



**TENDER DOCUMENT FOR  
LAND DEVELOPMENT, TOPOGRAPHICAL  
& CONTOUR SURVEY WORKS FOR  
PROPOSED WWTP AND ZLD PLANT AT  
GAIL, PATA ON OPEN DOMESTIC  
COMPETITIVE BIDDING BASIS**

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

**(GEPNIC ID: 2024\_GAIL\_191842)**



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**SECTION-I**

**INVITATION FOR BID**

**(IFB)**

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

Ref No: GAIL/ND/CnP/ZLD/W581/2024

Date: 02.04.2024

To,

**PROSPECTIVE BIDDERS**

**SUB: TENDER DOCUMENT FOR LAND DEVELOPMENT, TOPOGRAPHICAL & CONTOUR SURVEY WORKS FOR PROPOSED WWTP AND ZLD PLANT AT GAIL, PATA ON OPEN DOMESTIC COMPETITIVE BIDDING BASIS**

Dear Sir/Madam,

- 1.0 **GAIL (India) Limited, New Delhi [having registered office at 16, Bhikaji Cama Place, New Delhi 110066 CIN No. L40200DL1984GOI018976], the largest state-owned natural gas processing and distribution company and the Maharatna, invites bids from 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:

<b>(A)</b>	NAME OF WORK / BRIEF SCOPE OF WORK/JOB	LAND DEVELOPMENT, TOPOGRAPHICAL & CONTOUR SURVEY WORKS FOR PROPOSED WWTP AND ZLD PLANT AT GAIL, PATA ON OPEN DOMESTIC COMPETITIVE BIDDING BASIS
<b>(B)</b>	TENDER NO. & DATE	GAIL/ND/CnP/ZLD/W581/2024 dated 02.04.2024
<b>(C)</b>	TYPE OF BIDDING SYSTEM	Single Stage Two Bid System through GEPNIC portal.
<b>(D)</b>	TYPE OF TENDER	This is an e-Tendering and not a Manual /Physical tendering. Thus, clauses pertaining to manual tendering mentioned elsewhere shall not be applicable in this tender
<b>(E)</b>	COMPLETION/CONTRACT PERIOD	Refer Section-V & Section-VI of tender document
<b>(F)</b>	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	Applicable Amount: INR 20,00,000/- [INR Twenty Lacs Only] (Refer clause no.16 of ITB)
<b>(F1)</b>	DECLARATION FOR BID SECURITY	Start-Ups and CPSEs (to whom exemption is allowed as per extant guidelines in vogue) are required to submit Declaration for Bid Security as per proforma at Form F-2A



(G)	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	<p>From 02.04.2024 (1800 Hrs, IST) to 23.04.2024 (1400 Hrs, IST) on following websites:</p> <p>(i) GAIL's Tender Website – <a href="http://www.gailtenders.in">www.gailtenders.in</a></p> <p>(ii) Govt. CPP Portal - <a href="https://eprocure.gov.in">https://eprocure.gov.in</a></p> <p>(iii) Govt. e-Procurement System of National Informatics Center (GePNIC) portal [e-tender portal] <a href="https://etenders.gov.in/eprocure/app">https://etenders.gov.in/eprocure/app</a> <i>[in case of e-Tendering]</i></p> <p>(iv) Government E-Market (Gem) Portal</p> <p>(v) PDIL Website: <a href="https://www.pdilin.com">https://www.pdilin.com</a></p>
(H)	DATE, TIME & VENUE OF PRE-BID MEETING	<p>Date : 09.04.2024 Time : 1100 hrs Venue : Virtual Meeting through Microsoft Teams (Link is provided below)</p> <p>Further, if Bidder(s) wants to attend meeting in physical, address to attend meeting is as below:</p> <p>GAIL Bhawan,16, Bhikaiji Cama Plance, New Delhi 110066</p>
(I)	DUE DATE & TIME OF BID-SUBMISSION (ON OR BEFORE)	<p>Date : 23.04.2024 Time : 1400 hrs IST</p>
(J)	DATE AND TIME OF UN-PRICED BID OPENING	<p>Date : 24.04.2024 Time : 1400 hrs IST</p>
(K)	CONTACT DETAILS OF TENDER DEALING OFFICER	<p>Name : Mr. S K Sharma, Chief Manager (C&amp;P) GAIL (India) Ltd. Phone No. &amp; Extn : 26182955/26172580 Ext 2245 e-mail : <a href="mailto:sandeep.sharma@gail.co.in">sandeep.sharma@gail.co.in</a></p> <p>Name : Mr. T Xalxo, General Manager (C&amp;P) GAIL (India) Ltd. Phone No. &amp; Extn : 26182955/26172580 Ext 2270 e-mail : <a href="mailto:txalxo@gail.co.in">txalxo@gail.co.in</a></p>
(L)	DEALING GAIL'S OFFICE ADDRESS	<p>GAIL Bhawan,16, Bhikaiji Cama Plance, New Delhi 110066</p>

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



[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_NWI3M2JmJtNWM1NC00MTkzLWE2NmMtYTNINDAzOTY1ODRl%40thread.v2/0?context=%7b%22Tid%22%3a%22288eb95d-efee-416f-b87b-0470a90e53e9%22%2c%22Oid%22%3a%22df5f73b0-583e-424c-8cef-eb34ac2622b3%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NWI3M2JmJtNWM1NC00MTkzLWE2NmMtYTNINDAzOTY1ODRl%40thread.v2/0?context=%7b%22Tid%22%3a%22288eb95d-efee-416f-b87b-0470a90e53e9%22%2c%22Oid%22%3a%22df5f73b0-583e-424c-8cef-eb34ac2622b3%22%7d)

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB (Section-III) depending upon Type of Tender [refer Clause no. 2.0 (D) above]. The IFB is an integral and inseparable part of the bidding document.
- 4.0 In case of E-Tender, bid must be submitted only on <https://etenders.gov.in/e procure/app>. Further, the following documents in addition to uploading the bid on e-tender portal 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 Bidding Data Sheet(BDS) [Annexure-IV to Section-III]:-
- EMD/Bid Security/Declaration for Bid Security (as applicable)
  - Power of Attorney
  - Line of Credit (if applicable)

Kind Attention: Mr. T Xalxo  
General Manager (C&P)  
GAIL (India) Limited  
16, Bhikaji Cama Place/16  
New Delhi 110066

- 5.0 ~~In case of Manual Tenders, 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 (Section-III).

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 Any revision, clarification, corrigendum, time extension, etc. to 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. In case of manual tendering, Clarification(s)/Corrigendum(s), if any, shall be sent to the prospective bidder(s) by email/post.
- 10.0 All bidders including those who are not willing to submit their bid are required to submit F-6 (Acknowledgement cum Consent letter) duly filled within 7 days from date of receipt of tender information.
- 11.0 SAP generated Request for Quotation (RFQ), if any shall also form an integral part of the Tender Document.

This is not an Order.

For & on behalf of  
GAIL (India) Limited

(Authorized Signatory)  
(Mr. S K Sharma)  
Chief Manager (C&P)  
Phone No. & Extn : 26182955/26172580 Ext 2245  
E-mail : [sandeep.sharma@gail.co.in](mailto:sandeep.sharma@gail.co.in)



**DO NOT OPEN - THIS IS A QUOTATION**

***Tender Document No.*** : .....

***Description*** : .....

***Due Date & Time*** : .....

***From:***

***To:***

..... .....	..... .....
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***(To be pasted on the envelope containing Physical documents)***

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**SECTION-II**

**BID EVALUATION**  
**CRITERIA &**  
**EVALUATION**  
**METHODOLOGY**





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**SECTION-II****BID EVALUATION CRITERIA & EVALUATION METHODOLOGY****A. Technical Criteria**

The Bidder should have completed at least one or two or three Contract(s) of “Similar Work” having minimum value(s) as indicated below during last 07 (SEVEN) years, reckoned from the final bid due date:

- (i) One contract of minimum value of Rs. 12.04 Crores  
or
- (ii) Two contracts each of minimum value of Rs. 7.52 Crores  
or
- (iii) Three contracts each of minimum value of Rs. 6.02 Crores

**Definition of “Similar Work”:**

*Land Development / Site Enabling works in the field of Oil & Gas / Refinery / Petrochemicals / Fertilizers projects/Hydrocarbon Industry.*

*(Land Development / Site Enabling means Earth work in excavation & backfilling.)*

**Notes to Technical Criteria:**

- (a) In case the bidder has executed Composite Works which includes the qualifying work(s) as per the above definition of “Similar Work”, then the value of such qualifying work(s) out of the total value of Composite Works shall be considered for the purpose of qualification.
- (b) Bids from consortium / Joint Venture shall not be accepted.
- (c) Experience of bidder acquired as a subcontractor can be accepted against submission of certificate from end user by such bidder along with other qualifying documents such as Completion Certificate, Work Order, etc.
- (d) Execution certificate (issued by the end user/owner/authorized consultant) submitted by a bidder against work contracts can also be considered in place of completion certificate for meeting the stipulated experience criteria provided that the asset for which the said execution certificate has been issued is ready for commercial use.
- (e) A job executed by a bidder for its own plant/projects cannot be considered as experience for the purpose of meeting requirement of BEC of the 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 of the bidder towards payments of statutory tax in support of the job executed for Subsidiary /Fellow



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subsidiary / Holding company. Such bidders to submit these documents in addition to the documents specified in the bidding documents to meet BEC.

- (f) Only documents (Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids. Any new document submitted against representation option provided on NIC portal shall not be considered for evaluation of bid.
- (g) While evaluating the Bids, Bidder's past experience as a leader or member of a Consortium/JV shall be considered acceptable, provided his scope in that Consortium/JV meets the requirement stipulated in the subject BEC above. In case, the PTR of Consortium/JV experience submitted by the Bidder meets the similar work without indicating the division of scope of work in terms of specific activities and associated value of work between the Consortium/JV members, but only the division of scope in terms of percentage share is indicated, in such case the completed value shall be arrived at after considering percentage share of each member, for the purpose of BEC evaluation.

**B. Financial Criteria**

The Bidder is required to meet following financial criteria of BEC:

**A) Annual Turnover:**

The minimum average annual turnover of the Bidder as per the audited annual financial statements of preceding three financial years shall be INR 7.52 Crores.

**B) Net worth:**

Net Worth of the Bidder should be positive as per the audited annual financial statement of immediate preceding year.

**C) Working Capital:**

The minimum working capital of the Bidder as per the audited annual financial statement of last financial year shall be INR 1.5 Crore.

**Notes:**

- (i) If the Bidder's Working Capital is negative or inadequate, the Bidder shall submit a Letter from their Bank having Net Worth not less than Rs.100 Crore or Eqvt. USD, confirming the availability of Line of Credit for Working Capital amount mentioned herein above. The Line of Credit letter from Bank to be submitted strictly as per Format at F-9 of Tender.
- (a) Declaration Letter/Certificate for Line of Credit due to short fall of Working Capital shall be from single bank only. Letters from multiple banks shall not be applicable. However, banking syndicate will also be acceptable wherein group of banks can jointly provide Line of Credit to the Bidder.
- (b) The Bank shall be required to issue the letter for declaration /certificate of Line of Credit on their letter head along with the contact details of the issuing authority like email id, contact number etc., as per format provided at F-9 of Tender.



- (ii) **Average Annual Turnover:** Preceding 3 financial years mentioned in aforesaid BEC refer to immediate preceding 3 financial years wherever the closing date of the bid is after 30<sup>th</sup> Sept. of the relevant financial year. In case the tenders having the due date for submission of bid up to 30<sup>th</sup> September of the relevant financial year, and audited financial results of the immediate preceding 3 financial years are not available, the audited financial results of the 3 years immediately prior to that will be considered. In case the date of constitution/incorporation of the Bidder is less than 3 years old, the average turnover in respect of the completed financial years after the date of constitution/ incorporation shall be taken into account for minimum Average Annual Financial Turnover criteria.
- (iii) **Net Worth/Working Capital:** Immediate preceding financial year mentioned in aforesaid BEC refer to audited financial results for the immediate preceding financial year wherever the closing date of the bid is after 30<sup>th</sup> Sept. of the relevant financial year. In case the tenders having the due date for submission of bids up to 30<sup>th</sup> September of the relevant financial year, and audited financial results of the immediate preceding financial year is not available, in such case the audited financial results of the year immediately prior to that year will be considered. Bidder is to submit Audited Financial Statement of immediate preceding financial years (as mentioned above) along with format F-10 accordingly for Networth / Working Capital.
- (iv) Any shortfall information / documents on the Audited Annual Report / Financial Statement of the Bidder and/or Line of Credit for Working Capital issued on or before the final bid due date may only be sought against Commercial queries (CQs). Any information/ documents issued post final bid due date shall not be considered for evaluation.

C. Exchange rate for Conversion of Currency for evaluation of documents submitted by bidders for BEC which are in other currency than specified in BEC shall be as follows:

- (a) **BEC (Technical Criteria):** Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the date of award of contract submitted by bidder.
- (b) **BEC (Financial Criteria):**
- (i) **For Annual Turnover:**
- The average of Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the First date and Last date of the respective Financial Year.
- (ii) **For Net-Worth & Working Capital:**
- The Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the Last date of the respective Financial Year.
- (c) In case, the SBI Selling rate is not available as on the date of conversion as specified above for respective cases, the exchange rate for conversion of currency shall be taken from the internet, such as:



<https://www.xe.com/currencyconverter>  
<https://economictimes.indiatimes.com/markets/forex/currency-converter>  
<https://www.oanda.com/currency/converter>

- D. Only documents (Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids.**

After submission of bid, only related shortfall documents will be asked for in TQ/CQ and considered for evaluation. For example, if the bidder has submitted a contract without its completion/ performance certificate, the certificate will be asked for and considered. However, no new reference/ PO/WO/LOA is to be submitted by bidder in response to TQ/CQ so as to qualify and such documents will not be considered by GAIL for evaluation of Bid.

Any shortfall information / documents on the Audited Annual Report / Financial Statement of the Bidder and/or line of credit for working capital issued on or before the final bid due date can only be sought against Commercial queries (CQs). Any information/ documents issued post final bid due date shall not be considered for evaluation

Experience of bidder acquired as a subcontractor can be accepted against submission of certificate from end user by such bidder along with other specified documents.

- E. RELAXATION OF PRIOR TURNOVER AND PRIOR EXPERIENCE FOR STARTUPS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY), AS AMENDMED TIME TO TIME: NOT APPLICABLE**

- F. AUTHENTICATION OF DOCUMENTS TO BE SUBMITTED IN SUPPORT OF BEC:**

- (i) Technical Criteria of BEC:**

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

- (ii) Financial Criteria of BEC:**

Bidder shall submit "Details of financial capability of Bidder" in prescribed format (F-10) duly signed and stamped by a chartered accountant/ Certified Public Accountant (CPA).

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

- G. Eligibility criteria in case bid is submitted on the basis of technical experience of FOREIGN BASED ANOTHER COMPANY (SUPPORTING COMPANY) which**



**holds more than fifty percent of the paid up share capital of the bidder company or vice versa:**

Offers of those bidders (not under consortium arrangement) who themselves do not meet the technical experience criteria as stipulated in the BEC and are quoting based on the experience of Foreign based another company (Supporting Company) can also be considered. In such case the supporting company should hold more than fifty percent of the paid up share capital of the bidding company or vice versa.

However, the supporting company should on its own meet the technical experience as stipulated in the BEC and should not rely on any other company or through any other arrangement like Technical collaboration agreement.

In that case as the bidding company is dependent upon the technical experience of another company with a view to ensure commitment and involvement of the companies involved for successful execution of the contract, the participating bidder should enclose the following Agreements/ Guarantees/ Undertakings along with the techno-commercial bid:

- (i) An Agreement (*as per format enclosed at Appendix- A1 to Section II*) between the bidder and the supporting company.
- (ii) Guarantee (*as per format enclosed at Appendix- A2 to Section II*) by the supporting company to GAIL for fulfilling the obligation under the Agreement along with certificate issued by Company Secretary as per *Appendix- A2A to Section II*.
- (iii) Undertaking by Supporting Company to provide a Performance Bank Guarantee (*as per format and instructions enclosed at Appendix- A3 to Section II*), equivalent to 50% of the value of the PBG which is to be submitted by the bidding company, in case of being the successful bidder.

In cases where foreign based supporting company does not have Permanent Establishment in India as per Indian Income Tax Act, the bidding company can furnish Performance Bank Guarantee for an amount which is sum of PBG amount to be submitted by the bidder and additional PBG amount required to be submitted by the supporting company subject to the condition that supporting company have 100% paid up equity share capital of the bidder either directly or through intermediate subsidiaries or vice versa.

In such case bidding company shall furnish an undertaking that their foreign based supporting company is not having any Permanent Establishment in India in terms of Income Tax Act of India.

- (iv) Undertaking from the supporting company to the effect that in addition to invoking the PBG submitted by the bidding company, the PBG provided by supporting company shall be invoked by GAIL due to non-performance of the bidding company.

Note:

- 1.0 In case Supporting Company fails to submit Bank Guarantee as per (iii) above, EMD/SD submitted by the bidder shall be forfeited.
- 2.0 The Financial BEC of tender is to be met by bidder on their own.



3.0 The Supporting Company shall meet conditions of 'Eligible Bidder', as per clause no. 2 of Section-III (ITB).

4.0 The clause J as below shall be applicable to above supporting company also.

**H. Apart from above, Bidder must submit all other relevant documents/ information as specified in the Scope of Work/SCC for Technical Evaluation of bid or specified elsewhere in the Tender Document, towards proof of its responsiveness.**

**I. PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA**

1. OM no. 7/10/2021-PPD(1) dated 23.02.2023, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website <https://doe.gov.in/procurement-policy-divisions>.

2. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement no. 4) dated 23.02.2023.

Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.

Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India

3. **"Bidder"** (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) **for purpose of this provision** means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

4. **"Bidder from a country which shares a land border with India"** for the purpose of this:

- a. An entity incorporated, established or registered in such a country; or
- b. A subsidiary of an entity incorporated, established or registered in such a country; or
- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above



5. **"Beneficial owner"** for the purpose of above (4) will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
- b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- (v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

6. **"Agent"** for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons

Note:

- (i) A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent for the purpose of this Order.
- (ii) However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an Agent.]

7. **"Transfer of Technology"** means dissemination and transfer of all forms of commercially usable knowledge such as transfer of know-how, skills, technical expertise, designs, processes and procedures, trade secrets, which enables the acquirer



of such technology to perform activities using the transferred technology independently. (Matters of interpretation of this term shall be referred to the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade, and the interpretation of the Committee shall be final.)

8. **"Specified Transfer of Technology"** means a transfer of technology in the sectors and/ or technologies, specified at Schedule-I, II & 3 of this order.
9. **SUBMISSION OF CERTIFICATE IN BIDS:**

Bidder shall submit a certificate in this regard as Form-I-A.

For cases falling under the category of Transfer of Technology, Bidder shall submit a certificate in this regard as Form-I-B.

If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

10. The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.
11. **PROVISION TO BE IN WORKS CONTRACTS, INCLUDING TURNKEY CONTRACTS:**

The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in Para 4 herein above. A Certificate to this regard is to be submitted by bidder is placed at Form-II.

[Note: Procurement of raw material, components, etc. does not constitute sub- contracting]

**J. EVALUATION METHODOLOGY:**

The evaluation of all techno-commercially acceptable bids, to arrive at the lowest evaluated bid shall be carried out as under:

- a) Total quoted amount calculated based on the percentage (plus or minus) quoted by Bidder, which is inclusive of all taxes & duties except Goods & Services Tax (GST).
- b) Plus GST (CGST & SGST/UTGST or IGST)
- c) Less Input Credit of GST

**G. RESTRICTING PARTICIPATION OF NCLT REFERRED BIDDERS**

- (i) Offer from the following type of bidders / members of consortium will not be considered:





- 
- Bidders who are undergoing insolvency resolution process or liquidation or bankruptcy proceeding under Insolvency and Bankruptcy Code, 2016 (Code).
  - Bidders whose resolution process or liquidation or bankruptcy proceeding is initiated under the Code at any stage of evaluation of bid.
- (ii) It will be responsibility of the bidder/contractor/vendor to inform GAIL/ PMC within 15 (Fifteen) days from the date of order of insolvency resolution process or liquidation or bankruptcy proceeding passed by the Adjudating Authority Namely National Company Law Tribunal (NCLT) or Debt Recovery Tribunal (DRT) or any other similar authority under the Code.
- (iii) If bidder fails to share the information regarding their status of insolvency resolution process or liquidation or bankruptcy proceeding in their bid or at any latter stage, their offer is liable to be rejected by GAIL.
- (iv) GAIL reserve the right to cancel / terminate the contract without any liability on the part of GAIL/ PMC immediately on the commencement of insolvency resolution process or liquidation or bankruptcy proceeding of any party under the contract. A declaration in this regard shall be furnished by the bidder as per proforma at Annexure-II to Section-II.



