IN MODE OF MEASUREMENT:** In case of any dispute as to the mode of measurement not covered by the CONTRACT to be adopted for any item of WORK, mode of measurement as per latest Indian Standard Specifications shall be followed.

88.4 **ROUNDING-OFF OF AMOUNTS:** In calculating the amount of each item due to the CONTRACTOR in every certificate prepared for payment, sum of less than 50 paise shall be omitted and the total amount on each certificate shall be rounded off to the nearest rupees, i.e., sum of less than 50 paise shall be omitted and sums of 50 paise and more upto one rupee shall be reckoned as one rupee.

89 Lumpsum in tender:

89.1 The payment against any Lumpsum item shall be made only on completion of that item as per the provision of the CONTRACT after certification by ENGINEER-IN-CHARGE.

90 Running account payments to be regarded as advance:

90.1 All running account payments shall be regarded as payment by way of advance against the final payment only and not as payments for WORK actually done and completed

and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the CONTRACT, or any part thereof, in this respect, or of the accruing of any claim by the CONTRACTOR, nor shall it conclude, determine or affect in any way the powers of the EMPLOYER under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the CONTRACT. The final bill shall be submitted by the CONTRACTOR within one month of the date of physical completion of the WORK, otherwise, the ENGINEER-IN-CHARGE's certificate of the measurement and of total amount payable for the WORK accordingly shall be final and binding on all parties

91 Notice of claims for additional payments:

91.1 Should the CONTRACTOR consider that he is entitled to any extra payment for any extra/additional WORKS or MATERIAL change in original SPECIFICATIONS carried out by him in respect of WORK he shall forthwith give notice in writing to the ENGINEER-IN-CHARGE that he claims extra payment. Such notice shall be given to the ENGINEER-IN-CHARGE upon which CONTRACTOR bases such claims and such notice shall contain full particulars of the nature of such claim with full details of amount claimed. Irrespective of any provision in the CONTRACT to the contrary, the CONTRACTOR must intimate his intention to lodge claim on the EMPLOYER within 10 (ten) days of the commencement of happening of the event and quantify the claim within 30 (thirty) days, failing which the CONTRACTOR will lose his right to claim any compensation/reimbursement/damages etc. or refer the matter to arbitration. Failure on the part of CONTRACTOR to put forward any claim without the necessary particulars as above within the time above specified shall be an absolute waiver thereof. No omission by EMPLOYER to reject any such claim and no delay in dealing therewith shall be waiver by EMPLOYER of any of this rights in respect thereof.

91.2 **ENGINEER-IN-CHARGE** shall review such claims within a reasonably period of time and cause to discharge these in a manner considered appropriate after due deliberations thereon. However, CONTRACTOR shall be obliged to carry on with the WORK during the period in which his claims are under consideration by the EMPLOYER, irrespective of the outcome of such claims, where additional payments for WORKS considered extra are justifiable in accordance with the CONTRACT provisions, EMPLOYER shall arrange to release the same in the same manner as for normal WORK payments. Such of the extra works so admitted by EMPLOYER shall be governed by all the terms, conditions, stipulations and specifications as are applicable for the CONTRACT. The rates for extra works shall generally be the unit rates provided for in the CONTRACT. In the event unit rates for extra works so executed are not available as per CONTRACT, payments may either be released on day work basis for which daily/hourly rates for workmen and hourly rates for equipment rental shall apply, or on the unit rate for WORK executed shall be derived by interpolation/ extrapolation of unit rates already existing in the CONTRACT. In all the matters pertaining to applicability

of rate and admittance of otherwise of an extra work claim of CONTRACTOR the decision of ENGINEER-IN-CHARGE shall be final and binding.

92 Payment of contractor's bill:

92.1 No payment shall be made for works estimated to cost less than Rs.10,000/- till the whole of the work shall have been completed and a certificate of completion given. But in case of works estimated to cost more than Rs.10,000/-, that CONTRACTOR on submitting the bill thereof be entitled to receive a monthly payment proportionate to the part thereof approved and passed by the ENGINEER-IN-CHARGE, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the CONTRACTOR. This payment will be made after making necessary corrections/deductions as stipulated elsewhere in the CONTRACT DOCUMENT for materials, Contract Performance Security, taxes etc.

92.2 Payment due to the CONTRACTOR shall be made by the EMPLOYER by Account Payee cheque forwarding the same to registered office or the notified office of the CONTRACTOR. In no case will EMPLOYER be responsible if the cheque is mislaid or misappropriated by unauthorized person/persons. In all cases, the CONTRACTOR shall present his bill duly pre-receipted on proper revenue stamp payment shall be made in Indian Currency.

92.3 In general payment of final bill shall be made to CONTRACTOR within 60 days of the submission of bill on joint measurements, after completion of all the obligations under the CONTRACT.

93 Receipt for payment:

93.1 Receipt for payment made on account of work when executed by a firm, must be signed by a person holding due power of attorney in this respect on behalf of the CONTRACTOR, except when the CONTRACTOR's are described in their tender as a limited company in which case the receipts must be signed in the name of the company by one of its principal officers or by some other person having authority to give effectual receipt for the company.

94 Completion certificate:

94.1 APPLICATION FOR COMPLETION CERTIFICATE: When the CONTRACTOR fulfils his obligation under Clause 81.1 he shall be eligible to apply for COMPLETION CERTIFICATE. The ENGINEER-IN-CHARGE shall normally issue to the CONTRACTOR the COMPLETION CERTIFICATE within one month after receiving any application therefore from the CONTRACTOR after verifying from the completion documents and satisfying himself that the WORK has been completed in accordance with and as set out in the construction and erection drawings, and the CONTRACT DOCUMENTS. The CONTRACTOR, after obtaining the COMPLETION CERTIFICATE, is eligible to present the final bill for the WORK executed by him under the terms of CONTRACT.