**UNDERTAKING ON LETTERHEAD**

To,

M/s GAIL (INDIA) LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD(1) dated 23.02.2023 of Dept of Expenditure, Ministry of Finance, Government of India

(<https://doe.gov.in/procurement-policy-divisions>)

Dear Sir

We, M/s \_\_\_\_\_ (*Name of Bidder*), have read the clause regarding restrictions on Procurement from a Bidder of a country which shares a land border with India as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) Bidder is not from such a country [     ]
- (ii) If the Bidder is from such a country [     ]  
which shares a land border with India, has been registered  
with the Competent Authority.

(Evidence of valid registration by the  
Competent Authority to be attached by the bidder)

***(Bidder is to tick appropriate option (✓ or X) above).***

We hereby certify that we fulfill all requirements in this regard and is eligible to be considered against the subject tender.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



**UNDERTAKING ON LETTERHEAD**

*(Applicable in case of Transfer of Technology cases only)*

To,

M/s GAIL (INDIA) LIMITED

\_\_\_\_\_

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD(1) dated 23.02.2023 of Dept of Expenditure, Ministry of Finance, Government of India (<https://doe.gov.in/procurement-policy-divisions>)

Dear Sir

We, M/s \_\_\_\_\_ (*Name of Bidder*), have read the clause regarding restrictions on Procurement from a Bidder of a Country having Transfer of Technology (ToT) arrangement as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

(i) The Bidder does not have ToT with such a country [ ]

(iii) If the Bidder is having ToT from such a country [ ]  
which share a land border with India, has been registered  
with the Competent Authority.

(Evidence of valid registration by the  
Competent Authority to be attached by the bidder)

*(Bidder is to tick appropriate option (✓) above).*

We hereby certify that we fulfill all requirements in this regard and is eligible to be considered against the subject tender.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



**CERTIFICATE FOR TENDERS FOR WORKS INVOLVING POSSIBILITY OF SUB-CONTRACTING**

To,

M/s GAIL (INDIA) LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD(1) dated 23.02.2023 of Dept of Expenditure, Ministry of Finance, Government of India (<https://doe.gov.in/procurement-policy-divisions>)

Dear Sir

We, M/s \_\_\_\_\_ (*Name of Bidder*), have read the clause regarding restrictions on Procurement from a Bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) Bidder is not from such a country [       ]
- (ii) If the Bidder is from such a country [       ]  
which share a land border with India, has been registered  
with the Competent Authority.

(Evidence of valid registration by the  
Competent Authority to be attached by the bidder)

***(Bidder is to tick appropriate option (✓) above).***

We further certify that we will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that we fulfill all requirements in this regard and is eligible to be considered.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



**Schedule I**

List of Category-I Sensitive sectors:

Sr. No.	Sector
(i)	Atomic Energy
(ii)	Brocasting/ Print and Digital Media
(iii)	Defense
(iv)	Space
(v)	Telecommunications

**Schedule II**

List of Category-II Sensitive sectors:

Sr.No.	Sector
(i)	Power and Energy (including exploration/ generation/transmission/ distribution/ pipeline)
(ii)	Banking and Finance including Insurance
(iii)	Civil Aviation
(iv)	Construction of ports and dams & river valley projects
(v)	Electronics and Microelectronics
(vi)	Meteorology and Ocean Observation
(vii)	Mining and extraction (including deep sea projects)
(viii)	Railways
(ix)	Pharmaceuticals & Medical Devices
(x)	Agriculture
(xi)	Health
(xii)	Urban Transportation



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**Schedule III****List of Sensitive Technologies:**

<b>Sr.No.</b>	<b>Sensitive Technologies</b>
(i)	Additive Manufacturing (e.g. 3D Printing)
(ii)	Any equipment having electronic programmable components or autonomous systems (e.g. SCADA systems)
(iii)	Any technology used for uploading and streaming of data including broadcasting, satellite communication etc.
(iv)	Chemical Technologies
(v)	Biotechnologies including Genetic Engineering and Biological Technologies
(vi)	Information and Communication Technologies



Annexure-I to Section-II

DECLARATION ON PROCEEDINGS UNDER INSOLVENCY AND  
BANKRUPTCY CODE 2016

To,  
M/s GAIL (INDIA) LIMITED

SUB:

TENDER NO:

Dear Sir,

I/ We hereby declare that I/We ,M/s \_\_\_\_\_, declare that :  
I/We am/are not undergoing insolvency resolution process or liquidation or bankruptcy  
proceeding as on date.

OR

I/We am/are undergoing insolvency resolution process or liquidation or bankruptcy  
proceeding as on date as per details mentioned below.

- (a) \_\_\_\_\_  
(b) \_\_\_\_\_  
(c) \_\_\_\_\_

*(Attach details in separate sheet)*

Further, I/We also confirms that in case there is any change in status of this declaration  
at any stage of tendering/ execution (in case of award), the same will be promptly  
informed to GAIL.

Note: Strike out either (i) or (ii) as applicable.

It is understood that if this declaration is found to be false, GAIL (India) Limited shall  
have the right to reject my/our bid, and forfeit the EMD/ CPS. If the bid has resulted in a  
contract, the contract will be liable for termination without prejudice to any other right  
or remedy (including banning or holiday listing) available to GAIL (India) Limited.

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



## Appendix-A1 to Section II

**FORMAT OF AGREEMENT TO BE EXECUTED BETWEEN BIDDER AND THEIR FOREIGN BASED SUPPORTING COMPANY ON INDIAN NON-JUDICIAL STAMP PAPER OF REQUISITE VALUE DULY NOTARIZED.**

This agreement made this \_\_\_ day of \_\_\_ month \_\_\_ year by and between M/s. \_\_\_\_\_ (Fill in Bidder's full name, constitution and registered office address) \_\_\_\_\_ hereinafter referred to as bidder on the first part and M/s. \_\_\_\_\_ (Fill in full name, constitution and registered office address company which hold more than fifty percent of the paid up share capital of the bidding company or vice versa) hereinafter referred to as "Supporting Company" of the second part.

Whereas

M/s. GAIL (India) Limited (hereinafter referred to as GAIL) has invited offers vide their tender No. \_\_\_\_\_ for \_\_\_\_\_ and M/s. \_\_\_\_\_ (Bidder) intends to bid against the said tender and desires to have technical support of M/s. \_\_\_\_\_ [Supporting Company]

And whereas Supporting Company represents that they have gone through and understood the requirements of the subject tender and are capable and committed to provide the services as required by the bidder for successful execution of the contract, if awarded to the bidder.

Now, it is hereby agreed to by and between the parties as follows:

- a) M/s. \_\_\_\_\_ (Bidder) will submit an offer to GAIL for the full scope of work as envisaged in the tender document as a main bidder and liaise GAIL directly for any clarifications etc. in this context.
- b) M/s. \_\_\_\_\_ [Supporting Company] undertakes to provide technical support and expertise, expert manpower and project management including financial support, if so required, to the bidder to discharge its obligations as per the Scope of Work of the tender / Contract for which offer has been made by the bidder and accepted the GAIL.
- c) The Bidder/ Supporting Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder.
- d) This agreement will remain valid till validity of bidder's offer to GAIL including extension if any and till satisfactory performance of the contract, the same is awarded by GAIL to the bidder.
- e) Supporting Company undertakes that this agreement shall remain enforceable even if their stake in Bidder is diminished during the execution of works under the contract between the Bidder and GAIL.
- f) The bidder shall have the overall responsibility of satisfactory execution of the contract awarded by GAIL, however without prejudice to any rights that GAIL might have against the Supporting Company
- g) It is further agreed that, if contract pursuant to Supporting Company shall be jointly





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and severely responsible to GAIL for the performance of works during contract period and for the satisfactory execution of the contract, and for all the consequences for non-performance thereof.

In witness whereof the parties hereto have executed this agreement on the date mentioned above.

For and on behalf of  
(Bidder)  
M/s.

For and on behalf of  
(Supporting Company)  
M/s.

Witness:

- 1)
- 2)

Witness:

- 1)
- 2)



Appendix-A2 to Section II

**GUARANTEE BY THE FOREIGN BASED SUPPORTING COMPANY/ GUARANTOR**  
(to be executed on plain paper)

THIS DEED OF GUARANTEE executed at ..... this ..... day of ..... by M/s ..... (mention complete name) a company duly established and existing under the laws of ..... (insert country), having its Registered Office at ..... hereinafter called “the Guarantor and/ or the Supporting Company” which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assignees.

FOR

M/s ..... (bidder) a company duly established and existing under the laws of ..... (insert country), having its Registered Office at ..... hereinafter called the “Bidder” which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assignees.

TOWARDS

M/s GAIL(India) Limited, a company duly registered under the law of India having its Registered Office at 16, Bhikaiji Cama Place, R. K. Puram, New Delhi-110066, India, and having Purchase center at ..... hereinafter called “GAIL” which expression shall unless excluded by or repugnant to the context thereof, be deemed to include its successor and assignees

WHEREAS GAIL has invited tender number ..... for ..... on ....., and the bidder has submitted it bid number..... in response to the above mentioned tender invited by GAIL.

AND WHEREAS the bidder/ Guarantor Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder .

AND WHEREAS one of the condition for acceptance of Bidder’s bid against said tender is that in case the bidder is seeking to qualify upon the technical credentials of its Guarantor Company, then the bidder shall arrange a guarantee from its Guarantor Company guaranteeing due and satisfactory performance of the work covered under the said tender including any change therein as may be deemed appropriate by the GAIL at any stage.

The Guarantor represents that they have gone through and understood the requirement of the above said tender and are capable of and committed to provide technical and such other supports as may be required by the Bidder for successful execution of the same.

The Bidder and the Guarantor have entered into an agreement dated ..... as per which the Guarantor shall be providing technical, financial and such other supports as may be necessary for performance of the work under the tender, if the contract is awarded to the Bidder.

Accordingly, at the request of the Bidder and in consideration of and as a requirement for the GAIL to enter into agreement(s) with the Bidder, the Guarantor hereby guarantees and undertakes that upon award of Contract to Bidder against bid number ....., made by the Bidder under tender number.....:

1. The Guarantor unconditionally agrees that in case of non-performance by the Bidder of any of its obligations in any respect, the Guarantor shall, immediately on



receipt of notice of demand by the GAIL , take up the job without any demur or objection, in continuation and without loss of time and without any cost to the GAIL and duly perform the obligations of the Bidder to the satisfaction of the GAIL.

2. The Guarantor agrees that the Guarantee contained herein shall remain valid till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Bidder.
3. The Guarantor shall be jointly and severally responsible to GAIL for satisfactory performance of works during contract period and for the satisfactory execution of the contract, and for all consequences for non-performance thereof.
4. The liability of the Guarantor, under the Guarantee, is limited of the Bidder for non- performance under the contract entered between GAIL and the Bidder. This will, however, be in addition to the forfeiture of the Performance and Advance Guarantees furnished by the Bidder.
5. The Guarantor agrees to execute a Corporate Guarantee in favour of GAIL, guaranteeing the performance of obligations by the Bidder, in case the Contract is awarded to the Bidder by GAIL.
6. The Guarantor represents that this Guarantee has been issued after due observance of the appropriate laws in force in India. The Guarantor hereby undertakes that the Guarantor shall obtain and maintain in full force and effect all the governmental and other approvals and consents that are necessary and do all other acts and things necessary or desirable in connection therewith or for the due performance of the Guarantor's obligations towards GAIL.
7. Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration. It is further agreed that Claims by and against the Guarantor, the Bidder and GAIL under the different contract to be entered pursuant to their relationship can be brought under a single reference and there shall be no bar on the consolidation of such proceedings before the same arbitral tribunal. The governing law shall be the laws of India and seat of arbitration shall be New Delhi, India. The language of arbitration shall be English.
8. The Guarantor hereby declares and represents that this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.
9. In case of award of contract to the bidder, the Guarantor shall provide Performance Bank Security to GAIL, equivalent to 50% of the value of Performance Bank Security to be submitted by the bidding company, in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of GAIL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, GAIL shall have unfettered right to invoke the said Bank guarantee. The guarantor hereby agrees that decision of GAIL about performance of the bidder / Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Guarantee submitted by the Guarantor

OR

(applicable, subject to meeting the conditions stipulated in BEC in respect of additional Performance Bank Security)

In case of award of contract to the bidder, the bidder on behalf of the Guarantor shall provide additional Performance Bank Security to GAIL, equivalent to 50% of the value of Performance bank Security to be submitted by the bidding company,



in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of GAIL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, GAIL shall have unfettered right to invoke the said Bank guarantee. The Guarantor hereby agrees that decision of GAIL about performance of the bidder / Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Security submitted by the Bidder on behalf The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

(Strike through the clause whichever is not applicable)

10. The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

For & on behalf of (Supporting Company)

M/s \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

official seal \_\_\_\_\_

Witness:

1. Signature \_\_\_\_\_

Full Name \_\_\_\_\_

Address \_\_\_\_\_

2. Signature \_\_\_\_\_

Full Name \_\_\_\_\_

Address \_\_\_\_\_

#### INSTRUCTIONS FOR FURNISHING GUARANTEE

1. The official(s) executing the guarantee should affix full signature(s) on each page.
2. Resolution passed by Board of Directors of the guarantor company authorizing the signatory(ies) to execute the guarantee, duly certified by Company Secretary should be furnished along with Guarantee.



Appendix-A2A to Section II

**CERTIFICATE ISSUED BY COMPANY SECRETARY OF THE GUARANTOR COMPANY**

“Obligations contained in deed of guarantee No. \_\_\_\_\_ furnished against tender No. \_\_\_\_\_ are enforceable against the Guarantor Company and the same do not, in any way, contravene any law of the country of which the Guarantor Company is the subject.”

The above certificate should be enclosed alongwith the Guarantee.



## Appendix-A3 to Section II

**PROFORMA OF "BANK GUARANTEE" TOWARDS PERFORMANCE SECURITY / SECURITY DEPOSIT BY FOREIGN BASED SUPPORTING COMPANY OF THE BIDDING COMPANY**  
**CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT**  
**(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

To,

To, M/s GAIL (India) Limited  _____	<b>Bank Guarantee No.</b>	
	<b>Date of BG</b>	
	<b>BG Valid up to (Expiry date)</b>	
	<b>Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)</b>	
	<b>Stamp Sl. No./e-Stamp Certificate No.</b>	

**Dear Sir(s),**

M/s. \_\_\_\_\_ having registered office at \_\_\_\_\_ (herein after called the "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 \_\_\_\_\_ (herein after called CONTRACT) for GAIL (India) Limited having registered office at 16, Bhikaiji Cama Place, R.K. Puram, New Delhi (herein after called the "GAIL" which expression shall wherever the context so require include its successors and assignees).

Further, M/s \_\_\_\_\_ (Name of the Supporting company) having its registered/head office at \_\_\_\_\_ based on whose experience/technical strength, the SUPPLIER has qualified for award of contract (hereinafter referred to as the 'SUPPORTING COMPANY') which expression shall, unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assignees) has agreed to provide complete technical and other support to the SUPPLIER for successful completion of the contract as mentioned above, entered between GAIL and the SUPPLIER and GAIL having agreed that the 'SUPPORTING COMPANY' shall furnish to GAIL a performance guarantee for Indian Rupees/US\$ ..... towards providing complete financial and other support to the SUPPLIER for successful completion of the contract as mentioned above,

The said M/s. \_\_\_\_\_ (Supporting Company) 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.

2. We (name of the bank) \_\_\_\_\_ registered under the laws of \_\_\_\_\_ having head/registered office at \_\_\_\_\_ (hereinafter referred to as "the Bank", which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and permitted assignees) do hereby guarantee and undertake to pay immediately on first demand in writing any/all moneys to the extent of Indian Rs./US\$ (in figures) \_\_\_\_\_ (Indian Rupees/US Dollars (in words) \_\_\_\_\_) without any demur, reservation,



- contest or protest and/or without any reference to the 'SUPPORTING COMPANY'. Any such demand made by GAIL on the Bank by serving a written notice shall be conclusive and binding, without any proof, on the bank as regards the amount due and payable, notwithstanding any dispute(s) pending before any Court, Tribunal, Arbitrator or any other authority and/or any other matter or thing whatsoever, as liability under these presents being absolute and unequivocal. We agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable until it is discharged by GAIL in writing. This guarantee shall not be determined, discharged or affected by the liquidation, winding up, dissolution or insolvency of the 'SUPPORTING COMPANY' and shall remain valid, binding and operative against the bank.
3. The Bank also agrees that GAIL at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the 'SUPPORTING COMPANY' and notwithstanding any security or other guarantee that GAIL may have in relation to the 'SUPPORTING COMPANY's liabilities.
  4. The Bank further agrees that GAIL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said CONTRACT or to extend time of performance by the said SUPPLIER from time to time or to postpone for any time or from time to time exercise of any of the powers vested in GAIL against the said SUPPLIER/ and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said SUPPLIER or for any forbearance, act or omission on the part of GAIL or any indulgence by GAIL to the said SUPPLIER(s) or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
  5. The Bank further agrees that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the CONTRACT and all dues of GAIL under or by virtue of this CONTRACT have been fully paid and its claim satisfied or discharged or till GAIL discharges this guarantee in writing, whichever is earlier.
  6. This Guarantee shall not be discharged by any change in our constitution, in the constitution of GAIL or that of the 'SUPPORTING COMPANY'.
  7. The Bank confirms that this guarantee has been issued with observance of appropriate laws of the country of issue.
  8. The Bank also agrees that this guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian Courts of the place from where the purchase CONTRACT has been placed.
  9. Notwithstanding anything contained hereinabove, our liability under this Guarantee is limited to Indian Rs./US\$ (in figures) \_\_\_\_\_ (Indian Rupees/US Dollars (in words) \_\_\_\_\_ only) and our guarantee shall remain in force until (indicate the date of expiry of bank guarantee) \_\_\_\_\_.
  10. 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.
  11. Notwithstanding anything contained herein:
    - a) The Bank's liability under this Guarantee shall not exceed (currency in figures) . . . . . (currency in words only ) . . . . .
    - b) This Guarantee shall remain in force upto \_\_\_\_\_ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
    - c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of .....(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the



last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of GAIL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name .....

Designation .....

Yours faithfully,

Bank by its Constituted Attorney

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

E-mail :

Telephone/Mobile No. :

**INSTRUCTIONS FOR FURNISHING**

**"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 Delhi.
2. 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 Purchaser as per format appended below.
3. The Bank Guarantee shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural 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.





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 MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH BANK  
 GUARANTEE

1	<b>BANK GUARANTEE NO</b>	:				
2	<b>VENDOR NAME / VENDOR CODE</b>	:	<b>NAME</b>			
			<b>VENDOR CODE</b>			
3	<b>BANK GUARANTEE AMOUNT</b>	:				
4	<b>LOA / PO NO.</b>	:				
5	<b>NATURE OF BANK GUARANTEE</b>	:				
	<b>(Please Tick (√) Whichever is Applicable</b>		<b>PERFORMANCE BANK GUARANTEE</b>	<b>SECURITY DEPOSIT</b>	<b>EMD</b>	<b>ADVANCE</b>
6	<b>BG ISSUED BANK DETAILS</b>					
		(A)	<b>EMAIL ID</b>	:		
		(B)	<b>ADDRESS</b>	:		
		(C)	<b>PHONE NO</b>	:		



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# **SECTION-III**

# **INSTRUCTION TO** **BIDDERS**

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



**SECTION-III**

**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 Invitation For Bid (the “**Tender Document /Bid Document**”) issued by Employer. Employer/Owner/GAIL occurring herein under shall be considered synonymous.
- 1.2 SCOPE OF BID: The scope of work/ Services shall be as defined in the Tender 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 Tender 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 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 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 GAIL by the bidder.  
 It shall be the sole responsibility of the bidder to inform about their status regarding para 1 of clause 2.2 herein above 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 GAIL by the bidder.  
 It shall be the sole responsibility of the bidder to inform GAIL there status on above 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:  
Power of Attorney (POA) to be issued by the bidder in favour of the authorised employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the bidder (including Consortium). Any consequence resulting due to such signing shall be binding on the Bidder (including Consortium).
- (I) In case of a Single Bidder, the Power of Attorney shall be issued as per the constitution of the bidder as below:
- a) **In case of Proprietorship:** by Proprietor
  - b) **In case of Partnership:** by all Partners or Managing Partner
  - c) **In case of Limited Liability Partnership:** by any bidder's employee authorized in terms of Deed of LLP
  - d) **In case of Public / Limited Company:** PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the designated officer authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.
- (II) In case of a Consortium, Power of Attorney shall be issued both by Leader as well as Consortium Member(s) of the Consortium as per procedure defined herein above in favour of employee of Leader of Consortium.
- The Power of Attorney should be valid till award of contract / order to successful bidder.
- 2.8 In case of change of constitution of bidder after submission of bid, the same shall be informed by the bidder to GAIL promptly. Failure to same shall be considered as misrepresentation by the bidder.

### **3 BIDS FROM "CONSORTIUM" (FOR APPLICABILITY OF THIS CLAUSE REFER BIDDING DATA SHEET (BDS))**

- 3.1 Bids from consortium 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 shall submit the Agreement as per the format F-11 clearly defining the scope and responsibility of each member. Members of consortium shall assume responsibility jointly & severally. The EMD shall be submitted by the Bidder (Consortium).
- 3.2 The Consortium 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 once established at the time of submitting the Bid shall not be allowed to be altered with respect to constituting members of the 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 proposes any alteration/ changes in the orientation of consortium or replacements or inclusions or exclusions of any partner(s)/ member(s) which had originally submitted the bid, bid from such a consortium shall be liable for rejection.

- 3.5 Any member of the consortium/ shall not be eligible either in an individual capacity or be a part of any other consortium to participate in this tender. Further, no member of the consortium/ JV shall be on 'Holiday' by GAIL 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 shall not be considered for opening/ evaluation/Award.

#### **4 ONE BID PER BIDDER**

- 4.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process either as single entity or as a member of any consortium (wherever consortium bid is allowed). 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 A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices. The bidder found to have a conflict of interest shall be disqualified. A bidder shall be considered to have a conflict of interest with one or more bidders in this bidding process, if:
- a) they have controlling partner (s) in common; or
  - b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
  - c) they have the same legal representative/authorized signatory/agent for purposes of this bid; or
  - d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
  - e) Bidder participates in more than one bid in bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
  - f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
  - g) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.

Bidders are required to submit a confirmation for no conflict of interest with other bidders in Format F-5.

Failure to comply this clause during tendering process will disqualify all such bidders from process of evaluation of bids.

- 4.3 Alternative Bids shall not be considered.
- 4.4 Bidders are required to provide complete details of all Directors/Partners/Proprietors etc. including Father's name, Residential address, AADHAR, PAN Card details & DIN Nos. in Form F-1 of ITB and corresponding documents duly notarized by Notary Public.



It is the responsibility of the participating Bidder(s) to assess the relationship as mentioned above.

In case any undertaking/declaration given by a Bidder(s) in this regard is found to be false, this would be a sufficient ground for rejection of Bid(s) /termination of contract and also initiation of further action as per “Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices” of tender document.

- 4.4 The provisions mentioned at sl. no. 4.1 and 4.2 shall not be applicable wherein bidders are quoting for different Items / Sections / Parts / Groups/ SOR items of the same tender which specifies evaluation on Items / Sections / Parts / Groups/ SOR items basis.

## **5 COST OF BIDDING**

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, GAIL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

## **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 GAIL 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 and Clarification(s)' issued in accordance with "ITB: Clause-8 & 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 : General Conditions of Contract [GCC]\*\*\*
  - Section-V : Special Conditions of Contract [SCC] for Design, Engineering, Supply, Erection, Testing & Commissioning
  - Section-VI : Special Conditions of Contract for Operation & Maintenance(O&M)
  - Section-VII : Scope of Work (SOW)
  - Section-VIII : Technical Specification





➤ Section-IX : Forms and Formats

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

\*\* The subject tender is based on standard formats and applicability of some specific clauses may be seen in Annexure-IV to Section-III i.e. BDS (Bidding Data Sheet).

\*\*\* General Conditions of Contract – Works is available on GAIL's Tender website (<http://gailtenders.in/Gailtenders/gccs.asp>). Further, Hindi version of GCC is available on the GAIL's tender website for reference. However, in case of any discrepancy in English & its Hindi translation, for interpretation and legal aspects, the English version shall prevail.

For participation in e-tender, instructions are mentioned at Annexure-III to Section-III.

- 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 TENDER DOCUMENTS**

- 8.1 A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify GAIL in writing by email at GAIL'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 scheduled. GAIL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. GAIL may respond in writing to the request for clarification. GAIL's response including an explanation of the query, but without identifying the source of the query will be uploaded on e-tender portal / communicated to prospective bidders by e-mail.
- 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', Employer 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 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 (G) of IFB /communicated to prospective bidders by e-mail. Bidders have to take into account all such corrigendum before submitting their Bid.
- 9.3 The Employer, if consider necessary, may extend the Bid Due Date in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the addenda/corrigendum 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 GAIL 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 Indian Chamber of Commerce, 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 OF MANUAL TENDERING**

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 with index.
- (b) 'Bidder's General Information', as per 'Form F-1'.
- (c) Copies of documents, as specified in tender document
- (d) Copy of Schedule of Rate (SOR) with prices blanked out mentioning quoted / not quoted (as applicable) written against each item as a confirmation that the prices are quoted in requisite format .
- (e) 'Letter of Authority' on the Letter Head, as per 'Form F-3'
- (f) 'Agreed Terms and Conditions', as per 'Form F-5'
- (g) 'Acknowledgement Cum Consent Letter', as per 'Form F-6'
- (h) Duly attested documents in accordance with the "Bid Evaluation Criteria [BEC]" establishing the qualification.
- (i) Copy of Power of Attorney /copy of Board Resolution, in favour of the authorized signatory of the Bid, as per clause no.2.7 of ITB
- (j) EMD in original (in case of manual tendering) / copy of EMD (in case of e-Tender), as per Clause 16 of ITB. Declaration for Bid Security as per provision of ITB.
- (k) ~~Undertaking as per Form-1 to Annexure-V to Section-III by MSE bidders and Class I Bidders seeking preference under Policy for purchase preference linked with Local Content (PP-LC), if applicable.~~
- (l) Undertaking as per *Form-2 to Annexure-V to Section-III* and Certification from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of other than companies) as per *Form-3 to Annexure-V to Section-III (Applicable for all bidders irrespective of seeking purchase preference or not)*.
- (m) Undertaking as per *Form-I to Section-II* regarding Provisions for Procurement from a Bidder which shares a land border with India
- (n) All forms and Formats including Annexures
- (o) 'Integrity Pact' as per 'Form F-14'
- (p) 'Indemnity Bond' as per 'Form F-15'
- (q) Tender Document, its Corrigendum/Amendment/Clarification(s) duly signed on each page (in case of manual tendering)/ digitally signed (in case of e-Tender) by the Authorized Signatory holding POA.
- (r) Additional document specified in BDS, SCC, Scope of Supply or mentioned elsewhere in the Tender Document, its Corrigendum/Amendment/Clarification(s).
- (s) Any other information/details required as per Bidding Document



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

### 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. GAIL 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 unpriced 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.

~~11.1.3 In case of bids invited under Single Bid System (clause no. 2.0(C) of IFB refers), all the documents as specified at Clause 11.1.1 & 11.1.2 of ITB can be submitted in single envelope /folder, as per instructions of Tender Document.~~

### 11.2 IN CASE OF E-TENDERING:

Bidders are requested to refer instructions for participating in e-Tendering (Annexure-I to Section III), Bidders manual kit and FAQs available in e-tender portal and bids submitted manually shall be rejected. All pages of the Bid must be digitally signed by the "authorized signatory" of the Bidder holding Power of Attorney. The Bid must be submitted on e-tender portal (<https://etenders.gov.in/eprocure/app>) 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 Security/Declaration for Bid Security, copy of Power of Attorney and copy of integrity pact should be uploaded in the technical bid in the e-tender portal.

Further, Bidders must submit the original " EMD, 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, superscribing 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 upload in Financial bid in the e-tender portal.

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 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 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.

Bidder shall indicate applicable rate of GST (CGST & SGST/ UTGST or IGST) in SOR.

12.5 Prices quoted by the Bidder, shall remain firm and fixed and valid till completion of the Contract and will not be subject to variation on any account unless any price escalation/variation is allowed elsewhere in the Tender Document.

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 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 Contractor only. Contractor providing taxable



service shall issue an e-Invoice/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 Contractor with requisite details.

Payments to Contractor for claiming **GST (CGST & SGST/UTGST or IGST)** amount will be made provided the above formalities are fulfilled. Further, GAIL 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 CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of GAIL that the Contractor has not remitted the amount towards **GST (CGST & SGST/UTGST or IGST)** collected from GAIL to the government exchequer, then, that Contractor shall be put under Holiday list of GAIL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on GAIL.

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 Contractor 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 GAIL 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 Contractor'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 GAIL is entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then statutory variation in quoted **GST (CGST & SGST/UTGST or IGST)** on supply and on incidental services, shall be to GAIL'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 GAIL is entitled to avail the input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-

13.5.1 Owner/GAIL will reimburse the **GST (CGST & SGST/UTGST or IGST)** to the Contractor at actuals against submission of E-Invoices/Invoices as per format specified in rules/ regulation of GST to enable Owner/GAIL 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 quoted **GST (CGST & SGST/UTGST or IGST)** shall be considered for evaluation of bids, as per evaluation criteria of tender document.

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

13.6.1 Owner/GAIL will reimburse **GST (CGST & SGST/UTGST or IGST)** to the Contractor at actuals against submission of E-Invoices/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 quoted **GST (CGST & SGST/UTGST or IGST)**.
- 13.7 GAIL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet. However, in case any unregistered bidder is submitting their bid, Bids will be evaluated as per quoted prices without loading of **GST (CGST & SGST/UTGST or IGST)**, if not quoted. their prices will be loaded with applicable GST (CGST & SGST/UTGST or IGST) while evaluation of bid (if applicable as per Govt. Act/ Law in vogue). Where GAIL 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. Further, an unregistered bidder is required to mention its Income Tax PAN in bid document. Further, an unregistered bidder is required to mention its Income Tax PAN in bid document..
- 13.8 In case GAIL 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 GAIL has the obligation to discharge **GST (CGST & SGST/UTGST or IGST)** liability under reverse charge mechanism and GAIL 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 GAIL or ITC with respect to such payments is not available to GAIL for any reason which is not attributable to GAIL, then GAIL shall be entitled to deduct/ setoff/ recover such amounts against any amounts paid or payable by GAIL to Contractor / Supplier.
- 13.9 Contractor shall ensure timely submission of correct invoice(s) /e-invoice(s), as per GST rules/ regulation, with all required supporting document(s) within a period specified in Contract to enable GAIL to avail input credit of GST (CGST & SGST/UTGST or IGST). Further, returns and details required to be filled under GST laws & rules should be timely filed by Contractor with requisite details.  
If input tax credit is not available to GAIL for any reason not attributable to GAIL, then GAIL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, against any amounts paid or becomes payable by GAIL in future to the Contractor under this contract or under any other contract.
- 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 Contractor may note the above and quote their prices accordingly.
- 13.11 In case the GST rating of contractor on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by GAIL. Further, in case rating of bidder is negative / black listed after award of work, then GAIL shall not be obligated or liable to pay or reimburse GST to such c and shall also be entitled to deduct / recover such GST along with all penalties / interest, if any, incurred by GAIL.
- 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.
- 13.13 GST, as quoted by the bidder in Schedule of Rates, shall be deemed as final and binding



for the purpose of bid evaluation (applicable for tenders where bidder quotes the GST rates). In case a bidder enters “zero/blank” GST or an erroneous GST, the bid evaluation for finalizing the L1 bidder will be done considering the “Zero” or quoted GST rate, as the case may be. No request for change in GST will be entertained after submission of bids. In cases where the successful bidder quotes a wrong GST rate, for releasing the order, the following methodology will be followed:

- In case the actual GST rate applicable is lower than the quoted GST rate, the actual GST rate will be added to the quoted basic prices. The final cash outflow will be based on actual GST rate.
- In case the actual GST rate applicable is more than the quoted GST rate, the basic prices quoted will be reduced proportionately, keeping the final cash outflow the same as the overall quoted amount.

Based on the Total Cash Outflow calculated as above, GAIL shall place orders.

13.14 Wherever TDS under GST Laws has been deducted from the invoices raised / payments made to the Contractors, as per the provisions of the GST law / Rules, Contractors should accept the corresponding GST-TDS amount populated in the relevant screen on GST common portal ([www.gst.gov.in](http://www.gst.gov.in)). Further, Vendors should also download the GST TDS certificate from GST common portal (reference path: Services > User Services > View/Download Certificates option).

13.15 **Provision w.r.t. E- Invoicing requirement as per GST laws:**

Supplier who is required to comply with the requirements of E-invoice for B2B transactions as per the requirement of GST Law will ensure the compliance of requirement of E Invoicing under GST law. If the invoice issued without following this process, such invoice can-not be processed for payment by GAIL as no ITC is allowed on such invoices. Therefore, all the payments to such supplier who is liable to comply with e-invoice as per GST Laws shall be made against the proper e-invoice(s) only. Further, returns and details required to be filled under GST laws & rules against such e-invoices should be timely filed by Supplier of Goods with requisite details.

If input tax credit is not available to GAIL for any reason attributable to supplier (both for E-invoicing cases and non-E-invoicing cases), then GAIL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the supplier under this contract or under any other contract.

To ensure compliance, undertaking in requisite format is to be submitted by supplier as per format F-17 along with documents for release of payment.

13.16 **New Taxes & duties:** Any new taxes & duties, if imposed by the State/ Central Govt. of India after the due date of bid submission but before the Contractual Completion Date, shall be reimbursed to the Service Provider on submission of copy of notification(s) issued from State/ Central Govt. Authorities along with documentary evidence for proof of payment of such taxes & duties, but only after ascertaining it's applicability with respect to the Contract.

13.17 Full payment including GST will be released at the time of processing of invoice for payment, where the GST amount reflects in Form GSTR-2A of GAIL. However, in case where the GST amount doesn't reflect in Form GSTR-2A of GAIL, the amount of GST will be released after reflection of GST amount of corresponding invoice in Form GSTR-2A of GAIL.

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 GAIL 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 email. A Bidder may refuse the request without forfeiture of his EMD / Bid Security.

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’ / ‘Insurance Surety Bond’ / ‘Fixed Deposit Receipt’** [in favour of **GAIL (India) Limited** payable at place mentioned in **BDS**] or **‘Bank Guarantee (including e-Bank Guarantee)’** strictly as per the format given in form F 2 of the **Tender Document**. Bidder shall ensure that EMD submitted in the form of **‘Bank Guarantee’** 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 bidder can also submit the EMD through online banking transaction i.e. IMPS/NEFT/RTGS etc. For this purpose, the details of GAIL’s Bank Account are mentioned under BDS. While remitting, the bidder must indicate EMD and tender/E-tender no. under remarks. Bidders shall be required to submit/ upload the successful transaction details along-with their bid/e-bid in addition to forwarding the details to dealing officer through email/letter with tender reference number immediately after remittance of EMD. In absence of submitting/ uploading the remittance details, the bid is likely to be considered as bid not accompanied with EMD. Further, in case of the online transaction, submission of EMD in original is not applicable.
- 16.3 GAIL 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 (excluding Co-operative banks and Regional Rural 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. Purchaser will verify the BG from issuing bank.





- 16.4 Any Bid not secured in accordance with "ITB: Clause-16.1 & Clause-16.3" may be rejected by GAIL 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:
- If a Bidder withdraws his Bid during the 'Period of Bid Validity'
  - If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
  - If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).
  - Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.
  - In the case of a successful Bidder, if the Bidder fails to:
    - to acknowledge receipt of the "Notification of Award" / Fax of Acceptance[FOA]",
    - to furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause-38"
    - 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', 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. However, Traders/Dealers/ Distributors /Stockiest /Wholesaler are not entitled for exemption of EMD. The Government Departments/PSUs are also exempted from the payment of EMD. Further, Startups are also exempted from the payment of EMD.
- 16.10 In case of forfeiture of EMD/ Bid Security, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by GAIL. The forfeiture amount will be subject to final decision of GAIL based on other terms and conditions of order/ contract."
- 16.11 EMD/Bid Bond will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of EMD/ Bid Bond submitted by the bidder and bid of such bidder will be summarily rejected.

#### 16A **DECLARATION FOR BID SECURITY**

MSEs, Start-Ups and CPSEs (to whom exemption is allowed as per extant guidelines in vogue) are required to submit Declaration for Bid Security as per proforma at Form F-2A.

#### 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 e-tender portal against the Tender as specified in "ITB: Clause-8. 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 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 unamendable 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 (Annexure-III to Section III).

## **19 ZERO DEVIATION AND REJECTION CRITERIA**

19.1 ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. GAIL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note GAIL 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. GAIL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence.

Bidder is requested not to take any deviation(s)/exception(s) to the terms & conditions of Tender Document, and submit all requisite documents as mentioned in this Tender Document, failing which their Bid 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.

As a principle, clarifications from bidders after opening of tenders will not be sought. However, where clarifications / documents from the bidders on important aspects are absolutely necessary for finalization of tender, clarifications from bidder can be asked. The request for clarification shall be given in email/portal, asking the bidder to respond by a specified date, and also mentioning therein that, if the bidder does not comply or respond by the date, his tender will be liable to be rejected. Depending on the outcome, such tenders are to be ignored or considered further. No change in prices or substance of the bid including specifications, shall be offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained. The shortfall information/ documents should be sought only in case of historical documents which pre-existed bids and which have not undergone change since then.

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/ Bid Security declaration, as applicable
- (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**

GAIL (India) Limited has initiated payments to Contractors electronically, and to facilitate the payments electronically through 'e-banking'.

### **[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. Physical documents shall be addressed to the owner at address specified in IFB.
- 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 / 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, as specified in Clause no. 2.0 (I) of IFB and place mentioned in BDS.
- 22.3 GAIL may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids (8.0 and/or 9 of ITB refers). In which case all rights and obligations of GAIL 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 e-tender portal / 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 GePNIC 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 GAIL 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 unopened bid. In case of e-tendering, where the EMD/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 EMD /physical documents 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.
- 2.3.4 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 in received by GAIL 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, 21 & 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 superscribing the envelope as “WITHDRAWAL” and “Tender Document number :...”/ communication regarding withdrawal of bid with “Tender Document number :...”/ must reach concerned dealing official of GAIL 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 invocation of action as per Bid Security declaration and rejection of Bid.
- 24.4 The latest Bid submitted by the Bidder before Bid Due Date & Time shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.

## **[E] – BID OPENING AND EVALUATION**

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



- 25.1 GAIL 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(s) or any obligations to inform the affected Bidder(s) of the ground for GAIL's action. However, Bidder if so desire may seek the reason (in writing) for rejection of their Bid to which GAIL shall respond quickly.
- 25.2 A bidder is to be permitted to send his representation in writing to dealing officer specified in tender for rejection of bid. But, such representation has to be sent upto 10(ten) days from the date of Notification of Award/FOA. A decision on representation will be taken by GAIL within 15 (fifteen) days of the receipt of the representation. Only a directly affected bidder can represent in this regard:
- i) Only a bidder who has participated in tender can make such representation
  - ii) In case technical bid has been evaluated before the opening of the financial bid, an application for review in relation to the financial bid may be filed only by a bidder whose technical bid is found to be acceptable
- 25.3 However, following decisions of GAIL shall not be subject to review:
- a) Determination of the need for procurement;
  - b) Selection of the mode of procurement or bidding system;
  - c) Choice of selection procedure;
  - d) Provisions limiting participation of bidders in the procurement process;
  - e) The decision to enter into negotiations with the L1 bidder;
  - f) Cancellation of the procurement process except where it is intended to subsequently re-tender the same requirements;
  - g) Issues related to ambiguity in contract terms may not be taken up after a contract has been signed, all such issues should be highlighted before consummation of the contract by the vendor/ contractor; and
  - h) Complaints against specifications except under the premise that they are either vague or too specific so as to limit competition may be permissible.

## 26 **BID OPENING**

### 26.1 ***Unpriced Bid Opening :***

GAIL 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 GAIL will open the price bids of those Bidders who meet the qualification requirement and whose bid is determined to be technically and commercially responsive. Techno-commercial bid evaluation status will be are to be informed to all bidders (including informing the techno-commercially not qualified Bidders). Price bids are to be opened in the presence of only techno-commercially acceptable bidders, who are willing to attend the bid opening, at a pre-publicised date, time and place or on the portal in case of e-procurement. The bidder's name, bid price, discount (if any) and any such details considered appropriate shall be read out during the price bid opening. Offers should not, repeat not, be circulated amongst the bidder's representative. Bidders selected for opening of their price bid shall be informed about the date & time of price bid opening. Bidders may depute their authorized representative to witness the price bid opening. The Bidders' representatives, who are present shall sign a Price Bid Opening Register evidencing their attendance and may be required to be present even 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.



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 bidders or any other person not officially concerned with such a process until the award to the successful bidder.

## 28 **CONTACTING THE EMPLOYER**

28.1 From the time of bid opening to the time of contract award, no bidder shall contact GAIL on any matter related to the bid, except on request and prior written permission.

28.2 Any effort by the bidder to influence GAIL in bid evaluation, bid comparison or contract award decisions will vitiate the process and will result in the rejection of the bidder's bid and action shall be initiated as per the GAIL's procedure for action in case Corrupt / Fraudulent / Collusive / Coercive practices in this regard apart from forfeiture of EMD/ Bid Security, if any.

## 29 **EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS**

29.1 The employer's'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 / Bid Security Declaration';
- (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 for evaluation of bid.

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 Tenders that do not meet the basic requirements specified in the bid documents are to be treated as unresponsive {both during Techno-commercial evaluation and Financial Evaluation in case of Two Bid System ) and will be ignored. All tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the Bid document and to identify unresponsive tenders, if any. Unresponsive offers may not subsequently be made responsive by correction or withdrawal of the non- conforming stipulation. Some important points on the basis of which a tender may be declared as unresponsive and be ignored during the initial scrutiny are :

- i) The tender is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document;
- ii) The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption;
- iii) The bidder is not eligible to participate in the bid as per laid down eligibility criteria
- iv) The bid departs from the essential requirements specified in the bidding document (for example, the tenderer has not agreed to give the required contract performance security); or
- v) Against a schedule in the list of requirements in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule (example: in a schedule, it has been stipulated that the tenderer will supply the equipment, install and commission it and also train the GAIL's personnel for operating the equipment. The tenderer has, however, quoted only for supply of the equipment).