94.2 **COMPLETION CERTIFICATE:** Within one month of the completion of the WORK in all respects, the CONTRACTOR shall be furnished with a certificate by the ENGINEER-IN-CHARGE of such completion, but no certificate shall be given nor shall the WORK be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleared off the SITE completely nor until the WORK shall have been measured by the ENGINEER-IN-CHARGE whose measurement shall be binding and conclusive. The WORKS will not be considered as complete and taken over by the EMPLOYER, until all the temporary works, labour and staff colonies are cleared to the satisfaction of the ENGINEER-IN-CHARGE. If the CONTRACTOR fails to comply with the requirements of this clause on or before the date fixed for the completion of the WORK, the ENGINEER-IN-CHARGE may at the expense of the CONTRACTOR remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit and clean off such dirt as aforesaid, and the CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

94.3 **COMPLETION CERTIFICATE DOCUMENTS:** For the purpose of Clause 94.0 the following documents will be deemed to form the completion documents:

- (i) The technical documents according to which the WORK was carried out. Six (6) sets of construction drawings showing therein the modification and correction made during the course of execution and signed by the ENGINEER-IN-CHARGE.
- (ii) COMPLETION CERTIFICATE for 'embedded' and 'covered' up work.
- (iii) Certificates of final levels as set out for various works.
- (iv) Certificates of tests performed for various WORKS.
- (v) Material appropriation, Statement for the materials issued by the EMPLOYER for the WORK and list of surplus materials returned to the EMPLOYER's store duly supported by necessary documents.

95 Final decision and final certificate:

95.1 Upon expiry of the period of liability and subject to the ENGINEER-IN-CHARGE being satisfied that the WORKS have been duly maintained by the CONTRACTOR during monsoon or such period as hereinbefore provided in Clause 80 & 81 and that the CONTRACTOR has in all respect duly made-up any subsidence and performed all his obligations under the CONTRACT, the ENGINEER-IN-CHARGE shall (without prejudice to the rights of the EMPLOYER to retain the provisions of relevant Clause hereof) otherwise give a certificate herein referred to as the FINAL CERTIFICATE to that effect and the CONTRACTOR shall not be considered to have fulfilled the whole of his obligations under CONTRACT until FINAL CERTIFICATE shall have been given by the ENGINEER-IN-CHARGE notwithstanding any previous entry upon the WORK and taking possession, working or using of the same or any part thereof by the EMPLOYER.

96 Certificate and payments on evidence of completion:

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96.1 Except the FINAL CERTIFICATE, no other certificates or payments against a certificate or on general account shall be taken to be an admission by the EMPLOYER of the due performance of the CONTRACT or any part thereof or of occupancy or validity of any claim by the CONTRACTOR

97 Deductions from the contract price:

97.1 All costs, damages or expenses which EMPLOYER may have paid or incurred, which under the provisions of the CONTRACT, the CONTRACTOR is liable/will be liable, will be claimed by the EMPLOYER. All such claims shall be billed by the EMPLOYER to the CONTRACTOR regularly as and when they fall due. Such claims shall be paid by the CONTRACTOR within 15 (fifteen) days of the receipt of the corresponding bills and if not paid by the CONTRACTOR within the said period, the EMPLOYER may, then, deduct the amount from any moneys due i.e., Contract Performance Security or becoming due to the CONTRACTOR under the CONTRACT or may be recovered by actions of law or otherwise, if the CONTRACTOR fails to satisfy the EMPLOYER of such claims.

SECTION-VII TAXES AND INSURANCE

98 Taxes, Duties, Octroi etc:

98.1 The CONTRACTOR agrees to and does hereby accept full and exclusive liability for the payment of any and all Taxes, Duties, including Excise duty, octroi etc. now or hereafter imposed, increased, modified, all the GST, duties, octrois etc. now in force and hereafter increased, imposed or modified, from time to time in respect of WORKS and materials and all contributions and taxes for unemployment compensation, insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by the CONTRACTOR and the CONTRACTOR shall be responsible for the compliance of all SUB-CONTRACTORS, with all applicable Central, State, Municipal and local law and regulation and requirement of any Central, State or local Government agency or authority. CONTRACTOR further agrees to defend, indemnify and hold EMPLOYER harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason or any violation by CONTRACTOR or SUB-CONTRACTOR of such laws, suits or proceedings that may be brought against the EMPLOYER arising under, growing out of, or by reason of the work provided for by this CONTRACT, by third parties, or by Central or State Government authority or any administrative sub-division thereof. Tax deductions will be made as per the rules and regulations in force in accordance with acts prevailing from time to time.

99 GST/ Composite scheme under GST :

99.1 Tenderer should quote all inclusive prices including the liability of GST/ Composite scheme under GST whether on the works contract as a whole or in respect of bought out

components used by the CONTRACTOR in execution of the CONTRACT. GGPL shall not be responsible for any such liability of the CONTRACTOR in respect of this CONTRACT.

100 Statutory variations

100.1 Tenderer should quote prices inclusive of GST applicable on finished product. Any statutory variations in GST on finished product during the contractual completion period, shall be to the GGPL account for which the Contractor will furnish documentary evidence(s) in support of their claims to GGPL. However, any increase in the rate of these taxes and duties (GST beyond the contractual completion period shall be to Contractor's account and any decrease shall be passed on to GGPL.

101 Insurance:

101.1 GENERAL CONTRACTOR shall at his own expense arrange secure and maintain insurance with reputable insurance companies to the satisfaction of the EMPLOYER as follows: CONTRACTOR at his cost shall arrange, secure and maintain insurance as may be necessary and to its full value for all such amounts to protect the WORKS in progress from time to time and the interest of EMPLOYER against all risks as detailed herein. The form and the limit of such insurance, as defined here in together with the under works thereof in each case should be as acceptable to the EMPLOYER. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of CONTRACT shall be that of CONTRACTOR alone. CONTRACTOR's failure in this regard shall not relieve him of any of his responsibilities and obligations under CONTRACT. Any loss or damage to the equipment, during ocean transportation, port/custom clearance, inland and port handling, inland transportation, storage, erection and commissioning till such time the WORK is taken over by EMPLOYER, shall be to the account of CONTRACTOR. CONTRACTOR shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/or replacement of the parts of the Work damaged or lost. CONTRACTOR shall provide the EMPLOYER with a copy of all insurance policies and documents taken out by him in pursuance of the CONTRACT. Such copies of document shall be submitted to the EMPLOYER immediately upon the CONTRACTOR having taken such insurance coverage. CONTRACTOR shall also inform the EMPLOYER at least 60(Sixty) days in advance regarding the expiry cancellation and/or changes in any of such documents and ensure revalidation/renewal etc., as may be necessary well in time. Statutory clearances, if any, in respect of foreign supply required for the purpose of replacement of equipment lost in transit and/or during erection, shall be made available by the EMPLOYER. CONTRACTOR shall, however, be responsible for obtaining requisite licences, port clearances and other formalities relating to such import. The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk (during ocean transportation only) etc. The scope of such insurance shall cover the entire value of supplies of equipments, plants and materials to be imported from

time to time. All costs on account of insurance liabilities covered under CONTRACT will be to CONTRACTOR's account and will be included in VALUE OF CONTRACT. However, the EMPLOYER may from time to time, during the currency of the CONTRACT, ask the CONTRACTOR in writing to limit the insurance coverage risk and in such a case, the parties to the CONTRACT will agree for a mutual settlement, for reduction in VALUE OF CONTRACT to the extent of reduced premium amounts CONTRACTOR as far as possible shall cover insurance with Indian Insurance Companies, including marine Insurance during ocean transportation.

101.1.1 EMPLOYEES STATE INSURANCE ACT: The CONTRACTOR agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed by the Employee State Insurance Act 1948 and the CONTRACTOR further agrees to defend, indemnify and hold EMPLOYER harmless for any liability or penalty which may be imposed by the Central, State or Local authority by reason of any asserted violation by CONTRACTOR or SUB-CONTRACTOR of the Employees' State Insurance Act, 1948, and also from all claims, suits or proceeding that may be brought against the EMPLOYER arising under, growing out of or by reasons of the work provided for by this CONTRACTOR, by third parties or by Central or State Government authority or any political sub- division thereof. The CONTRACTOR agrees to fill in with the Employee's State Insurance Corporation, the Declaration Forms, and all forms which may be required in respect of the CONTRACTOR's or SUB- CONTRACTOR's employees, who are employed in the WORK provided for or those covered by ESI from time to time under the Agreement. The CONTRACTOR shall deduct and secure the agreement of the SUB- CONTRACTOR to deduct the employee's contribution as per the first schedule of the Employee's State Insurance Act from wages and affix the Employees Contribution Card at wages payment intervals. The CONTRACTOR shall remit and secure the agreement of SUB-CONTRACTOR to remit to the State Bank of India, Employee's State Insurance Corporation Account, the Employee's contribution as required by the Act. The CONTRACTOR agrees to maintain all cards and Records as required under the Act in respect of employees and payments and the CONTRACTOR shall secure the agreement of the SUB- CONTRACTOR to maintain such records. Any expenses incurred for the contributions, making contributions or maintaining records shall be to the CONTRACTOR's or SUB-CONTRACTOR's account. The EMPLOYER shall retain such sum as may be necessary from the total VALUE OF CONTRACT until the CONTRACTOR shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948, have been paid. This will be pending on the CONTRACTOR when the ESI Act is extended to the place of work.

101.1.2 WORKMEN COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE: Insurance shall be effected for all the CONTRACTOR's employees engaged in the performance of this CONTRACT. If any of the work is sublet, the CONTRACTOR shall require the SUB-CONTRACTOR to provide workman's Compensation and employer's liability insurance for the later's employees if such employees are not covered under the CONTRACTOR's Insurance.

101.1.3 **ACCIDENT OR INJURY TO WORKMEN:** The EMPLOYER shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the Employment of the CONTRACTOR or any SUB-CONTRACTOR save and except an accident or injury resulting from any act or default of the EMPLOYER, his agents or servants and the CONTRACTOR shall indemnify and keep indemnified the EMPLOYER against all such damages and compensation (save and except and aforesaid) and against all claims, demands, proceeding, costs, charges and expenses, whatsoever in respect or in relation thereto.

101.1.4 **TRANSIT INSURANCE** In respect of all items to be transported by the CONTRACTOR to the SITE of WORK, the cost of transit insurance should be borne by the CONTRACTOR and the quoted price shall be inclusive of this cost.

101.1.5 **COMPREHENSIVE AUTOMOBILE INSURANCE** This insurance shall be in such a form as to protect the Contractor against all claims for injuries, disability, disease and death to members of public including EMPLOYER's men and damage to the property of others arising from the use of motor vehicles during on or off the 'site' operations, irrespective of the Employership of such vehicles.

101.1.6 **COMPREHENSIVE GENERAL LIABILITY INSURANCE:**

a) This insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of member of public or damage to property of others due to any act or omission on the part of the Contractor, his agents, his employees, his representatives and Sub- Contractor's or from riots, strikes and civil commotion.

b) Contractor shall take suitable Group Personal Accident Insurance Cover for taking care of injury, damage or any other risks in respect of his Engineers and other Supervisory staff who are not covered under Employees State Insurance Act.

c) The policy shall cover third party liability. The third party (liability shall cover the loss/ disablement of human life (person not belonging to the Contractor) and also cover the risk of damage to others materials/ equipment/ properties during construction, erection and commissioning at site. The value of third party liability for compensation for loss of human life or partial/full disablement shall be of required statutory value but not less than Rs. 2 lakhs per death, Rs. 1.5 lakhs per full disablement and Rs. 1 lakh per partial disablement and shall nevertheless cover such compensation as may be awarded by Court by Law in India and cover for damage to others equipment/ property as approved by the Purchaser. However, third party risk shall be maximum to Rs. 10(ten) lakhs to death.

d) The Contractor shall also arrange suitable insurance to cover damage, loss, accidents, risks etc., in respect of all his plant, equipments and machinery, erection tools & tackles and all other temporary attachments brought by him at site to execute the work.

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e) The Contractor shall take out insurance policy in the joint name of EMPLOYER and Contractor from one or more nationalized insurance company from any branch office at Project site.

f) Any such insurance requirements as are hereby established as the minimum policies and coverages which Contractor must secure and keep in force must be complied with, Contractor shall at all times be free to obtain additional or increased coverages at Contractor's sole expenses.

101.1.7 ANY OTHER INSURANCE REQUIRED UNDER LAW OR REGULATIONS OR BY EMPLOYER: CONTRACTOR shall also carry and maintain any and all other insurance(s) which he may be required under any law or regulation from time to time without any extra cost to EMPLOYER. He shall also carry and maintain any other insurance which may be required by the EMPLOYER.