### **30 CORRECTION OF ERRORS**

30.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors in Price Schedule/Schedule of Rates (SOR) 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 (i.e. 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 bidder shall be taken as correct and not the amount. The amount shall be re-calculated/ corrected accordingly.
- (iii) In case a Price Schedule/ Schedule of Rate is having provisions of sub-total and grand total and there is a difference between "sum of sub totals" and "grand total", "sum of sub totals" shall be taken as correct
- (iv) 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.
- (v) 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.



30.2 The discrepancy in bid shall be conveyed to the bidder asking to respond by a target date and if the bidder does not agree with observation, its Bid is liable to be rejected, and the EMD shall be forfeited / actions shall be invoked as per Declaration for Bid Security.

30.3 The above provision of Correction of Error shall not be applicable for E-tendering.

**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 on lowest bid.

In case of a tie at the lowest bid (L1) position between two or more bidders, the order/LoA will be placed on the bidder who has higher/ highest turnover in last audited financial year. In case there is a tie at the lowest bid (L1) position between only startup bidders and none of them has past turnover, the order/LoA will be placed on the startup who is registered earlier with Department for Promotion of Industry and Internal Trade.

**33 COMPENSATION FOR EXTENDED STAY: NOT APPLICABLE**

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 1/5<sup>th</sup> 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 1/5<sup>th</sup> 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 as per Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017 / Domestically Manufactured Telecom Products (DMTP) shall be allowed as per Government instructions in vogue, as applicable from time to time.

The Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017 is enclosed as Annexure V to ITB herewith.

Bidders are required to select the applicable purchase preference (i.e. preference category) option while submitting the bid on GePNIC portal. However, evaluation and applicability of purchase preference policy will be based on the confirmations & documents submitted by the bidder in the their bid irrespective of selection made on GePNIC portal.

**[F] – AWARD OF CONTRACT**

**35 AWARD**





Subject to "ITB: Clause-29", GAIL 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.

***“GAIL intent to place the contract directly on the address from where Goods are produced/dispached or Services are rendered. In case, bidder wants contract at some other address or supply of Goods/ Services from multiple locations, bidder is required to provide in their bid address on which order is to be placed”.***

GAIL will place the Contract directly on the successful bidder from whom the bid has been received & evaluated and will not place order on other entities such as subsidiary, business associate or partner, dealer/distributor etc. of the Bidder.

### **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 GAIL either by 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 GAIL and successful Bidder (i.e. Contractor). 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. GAIL 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 Agreement as per "ITB: Clause-37".
- 36.3 Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", GAIL will promptly discharge his 'Earnest Money Deposit / Bid Security', pursuant to "ITB: Clause-16"
- 36.4 The Order/ contract value mentioned above is subject to Price Reduction Schedule clause.
- 36.5 GAIL 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 GAIL.

### **37 SIGNING OF AGREEMENT**

- 37.1 The successful Bidder/Contractor shall be required to execute an 'Agreement' (in case the individual contract value as specified in Notification of Award is more than INR 10 Lakhs exclusive of GST) 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 of India' 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 / Action as per Bid Security declaration.
- 37.3 Bidders can request Bilingual (Hindi & English) Contract Agreement. The format for signing Contract Agreement in English is attached with this Bidding Document.



### 38 CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT [CPS/SD]

- 38.1 Within 30 days of the receipt of the notification of award/ Fax of Acceptance from GAIL, 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 Insurance Surety Bond or Fixed Deposit Receipt or Bank Guarantee (including e- bank guarantee) or Letter of Credit and shall be in the currency of the Contract. However, CPS shall not be applicable in cases wherein the individual contract value as specified in Notification of Award is less than INR 5 Lakh (exclusive of GST).

In case, GAIL allows additional time for submission of CPBG/SD beyond 30 days, a penal interest of Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on due date of submission of CPBG/SD i.e. 30th day after issuance of FOA/Notification of award) plus 4.0% p.a (on CPBG/SD amount) shall be charged for delay beyond 30 days i.e. from 31st days after issuance of FOA.

- 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)**. Bank Guarantee towards CPS shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural 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 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.
- 38.3 Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for consideration of the annulment of the award and forfeiture of the EMD / action as per declaration for Bid Security.
- 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.
- 38.5 Further, Ministry of Finance (MOF) Department of financial service has issued direction for submission of Bank Guarantee through online vide letter ref number F.No.7/112/2011-BOA dated 17<sup>th</sup> July 2012. The successful bidder can submit CPS online through issuing bank to GAIL directly as per the above direction including its revisions, if any. In such cases confirmation will not be sought from issuing banker by GAIL.
- 38.6 In addition to existing specified form (i.e. Demand Draft (DD)/ Banker's Cheque/ Bank Guarantee/Letter of Credit) mentioned in tender documents for submission of Security Deposit/ Contract Performance Security, the successful bidder can also submit the Security Deposit/ Contract Performance Security through online banking transaction i.e. IMPS/NEFT/RTGS/SWIFT etc. For this purpose, the details of GAIL's Bank Account is mentioned in BDS. Further, in case a successful Bidder is willing to furnish CPS through SWIFT, the details may be obtained from Purchase Officer immediately after receipt of FOA.



While remitting such online transaction, the bidder must indicate “**Security Deposit/ Contract Performance Security against FOA/DLOA no. \_\_\_\_\_ (contractor to specify the FOA/DLOA No.)**” under remarks column of such transaction of respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing officer immediately through email/letter and necessarily within 30 days from the date of Fax of Acceptance.

- 38.7 In case of forfeiture of Contract Performance Security/ Security Deposit in terms of GCC, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by GAIL. The forfeiture amount will be subject to final decision of GAIL based on other terms and conditions of order/ contract.
- 38.8 The Contractor will also submit covering letter along with CPS as per format at F-4.
- 38.9 CPBG/Security Deposit will not be accepted in case the same has reference of ‘remitter’/‘financer’ other than bidder on the aforementioned financial instrument of CPBG/ Security Deposit submitted by the Contractor.
- 38.10 The first payment to vendor is to be released only after submission of CPS / Security Deposit (SD).
- 38.11 Before the CPS / Security Deposit (SD) is released a "No Claim Certificate" is to be submitted by the supplier/vendor.

### **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](http://www.gailonline.com))
- 39.3 Name and contact details of nodal officer- Refer BDS for details

### **39.4 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 Contractors / Bidders indulged in fraudulent/ coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as mentioned in GAIL’s “Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices” (Annexure-I to Section-III), the contractor/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by GAIL (India) Ltd., to such Contractors/Bidders.

The Contractor/ Bidder understands and agrees that in such cases where Contractor/ Bidder has been banned (in terms of aforesaid procedure) from the date of issuance of such order by GAIL (India) Limited, such decision of GAIL (India) Limited shall be final and binding on such Contractor/ Bidder 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 Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaimed the Public Procurement Policy for Micro and Small Enterprises (MSEs). The following benefit is available in case of work contract also:



- i) Issue of tender document to MSEs free of cost.  
ii) Exemption to MSEs from payment of EMD/Bid Security.

**40.2 In case Bidder is a Micro or Small Enterprise, the Bidder shall submit Udyam Registration Certificate for availing benefit under Public Procurement Policy for MSEs-2012.**

Vide Gazette notification dated 18.10.2022 of Ministry of MSME, the following is notified:

*“In case of an upward change in terms of investment in plant and machinery or equipment or turnover or both, and consequent re-classification, an enterprise shall continue to avail of all nontax benefits of the category (micro or small or medium) it was in before the re-classification, for a period of three years from the date of such upward change”*

**Accordingly, in case of upward change in status, MSE bidder is required to submit the previous certificate also to get the MSE benefit.**

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.

- 40.3 If against an order placed by GAIL, successful bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise as per provision mentioned at clause no.40.2 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 procurement made, etc. of such Enterprises shall be furnished by the successful bidder at the time of submission of invoice/Bill.
- 40.4 The benefit of policy are not extended to the traders/dealers/ Distributors /Stockiest/Wholesalers.
- 40.5 NSIC has initiated a scheme of “Consortia and Tender Marketing Scheme” under which they are assisting the Micro & Small enterprises to market their products and services through tender participation on behalf of the individual unit or through consortia. Accordingly, if the MSEs or the consortia, on whose behalf the bid is submitted by NSIC, is meeting the BEC and other terms and conditions of tender their bid will be considered for further evaluation.  
Further, in such cases a declaration is to be submitted by MSE/ consortia on their letter head (s) that all the terms and conditions of tender document shall be acceptable to them.
- 40.6 It may be noted that Government of India has implemented Trade Receivable Discounting System (TReDS) to address challenges faced by MSMEs in delayed payments (after receipt/acceptance of Material/Services) from Government buyers leading to shortfall of Working Capital. TReDS is an online electronic institutional mechanism for facilitating the financing of trade receivables of MSMEs through multiple financiers. GAIL is already registered on the following TReDS platform:



- M/s Receivable Exchange of India (RXIL), Mumbai
- M/s Mynd Solutions Private Limited (Mynd), New Delhi
- M/s A. TREDIS (Invoicemart), Mumbai

MSME Bidders are required to register on the TReDS platform. The MSME vendors can avail the TReDS facility, if they want to.

- 40.7 Interest payment on delayed payments to MSME is payable in line with Micro, Small and Medium Enterprises Development Act, 2006

#### 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.
- 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 **TDS**

- (i) TDS, wherever applicable, shall be deducted as per applicable act/law/rule.
- (ii) **Higher rate of TDS for non-filers of ITR**  
As per Section 206AB of Income Tax Act, 1961, in case of any vendor/customer who does not file their Income Tax Return for both of the two previous years preceding to current year and aggregate amount of TDS is more than or equal to 50,000/- in each of those previous two years (or limit defined by Govt. from time to time), then TDS will be deducted at the higher of following rates:
  - (I) Twice the rate mentioned in relevant TDS section.
  - (II) Twice the rate or rates in force
  - (III) 5%

#### 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 or as amended from time to time.



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

Payment of contractor shall be processed only after fulfilment of above requirement

#### **44 DISPUTE RESOLUTION MECHANISM**

##### **44.1 QUARTERLY CLOSURE OF THE CONTRACT AND SAMADHAN MECHANISM**

During execution of orders, various issues may arise. In order to timely detect and to address the contractual issue(s) during the execution of contracts, GAIL has introduced a mechanism of Quarterly Closure of the contract, under which all the related issues /disputes will be monitored and addressed on quarterly basis for resolution. Vendor (hereinafter referred 'Vendor') should first refer any issues/disputes to Engineer-in-Charge (EIC) for LOA/contracts/ Dealing C&P Executive for Purchase Orders and co-operate them for smooth execution of the contract and to timely address the issues, if any. For applicability of 'Quarterly Closure', please refer BDS.

In case issue is not resolved by above, Supplier may submit their issue(s) to Vendor Grievance Portal "Samadhan", which will be addressed by GAIL within 15 days. The Samadhan Portal is available at <https://gailebank.gail.co.in/grievance/welcome.aspx>.

Accordingly, the methodology for resolution of issue(s)/ grievance (s) of Vendor/Supplier shall be as under:

- (i) Any issue should be first referred to EIC for LOA/contracts/ Dealing C&P Executive for Purchase Orders.
- (ii) In case issue is not resolved, Vendor may submit their issue/ grievance through online Vendor Grievance Portal-"Samadhan".
- (iii) In case, Vendor is not satisfied, there is a provision of escalation of issue to higher authority in GAIL. This option is available two times to vendor.
- (iv) Further, issue(s) can only be submitted upto 1 month after closure of respective Contract.
- (v) Vendor should refer their issue/ grievance through above mode only. Issue/ grievance received through any other mode shall not be entertained.

##### **44.2 CONCILIATION AND ARBITRATION**

###### **1.0 CONCILIATION**

GAIL (India) Limited has framed the Conciliation Rules 2010 in conformity with Part – III of the Arbitration and Conciliation Act 1996 as amended from time to time for speedier, cost effective and amicable settlement of disputes through conciliation. All issue(s)/dispute(s) arising under the Contract, which cannot be mutually resolved within a reasonable time as per clause no. 44.1, may be referred for conciliation in accordance with GAIL Conciliation Rules 2010 as amended from time to time A copy of the said rules have been made available on GAIL's web site i.e www.gailonline.com.

Where invitation for Conciliation has been accepted by the other party, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the 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 invoke Arbitration Clause. 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.

## **2.0 ARBITRATION**

All issue(s)/dispute(s) excluding the matters that have been specified as excepted matters and listed at clause no. 2.6 and which cannot be resolved through Conciliation, such issue(s)/dispute(s) shall be referred to arbitration for adjudication by Sole Arbitrator.

The party invoking the Arbitration shall have the option to either opt for Ad-hoc Arbitration as provided at Clause 2.1 below or Institutionalized Arbitration as provided at Clause 2.2 below, the remaining clauses from 2.3 to 2.7 shall apply to both Ad-hoc and Institutional Arbitration:-

2.1 On invocation of the Arbitration clause by either party, GAIL shall suggest a panel of three independent and distinguished persons (Retd Supreme Court & High Court Judges only) to the other party from the Panel of Arbitrators maintained by 'Delhi International Arbitration Centre (DIAC) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other party to select the Sole Arbitrator within 30 days from the receipt of the communication from GAIL suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and GAIL shall appoint the Sole Arbitrator from the suggested panel of three Arbitrators for adjudication of dispute(s). The decision of GAIL on the appointment of the sole arbitrator shall be final and binding on the other party. The fees payable to Sole Arbitrator shall be governed by the fee Schedule of 'Delhi International Arbitration Centre'.

OR

2.2 If a dispute arises out of or in connection with this contract, the party invoking the Arbitration shall submit that dispute to any one of the Arbitral Institutions i.e ICADR/ICA/DIAC/SFCA and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Supreme Court/High Court Judge to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

2.3 The cost of arbitration proceedings shall be shared equally by the parties.

2.4 The Arbitration proceedings shall be in English language and the seat, venue and place of Arbitration shall be New Delhi, India only.

2.5 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matter relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.

2.6 List of Excepted matters:

- a) Dispute(s)/issue(s) involving claims below Rs 25 lakhs and above Rs 25 crores.
- b) Dispute(s)/issue(s) relating to indulgence of Contractor/Vendor/Bidder in corrupt/fraudulent/collusive/coercive practices and/or the same is under



investigation by CBI or Vigilance or any other investigating agency or Government.

- c) Dispute(s)/issue(s) wherein the decision of Engineer-In-Charge/owner/GAIL has been made final and binding in terms of the Contract.

2.7. Disputes involving claims below Rs 25 Lakhs and above Rs. 25 crores:- Parties mutually agree that dispute(s)/issue(s) involving claims below Rs 25 Lakhs and above Rs 25 crores shall not be subject matter of Arbitration and are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.

3. **GOVERNING LAW AND JURISDICTION:**

The Contract shall be governed by and construed in accordance with the laws in force in India. The Parties hereby submit to the exclusive jurisdiction of the Courts situated at New Delhi for adjudication of disputes, injunctive reliefs, actions and proceedings, if any, arising out of this Contract.

45. **DISPUTES BETWEEN CPSE'S/GOVERNMENT DEPARTMENT'S/ ORGANIZATIONS**

Subject to conciliation as provided above, in the event of any dispute (other than those related to taxation matters) or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts) inter se and also between CPSEs and Government Departments /Organizations), such dispute or difference shall be taken up by either party for resolution only through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through it's administrative Ministry/Department, whose decision will be final and binding on all concerned.

The above provisions mentioned at clause no.44 & 45 shall supersede provisions relating to Conciliation, Arbitration, Governing Law & Jurisdiction and Disputes between CPSE's/ Government Department's/ Organizations mentioned in General Conditions of Contract (GCC) and elsewhere in tender document.

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. GAIL'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. PROVISIONS FOR STARTUPS (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) :  
*NOT APPLICABLE***

**50. PROVISION REGARDING INVOICE FOR REDUCED VALUE OR CREDIT NOTE TOWARDS PRS**

PRS is the reduction in the consideration / contract value for the services covered under this contract. In case of delay in execution of contract, service provider should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If service provider has raised the invoice for full value, then service provider should issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if service provider fails to submit the invoice with reduced value or does not issue credit note as mentioned above, GAIL will release the payment to service provider after giving effect of the PRS clause with corresponding reduction of taxes charged on service provider's invoice, to avoid delay in payment.

In case any financial implication arises on GAIL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of service provider. GAIL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by GAIL in future to the service provider under this contract or under any other contract.

**51. UNIQUE DOCUMENT IDENTIFICATION NUMBER BY PRACTICING CHARTERED ACCOUNTANTS**

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of Tender Document. However, UDIN may not be required for documents being attested by Chartered Accountants in terms of provisions of Tender Document.



52. **ANJANI PORTAL**

GAIL has implemented "Anjani" e-Measurement Book & e-Billing Portal for ease in submission of measurement book/bill and reduction in paper transaction.

Accordingly, GAIL will process the Bill with Measurement Book through "Anjani" e-Measurement Book & e-Billing Portal (link: <https://gailebank.gail.co.in/MBAutomation/frmlogin.aspx>). Accordingly, Contractor/ Service Provider/ Consultant is requested to forward the RA Bill on "Anjani" e-Measurement Book & e-Billing Portal through concerned EIC/CIC/SIC, whichever is applicable.

Further, User Manual is also available on aforesaid portal.

53. **DOCUMENTS FOR PAYMENT:**

Payment terms shall be as mentioned in GCC-Works/SCC.

However, for release of payment, Contractor is required to submit invoice along with other documents as mentioned in SCC. The final bill is to be submitted within one month after completion.

Supplier/ Contractor/Service Provide/ Consultant is required to upload digital invoice on 'Sparsh' portal. The system optimizes and simplifies the process of receiving, managing, monitoring and forwarding invoices for payment process. The link of 'Sparsh' portal is as under:

<https://sparsh.gail.co.in/flipper/#/login>

The 'Help Manual' hyperlink to access the detailed User Manual, Demo Videos, FAQ's and other relevant information is available on 'Sparsh' portal.

Only digital invoice is to be uploaded on 'Sparsh' portal and all other supporting documents along with copy of invoice are to be submitted to concerned as defined in Purchase Order (PO)/ Letter of Acceptance (LoA).

54. **ORDER TRANSMITTAL SYSTEM:**

The complete PO/LOA along with all annexures including tender document shall be shared through order/contract transmittal system after intimation through email.

Supplier/Contractor is requested to visit <https://gailonline.com/home.html> and click on link order/contract transmittal system ( It can be found under Vendor Zone (Portal For Suppliers)) or [https://gailebank.gail.co.in/GOGA\\_AUDIT/frmUserLogin.aspx](https://gailebank.gail.co.in/GOGA_AUDIT/frmUserLogin.aspx).

Therein, in order to access the detailed order/contract, supplier/contractor shall be prompted to enter your email id. Further an OTP shall be sent on your registered mobile number. After entering OTP, supplier/contractor shall be allowed to download complete PO/LOA along with all annexures including tender document. After downloading the documents, the supplier/contractor shall be required to digitally sign the document (by authorized signatory) for uploading the documents on order/contract transmittal system towards acknowledgement of the same.



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**55. SUB-LETTING OF WORKS**

The following is added to the Clause no. 37 of General Conditions of Contract (GCC)-Works:

- (i) Procurement of material, hire of equipment or engagement of labour will not mean sub-contracting.
- (ii) Sub-contracting by the contractor without the approval of GAIL shall be a breach of contract, unless explicitly permitted in the contract.
- (iii) However, If specified in SCC Sub-contracting for Specialized Items of Work is allowed upto certain percentage of work

**56. CONFIDENTIALITY CLAUSE IN ACCORDANCE WITH SEBI (PROHIBITION OF INSIDER TRADING) REGULATIONS, 2015 OR ANY AMENDMENT THEREOF**

The parties hereto or any of their representatives /employees/ team members/ partners/ immediate relatives shall not trade in the securities of GAIL while in possession of **Unpublished Price Sensitive Information (UPSI)** or communicate such UPSI to any person except in furtherance of legitimate purposes. Parties should keep the UPSI strictly confidential , protected against theft, damage, any unauthorized access and shall not disclose the same to any person in contravention to CODE OF CONDUCT TO REGULATE, MONITOR AND REPORT TRADING BY INSIDERS - INSIDER TRADING CODE of GAIL (India) Limited read with SEBI (Prohibition of Insider Trading) Regulations, 2015 or any amendment thereof .

In case any UPSI is communicated /shared in contravention of Insider Trading Code by any person, then the parties referred above should inform immediately the Compliance Officer of GAIL for reporting of such cases to SEBI for taking appropriate action. The reporting to SEBI would be in addition to the action envisaged as per the terms of the contract / agreement for the Breach of Contract. The action taken by the Company shall not preclude SEBI and other authorities from taking any action in case of violation of SEBI (Prohibition of Insider Trading) Regulations, 2015 and any amendments thereto.