102 Damage to Property or to any Person or any Third Party

102.1 CONTRACTOR shall be responsible for making good to the satisfaction of the EMPLOYER any loss or any damage to structures and properties belonging to the EMPLOYER or being executed or procured or being procured by the EMPLOYER or of other agencies within in the premises of all the work of the EMPLOYER, if such loss or damage is due to fault and/or the negligence or willful acts or omission of the CONTRACTOR, his employees, agents, representatives or SUB-CONTRACTORS.

102.2 The CONTRACTOR shall take sufficient care in moving his plants, equipments and materials from one place to another so that they do not cause any damage to any person or to the property of the EMPLOYER or any third party including overhead and underground cables and in the event of any damage resulting to the property of the EMPLOYER or of a third party during the movement of the aforesaid plant, equipment or materials the cost of such damages including eventual loss of production, operation or services in any plant or establishment as estimated by the EMPLOYER or ascertained or demanded by the third party shall be borne by the CONTRACTOR. Third party liability risk shall be Rupees One lakh for single accident and limited to Rupees Ten lakhs.

102.3 The CONTRACTOR shall indemnify and keep the EMPLOYER harmless of all claims for damages to property other than EMPLOYER's property arising under or by reason of this agreement, if such claims result from the fault and/or negligence or willful acts or omission of the CONTRACTOR, his employees, agents, representative of SUB-CONTRACTOR.

SECTION-VIII LABOUR LAWS

103 Labour laws:

103.1 No labour below the age of 18 (eighteen) years shall be employed on the WORK.

103.2 The CONTRACTOR shall not pay less than what is provided under law to laborers engaged by him on the WORK.

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103.3 The CONTRACTOR shall at his expense comply with all labour laws and keep the EMPLOYER indemnified in respect thereof.

103.4 The CONTRACTOR shall pay equal wages for men and women in accordance with applicable labour laws.

103.5 If the CONTRACTOR is covered under the Contract labour (Regulation and Abolition) Act, he shall obtain a license from licensing authority (i.e. office of the labour commissioner) by payment of necessary prescribed fee and the deposit, if any, before starting the WORK under the CONTRACT. Such fee/deposit shall be borne by the CONTRACTOR

103.6 The CONTRACTOR shall employ labour in sufficient numbers either directly or through SUB- CONTRACTOR's to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the CONTRACT and to the satisfaction of the ENGINEER-IN-CHARGE.

103.7 The CONTRACTOR shall furnish to the ENGINEER-IN- CHARGE the distribution return of the number and description, by trades of the work people employed on the works. The CONTRACTOR shall also submit on the 4th and 19th of every month to the ENGINEER-IN-CHARGE a true statement showing in respect of the second half of the preceding month and the first half of the current month (1) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (2) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 on Rules made thereunder and the amount paid to them.

103.8 The CONTRACTOR shall comply with the provisions of the payment of Wage Act 1936, Employee Provident Fund Act 1952, Minimum Wages Act 1948. Employers Liability Act 1938. Workmen's Compensation Act 1923, Industrial Disputes Act 1947, the Maternity Benefit Act 1961 and Contract Labour Regulation and Abolition Act 1970, Employment of Children Act 1938 or any modifications thereof or any other law relating thereto and rules made thereunder from time to time.

The contractor shall bear any upward revision in the rate of minimum wages, including but not limited to any kind of unprecedented or steep hike over and above the half yearly revisions of variable dearness allowance from time to time at its own cost during the contract period

103.9 The ENGINEER-IN-CHARGE shall on a report having been made by an Inspecting Officer as defined in Contract Labour (Regulation and Abolition) Act 1970 have the power to deduct from the money due to the CONTRACTOR any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said regulations.

103.10 The CONTRACTOR shall indemnify the EMPLOYER against any payments to be made under and for the observance of the provisions of the aforesaid Acts without prejudice to his right to obtain indemnity from his SUB-CONTRACTOR's. In the event of the CONTRACTOR committing a default or breach of any of the provisions of the aforesaid Acts as amended from time to time, of furnishing any information or submitting or filling and Form/ Register/ Slip under the provisions of these Acts which is materially incorrect then on the report of the inspecting Officers, the CONTRACTOR shall without prejudice to any other liability pay to the EMPLOYER a sum not exceeding Rs.50.00 as Liquidated Damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the ENGINEER-IN- CHARGE and in the event of the CONTRACTOR's default continuing in this respect, the Liquidated Damages may be enhanced to Rs.50.00 per day for each day of default subject to a maximum of one percent of the estimated cost of the WORK put to tender. The ENGINEER-IN-CHARGE shall deduct such amount from bills or Contract Performance Security of the CONTRACTOR and credit the same to the Welfare Fund constitute under these acts. The decision of the ENGINEER-IN-CHARGE in this respect shall be final and binding.

104 Implementation of Apprentices Act, 1961:

104.1 The CONTRACTOR shall comply with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the CONTRACT and the ENGINEER-IN-CHARGE may, at his discretion, cancel the CONTRACT. The CONTRACTOR shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions, of the Act.

105 Contractor to indemnify the Employer:

105.1 The CONTRACTOR shall indemnify the EMPLOYER and every member, office and employee of the EMPLOYER, also the ENGINEER-IN-CHARGE and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the matters referred to in Clause 102.0 and elsewhere and all actions, proceedings, claims, demands, costs and expenses which may be made against the EMPLOYER for or in respect of or arising out of any failure by the CONTRACTOR in the performance of his obligations under the CONTRACT DOCUMENT. The EMPLOYER shall not be liable for or in respect of or arising out of any failure by the CONTRACTOR in the performance of his obligations under the CONTRACT DOCUMENT. The EMPLOYER shall not be liable for or in respect of any demand or compensation payable by law in respect or in consequence of any accident or injury to any workmen or other person. In the employment of the CONTRACTOR or his SUB-CONTRACTOR the CONTRACTOR shall indemnify and keep indemnified the EMPLOYER against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

105.2 PAYMENT OF CLAIMS AND DAMAGES: Should the EMPLOYER have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the EMPLOYER shall be charged to and paid by the CONTRACTOR and the CONTRACTOR shall not be at liberty to dispute or question the right of the EMPLOYER to make such payments notwithstanding the same, may have been made without the consent or authority or in law or otherwise to the contrary.

105.3 In every case in which by virtue of the provisions of Section 12, Sub-section (i) of workmen's compensation Act, 1923 or other applicable provision of Workmen Compensation Act or any other Act, the EMPLOYER is obliged to pay compensation to a workman employed by the CONTRACTOR in execution of the WORK, the EMPLOYER will recover from the CONTRACTOR the amount of the compensation so paid, and without prejudice to the rights of EMPLOYER under Section 12, Sub-section (2) of the said act, EMPLOYER shall be at liberty to recover such amount or any part thereof by deducting it from the Contract Performance Security or from any sum due to the CONTRACTOR whether under this CONTRACT or otherwise. The EMPLOYER shall not be bound to contest any claim made under Section 12, Sub-section (i) of the said act, except on the written request of the CONTRACTOR and upon his giving to the EMPLOYER full security for all costs for which the EMPLOYER might become liable in consequence of contesting such claim.

106 Health and sanitary arrangements for workers:

106.1 In respect of all labour directly or indirectly employed in the WORKS for the performance of the CONTRACTOR's part of this agreement, the CONTRACTOR shall comply with or cause to be complied with all the rules and regulations of the local sanitary and other authorities or as framed by the EMPLOYER from time to time for the protection of health and sanitary arrangements for all workers.

106.2 The CONTRACTOR shall provide in the labour colony all amenities such as electricity, water and other sanitary and health arrangements. The CONTRACTOR shall also provide necessary surface transportation to the place of work and back to the colony for their personnel accommodated in the labour colony.

SECTION-IX APPLICABLE LAWS AND SETTLEMENT OF DISPUTES

107 Dispute Resolution & Arbitration:

Unless otherwise specified, the matters where decision of the Engineer-in-Charge is deemed to be final and binding as provided in the Agreement and the issues/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be dealt as per Conciliation Rule 2010 and Arbitration, as under.

107.1 GGPL (INDIA) LTD has framed the condition Rules 2010 in conformity with supplementary to part- III of the Indian Arbitration and conciliation Act 1996 for speedier, cost effective and amicable settlement of disputes through conciliation. A copy of the said rules made available on GGPL's web site www.GGPLonline.com for reference. Unless others

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specified, the matters where decision of the Engineer-in-charge is deemed to be final and binding as provided in the Agreement and the issue/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be settled in accordance with the conciliation Rules 2010 .

107.2 Any dispute (s)/difference(s)/issue(s) of any kind whatsoever between/amongst the parties arising under /out/of/in connection with this contract shall be settled in accordance with the afore said rules.

107.3 In case of any dispute (s)/difference(s)/issue(s), a party shall notify the other party (ies) in writing about such a disputes (s)/difference(s)/ issue(s) between/amongst the parties and that such a party wishes to refer the disputes(s)/difference(s)/issues(s) to conciliation. Such Invitation for conciliation shall contain sufficient information as to the dispute(s)/difference(s) /issue(s) to enable the other party (ies) to be fully informed as to the nature of the dispute(s)/difference(s) issue(s) , the amount of monetary claim, if any, and apparent causes(s) of action.

107.4 Conciliation proceedings commence when the other party(ies) accept (s) the invitation to conciliate and confirmed in writing. If the other party (ies) reject(s) the invitation, there will be no conciliation proceedings.

107.5 If the party initiating conciliation does not receive a reply within thirty days from the date on which he/she sends the invitation, or within such other period of times as specified in the invitation, he/she may elect to treat this as a rejection of the invitation to conciliate. If he/she so elect he/she shall inform the other party(ies) accordingly.

107.6 Where Invitation for conciliation has been furnished, the parties shall attempt to settle such dispute (s) amicably under part-III of the Indian Arbitration and Conciliation Act,1996 and GGPL (INDIA) LTD Conciliation Rules,2010. It would be only after exhausting the option of conciliation as an Alternate Dispute Resolution Mechanism that the parties here to shall go for Arbitration. For the purpose of this clause, the option of ‘Conciliation’ shall be deemed to have been exhausted, even in case of rejection of Conciliation by any of the parties.

107.7 The cost of Conciliation proceeding including but not limited to fees for Conciliator(s), Airfare, Local Transport, Accommodation, cost towards conference facility etc. shall be borne by the parties equality.

107.8 The parties shall freeze claims(s) of interest, if any and shall not claim the same during the pendency of Conciliation proceedings. The Settlement Agreement, as and when reached/agreed upon, shall be signed between the parties and Conciliation proceedings shall stand terminated on the date of the Settlement Agreement.

17.9 Arbitration:

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The Employer [GGPL] shall suggest a panel of three independent and distinguished persons to the bidder/contractor/supplier/buyer (as the case may be) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other parties to select the Sole Arbitrator within 30 days from the receipt of the communication suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and the EMPLOYER (GGPL) shall have discretion to proceed with the appointment of the Sole Arbitrator. The decision of Employer on the appointment of the sole arbitrator shall be final and binding on the parties. The award of sole arbitrator shall be final and binding on the parties and unless directed/awarded otherwise by the sole arbitrator, the cost of arbitration proceedings shall be shared equally by the parties. The Arbitration proceedings shall be in English language and venue shall be Rajahmundry, India. Subject to the above, the provisions of (Indian) Arbitration & Conciliation ACT 1996 and the Rules framed there under shall be applicable. All matter relating to this contract are subject to the exclusive jurisdiction of the court situated in the state of Rajahmundry, East Godavari Dist, A.P. Bidders/suppliers/contractors may please note that the Arbitration & Conciliation Act 1996 was enacted by the Indian Parliament and is based on United Nations Commission on International Trade Law (UNCITRAL model law), which were prepared after extensive consultation with Arbitral Institutions and centers of International Commercial Arbitration. The United Nations General Assembly vide resolution 31/98 adopted the UNCITRAL Arbitration rules on 15 December 1976.