Insider Trading Code along with definition of **Unpublished Price Sensitive Information” (UPSI) and Legitimate Purpose** is available at <http://gailonline.com>.

Further, all Intermediary/Fiduciary (Professional firms such as auditors, accountancy firms, law firms, analysts, insolvency professional entities, consultants, banks etc., assisting or advising listed companies shall be collectively referred to as fiduciaries or intermediary for the purpose of these regulations) must formulate their Code of Conduct in accordance with **Schedule C of Securities and Exchange Board of India (Prohibition of Insider Trading) (Amendment) Regulations, 2018 or any amendment thereof (for more details please visit [www.sebi.gov.in](http://www.sebi.gov.in))**”



**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 concerns which come within the sphere of effective influence of the banned/suspended agency shall be treated as allied agency. In determining this, the following factors may be taken into consideration:
- Whether the management is common;
  - Majority interest in the management is held by the partners or directors of banned/ suspended agency;
  - Substantial or majority shares are owned by the banned/ suspended agency and by virtue of this it has a controlling voice.
  - Directly or indirectly controls, or is controlled by or is under common control with another bidder.
  - All successor agency will also be considered as allied agency.
- 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, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.
- A.10 "Obstructive practice": materially impede the procuring entity's investigation into allegations of one or more of the above mentioned practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/ or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding GAIL's rights of audit or access to information.

**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 GAIL 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, action shall be initiated for putting the agency on banning list.



After conclusion of process and issuance of Speaking order for putting party on banning list, 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) submitted by agency against such order (s)/ contract (s) shall also be forfeited. Further such order/ contract will be closed following the due procedure in this regard.

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.

**Suspension of order/ contract:**

Further, only in the following situations, the concerned order (s)/ contract(s) (where Corrupt/Fraudulent/ Collusive/ Coercive Practices are observed) and payment shall be suspended after issuance of Suspension cum Show Cause Notice:

- (i) Head of Corporate Vigilance Department/CVO based on the investigation by them, recommend for specific immediate action against the agency.
- (ii) Head of Corporate Vigilance Department/CVO based on the input from investigating agency, forward for specific immediate action against the agency.

Suspension cum Show Cause Notice being issued in above cases after approval of the competent authority (as per provisions mentioned under Clause no. D) shall also include the provision for suspension of Order (s)/ Contract (s) and payment. Accordingly, after issuance of Suspension cum Show Cause Notice, the formal communication for suspension of Order (s)/ Contract (s) and payment with immediate effect will be issued by the concerned person of GAIL.

During suspension, Contractor/ Service Providers will be allowed to visit the plant/ site for upkeep of their items/ equipment, GAIL's issued materials (in case custody of same is not taken over), demobilizing the site on confirmation of EIC, etc.

In addition to above, Recovery of payments (other than due payments) including balance advance payments, if any, made by along with interest thereon at the prevailing rate shall be recovered.

**(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 GAIL 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 GAIL for a period specified in para B 2.2 below from the date of issue of banning order.

**B.2.2 Period of Banning**

The period of banning of agencies indulged in Corrupt/ Fraudulent/ Collusive/Coercive Practices shall be as under and to be reckoned from the date of banning order:



S. No.	Description	Period of banning from the date of issuance of Banning order
1	Misrepresentation/False information other than pertaining to BEC of tender but having impact on the selection process. For example, if an agency confirms not being in holiday in GAIL/PSU's PMC or banned by PSUs/ Govt. Dept., liquidation, bankruptcy & etc. and subsequently it is found otherwise, such acts shall be considered in this category.	06 Months
2	Corrupt/Fraudulent (except mentioned sl. no. 1 above) /Collusive/Coercive Practices	01 year
2.1	If an agency again commits Corrupt/Fraudulent (except mentioned sl. no. 1 above) /Collusive/ Coercive Practices in subsequent cases after their banning, such situation of repeated offense to be dealt with more severity	2 years (in addition to the period already served)
3	Indulged in unauthorized disposal of materials provided by GAIL	2 years
4	If act of vendor/ contractor is a threat to the National Security	2 years

### 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. . In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1..

### 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

- Corporate Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the agency.
- Corporate Vigilance Department based on the input from Investigating agency, forward for specific immediate action against the agency.
- 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 GAIL.

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. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1. .
- 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 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.



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

**1.0 GENERAL**

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants and their performance is a key process and important to support an effective purchasing & contracting function of an organization. Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

**2.0 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 GAIL 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.

**3.0 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. 50 Lakhs and above is recommended to be drawn up. Further, Performance rating data Sheet for orders/contracts of Vendor/Supplier/Contractor/ Consultant who are on watch list/holiday list/ banning list shall be prepared irrespective of order/ contract value. 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 GAIL.
- 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.

**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. 50 Lakhs if Vendor/ Supplier/Contractor/ Consultant is not on watch list/ holiday list/ banning list.
- ii) Orders for Misc./Administrative items/ Non stock Non valued items (PO with material code ending with 9).





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

### 5.1 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 shall 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" (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):
  - (a) **First Instance: Holiday (Red Card) for One Year**
  - (b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years**
2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):
  - (a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.
  - (b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of One Year**
  - (c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.**



- B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/ Contractor/Consultant (under clause no. 32 (C) of GCC-Works)
- (a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Years.  
Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken. However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).  
The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.
- (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.
- (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**
- (C) Where Performance rating is “FAIR”:  
Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

## 5.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 5.1 for Projects.

## 5.3 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 shall be initiated by EIC:

Sl. No.	Performance Rating	Action
1	<b>POOR</b>	Seek explanation for Poor performance
2.	<b>FAIR</b>	Seek explanation for Fair performance
3	<b>GOOD</b>	Letter to the concerned for improving performance in future.
4	<b>VERY GOOD</b>	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” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)  
Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following



action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):
    - (a) **First Instance: Holiday (Red Card) for One Year**
    - (b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years**
  2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):
    - (a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.
    - (b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of One Year**
    - (c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.**
- B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/ Contractor/Consultant (under clause no. 32 (C) of GCC-Works)
- (a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Years.  
Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken. However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).  
The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant.
  - (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.
  - (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contract (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**
- (C) Where Performance rating is "FAIR"  
Issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

## 6.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

- 6.1 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.



## 7.0 EFFECT OF HOLIDAY

- 7.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant shall not be considered in ongoing tenders/future tenders.
- 7.2 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.
- 7.3. Effect on other ongoing tendering:
- 7.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 7.3.2 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.
- 7.3.3 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. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1..
- 8.0 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.
- 9.0 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 GAIL 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.

## 10. 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).

## 11. 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, GAIL shall forfeit EMD if paid by the bidder and such bidders shall be debarred from participation in retendering of the same job(s)/item(s).

Further, such bidder will be put on Watch List (Yellow Card) for a period of two years after following the due procedure. However, during the period in watch list such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

In case of subsequent instances of default in other tender(s) during aforesaid watch list period, the action shall be initiated as per provision of sl. no. 2 of para A of Clause no. 5.1 (v) and 5.3 (v).

The Yellow card will be automatically revoked after specified period unless the same is converted into Red Card

12. In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of GAIL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from GAIL to the government exchequer, then, that Supplier shall be put under Holiday list of GAIL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on GAIL.



Annexure-1

**GAIL (India) Limited**  
**PERFORMANCE RATING DATA SHEET**  
**(FOR PROJECTS/ CONSULTANCY JOBS)**

- i) Project/Work Centre :  
 ii) Order/ Contract No. & date :  
 iii) Brief description of Items :  
 Works/Assignment  
 iv) Order/Contract value (Rs.) :  
 v) Name of Vendor/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 Allotted				

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 :

<b>1.1</b>	<b>DELIVERY/ COMPLETION PERFORMANCE</b>	<b>40 Marks</b>
	<b>Delivery Period/ Completion Schedule</b>	<b>Delay in Weeks</b>
		<b>Marks</b>
	a) Upto 3 months	Before CDD
		Delay upto 4 weeks
		"    8 weeks
		"   10 weeks
		"   12 weeks
		"   16 weeks
		More than 16 weeks
		40
		35
		30
		25
		20
		15
		0
	b) Above 3 months	Before CDD
		Delay upto 4 weeks
		"    8 weeks
		"   10 weeks
		"   16 weeks
		"   20 weeks
		"   24 weeks
		More than 24 weeks
		40
		35
		30
		25
		20
		15
		10
		0
<b>1.2</b>	<b>QUALITY PERFORMANCE</b>	<b>40 Marks</b>
	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
		- Moderate nature
		- low severe nature
		0 marks
		5 marks
		10-25 marks
	iii) Number of deviations	1. No deviation
		2. No. of deviations $\leq 2$
		3. No. of deviations $> 2$
		5 marks
		2 marks
		0 marks



## 1.3 RELIABILITY PERFORMANCE

20 Marks

<b>A.</b>	<b>FOR WORKS/CONTRACTS</b>	
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>B.</b>	<b>FOR SUPPLIES</b>	
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



**GAIL (India) Limited  
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) Contracted 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	Signature of Authorised Signatory:
1	60 & below	POOR	Name:  Designation:
2	61-75	FAIR	
3	76-90	GOOD	
4	More than 90	VERY GOOD	

**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<br>- Moderate nature<br>- low severe nature  | 0 marks<br>5 marks<br>10-25 marks |
| iii) Number of deviations   | 1. No deviation<br>2. No. of deviations $\leq 2$<br>3. No. of deviations $> 2$                                | 5 marks<br>2 marks<br>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



Annexure-III to Section-III

**ADDENDUM TO INSTRUCTIONS TO BIDDERS  
(INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)**

Detailed instructions regarding bid submission procedure under e-tendering system (e-tender portal) is available on <https://gailtenders.in/Gailtenders/Home.asp> as detailed below

The screenshot displays the GAIL Tenders website interface. At the top, there is a navigation bar with tabs for 'ACTIVE TENDERS', 'TENDERS SEARCH', 'CORRIGENDUM', and 'TENDER AWARDED'. Below this is a banner with the GAIL logo and the slogan "Think Digital, Be Digital". The main content area includes a 'WELCOME ! TO GAIL TENDER WEBSITE' message, a date 'Friday, November 11, 2022', and a search bar. There are two statistics sections: 'Tender Statistics' showing 83 tenders and 28 corrigendums, and 'Todays Statistics' showing 0 tenders and 1 corrigendum. A red box highlights the text 'ADDENDUM TO INSTRUCTIONS TO BIDDERS (INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)'. The footer contains links for 'General Conditions of Contracts (GCCs)', 'Corporate Website', 'Corporate Intranet', 'Corporate Email', 'Reverse Auction Training Videos', and 'GAIL (India) Limited'.

**ANNEXURE-IV to Section-III****BIDDING DATA SHEET (BDS)****ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:**

<b>A. GENERAL</b>									
<b>ITB clause</b>	<b>Description</b>								
1.1	The Employer/Owner is: GAIL (India) Limited								
2.1	The name of the Works/Services to be performed is:  LAND DEVELOPMENT, TOPOGRAPHICAL & CONTOUR SURVEY WORKS FOR PROPOSED WWTP AND ZLD PLANT AT GAIL, PATA								
3	BIDS FROM CONSORTIUM/ JOINT VENTURE: NOT APPLICABLE								
<b>B. BIDDING DOCUMENT</b>									
<b>ITB clause</b>	<b>Description</b>								
8.1	For <b>clarification purposes</b> only, the communication address is: Attention: Sh. Sandeep Kumar Sharma, Chief Manager, GAIL (India) Ltd, New Delhi-110066 Email: sandeep.sharma@gail.co.in								
<b>C. PREPARATION OF BIDS</b>									
<b>ITB clause</b>	<b>Description</b>								
11.1.1 (u)	Additional documents to be submitted by the Bidder with its Part-I (Techno-commercial/ Unpriced bid) : SCC/Scope of Work refers								
12	Additional Provision for Schedule of Rate/ Bid Price are as under: <u>Nil</u>								
12 & 13	Whether GAIL will be able to avail input tax credit in the instant tender: YES  Details of Buyer: <table border="1"> <tbody> <tr> <td>Services to be rendered at</td> <td>Shall be intimated based on the location finalized</td> </tr> <tr> <td>PAN No.</td> <td>AAACG1209J</td> </tr> <tr> <td>GST no.</td> <td>09AAACG1209J3ZS</td> </tr> <tr> <td>GAIL Bank details</td> <td>Beneficiary Name- GAIL India Limited Beneficiary A/c no. 10813604063 IFSC - SBIN0017313 Bank and Branch - State Bank of India , New Delhi Address - State Bank of India, CAG Branch, 5th Floor, Red Fort Capital, Parsvnath Tower, Bhai Veer Singh Marg, Gole Market, New Delhi-110001</td> </tr> </tbody> </table>	Services to be rendered at	Shall be intimated based on the location finalized	PAN No.	AAACG1209J	GST no.	09AAACG1209J3ZS	GAIL Bank details	Beneficiary Name- GAIL India Limited Beneficiary A/c no. 10813604063 IFSC - SBIN0017313 Bank and Branch - State Bank of India , New Delhi Address - State Bank of India, CAG Branch, 5th Floor, Red Fort Capital, Parsvnath Tower, Bhai Veer Singh Marg, Gole Market, New Delhi-110001
Services to be rendered at	Shall be intimated based on the location finalized								
PAN No.	AAACG1209J								
GST no.	09AAACG1209J3ZS								
GAIL Bank details	Beneficiary Name- GAIL India Limited Beneficiary A/c no. 10813604063 IFSC - SBIN0017313 Bank and Branch - State Bank of India , New Delhi Address - State Bank of India, CAG Branch, 5th Floor, Red Fort Capital, Parsvnath Tower, Bhai Veer Singh Marg, Gole Market, New Delhi-110001								
14	The currency of the Bid shall be INR								



15	The bid validity period shall be <b>90 days</b> from final 'Bid Due Date'.
16.1, 16.10 and 38.6	<p>In case '<b>Earnest Money / Bid Security</b>' is in the form of '<b>Demand Draft</b>' or '<b>Banker's Cheque</b>', the same should be favor of <b>GAIL (India) Limited</b>, payable at STATE BANK OF INDIA, Branch –NEW DELHI Address - CAG Branch, 5th Floor, Red Fort Capital, Parsvnath Tower, Bhai Veer Singh Marg, Gole Market, New Delhi-110001</p> <p>In case of submission through online banking transaction i.e. IMPS / NEFT / RTGS / SWIFT, etc, the details of GAIL's Bank account are as under: Beneficiary Name- GAIL India Limited Beneficiary A/c no. 10813604063 IFSC - SBIN0017313 Bank and Branch - State Bank of India , New Delhi Address - State Bank of India, CAG Branch, 5th Floor, Red Fort Capital, Parsvnath Tower, Bhai Veer Singh Marg, Gole Market, New Delhi-110001</p> <p>Bidder to mention reference no. "EMD/... .." in narration while remitting the EMD / Bid Security amount in GAIL's Bank Account.</p> <p><b>MSE Bidders are not entitled for EMD exemption and they have to submit EMD.</b></p>
<b>D. SUBMISSION AND OPENING OF BIDS</b>	
<b>ITB clause</b>	<b>Description</b>
18	In addition to the original of the Bid, the number of copies required is one. Not applicable in case of e-tendering.
22.3, 26 and 4.0 of IFB	<p>For submission of physical document as per clause no. 4.0 of IFB, and <b>Bid Opening Purpose</b> the Owner's address is :</p> <p>Kind Attention: Mr. T Xalxo General Manager (C&amp;P) GAIL (India) Limited 16, Bhikaji Cama Place/16 New Delhi 110066</p>
<b>E. EVALUATION, AND COMPARISON OF BIDS</b>	
<b>ITB clause</b>	<b>Description</b>
32	Evaluation Methodology is mentioned in Section-II.
33	Compensation for Extended Stay: Not Applicable
34	<p>The following Purchase Preference Policy will be applicable as per provisions mentioned in tender:</p> <ul style="list-style-type: none"> <li>Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017</li> </ul>
<b>F. AWARD OF CONTRACT</b>	
<b>ITB clause</b>	<b>Description</b>
37	State of India of which stamp paper is required for Contract Agreement: New Delhi



<b>38</b>	<p>Contract Performance Security/ Security Deposit: Applicable</p> <p>SD/CPBG @ 10% of Total Order/ Contract Value within 30 days of FOA/notification of award OR</p> <p>Initial CPBG/Security Deposit (ISD) @ 5% of Total Contract Value within 30 days of FOA/ notification of award and deduction @ 10% of the RA bill subsequently from RA bills till the total amount of security deposit (including ISD and deducted amount) reaches 10% of Total Contract value.</p>
<b>39.2</b>	<p>Name and contact details of nodal officer are as under:</p> <p>Name: Sh. S K Gupta  Designation: CGM (Contracts and Procurements)  Phone No. &amp; Extn : #91 26172580 Extn. 2269, e-mail : <a href="mailto:sk.gupta@gail.co.in">sk.gupta@gail.co.in</a></p>
<b>41</b>	Provision of AHR Item : NOT APPLICABLE
<b>44.1</b>	Quarterly Closure of Contract: Applicable
<b>Clause no. 27.3 of GCC</b>	Bonus for Early Completion: Not Applicable
<b>49</b>	Applicability of provisions relating to Startups: Not Applicable
<b>53</b>	Applicability of provisions relating to Order Transmittal System: APPLICABLE
<b>SCC</b>	<p>Documents required for accepting the Works:</p> <p>Refer SCC.</p>



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**ANNEXURE-V TO SECTION-III****POLICY TO PROVIDE PURCHASE PREFERENCE AS PER PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017**

1.0 Ministry of Petroleum & Natural Gas vide Notification No. FP-20013/2/2017-FP-PNG-Part(4) (E-41432) dated 26.04.2022 has notified that Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT and as amended from time to time shall be applicable to all the Public Sector Undertakings and their wholly owned subsidiaries under MoP&NG with certain modifications.

2.0 The Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT to encourage 'Make in India' and promote manufacturing & production of goods and services in India with a view to enhancing income and employment.

3.0 **DEFINITIONS:-**

(i) **Local Content** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Further Local value addition through services such as transportation, insurance, installation, commissioning, training, and after sale support like AMC/CMC etc. shall be considered in local content calculation.

(ii) **'Class-I local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of equal to or more than 50%.

**'Class-II local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of more than 20% but less than 50%.

**'Non - Local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%.

(iii) **L1** mean the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per tender or other procurement solicitation.

(iv) **Margin of Purchase Preference:** means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for purpose of purchase Preference.



- (v) **Nodal Ministry** means the Ministry of Petroleum & Natural Gas
- (vi) **Procuring Entity** means GAIL (India) Limited (GAIL)
- (vi) **Works** means all the works as per Rule 130 of GFR-2017 also include 'turnkey works'

4.0 **Margin of Purchase Preference:** The margin of purchase preference shall be 20%.

5.0 **ELIGIBILITY OF 'CLASS-I LOCAL SUPPLIER'/ 'CLASS-II LOCAL SUPPLIER'/ 'NON-LOCAL SUPPLIERS' FOR DIFFERENT TYPES OF PROCUREMENT**

- (a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', shall be eligible to bid irrespective of purchase value.
- (b) Only 'Class-I local supplier' and 'Class-II local supplier', shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry/ International Competitive bidding has been issued. In global tender enquiries/ International Competitive bidding 'Non local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.
- (c) Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts
- (d) HP-HT Operations in upstream oil and gas business activities shall be exempted from this order.