107.2 FOR THE SETTLEMENT OF DISPUTES BETWEEN GOVERNMENT DEPARTMENT AND ANOTHER AND ONE GOVERNMENT DEPARTMENT AND PUBLIC ENTERPRISE AND ONE PUBLIC ENTERPRISE AND ANOTHER THE ARBITRATION SHALL BE AS FOLLOWS:

"In the event of any dispute or difference between the parties hereto, such dispute or difference shall be resolved amicably by mutual consultation or through the good offices of empowered agencies of the Government. If such resolution is not possible, then, the unresolved dispute or difference shall be referred to arbitration of an arbitrator to be nominated by Secretary, Department of Legal Affairs ("Law Secretary") in terms of the Office Memorandum No.55/3/1/75 CF, dated the 19th December 1975 issued by the Cabinet Secretariat (Department of Cabinet Affairs), as modified from time to time. The Arbitration Act 1940 (10 of 1940) shall not be applicable to the arbitration under this clause. The award of the Arbitrator shall be binding upon parties to the dispute. Provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to Law Secretary whose decision shall bind the parties finally and conclusively.

108 Jurisdiction:

108.1 The CONTRACT shall be governed by and constructed according to the laws in force in INDIA. The CONTRACTOR hereby submits to the jurisdiction of the Courts situated at RAJAHMUNDRY, EAST GODAVARI DIST, A.P for the purposes of disputes, actions and

proceedings arising out of the CONTRACT, the courts at RAJAHMUNDRY, EAST GODAVARI DIST, A.P only will have the jurisdiction to hear and decide such disputed, actions and proceedings.

SECTION-X SAFETY CODES

109 General:

109.1 CONTRACTOR shall adhere to safe construction practice and guard against hazardous, and unsafe working conditions and shall comply with EMPLOYER's safety rules as set forth herein. Prior to start of construction, CONTRACTOR will be furnished copies of EMPLOYER's "Safety Code" for information and guidance, if it has been prepared.

110 Safety regulations:

110.1 In respect of all labour, directly employed in the WORK for the performance of CONTRACTOR's part of this agreement, the CONTRACTOR shall at his own expense arrange for all the safety provisions as per safety codes of C.P.W.D., Indian Standards Institution. The Electricity Act, The Mines Act and such other acts as applicable.

110.2 The CONTRACTOR shall observe and abide by all fire and safety regulations of the EMPLOYER. Before starting construction work CONTRACTOR shall consult with EMPLOYER's safety Engineers or ENGINEER- IN-CHARGE and must make good to the satisfaction of the EMPLOYER any loss or damage due to fire to any portion of the work done or to be done under this agreement or to any of the EMPLOYER's existing property.

111 First aid and industrial injuries:

111.1 CONTRACTOR shall maintain first aid facilities for its employees and those of its SUB-CONTRACTOR

111.2 CONTRACTOR shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to EMPLOYER prior to start of construction and their telephone numbers shall be prominently posted in CONTRACTOR's field office.

111.3 All critical industrial injuries shall be reported promptly to EMPLOYER, and a copy of CONTRACTOR's report covering each personal injury requiring the attention of a physician shall be furnished to the EMPLOYER.

112 General rules:

112.1 Smoking within the battery area, tank farm or dock limits is strictly prohibited. Violators of the no smoking rules shall be discharged immediately.

113 Contractor's barricades:

113.1 CONTRACTOR shall erect and maintain barricades required in connection with his operation to guard or protect:-

- a) Excavations
- b) Hoisting Areas.

- c) Areas adjudged hazardous by CONTRACTOR's or EMPLOYER's inspectors.
- d) EMPLOYER's existing property subject to damage by CONTRACTOR's Operations.
- e) Rail Road unloading spots.

113.2 CONTRACTOR's employees and those of his SUB- CONTRACTOR's shall become acquainted with EMPLOYER's barricading practice and shall respect the provisions thereof.

113.3 Barricades and hazardous areas adjacent to, but not located in normal routes of travel shall be marked by red flasher lanterns at nights.

114 **Scaffolding:**

114.1 Suitable scaffolding should be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying material as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal and 4 vertical).

114.2 Scaffolding or staging more than 4 metres above the ground or floor, swing suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise retarded at least one metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

114.3 Working platform, gangway and stairway should be so constructed that they should not sag unduly or unequally and if the height of platform of the gangway or the stairway is more than 4 metres above the ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as in ii) above.

114.4 Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing of railing whose minimum heights shall be 1 metre.

114.5 Safe-means of access shall be provided to all working platforms and other working places, every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length while the width between side rails in rung ladder shall in no case be less than 30 cms for ladder upto and including 3 metres in length. For longer ladder this width should be increased 5mm for each additional foot of length. Uniform steps spacing shall not exceed 30 cms. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed to cause danger or inconvenience to any person or public. The CONTRACTOR shall also provide all necessary fencing and lights to protect the workers and staff from accidents, and shall be bound to bear the expenses of defense of every suit, action or other proceeding of law that may be brought

by any person for injury sustained owing to neglect of the above precautions and pay any damages and costs which may be awarded in any such suit or action or proceeding to any such person or which may with the consent of the CONTRACTOR be paid to compromise any claim by any such person.

115 Excavation and trenching:

115.1 All trenches 1.2 metres or more in depth, shall at all times be supplied with at least one ladder for each 50 metres length or fraction thereof. Ladder shall be extended from bottom of the trenches to at least 1 metre above the surface of the ground. The sides of the trenches which are 1.5M in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated materials shall not be placed within 1.5 metres of the edge of the trench or half of the trench width whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or under-cutting shall be done.

116 Demolition/general safety:

116.1 Before any demolition work is commenced and also during the progress of the demolition work

- a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- b) No electric cable or apparatus which is liable to be a source of danger shall remain electrically charged.
- c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

116.2 All necessary personal safety equipment as considered adequate by the ENGINEER-IN-CHARGE should be kept available for the use of the persons employed on the SITE and maintained in condition suitable for immediate use, and the CONTRACTOR shall take adequate steps to ensure proper use of equipment by those concerned.

- a) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves.
- b) Those engaged in white washing and mixing or stacking or cement bags or any material which are injurious to the eyes be provided with protective goggles.
- c) Those engaged in welding and cutting works shall be provided with protective face & eye shield, hand gloves, etc.
- d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- e) When workers are employed in sewers and manholes, which are in use, the CONTRACTOR shall ensure that the manhole covers are opened and are ventilated atleast for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or

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- f) Board to prevent accident to the public.
- g) The CONTRACTOR shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken.
- 1) No paint containing lead or lead product shall be used except in the form of paste or readymade paint.
 - 2) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - 3) Overalls shall be supplied by the CONTRACTOR to the workmen and adequate facilities shall be provided to enable the working painters to wash them during and on cessation of work.

116.3 When the work is done near any place where there is risk of drowning, all necessary safety equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

116.4 Use of hoisting machines and tackles including their attachments, anchorage and supports shall conform to the following standards or conditions:

- a. These shall be of good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good working order.
- b. Every rope used in hoisting or lowering materials or as means of suspension shall be of durable quality and adequate strength and free from patent defects.
- b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding, winch or give signals to the operator.
- c) In case of every hoisting machine and of every chain ring hook, shackle, swivel, and pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gears referred to above shall be plainly marked with the safe working load of the conditions under which it is applicable and the same shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.
- d) In case of departmental machine, the safe working load shall be notified by the ENGINEER-IN-CHARGE. As regards CONTRACTOR's machines, the CONTRACTOR shall notify the safe working load of the machine to the ENGINEER-IN-CHARGE whenever he brings any machinery to SITE of WORK and get it verified by the Engineer concerned.
- e) Motors, gears, transmission lines, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as to reduce to minimum the accidental descent of the load, adequate precautions should be taken to reduce the minimum risk of any part or parts of a suspended load becoming accidentally displaced. When workers are employed on electrical

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installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves, and boots as may be necessary should be provided. The workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

116.5 All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe conditions and no scaffolds, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

116.6 These safety provisions should be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work-spot. The person responsible for compliance of the safety code shall be named therein by the CONTRACTOR

116.7 To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the CONTRACTOR shall be open to inspection by the Welfare Officer, ENGINEER-IN- CHARGE or safety Engineer of the Administration or their representatives.

116.8 Notwithstanding the above clauses there is nothing in these to exempt the CONTRACTOR for the operations of any other Act or rules in force in the Republic of India. The work throughout including any temporary works shall be carried out in such a manner as not to interfere in any way whatsoever with the traffic on any roads or footpath at the site or in the vicinity thereto or any existing works whether the property of the Administration or of a third party. In addition to the above, the CONTRACTOR shall abide by the safety code provision as per C.P.W.D. Safety code and Indian Standard Safety Code from time to time.

117 Care in handling inflammable gas:

117.1 The CONTRACTOR has to ensure all precautionary measures and exercise utmost care in handling the inflammable gas cylinder/inflammable liquids/paints etc. as required under the law and/or as advised by the fire Authorities of the EMPLOYER.

118 Temporary combustible structures:

118.1 Temporary combustible structures will not be built near or around work site.

119 Precautions against fire:

119.1 The CONTRACTOR will have to provide Fire Extinguishers, Fire Buckets and drums at worksite as recommended by ENGINEER-IN-CHARGE. They will have to ensure all precautionary measures and exercise utmost care in handling the inflammable gas cylinders/inflammable liquid/ paints etc. as advised by ENGINEER-IN-CHARGE. Temporary combustible structures will not be built near or around the work-site.

120 Explosives:

120.1 Explosives shall not be stored or used on the WORK or on the SITE by the CONTRACTOR without the permission of the ENGINEER-IN-CHARGE in writing and then only in the manner and to the extent to which such permission is given. When explosives are required for the WORK they will be stored in a special magazine to be provided at the

cost of the CONTRACTOR in accordance with the Explosives Rules. The CONTRACTOR shall obtain the necessary license for the storage and the use of explosives and all operations in which or for which explosives are employed shall be at sole risk and responsibility of the CONTRACTOR and the CONTRACTOR shall indemnify the EMPLOYER against any loss or damage resulting directly or indirectly therefrom.

121 Mines act:

121.1 **SAFETY CODE:** The CONTRACTOR shall at his own expense arrange for the safety provisions as required by the ENGINEER-IN-CHARGE in respect of all labour directly employed for performance of the WORKS and shall provide all facilities in connection therewith. In case the CONTRACTOR fails to make arrangements and provides necessary facilities as aforesaid, the ENGINEER-IN-CHARGE shall be entitled to do so and recover the costs thereof from the CONTRACTOR

121.2 Failure to comply with Safety Code or the provisions relating to report on accidents and to grant of maternity benefits to female workers shall make the CONTRACTOR liable to pay Company Liquidated Damages an amount not exceeding Rs.50/- for each default or materially incorrect statement. The decision of the ENGINEER-IN-CHARGE in such matters based on reports from the Inspecting Officer or from representatives of ENGINEER-IN-CHARGE shall be final and binding and deductions for recovery of such Liquidated Damages may be made from any amount payable to the CONTRACTOR from all the provisions of the Mines Act, 1952 or any statutory modifications or re-enactment thereof the time being in force and any Rules and Regulations made there under in respect of all the persons employed by him under this CONTRACT and shall indemnify the EMPLOYER from and against any claim under the Mines Act or the rules and regulations framed there under by or on behalf of any persons employed by him or otherwise.

122 Preservation of place:

122.1 The CONTRACTOR shall take requisite precautions and use his best endeavors to prevent any riotous or unlawful behavior by or amongst his worker and others employed or the works and for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the WORK. In the event of the EMPLOYER requiring the maintenance of a Special Police Force at or in the vicinity of the site during the tenure of works, the expenses thereof shall be borne by the CONTRACTOR and if paid by the EMPLOYER shall be recoverable from the CONTRACTOR.

123 Outbreak of infectious diseases:

123.1 The CONTRACTOR shall remove from his camp such labour and their facilities who refuse protective inoculation and vaccination when called upon to do so by the ENGINEER-IN-CHARGE's representative. Should Cholera, Plague or other infectious diseases break out the CONTRACTOR shall burn the huts, beddings, clothes and other belongings or used by the infected parties and promptly erect new huts on healthy sites as required by the ENGINEER-IN-CHARGE failing which within the time specified in the Engineer's requisition, the work may be done by the EMPLOYER and the cost thereof recovered from the CONTRACTOR.