6.0 **PURCHASE PREFERENCE METHODOLOGY UNDER PPP-MII (SUBJECT TO QUANTITY DISTRIBUTION APPLICABLE TO MSES AS PER PUBLIC PROCUREMENT POLICY FOR MSE 2012, REFER EXAMPLES GIVEN BELOW):**

- (a) Purchase preference shall be given to 'Class-I local supplier' in procurements in the manner specified here under.
- (b) In the procurements of goods or works which are cover by para 5 (b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:



- 
- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
  - ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.
- (c) In the procurements of goods or works which are covered by para 5 (b) and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
  - ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
  - iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.
  - iii. "Class-II local supplier" will not get purchase preference in any procurement.
- d) **Applicability in tenders where contract is to be awarded to multiple bidders** - In tenders where contract is awarded to multiple bidders subject





to matching of L1 rates or otherwise which are covered by para 5 (b), the 'Class-I local supplier' shall get purchase preference over 'Class II- local supplier' as well as 'Non-local supplier', as per following procedure:

- i) If 'Class-I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class -I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class-I local supplier' over 'Class-II local suppliers'/ 'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class-I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.
- ii) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

#### **7.0 CONCURRENT APPLICATION OF PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES ORDER, 2012 AND PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER, 2017 :**

The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act. Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorized in following four broad categories for consideration or applicability of purchase preference:

Category	Terminology
Supplier is both MSE & Class-I local supplier.	"MSE Class-I local supplier"
Supplier is MSE but not Class-I local supplier.	"MSE but non-Class-I local supplier"
Supplier is not MSE but is Class-I local supplier.	"Non-MSE but Class-I local supplier"
Supplier is neither MSE nor Class-I local.	"Non-MSE non Class-I local supplier"



The applicability of PPP-MSE Order and PPP-MII Order in various scenarios, involving simultaneous purchase preference to MSEs and Class-I local suppliers under PPP-MSE Order and PPP-MII Order respectively, shall be as under:

- a) Items covered under Para 3(a) of PPP- MII Order, 2017 for which Nodal Ministry has notified sufficient local capacity and competition: For these items, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-II local suppliers or Non-local suppliers, including MSEs which are Class-II local suppliers/ Non-local suppliers, are not eligible to bid. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
  - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is given to MSEs as per PPP-MSE Order. Balance quantity is to be awarded to the L-1 bidder.
- b) Items reserved exclusively for procurement from MSEs as per PPP-MSE Order: These items are reserved exclusively for purchase from MSEs. Hence, non-MSEs are not eligible to bid for these items. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
  - (ii) L-1 is "MSE non-Class-I local supplier" - Purchase preference is to be given to Class-I local supplier as per PPP-MII Order. Balance quantity, is to be awarded to L-1 bidder.
- c) If items are neither notified for sufficient local capacity nor reserved for MSEs, then the process will be as follows:
- c(a) Items covered under Para 3A(b) of PPP-MII Order are divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
  - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is to be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity is to be awarded to L-1 bidder.
  - (iii) L-1 is "MSE but non-Class-I local supplier" - Purchase preference is to be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity is to be awarded to L-1 bidder.
  - (iv) L-1 is "Non-MSE non-Class-I local supplier" - Purchase preference is to be given to MSEs as per PPP-MSE Order. Thereafter, purchase



preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs above" as per PPP-MII Order. For the balance quantity, contract is to be awarded to L-1 bidder. (Refer Illustrative example).

c (b) Items covered under Para 3A(c) of PPP-MII Order, 2017 are non-divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:

- (i) L-1 is "MSE Class-I local supplier"- Contract is awarded to L-1.
- (ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference - Purchase preference is to be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on.
- (iii) If conditions mentioned in sub paras (i) and (ii) above are not met i.e. L-1 is neither "MSE Class-I local supplier" nor "non-MSE Class-I local supplier" is eligible to take benefit of purchase preference, the contract is to be awarded/ purchase preference to be given in different possible scenarios as under:
  - A. L1 is "MSE but non-Class-I local supplier" or "Non-MSE but Class-I local supplier" – Contract is awarded to L1.
  - B. L1 is "Non-MSE non-Class-I local supplier" - First purchase preference to be given to MSE as per PPP-MSE Order. If MSE not eligible/ does not accept - purchase preference to be given to Class- I Local supplier as per PPP-MII Order. If Class-I Local supplier also not eligible/ does not accept - contract to be awarded to L-1.

d) Items reserved for both MSEs and Class- I local suppliers: These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs/Class-II local suppliers/ Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.

e) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.



**8.0 Example to deal Various situations in case a bidder is eligible to seek benefit under Public Procurement (Preference to Make in India), Order 2017 as well as Public Procurement Policy for MSE 2012 (PPP for MSE 2012) :**

(Scenario: Divisible items, both MSEs as well as Class-I local suppliers eligible for purchase preference and L-1 is "Non-MSE non-Class-I local supplier") Item - Desktop computer Qty- 50 Nos.

Details of bids received

Sr. No.	Name of bidder	Rates quoted	Price Ranking	Status of bidder
1	A	100	L1	"Non-MSE non- Class-I local supplier"
2	B	110	L2	"Non-MSE but Class-I local supplier"
3	C	112	L3	"MSE but non- Class-I local supplier"
4	D	115	L4	"Non-MSE but Class-I local supplier"
5	E	118	L5	"MSE but non- Class-I local supplier"
6	F	120	L6	"MSE Class-I local supplier"

1. In this case, first purchase preference is to be given to MSEs as per PPP-MSE Order for 25% of tendered quantity of 50 Nos. i.e. 12.5 Nos. (Rounded off to the next whole number say 13 Nos). Accordingly, invite L3 (bidder C), whose quoted rates falls within 15% margin of purchase preference to match L1 price i.e. Rs. 100/- for quantity of 13 Nos. Bidder "E" and "F", although MSEs, will not get purchase preference since their quoted rates don't fall within 15% margin of purchase preference. Bidder C will be considered for order of 13 Nos. on confirmation of reduction of price.
2. For 50% of balance quantity of 37 number (tendered quantity of 50- 13 awarded to bidder C; assuming bidder C has confirmed to accept L1 rates), purchase preference will be given to lowest Class-I local supplier as per PPP-MII Order. Accordingly, bidder B will be invited to match L-1 price for 50% of 37 Nos i.e. 18.5 (say 19 Nos of computers). If bidder "B" does not accept the L1 price i.e. price of Rs. 100/- per unit, next higher Class-I local supplier falling within 20% margin of purchase preference, i.e. bidder "D", may be invited to match L-1 price for 19 Nos. of computers and so on.
3. For remaining quantity i.e. 18 Nos (50-13-19), the contract will be awarded to lowest quoting bidder i.e. Bidder "A", who is L-1 in the example.



## 9.0 VERIFICATION OF LOCAL CONTENT/ DOMESTIC VALUE ADDITION

- a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall require to indicate percentage of local content and provide **self-certification** (as per proforma at Form-2 to Annexure II to Section-III) that the item offered meets the minimum local content for 'Class-I local supplier'/ 'Class-II local supplier' as the case may be and shall give details of the location(s) at which the local value addition is made.
- b. In cases of procurement for a value in excess of Rs. 10 crores, in addition to Form-2 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content as per proforma at Form -3 to Annexure II to Section-III.
- c. In case a complaint is received by the procuring agency relating to implementation of this order including the claim of a bidder regarding local content/ domestic value addition, the same shall be referred to Competent Authority who is empowered to look into procurement related complaints.
- d. Nodal Ministry may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/accountant's certificates on random basis and in the case of complaints. A complaint fee of Rs.2 Lakh or 1% of the value of the domestically manufactured products being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, shall be paid by Demand Draft to be deposited with GAIL. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
- e. In case of false declarations, GAIL shall initiate action for banning such manufacturer/supplier/service provider as per as per GAIL's extant "Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices"
- f. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph g below.
- g. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:



- 
- i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
  - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
  - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

#### **10.0 RECIPROCITY CLAUSE**

- i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.
- ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
- iii. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.



FORM-1

DELETED



**FORM-2**

**SELF CERTIFICATION BY BIDDER WHO CLASS-I LOCAL SUPPLIER/ CLASS-II LOCAL SUPPLIER TOWARDS MANDATORY MINIMUM LOCAL CONTENT/ DOMESTIC VALUE ADDITION (APPLICABLE FOR ALL BIDDERS INCLUDING MSEs)**

To,

M/s GAIL (INDIA) LIMITED

SUB:  
TENDER NO:

Dear Sir

We, M/s \_\_\_\_\_ (*Name of Bidder*) confirm that as per the definition of policy we are:

Class-I Local supplier [     ]

Class-II Local Supplier [     ]

*(Bidder is to tick appropriate option (✓) above).*

It is further confirm that M/s \_\_\_\_\_ (*Name of Bidder*) meet the mandatory minimum Local content/Domestic Value Addition requirement for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of .....%.

The details of the location (s) at which the local value addition is made is as under:

.....  
.....  
.....

We further confirm that in case we fail to meet the minimum local content/domestic value addition, the same shall be treated false information and GAIL will take action as per provision of tender document.

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





**CERTIFICATE BY STATUTORY AUDITOR/COST AUDITOR/ CHARTERED  
ACCOUNTANT OF BIDDER TOWARDS MANDATORY MINIMUM LOCAL  
CONTENT/ DOMESTIC VALUE ADDITION**

**(APPLICABLE FOR ALL BIDDERS INCLUDING MSEs)**

To,

M/s GAIL (INDIA) LIMITED

SUB:

TENDER NO:

Dear Sir

“We \_\_\_\_\_ the statutory auditor/ cost auditor/chartered accountant (not an employee of the company) of M/s. \_\_\_\_\_ (*Name of the bidder*) hereby certify that as per definition specified in policy, M/s. \_\_\_\_\_ (*Name of the bidder*) is

Class-I Local supplier [     ]

Class-II Local Supplier [     ]

*(Bidder is to tick appropriate option (✓) above).*

It is further confirm that M/s \_\_\_\_\_ (*Name of Bidder*) quoted vide offer No. \_\_\_\_\_ dated \_\_\_\_\_ against tender No. \_\_\_\_\_ meet the mandatory minimum Local content/Domestic Value Addition requirement specified for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Policy for Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of .....% .

Name of Audit Firm:

[Signature of Authorized Signatory]

Name:

Date:

Designation:

Seal:

Membership no.

**Note:**

- (i) This certificate it to be furnished by the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies)
- (ii) The above format is indicative, the statutory auditor/ cost auditor/ cost accountant can modify the format without changing the intent of certification.



**LIST OF FORMS & FORMAT**

<b>Form No.</b>	<b>Description</b>
F-1	BIDDER'S GENERAL INFORMATION
F-2	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY "
F-2A	PROFORMA OF DECLARATION FOR BID SECURITY
F-3	LETTER OF AUTHORITY
F-4	PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-5	AGREED TERMS & CONDITIONS
F-6	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-7	BIDDER'S EXPERIENCE
F-8	CHECK LIST
F-8B	CHECK LIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS
F-9	FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL IS INADEQUATE
F-10	FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-11	FORMAT FOR CONSORTIUM/JV AGREEMENT
F-12	BIDDER'S QUERIES FOR PRE BID MEETING
F-13	E-BANKING FORMAT
F-14	INTEGRITY PACT
F-15	INDEMNITY BOND
F-16	FREQUENTLY ASKED QUESTIONS (FAQs)
F-17	UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-INVOICE AS PER GST LAWS)
F-18	FORMAT FOR NO CLAIM CERTIFICATE FOR RELEASE OF CPS/SECURITY DEPOSIT

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

To,  
M/s GAIL (INDIA) LIMITED

TENDER NO:

1	Bidder Name	M/s.....
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited Liability Partnership (LLP) firm/Public Limited/ Pvt. Limited/ Govt. Dept. / PSU/ Others  If Others Specify: _____  [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
3a	Name of Proprietor/ Partners/ Directors of the firm/company including their Father's Name and residential address, Aadhar No., Pan Card Details & DIN Nos.  [As per clause for 'One Bid Per Bidder' under Section-III of Tender Document]  If required, a separate sheet may be enclosed for providing the above details.	
3b	Name of Power of Attorney holders of bidder	
4	Number of Years in Operation	
5	Address of Registered Office:	City: District: State: PIN/ZIP:
6	Bidder's address where order/contract is to be placed	City: District: State: PIN/ZIP:
7	Office responsible for executing the contract with GST no. * (In case supply of works are from multiple locations, addresses and GST	City: District: State: PIN/ZIP:



	no. of all such locations are to be provided).	GST No.:
8	Telephone Number/ Mobile no. of address where order is to be placed	(Country Code) (Area Code) (Telephone No.)
9	E-mail address	
10	Website	
11	Mobile Number:	
12	ISO Certification, if any	{If yes, please furnish details}
13	PAN No.	
14	GST No. (refer sl. no. 7 above)	
15	EPF Registration No.	
16	ESI code No.	
17	Whether Micro or Small Enterprise	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)
	Whether MSE is owned by SC/ST Entrepreneur(s)	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)
	Whether MSE is owned by Women	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)
	Whether payment is required through TReDS	Yes / No If Yes, please provide the name of portal .....
18	Whether Bidder is Startups or not	Yes / No (If Yes, Bidder to submit requisite documents as specified in ITB: Clause No.50 )
	In case of Start-up confirm the following: (i) Date of its incorporation/ registration [The certificate shall only be valid for the entity upto ten years from the date of its incorporation/ registration] (ii) Whether turnover for any financial years since incorporation/ registration has exceed Rs.100 Crores.	

Note: \* GAIL intent to place the contract directly on the address from where Works are to be supplied. In case, bidder wants contract at some other address or Works are to be supplied from multiple locations, bidder is required to provide in their bid, the address on which contract is to



-----  
*be placed.*

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

**FORMAT F-2**

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

To, M/s GAIL (India) Limited  _____	<b>Bank Guarantee No.</b>	
	<b>Date of BG</b>	
	<b>BG Valid up to</b>	
	<b>Claim period up to (There should be three months gap between expiry date of BG &amp; Claim period)</b>	
	<b>Stamp Sl. No./e-Stamp Certificate No.</b>	

**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 GAIL (India) Ltd., the amount \_\_\_\_\_ without any reservation, protest, demur and recourse. Any such demand made by GAIL, 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 \_\_\_\_\_.

Notwithstanding anything contained herein:

- The Bank's liability under this Guarantee shall not exceed (currency in figures) . . . . . (currency in words only) . . . . .
- This Guarantee shall remain in force upto \_\_\_\_\_ (this expiry date of BG should be two months beyond the validity of bid) and any extension(s) thereof; and
- The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of .....(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of GAIL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.



-----  
Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name .....

Designation .....

WITNESS:

(SIGNATURE)  
(NAME)

(SIGNATURE)  
(NAME)  
Designation with Bank Stamp

(OFFICIAL ADDRESS)

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.
2. The expiry date should be arrived at in accordance with "ITB: Clause-16.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB:Clause-16.2".
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 / Phone from where the Earnest Money Bond has been issued as per proforma provided below.
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 along with documentary evidence or in the Bank Guarantee itself.



MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED  
BY VENDOR ALONG WITH BANK GUARANTEE

1	<b>BANK GUARANTEE NO</b>	:				
2	<b>VENDOR NAME / VENDOR CODE</b>	:	<b>NAME</b>			
			<b>VENDOR CODE</b>			
3	<b>BANK GUARANTEE AMOUNT</b>	:				
4	<b>TENDER NO</b>	:				
5	<b>NATURE OF BANK GUARANTEE</b>	:				
	<b>(Please Tick (√) Whichever is Applicable</b>		<b>PERFORMANC E BANK GUARANTEE</b>	<b>SECURIT Y DEPOSIT</b>	<b>EM D</b>	<b>ADVANC E</b>
6	<b>BG ISSUED BANK DETAILS</b>					
(A)		<b>EMAIL ID</b>	:			
(B)		<b>ADDRESS</b>	:			
(C)		<b>PHONE NO</b>	:			





FORMAT F-2A

**DECLARATION FOR BID SECURITY**

To,

M/s GAIL (INDIA) LIMITED

SUB:  
TENDER NO:

Dear Sir

After examining / reviewing provisions of above referred tender documents (including all corrigendum/ Addenda), we M/s \_\_\_\_\_ (*Name of Bidder*) have submitted our offer/ bid no. ....

We, M/s \_\_\_\_\_ (*Name of Bidder*) hereby understand that, according to your conditions, we are submitting this Declaration for Bid Security.

We understand that we will be put on watch list/holiday/ banning list (as per polices of GAIL in this regard), if we are in breach of our obligation(s) as per following:

- (a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- (b) having been notified of the acceptance of our Bid by the GAIL during the period of bid validity:
  - (i) fail or refuse to execute the Contract, if required, or
  - (ii) fail or refuse to furnish the Contract Performance Security, in accordance provisions of tender document.
  - (iii) fail or refuse to accept 'arithmetical corrections' as per provision of tender document.
- (c) having indulged in corrupt/fraudulent /collusive/coercive practice as per procedure.

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



**F-3**  
**LETTER OF AUTHORITY**

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

Ref:  
To,  
M/s GAIL (INDIA) LIMITED

Date:

SUB:  
TENDER NO:

**Dear Sir,**

I/We, \_\_\_\_\_ hereby authorize the following representative(s) for attending any 'Meetings [Pre-Bid Meeting]', 'Un-priced Bid Opening', and 'Price Bid Opening' against the above Tender Documents:

[1] Name & Designation \_\_\_\_\_ Signature \_\_\_\_\_  
Phone/Cell: \_\_\_\_\_  
E-mail: ..... @ .....

[2] Name & Designation \_\_\_\_\_ Signature \_\_\_\_\_  
Phone/Cell: \_\_\_\_\_  
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:
- (i) This "Letter of Authority" should be on the "**letterhead**" of the 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 'Pre-Bid Meetings' /'Un-priced Bid Opening' / 'Price Bid Opening'.
  - (ii) Bidder's authorized representative is required to carry a copy of this authority letter while attending the 'Pre-Bid Meetings' /'Un-priced Bid Opening'.



**PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"**

**(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

To, M/s GAIL (India) Limited  _____	<b>Bank Guarantee No.</b>	
	<b>Date of BG</b>	
	<b>BG Valid up to</b>	
	<b>Claim period up to (There should be three months gap between expiry date of BG &amp; Claim period)</b>	
	<b>Stamp Sl. No./e-Stamp Certificate No.</b>	

**Dear Sir(s),**

M/s. \_\_\_\_\_ having registered office at \_\_\_\_\_ (herein after called the "contractor" which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of \_\_\_\_\_ vide LOA /FOA No. \_\_\_\_\_ dated \_\_\_\_\_ for GAIL (India) Limited having registered office at 16, Bhikaiji Cama Place, R.K. Puram, New Delhi (herein after called the "GAIL" which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the 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 GAIL (INDIA) 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.

- 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 GAIL (INDIA) LIMITED we shall on first demand pay without demur, contest, protest and/ or without any recourse to the contractor to GAIL in such manner as GAIL 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.
- 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.
- 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 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. 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 GAIL in writing. However, if for any reason, the contractor is unable to complete the 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 contractor fails to perform the work fully, the bank hereby agrees to further extend this guarantee at the instance of the contractor till such time as may be determined by GAIL. 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 GAIL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the contractor and notwithstanding any security or other guarantee that GAIL may have in relation to the contractor's liabilities.
  7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by GAIL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at New Delhi.
  8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the 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 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.
  9. 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.
  10. Notwithstanding anything contained herein:
    - a) The Bank's liability under this Guarantee shall not exceed (currency in figures) . . . . . (currency in words only) . . . . .
    - b) This Guarantee shall remain in force upto \_\_\_\_\_ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
    - c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of .....(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of GAIL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:



-----  
Name .....

Designation .....

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.
2. The Bank Guarantee by Bidders will be given from bank as specified in cl.no. 38.3 of ITB [Section-III] of Tender Document.
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 alongwith documentary evidence OR in the Bank Guarantee itself.
5. Contractor shall submit attached cover letter (Annexure) while submitting Contract Performance Security



-----  
 MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH BANK  
 GUARANTEE

1	BANK GUARANTEE NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
3	BANK GUARANTEE AMOUNT	:				
4	PURCHASE ORDER/ LOA NO	:				
5	NATURE OF BANK GUARANTEE	:				
	(Please Tick (√) Whichever is Applicable		PERFORMANCE BANK GUARANTEE	SECURITY DEPOSIT	EMD	ADVANCE
6	BG ISSUED BANK DETAILS					
		(A)	EMAIL ID	:		
		(B)	ADDRESS	:		
		(C)	PHONE NO	:		

**F-5****AGREED TERMS & CONDITIONS**

To,

M/s GAIL (INDIA) LIMITED

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, Vendor Code of GAIL (if any) and address (FOA/Order shall be released in this name)	Bidder's name : GAIL's Vendor Code: Address:
2.	Bidder confirms the currency of quoted prices is in Indian Rupees.	
3.	Bidder confirms quoted prices will remain firm and fixed till complete execution of the order (except where price escalation/variation is allowed in the Tender).	
4	Bidder confirms that they have quoted <b>GST (CGST &amp; SGST/ UTGST or IGST )</b> in Price Schedule/ SOR of Price bid.	
4.1	Whether in the instant tender services/works are covered in reverse charge rule of <b>GST (CGST &amp; SGST/UTGST or IGST)</b>  If yes, Bidder confirms that they have quoted rate of applicable GST (CGST & SGST/ UTGST or IGST) in Price Schedule / Schedule of Rates of Price Bid	Yes/ No
4.2	Bidder confirms that they have mentioned Harmonized System Nomenclature (HSN)/Service Accounting Code (SAC) in Price Bid	
4.3	Bidder hereby confirms that the quoted prices are in compliance with the Section 171 of CGST Act/ SGST Act as mentioned as clause no. 13.10 of ITB (Anti-profiteering clause).	
4.4	Whether bidder is liable to raise E-Invoice as per GST Act. If yes, bidder will raise E-Invoice and confirm compliance to provision of tender in this regard.	
5.	Bidder confirms acceptance of relevant Terms of Payment specified in the Bid Document.	
6.	Bidder confirms that Contract Performance Security will be furnished as per Bid Document within 30 days of FOA in case of successful bidder.	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
7.	Bidder confirms that Contract Performance Security shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural 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.	Bidders confirms compliance to Completion Schedule as specified in Bid document and the same shall be reckoned from the date of Fax of Acceptance.	
9.	Bidders confirms acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document.  In case of delay, the bills / invoices shall be submitted after reducing the price reduction due to delay (refer PRS Clause).	
10.	a) Bidder confirms acceptance of all terms and conditions of Bid Document (all sections). b) Bidder confirms that printed terms and conditions of bidder are not applicable.	
11.	Bidder confirms their offer is valid for period specified in BDS from Final/Extended due date of opening of Techno-commercial Bids.	
12.	Bidder have furnished EMD/Bid Security details as under: a) EMD/ Bid Security No. & date b) Value c) Validity d) Bank Address/e-mail ID/Mobile no. [in case of BG] <b>OR</b> Bidder furnishes bid security declaration [applicable for MSEs, Start-Ups and CPSEs (to whom exemption is allowed as per extant guidelines in vogue)]	
13.	As per requirement of tender, bidder (having status as Pvt. Ltd. or Limited company) must upload bid duly digitally signed on e-portal through class-3B digital signature (DS). In case, class of DS or name of employee or name of employer is not visible in the digitally signed documents, the bid digitally signed as submitted by the person shall be binding on the bidder.	
14.	Bidder confirms that (i) none of Directors (in Board of Director) of bidder is a relative of any Director (in Board of Director) of GAIL or (ii) the bidder is not a firm in which any Director (in Board of Director) of GAIL or their relative is a partner.	





Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
15.	All correspondence must be in ENGLISH language only.	
16.	The contents of this Tender Document have not been modified or altered by Bidder. In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by them shall be liable for rejection.	
17.	Bidder confirms that all Bank charges associated with Bidder's Bank regarding release of payment etc. shall be borne by Bidder.	
18.	<p><u>No Deviation Confirmation:</u></p> <p>It may be note that any 'deviation / exception' in any form may result in rejection of Bid. Therefore, Bidder confirms that they have not taken any 'exception / deviation' anywhere in the Bid. In case any 'deviation / exception' is mentioned or noticed, Bidder's Bid may be rejected.</p>	
19.	<p>If the Bidder becomes a successful Bidder pursuant to the provisions of the Tender Document, the following Confirmation shall be automatically become enforceable:</p> <p>"We agree and acknowledge that the Employer is entering into the Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood &amp; agreed that the Government of India is not a party to the Contract/Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Purchaser is authorized to enter into Contract/Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Purchaser 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."</p>	
20.	Bidder to ensure all documents as per tender including clause 11 of Section III and all Formats are included in their bid	
21.	Bidder understands that Tender Document is not exhaustive. In case any activity though specifically not covered in description of 'Schedule of Rates' but is required to complete the work as per Scope of Work, Conditions of Contract, or any other part of Bidding document, the quoted rates will deemed to be inclusive of cost incurred for such activities unless otherwise specifically excluded. Bidder confirms to perform for fulfilment of the contract and completeness of the	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	supplies in all respect within the scheduled time frame and quoted price.	
22.	<p>Bidder hereby confirms that they are not on 'Holiday' by GAIL 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.</p> <p>Further, Bidder confirms that neither they 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 or the Ministry of Petroleum and Natural Gas.</p> <p>Bidder also confirms that they are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'.</p> <p>In case it comes to the notice of GAIL 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.</p> <p>Further, Bidder also confirms that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to GAIL by them.</p>	
23.	Bidder confirms that they have read and understood the General Conditions of Contract – Works available on GAIL's Tender website ( <a href="http://gailtenders.in/Gailtenders/gccs.asp">http://gailtenders.in/Gailtenders/gccs.asp</a> ) & no 'exception / deviation' anywhere has been taken in the same and that they shall abide by provisions of relevant GCC.	
24.	Bidder certifies that they would adhere to the Fraud Prevention Policy of GAIL [available on GAIL's website ( <a href="http://www.gailonline.com">www.gailonline.com</a> )] and shall not indulge themselves or allow others (working in GAIL) to indulge in fraudulent activities and that they would immediately apprise GAIL of the fraud/suspected fraud as soon as it comes to their notice. Concealment of facts regarding their involvement in fraudulent activities in connection with the business transaction(s) of GAIL is liable to be treated as crime and dealt with by the procedures of GAIL as applicable from time to time.	
25.	Bidder confirms that (i) any variation in GST at the time of supplies for any reasons, other than statutory, including variations due to turnover, shall be borne by them and (ii) any error of interpretation of applicability of rate of GST (CGST & SGST/ UTGST or IGST) on components of an item and/or various items of tender by them shall be dealt as per clause no. 13.13 of Section-III.	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
26.	<p>Bidders confirm to submit signed copy of Integrity Pact (wherever included in tender).</p> <p>If Bidder is a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.</p>	
27.	<p>Bidder confirms that there is no conflict of interest with other bidders, as per clause no.4.2 of Section-III (ITB) of Tender Document.</p>	
28.	<p>Bidder confirms that, in case of contradiction between the confirmations provided in this format and to the terms &amp; conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.</p>	
29	<p>The bidder (in case of Consortium, any member of the Consortium) or its Proprietor / Partner(s) / Director(s) of the Firm should not have been convicted by a Court of Law for an offence involving moral turpitude in relation to business dealings during the past Ten (10) years. The bidder shall give an affidavit to this effect. The affidavit must be affirmed before the competent judicial authority or duly notarized by the Notary. Besides, bidder should furnish litigation history of their firm or group firm (if claiming fulfilment of BEC on group entity terms). The litigation history shall include:</p> <ol style="list-style-type: none"> <li>Arbitration cases pending.</li> <li>Disputed incomplete works.</li> <li>Pending civil cases against the firm and / or its Proprietor / Partner(s) / Director(s) involving moral turpitude in relation to business dealings.</li> <li>Pending criminal cases against the firm and / or its Proprietor / Partner(s) / Director(s) involving moral turpitude in relation to business dealings.</li> <li>Punishments awarded under civil cases and / or criminal cases involving moral turpitude in relation to business dealings to the firm and / or its Proprietor / Partner(s) / Director(s).</li> </ol>	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



F-6  
**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 to concerned executive in GAIL issued the tender, by filling up the Format)**

To,

M/s GAIL (INDIA) LIMITED

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 : .....  
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 : .....

TENDER NO: GAIL/ND/CnP/ZLD/W581/2024

**F-7**  
**BIDDER'S EXPERIENCE**

To,

M/s GAIL (INDIA) LIMITED

---

SUB:

TENDER NO:

Sl. No	Description of the Services	LOA /WO No. and date	Full 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 ( <i>Specify Currency Amount</i> )	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:

**Note: As per cl.no.D of Section-II, only documents (Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids.**



**F-8 (A)**  
**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, corrigendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		X
i	Covering Letter, Letter of Submission		
ii	EMD / Declaration for Bid Security [as applicable] as per provisions of Tender		
iii	Digitally signed (in case of e-tendering) or 'signed & stamped (in case of Manual tender) tender document along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
v	Confirm submission of document alongwith unpriced bid as per bid requirement (including cl.no.11.1.1 of Section-III).		X
3.0	Confirm that all format duly filled in are enclosed with the bid duly Digitally Signed (in case of e-bidding)/ Signed and Stamped (in case of manual bidding) by authorised person(s)		
4.0	Confirm that the price part as per Price Schedule format submitted with Bidding Document/ uploaded in case of e-bid.		X
5.0	<del>Confirm that Undertaking as per Form 1 of Annexure-III to Section-III has been submitted (applicable for MSE and Class I Local supplier).</del>		X
6.0	Confirm that Undertaking as per <i>Form-2 to Annexure-V to Section-III</i> and Certification from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of other than companies) as per <i>Form-3 to Annexure-V</i>		X



	<i>to Section-III</i> are submitted. (Applicable for all bidders <del>including MSEs bidders</del> )		
7.0	Confirm that Undertaking as per Form-1 to Section-II have been submitted by the bidder (Guidelines from Procurement from a Country sharing a Land Border with India)		
8.0	Confirm submission of Checklist against Bid Evaluation Criteria as per format F-8(B)		

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

**F-8(B)**  
**CHECKLIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS**  
**(refer Section II of Tender document)**

BEC Clause No.	Description	Documents required for qualification	Documents Submitted by Bidder	Documents attested as per Section-II of Tender	Reference Page No. of the Bid submitted
<b>Technical BEC</b>					
1.	<b>Experience</b>	<i>Refer Section-II of tender document for complete details</i>		Yes/No	
2	<b>Experience of bidder acquired as a subcontractor</b>	Certificate from End User		Yes/No	
3.	<b>Job executed for Subsidiary / Fellow subsidiary/ Holding company.</b>	Tax paid invoice(s) duly certified by statutory auditor of the bidder towards payment of statutory tax in support of the job executed for Subsidiary / Fellow subsidiary/ Holding company.		Yes/No	
4.	<b>Any other technical criteria in BEC</b>	<i>Refer Section-II of tender document for complete details</i>		Yes/No	
<b>Financial BEC</b>					





1.	<b>Average Annual Turn Over</b>	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for preceding three Audited Financial Years.	Submitted (Mention specific year..... )	Yes/No	
2.	<b>Net Worth</b>	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for last Audited Financial Year.	Submitted (Mention specific year.....)	Yes/No	
3.	<b>Working Capital</b>	Audited Financial Statements [including Auditor's Report, Balance sheet, Profit & Loss Accounts statements, Notes & schedules etc.] for last Audited Financial Year.  If the bidder's working capital is negative or inadequate, the bidder shall submit a letter (in prescribed format) from their bank having net worth not less than Rs.100 Crores, confirming the availability of line of credit for at least working capital requirement as stated above.	Submitted (Mention specific year..... )  Submitted/ Not Applicable (Bidder to tick appropriate option)	Yes/No	
4.	<b>Format for Details of financial capability of Bidder</b>	Bidder shall submit "Details of financial capability of Bidder" in prescribed format duly signed and stamped by a chartered accountant / Certified Public Accountant (CPA).	Submitted		

Place:  
Date:

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

**F-9**  
**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. GAIL (India) Limited

-----  
-----  
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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 GAIL's Tender No. .... dated ..... for .....(Name of the supply/work/services/consultancy) and as per the terms of the said Tender Document 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 :

Email Id :

Contact No. :

Stamp

**Note:**

This Declaration Letter for line of credit shall be from single bank only. Letters from multiple banks shall not be applicable. However, banking syndicate will be acceptable wherein a group of banks can jointly provide line of credit to the bidder.



F-10

**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:	
Total (A)	
Average Annual Financial Turnover during the last three financial years (A/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:**

- 1.0 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]
- 2.0 We confirm that above figures are after referring instructions at page 2 of 2 of F-10.
- 3.0 Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them

Name of Audit Firm:  
Chartered Accountant/CPA  
Date:

[Signature of Authorized Signatory]  
Name:  
Designation:  
Seal:  
Membership No.:  
UDIN:



(Page 1 of 2)

**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 “Revenue from Operations” as per Profit & Loss account of audited annual financial statements
  - (ii) **Working Capital** shall be “Current Assets less Current liabilities” and
  - (iii) **Net Worth** shall be Aggregate value of the paid-up share capital and all reserves created out of the profits and securities premium account, after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any, but does not include reserves created out of revaluation of assets, writeback of depreciation and amalgamation. .

In case the date of constitution/incorporation of the bidder is less than 3 years old, the average turnover in respect of the completed financial years after the date of constitution/ incorporation shall be taken into account for minimum Average Annual Financial Turnover criteria.

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.

(Page 2 of 2)



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F-11

DELETED



**BIDDER'S QUERIES FOR PRE BID MEETING**

To,

M/s GAIL (INDIA) LIMITED

Sub :

Tender No :

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

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

**SIGNATURE OF BIDDER:** \_\_\_\_\_

**NAME OF BIDDER :** \_\_\_\_\_

**F-13**

**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 GAIL(India) 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 GAIL (India) Limited 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-14

## INTEGRITY PACT

### INTRODUCTION:

GAIL as one of its endeavour to maintain and foster most ethical and corruption free business environment, have decided to adopt the Integrity Pact, a tool developed by the Transparency International, to ensure that all activities and transactions between the Company (GAIL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption. Accordingly, an MOU on Integrity Pact has been signed on 23.07.2007 by GAIL with Transparency International India.

Considering the above, the details mentioned at attached Annexure-1 are applicable as stated in Instruction to Bidders of Bid Document in addition to the existing stipulation regarding Corrupt and Fraudulent Practices.

The attached copy of the Integrity Pact at Annexure- 2 shall be included in the Bid submitted by the bidder (to be executed by the bidder for all tenders of value Rs. 1 (One) crore and above). In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.







ANNEXURE-1

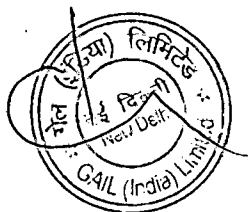
Bidder is required to sign the Integrity Pact with GAIL as per format & terms and conditions enclosed with tender. In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.

**I COMMITMENTS AND OBLIGATIONS OF THE "COUNTERPARTY"**

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

**II VIOLATIONS & CONSEQUENCES:**

- a) If a Counterparty commits a violation of its Commitments and Obligations under the Integrity Pact Programme during bidding process, their entire Earnest Money Deposit/ Bid Security, would be forfeited and in addition, action shall be taken as per "**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**"
- b) In case of violation of the Integrity pact by Counterparty after award of the Contract, GAIL shall be entitled to terminate the Contract. Further, GAIL would forfeit the security deposits/ Contract Performance Bank Guarantee and in addition, action shall be taken as per "**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**"



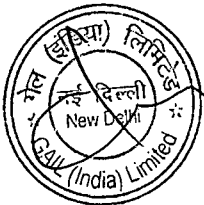


**INDEPENDENT EXTERNAL MONITORS (IEMS)**

Presently the panel consisting of the following Independent External Monitors (IEMs) has been appointed by GAIL, in terms of Integrity Pact(IP) which forms part of GAIL Tenders / Contracts.

- i) Shri Deepak Kashyap, (email id : [deepakkashyapnd02@gmail.com](mailto:deepakkashyapnd02@gmail.com))
- ii) Shri Yogendra Tripathi (email id : [yogendratripathi@yahoo.com](mailto:yogendratripathi@yahoo.com) )
- iii) Shri Amrit Lugun (email id : [asha74lugun@gmail.com](mailto:asha74lugun@gmail.com))

This panel is authorised to examine / consider all references made to it under this tender/ contract. "The bidder(s), in case of any dispute(s) / complaint(s) pertaining to this tender falling under provisions of Integrity Pact may raise the same either directly with the IEMs on the panel viz Shri Deepak Kashyap, Email : [deepakkashyapnd02@gmail.com](mailto:deepakkashyapnd02@gmail.com), Shri Yogendra Tripathi , Email id : [yogendratripathi@yahoo.com](mailto:yogendratripathi@yahoo.com) & Shri Amrit Lugun , Email id : [asha74lugun@gmail.com](mailto:asha74lugun@gmail.com) or with CC to them through their Nodal Officer- Sh. T Xalxo, GM (C&P)- Email [txalxo@gail.co.in](mailto:txalxo@gail.co.in), GAIL ( India) Limited, GAIL Bhawan, 16, Bhikaiji Cama Place, R.K. Puram, New Delhi – 110066. On receipt of such complaints/representations, Nodal Officer shall coordinate with IEM Panel and GAIL authorities concerned for their disposal as per extant guidelines."





**INTEGRITY PACT**

(To be executed on plain paper)

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

AND

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

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

**PREAMBLE**

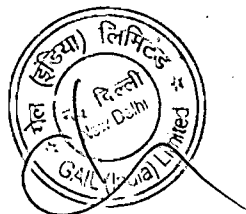
The Principal intends to award under laid down organizational procedures, contract/s for \_\_\_\_\_. The Principal values full compliance with all relevant laws of land rules, regulations, and economic use of resources and of fairness /transparency in its relations with its Bidder (s) and/or Contractor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

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1 – Commitments of the Principal**

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following Principles:-
  - i) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or for a third person, any material or immaterial benefit which the person is not legally entitled to.
  - ii) The Principal will, during the tender process treat all Bidder(s) with equity and reasons. The Principal will in particular, before and during the tender process, provide to all Bidder (s) the same information and will not provide to any Bidder (s) confidential / additional information through which the Bidder (s) could obtain an advantage in relation to the tender process or the contract execution.
  - iii) The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/ Prevention of Corruption Act (PC Act), or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officers and in addition can initiate disciplinary actions.

**Section 2 – Commitments of the Bidder (s)/Contractor (s)**





1. The Bidder (s) / Contractor (s) commits themselves to take all measures necessary to prevent corruption. The Bidder (s)/ Contractor (s) commits themselves to observe the following principles during participation in the tender process and during the contract execution:
- The Bidder (s) / Contractor (s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
  - The Bidder (s) / Contractor (s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelisation in the bidding process.
  - The Bidder (s) / Contractor (s) will not commit any offence under the relevant IPC/PC Act; further, the Bidder (s) / Contractor (s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - The Bidder (s)/ Contractor (s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly, the Bidder (s)/ Contractor (s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further, all the payments made to the Indian agent/ representative have to be in India Rupees only.
  - The Bidder (s) / Contractor (s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
  - Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
2. The Bidder(s)/ Contractor(s) shall not instigate third person to commit offences outlined above or be an accessory to such offences.

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

If the Bidder (s) / Contractor (s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder (s) / Contractor (s) from the tender





process or take action as per provisions of “Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”.

#### Section 4 – Compensation for Damages

1. If the Principal has disqualified the Bidder (s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security .
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor, liquidated damages equal to the Contract Value or the amount equivalent to Performance Bank Guarantee.

#### Section 5 – Previous transgression

1. The Bidder declares that no previous transgression occurred in the last three years, with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or actions can be taken as per provisions of “Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”

#### Section 6 – Equal treatment to all Bidders / Contractors / Subcontractors

1. In case of sub-contracting, the Principal contractor shall take the responsibility of the adoption of IP by the sub-contractor. It is to be ensured by him that all sub-contractors also sign the IP. .
2. The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

#### Section 7 – Criminal charges against violating Bidder (s) / Contractor (s) / Sub-contractor (s)

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

#### Section 8 –Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all documents/records





- pertaining to the contract for which a complaint or issue is raised before them, as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed. It will be obligatory for him/ her to treat the information and documents of the Bidders/ Contractors as confidential. He/she reports to the C&MD, GAIL.
3. The Bidder (s)/ Contractor (s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.
  4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
  5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
  6. The Monitor will submit a written report to the C&MD, GAIL within 30 days from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
  7. If the Monitor has reported to the C&MD, GAIL, a substantiated suspicion of an offence under relevant IPC/PC Act, and the C&MD, GAIL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, then only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Central Vigilance Commission.
  8. The word 'Monitor' would include both singular and plural.
  9. In case of any complaints referred under IP Program, the role of IEMs is advisory and would not be legally binding and it is restricted to resolving the issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidder.
  10. After award of contract, the IEMs shall look into any issue relating to execution of contract, if specifically raised before them. As an illustrative example, if a contractor who has been awarded the contract, during the execution of contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.

#### Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded. Any violation to the same would entail disqualification of the bidders and exclusion from future business dealing.





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

Section 10 – Miscellaneous provisions

- 1. This agreement is subject to Indian Law. Place of performance and exclusive jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices, if any, need to be made in writing. Side agreements have not been made.
3. If the Contractor / Bidder is a Joint Venture or a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several of the provisions of this agreement turn out to be invalid, the remainder of this agreement shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions in such a case.
5. Issues like warranty / guarantee, etc. shall be outside the purview of IEMs.
6. In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in Integrity Pact will prevail.

(For & on Behalf of Principal)

(For & on Behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

संदीप कुमार शर्मा / Sandeep Kumar Sharma
मुख्य प्रबन्धक (संविदा एवं प्रापण) / Chief Manage: (C&P)
गेल (इण्डिया) लिमिटेड / GAIL (India) Limited
Place New Delhi-110 066 / New Delhi-110 066

Date 02.04.2024

Witness 1:

(Name & Address)

Witness 2:

(Name & Address)



## INDEMNITY BOND

WHEREAS GAIL (India) Ltd. (hereinafter referred to as “GAIL”) which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at 16, Bhikaiji, Cama Place, R.K. Puram, New Delhi 110066 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.

GAIL has also advised the Contractor to execute an Indemnity Bond in general in favour of GAIL indemnifying GAIL 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 GAIL for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GAIL 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 GAIL under or in relation to this contract. The Contractor undertakes to compensate and pay to GAIL and/or any of its employees, Directors including Independent Directors, forth with on demand without any protest the amount claimed by GAIL 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 GAIL that:

- (i) This Indemnity shall remain valid and irrevocable for all claims of GAIL 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 GAIL 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 GAIL are settled by the Contractor and/or GAIL 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



## F-16

## FREQUENTLY ASKED QUESTIONS (FAQs)

SL.NO.	QUESTION	ANSWER
1.0	Can any vendor quote for subject Tender?	Yes. A Vendor has to meet Bid Evaluation Criteria given under Section II of Tender document in addition to other requirements.
2.0	Should the Bid Evaluation Criteria documents be attested?	Yes. Please refer Section II of Tender document
3.0	Is attending Pre Bid Meeting mandatory.	No. Refer Clause No. 17 of Instruction to Bidders of Tender Document. However attending Pre Bid Meeting is recommended to sort out any issue before submission of bid by a Bidder.
4.0	Can a vendor submit more than 1 offer?	No. Please refer Clause No. 4 of Instruction to Bidders of Tender Document.
5.0	Is there any Help document available for e-Tender.	Refer FAQs as available on Govt. e-Procurement System of National Informatics Center (NIC) <a href="https://etenders.gov.in/eprocure/app">https://etenders.gov.in/eprocure/app</a>
6.0	Are there are any MSE (Micro & Small Enterprises) benefits available?	Yes. Refer Clause No. 40 of Instructions to Bidders of Tender Document.
7.0	Are there are any benefits available to Startups?	Refer Clause No. 49 of Instructions to Bidders of Tender Document.