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124 Use of intoxicants:

124.1 The unauthorized sale of spirits or other intoxicants, beverages upon the work in any of the buildings, encampments or tenements owned, occupied by or within the control of the CONTRACTOR or any of his employee is forbidden and the CONTRACTOR shall exercise his influence and authority to the utmost extent to secure strict compliance with this condition. In addition to the above, the CONTRACTOR shall abide by the safety code provision as per C.P.W.D. safety code and Indian Standard Code framed from time to time.

PROFORMA FOR CONTRACT AGREEMENT

LOA No. GGPL /

Dated -----

GGPL's PAN No. AAACG1209J

Contract Agreement for the work of ----- of GODAVARI GAS PRIVATE LIMITED made on ----- between (Name and Address)-----, hereinafter called the "CONTRACTOR" (which term shall unless excluded by or repugnant to the subject or context include its successors and permitted assignees) of the one part and GODAVARI GAS PRIVATE LIMITED having its registered address at #85-06-23/2, 2nd Floor, Morampudi Junction, Near Indian Oil Petrol Bunk, Rajahmundry East Godavari - 533107 A.P. INDIA hereinafter called the "EMPLOYER" (which term shall, unless excluded by or repugnant to the subject or context include its successors and assignees) of the other part.

WHEREAS

- A. The EMPLOYER being desirous of having provided and executed certain work mentioned, enumerated or referred to in the Tender Documents including Letter Inviting Tender, General Tender Notice, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Plans, Time Schedule of completion of jobs, Schedule of Rates, Agreed Variations, other documents has called for Tender.
- B. The CONTRACTOR has inspected the SITE and surroundings of WORK specified in the Tender Documents and has satisfied himself by careful examination before submitting his tender as to the nature of the surface, strata, soil, sub-soil and ground, the form and nature of site and local conditions, the quantities, nature and magnitude of the work, the availability of labour and materials necessary for the execution of work, the means of access to SITE, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and thing referred to, or implied in the tender documents or having any connection therewith and has considered the nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the execution and completion of the work to be carried out under the CONTRACT, and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and ancillary thereof affecting the execution and completion of the WORK and which might have influenced him in making his tender.
- D. The Tender Documents including the Notice Letter Inviting Tender, General Conditions of Contract, Special Conditions of Contract, Schedule of Rates, General Obligations, SPECIFICATIONS, DRAWINGS, PLANS, Time Schedule for completion of Jobs, Letter of Acceptance of Tender and any statement of agreed variations with its enclosures copies of which are hereto annexed form part of this CONTRACT though separately set out herein and are included in the expression "CONTRACT" wherever herein used.

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AND WHEREAS

The EMPLOYER accepted the Tender of the CONTRACTOR for the provision and the execution of the said WORK at the rates stated in the schedule of quantities of the work and finally approved by EMPLOYER (hereinafter called the "Schedule of Rates") upon the terms and subject to the conditions of CONTRACT.

NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:-

1. In consideration of the payment to be made to the CONTRACTOR for the WORK to be executed by him, the CONTRACTOR hereby covenants with EMPLOYER that the CONTRACTOR shall and will duly provide, execute and complete the said work and shall do and perform all other acts and things in the CONTRACT mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said WORK and at the said times and in the manner and subject to the terms and conditions or stipulations mentioned in the contract.
2. In consideration of the due provision execution and completion of the said WORK, EMPLOYER does hereby agree with the CONTRACTOR that the EMPLOYER will pay to the CONTRACTOR the respective amounts for the WORK actually done by him and approved by the EMPLOYER at the Schedule of Rates and such other sum payable to the CONTRACTOR under provision of CONTRACT, such payment to be made at such time in such manner as provided for in the CONTRACT.

A N D

3. In consideration of the due provision, execution and completion of the said WORK the CONTRACTOR does hereby agree to pay such sums as may be due to the EMPLOYER for the services rendered by the EMPLOYER to the CONTRACTOR, such as power supply, water supply and others as set for in the said CONTRACT and such other sums as may become payable to the EMPLOYER towards the controlled items of consumable materials or towards loss, damage to the EMPLOYER'S equipment, materials construction plant and machinery, such payments to be made at such time and in such manner as is provided in the CONTRACT.

It is specifically and distinctly understood and agreed between the EMPLOYER and the CONTRACTOR that the CONTRACTOR shall have no right, title or interest in the SITE made available by the EMPLOYER for execution of the works or in the building, structures or work executed on the said SITE by the CONTRACTOR or in the goods, articles, materials etc., brought on the said SITE (unless the same specifically belongs to the CONTRACTOR) and the CONTRACTOR shall not have or deemed to have any lien whatsoever charge for unpaid bills will not be entitled to assume or retain possession or control of the SITE or structures and the EMPLOYER shall have an absolute and unfettered right to take full possession of



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SITE and to remove the CONTRACTOR, their servants, agents and materials belonging to the CONTRACTOR and lying on the SITE.

The CONTRACTOR shall be allowed to enter upon the SITE for execution of the WORK only as a licensee simpliciter and shall not have any claim, right, title or interest in the SITE or the structures erected thereon and the EMPLOYER shall be entitled to terminate such license at any time without assigning any reason.

The materials including sand, gravel, stone, loose, earth, rock etc., dug up or excavated from the said SITE shall, unless otherwise expressly agreed under this CONTRACT, exclusively belong to the EMPLOYER and the CONTRACTOR shall have no right to claim over the same and such excavation and materials should be disposed off on account of the EMPLOYER according to the instruction in writing issued from time to time by the ENGINEER-IN-CHARGE.

In Witness whereof the parties have executed these presents in the day and the year first above written.

Signed and Delivered for and on behalf of EMPLOYER.
GODAVARI GAS PRIVATE LIMITED.

Signed and Delivered for and on behalf of the CONTRACTORS.
(NAME OF THE CONTRACTOR)

Date : _____
Place: _____

Date : _____
Place: _____

IN PRESENCE OF TWO WITNESSES

1. _____

2. _____

1. _____

2. _____

SECTION - VII

SCHEDULE OF RATES

**ATTACHED SEPARATELY AS
ANNEXURE OF THIS
DOCUMENT**