All the terms and conditions of Tender remain unaltered.



F-17

**UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-INVOICE AS PER GST LAWS)**

**(to be submitted on letter head along with documents for release of payment)**

To,  
M/s GAIL (INDIA) LIMITED

.....

SUB: .....

PO NO: .....

**Dear Sir,**

We \_\_\_\_\_ (Name of the Supplier) hereby confirm that E-Invoice provision as per the GST Law is

(i) Applicable to us [ ]

(ii) Not Applicable to us [ ]

**(Supplier is to tick appropriate option [✓]above).**

In case, same is applicable to us, we confirm that we will submit E-Invoice after complying with all the requirements of GST Laws. If the invoice issued without following this process, such invoice can-not be processed for payment by GAIL as no ITC is allowed on such invoices. We also confirm that If input tax credit is not available to GAIL for any reason attributable to Supplier (both for E-invoicing cases and non-E-invoicing cases), then GAIL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the Supplier under this contract or under any other contract.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



F-18

**NO CLAIM CERTIFICATE  
(TO BE SUBMITTED BEFORE RELEASE OF CPS/SECURITY DEPOSIT)**

*[On the Letter-head of Supplier/Vendor]*

We, \_\_\_\_\_, a company incorporated under the laws of India/ a Consortium between \* \_\_\_ and \* \_\_\_ (*name of Consortium partners to be inserted*)/ a Partnership Firm consisting of \* \_\_\_ and \* \_\_\_ (*name of Partners to be inserted*)/ a Sole Proprietorship (as the case may be), having its registered office at \_\_\_\_\_ and carrying on business under the name and style M/s. \_\_\_\_\_ were awarded the contract by GAIL (India) Ltd. in reference to Tender No. \_\_\_\_\_ dated \_\_\_\_\_ (“Order/Contract”).

After completion of the above-said items/job under the Order/Contract, we have scrutinized all our claims, contentions, disputes, issues and we hereby confirm that after adjusting all payments received by us against our R.A. Bills and final bill, we have no claims, dues, issues and contentions from GAIL (India) Ltd.

We further absolve GAIL (India) Ltd. from all liabilities present or future arising directly or indirectly out of the Contract.

There is no economic duress or any other compulsion on us for submission of this no claim certificate.

Signature with Seal of Supplier/Vendor

Dated:



---

# **SECTION-IV**

## **GENERAL CONDITIONS OF CONTRACT- WORKS**

**Note: General Conditions of Contract-Works is available on  
GAIL's Tender Website <http://gailtenders.in/Gailtenders/gccs.asp>**



ACTIVE TENDERS TENDERS SEARCH CORRIGENDUM TENDER AWARDED

# GAIL Tenders

"Think Digital, Be Digital"

## The GAIL Tenders Information System

Friday, January 5, 2024 Tender Search E-Tenders

WELCOME ! TO GAIL TENDER WEBSITE

### Tender Statistics

Tender(s): 154 Corrigendum(s): 24

Click here to Login for uploading Tenders / Corrigendum (Only For GAIL Users)

Annual Procurement Plan

### Today's Statistics

Tender(s): 6 Corrigendum(s): 1

DETAILS OF PRE-TENDER CONFERENCE Authentication of BEC Documents ADDENDUM TO INSTRUCTIONS TO BIDDERS (INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)

### ACTIVE TENDERS

Tenders which are currently active and for which the last date is near future. You can choose from the tenders whose last date is due

- ★ Today
- ★ Next Week
- ★ Next Fortnight
- ★ All Active Tenders

### TENDERS BY CLASSIFICATIONS

Tender notifications by the Tender Category

- ★ Purchase
- ★ Empanelment
- ★ Auction
- ★ Work contract
- ★ Service Contract
- ★ Sell/Dispose
- ★ Consultancy
- ★ EOI (Expression of Interest)

### TENDER SEARCH

- ★ Location
- ★ Category

### Corrigendum

Tender notifications for which corrigendum has been issued

**General Conditions of Contracts (GCCs)** | Corporate Website | Corporate Intranet | Corporate Email | Archived PTC

Reverse Auction Training Videos Vendor Invoice Management System

GAIL (India) Limited



 पी डी आई एल <b>PDIL</b>	PROJECTS & DEVELOPMENT INDIA LTD.	PNMM/PC- 286/E-001	00	 गैल <b>GAIL</b>
		DOCUMENT NO	REV	
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**SECTION-V**  
**SPECIAL CONDITIONS OF CONTRACT**

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## **1.0 GENERAL**

- 1.1 In line with Clause 22.1 of General Conditions of Contract (GCC), these Special Conditions of Contract (SCC) 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. Provisions as mentioned under Instructions (ITB) shall also apply.
- 1.2 CONSULTANT referred to in Clause 1.1.8 of GCC means “Projects & Development India Limited” who are the PMC consultant to the employer for this project and having registered office at “PDIL Bhawan, A-14, Sector-1, Noida-201301”.
- 1.3 Location of Site referred to in Clause 2.1 of GCC shall be “PETROCHEMICAL COMPLEX OF M/S GAIL (INDIA) LIMITED AT PATA, UTTAR PRADESH, INDIA”.
- 1.4 It will be the 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.

## **2.0 SCOPE OF WORK & SUPPLY**

- 2.1 The scope of work & supply shall be as mentioned in Job Specifications/ Technical Specifications, Schedule of Rates, GCC etc. of Bidding Document. All materials, equipment, labour & consumables required for successful completion of work as per the description of item in Schedule of Rates shall be supplied by the CONTRACTOR and the cost of such supply shall be deemed to be included in the quoted rates without any additional liability on the part of GAIL except for the material specifically covered under GAIL Scope of Supply.

## **3.0 SUPPLY OF WATER , POWER & OTHER UTILITIES**

- 3.1 The Clause No. 2.3 to 2.5 given in GCC is modified to following extent:

### **3.2 CONSTRUCTION WATER:**

Construction water shall be provided by Owner on chargeable basis at the rate of 0.5% of the executed contract value at one point from where CONTRACTOR will make his own arrangement for temporary distribution through tested and certified piping / fittings in line with the provisions of GCC.  
However, CONTRACTOR shall arrange for drinking water at his own cost.

### **3.3 CONSTRUCTION POWER:**

Owner will provide power on chargeable basis at the rate of Rs. 10/Unit (KWh), at one point from where CONTRACTOR shall make his own arrangement for temporary distribution in line with the provisions of GCC.

### **3.4 LAND FOR CONTRACTOR’S OFFICE & FABRICATION YARD:**

GAIL will offer land for use of contractor’s office space and fabrication yard inside the GAIL premises up to 3 months after completion of works on free of cost basis. However in case, contractor fails to clear the site beyond 3 months after completion of works (as defined above), the payment of final Bill and release of CPBG shall be withheld and can be done only after full vacation of site by contractor. Additionally, GAIL shall charge/levy rent for occupying land inside GAIL premises at twice the rate to be decided by rental formula (as per applicable Government

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norms in force). Decision of Engineer-In-Charge in this regard to applicability of rental charge shall be final and binding on the contractor and same will not be subject of Arbitration process.

- 3.5 If Owner is unable to provide Construction water and Construction power as mentioned above for any reasons whatsoever, the same have to arrange by CONTRACTOR. No time extension or compensation shall be payable on the above account. This shall not relieve CONTRACTOR of his responsibility for timely completion of the work as stipulated in the bidding document.

#### **4.0 TIME SCHEDULE**

- 4.1 The Work shall be executed strictly as per time schedule given in ANNEXURE- V to SCC. The period of completion given includes the time required for mobilisation, demobilisation and completion of work in all respects to the satisfaction of the Engineer-in-Charge.
- 4.2 Contractor shall adhere to the provisions of GCC mentioned in regard to Time Schedule.

#### **5.0 DRAWINGS AND DOCUMENTS**

- 5.1 Provisions as mentioned in GCC shall apply in this regard. However, 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.
- 5.2 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 what so ever shall be entertained for any variation in the "approved/issued for construction drawings" and "tender drawings" regarding any changes/units unless otherwise agreed.
- 5.3 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.

#### **6.0 LIMITATION OF LIABILITY**

- 6.1 Clause 80.3 of GCC stands modified to the extent that the liability on account of the following shall not be limited for the following:
- i) In the event of breach of any Applicable Law;
  - ii) In the event of fraud, willful misconduct or illegal or unlawful acts, or gross negligence of the Contractor or any person acting on behalf of the Contractor; or
  - iii) In the event of acts or omissions of the Contractor which are contrary to the most elementary rules of diligence which a conscientious Contractor would have followed in similar circumstances; or
  - iv) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or

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v) For any damage to any third party, including death or injury of any third party caused by the Contractor or any person or firm acting on behalf of the Contractor in executing the Works.

6.2 Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.

6.3 The final payment by the Employer/Consultant in pursuance of the Contract terms shall not mean release of the Contractor from all of his liabilities under the Contract. The Contractor shall be liable and committed under this contract to fulfil all his liabilities and responsibilities, till the time of release of contract performance guarantee by the Employer/Consultant.

## **7.0 CONTRACT PERFORMANCE GUARANTEE**

Clause 24 of GCC stands modified only to the following extent:

7.1 "15 days" mentioned in Clause 24.1 to be read as "30 days".

7.2 Amount of Contract Performance Security shall be 10% of the Contract Value. Contractor can submit Contract Performance Security for 10% of the Contract Value within 30 days of notification of award.


7.3 The Bank Guarantee submitted shall be valid till expiry of 90 (Ninety) days after the end of Defect Liability Period.

7.4 In the event completion of works is delayed beyond the Scheduled Completion Date for any reasons whatsoever, the Contractor shall have the validity of the guarantee suitably extended to cover the period mentioned above.

7.5 In the event, if Contract Value is increased during the Contract Validity Period for any reason whatsoever, the value of the Bank Guarantee towards Contract Performance Guarantee shall be increased proportionately by the CONTRACTOR within 7 (Seven) Days to ensure that it remains valid for an amount which is equivalent to the amount stated as per Clause 7.2 above, as determined by the engineer-in-Charge, else amount equivalent to such differential between original contract price and executed contract price shall be withheld/ deducted from the RA bills on account of increase in the extend of Contract Performance Guarantee.

7.6 The Employer/Consultant shall have an unqualified option under this guarantee to invoke the Banker's Guarantee and claim the amount there under in the event of the Contractor failing to honour any of the commitments entered into under this Contract and/or in respect of any amount due from the Contractor to the Employer/Consultant. In case Contractor fails to furnish the requisite Bank Guarantee as stipulated above, then the Employer/Consultant shall have the option to terminate the Notification of Award of Work and forfeit the Bid Security/Earnest Money amount and no compensation for the works performed shall be payable upon such termination.

7.7 Upon completion of the Works as per Completion Schedule stipulated in the Contract, the above said guarantee shall be considered to constitute the Contractor's warranty/guarantee for the work done by him or for the Works supplied and their performance as per the specifications and any other conditions against this Contract. The warranty/guarantee shall remain in force for Defect Liability Period.

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## **8.0 TAXES, DUTIES AND LEVIES**

- 8.1 The quoted prices shall be inclusive of all taxes & duties except **GST (CGST & SGST/ UTGST or IGST)** with respect to CONTRACTOR's scope of work/ scope of supply till the completion of the work in line with the provisions mentioned in Instructions to Bidders (ITB).
- 8.2 Any errors of interpretation of applicability of taxes/ duties by Bidders shall be to their account.

## **9.0 DELETED**

## **10.0 DELETED**

## **11.0 DELETED**

## **12.0 DELETED**

## **13.0 DELETED**

## **14.0 CONFIDENTIAL INFORMATION**

- 14.1 Neither Employer/Consultant nor Contractor nor their personnel, agents nor any sub-contractor shall divulge to any one (other than persons designated by the party disclosing the information) any information designated in writing as confidential and obtained from the disclosing party during the course of execution of the works so long as and to the extent that the information has not become part of the public domain. This obligation does not apply to information furnished or made known to the recipient of the information without restriction as to its use by third parties or which was in recipient's possession at the time of disclosure by the disclosing party. Upon completion of the works or in the event of termination pursuant to the provisions of the contract, Contractor shall immediately return to Employer/Consultant all drawings, plans, specifications and other documents supplied to the Contractor by or on behalf of Employer/Consultant or prepared by the Contractor solely for the purpose of the performance of the works, including all copies made thereof by the Contractor.

## **15.0 FIRM PRICE**

- 15.1 The quoted price shall be firm and shall not be subjected to price escalation on any account, till the work is completed in all respects except for the following:

### **i) VARIATION DUE TO TAXES & DUTIES**

Quoted prices shall be subject to increase / decrease due to variations in taxes & duties and new taxes & duties as per the provisions mentioned in the Bidding Document.

**Note:** Variations, if any, on account of materials and / or labour and / or fuel (including diesel) shall be to CONTRACTOR's account. Nothing shall be payable extra by GAIL on this account.

## **16.0 WORKS CONTRACT**

- 16.1 The work covered under this contract shall be treated as "Works Contract".

## **17.0 PROVIDENT FUND ACT**

- 17.1 The Contractor shall strictly comply with the provisions of Employees Provident Fund Act and register themselves with RPFCA before commencing work. The

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Contractor shall deposit Employees and Employers contributions to the RPFC every month. The Contractor shall furnish along with each running bill, the challan/ receipt for the payment made to the RPFC for the preceding months.

- 17.2 The contractor(s) are required to submit copies of electronic challan cum return (ECR)/electronic challan along with on line uploaded list of contract workers/members for the proof of remittance of Provident Fund (PF) and Employee State Insurance (ESI) contribution with respective authorities for the contract workers engaged by him in GAIL while submitting monthly bills. In case the relevant provident fund Authority's receipt/challans referred to above are not furnished, Owner shall deduct 5% (five percent) of the payable amount from the Running Bill and retain the deducted amount as a security for the contribution to provident fund. Such retained amounts shall be released to the Contractor only on production of challan/receipts of the relevant provident fund Authority for the period covered by the related deduction.

## 18.0 **MOBILIZATION ADVANCE**

Contractor, if requested, shall be paid recoverable interest bearing Mobilization Advance [on submission of Bank Guarantee as per the proforma attached in the Bidding Document] up to a maximum of 10% (Ten Percent) of awarded Contract Value. The mobilization advance will attract an interest rate (medium terms) at Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on the date of disbursement of mobilization advance) plus 2.0% p.a. on reducing balance basis.

The Bank Guarantee etc. taken towards security of 'Mobilization Advance' should be at least 110% of the advance so as to enable recovery of not only principal amount but also the interest portion, if so required.

The Mobilization Advance should not be paid in less than two instalments (each maximum of 5%) subject to the fulfilment of the following conditions:

### 18.1 **FIRST INSTALLMENT**

5% (Five percent) of Contract value shall be payable as the first instalment of mobilisation advance, within 15 (fifteen) Calendar Days, after fulfilling the following formalities by the contractor:

- Signing of the contract agreement by the Contractor;
- Submission of the contract performance bank guarantee; and
- Submission of the mobilization advance guarantee.

### 18.2 **SECOND INSTALMENT**

Balance 5% (Five Percent) subject to the fulfilment of the following conditions or other specific conditions on case to case basis:

- After the contractor has constructed a site office, storage shed, fabrication yard, etc. and has physically mobilized construction equipment and is ready to start the Works to the entire satisfaction of the Engineer-in-Charge or linked to the progress of work if so indicated in Special Condition of Contract.
- Submission of Mobilization Advance Guarantee.

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### 18.3 **RECOVERY OF MOBILISATION ADVANCE**

Recoveries will be effected from each Running Account Bill at the rate of 10% of the Gross bill value, till the entire mobilization advance (together with interest accrued thereon) is fully recovered. In any case, mobilization advance shall be fully recovered before release of payment due towards Mechanical Completion/ Pre-Final Bill.

### 19.0 **CHANGE ORDERS**

19.1 A change order will be initiated in case:

- i. The Employer/Consultant directs the Contractor to include any addition to the scope of work not covered under this contract or delete any part of the scope of the work under the contract.
- ii. Contractor requests to delete any part of the work which will not adversely affect the operational capabilities of the project and if agreed by the Employer/Consultant and for which cost and time benefits shall be passed on to the Employer/Consultant.

19.2 Any changes required by the Employer/Consultant before giving their approval to detailed procedure or any other document relating to material procurement, layout plans etc for complying with the requirements of bidding document shall not be construed to be a change in the scope of work under the contract.

19.3 Any change order as above comprising an alteration which involves a change in the cost of the works (which sort of alteration is hereinafter called a "Variation") shall be the subject of an amendment to the contract by way of an increase or decrease in the contract price and adjustment of the Construction Schedule, if any.

19.4 If the contract provides applicable rates for the valuation of the variation in question the contract price shall be increased or decreased in accordance with those rates. If the parties agree that the contract does not contain applicable rates then the rates shall be arrived in line with Clause 60 of GCC. Any change order must be duly approved by the Employer/Consultant in writing.

19.5 If there is a difference of opinion between Contractor and Employer/Consultant whether a particular work constitutes a change order or not, the matter shall be handled in accordance with the procedures.


19.6 Within 10 (Ten) working days of receiving the comments from the Employer/Consultant on the documents submitted by the Contractor for approval, the Contractor's response in writing stating which item(s) is/are potential change(s), if applicable, will be submitted to the Employer/Consultant.

#### 19.7 **Procedure**

19.7.1 During execution of work if the Contractor observes that any new requirements which is not specific or intended in the bidding document has been indicated by Employer/Consultant, they shall discuss the matter with Employer/Consultant's representatives.

19.7.2 In case such requirement arises from the side of the Contractor they would also discuss the matter with Employer/Consultant's Representative.

19.7.3 In either of the two cases above, the representatives of both the parties shall

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discuss the project requirement and mutually decide whether the project requirement constitutes a change order.

- 19.7.4 If it is mutually agreed that the project requirement/Inquiry constitutes a "Change Order" then a joint memorandum will be prepared to confirm a "Change Order" and basic ideas of necessary agreed modifications.
- 19.7.5 Contractor will study the work required in accordance with the Joint memorandum and assess subsequent schedule and cost effect if any.
- 19.7.6 The results of this study would be discussed mutually to enable Employer/Consultant to give a final decision whether Contractor should proceed with the Change Order or not, in the best interest of the Project.
- 19.7.7 If Employer/Consultant's representative accepts the change order in writing then Contractor shall proceed with the work stipulated in the Change order. Time worked by all workmen employed and a statement showing the description and quantity of all materials and plant utilized for extra work shall be submitted to Employer/Consultant. The Employer/Consultant's representative shall sign and return to the Contractor the statement, as agreed. At the end of each month the Contractor shall deliver to the Employer/Consultant's representative a priced statement of the labour, materials and plant used. Whenever any dispute arises as to cost allocation between the Contractor and the Employer/Consultant, the voucher shall nevertheless be signed by the Employer/Consultant as a record of time worked and materials used. List and vouchers so signed will be the subject of negotiations between the Employer/Consultant and the Contractor regarding their costs allocation.
- 19.7.8 In case, mutual agreement as above that is whether Project Requirement constitutes a Change order or not, is not reached, then Contractor, in the interest of the project, shall take up the implementation of the work, if advised in writing to do so by Employer/Consultant's representative pending settlement between the two parties to the effect whether the Project Requirement constitutes a change order or not as per the terms and conditions of Contract Documents.
- 19.7.9 The time and cost effect in such a case shall be mutually verified for the purpose of record. Should it be established that the said work is constituting a Change Order, the same shall be compensated taking into account the records kept and in accordance with the contract.
- 19.7.10 Should the amount of Extra Work/ Change Order, if any, which the Contractor may be required to perform by the Employer/Consultant, fairly entitles the Contractor to extensions of time beyond the scheduled completion date for completion of either the whole of the works or for such Extra Work only, the Employer/Consultant and the Contractor shall mutually discuss and decide the extension of time, if any to be granted to the Contractor.

## **20.0 CONSTRUCTION EQUIPMENT AND SITE ORGANIZATION**

### **20.1 CONSTRUCTION EQUIPMENT**

- 20.1.1 The CONTRACTOR shall without prejudice to his responsibilities to execute and complete the work as per the specifications and time for completion, progressively deploy minimum construction equipment & tools and further augment the same depending on the exigencies of work as per ANNEXURE-I to SCC and as decided by the Engineer-in-Charge so as to suit the construction schedule within scheduled completion date without any additional cost to Employer.

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20.1.2 The Employer/Consultant shall not supply any Construction Equipment.

20.2 **MANPOWER DEPLOYMENT**

20.2.1 The CONTRACTOR shall without prejudice to his overall responsibilities and liabilities to provide adequate qualified and skilled personnel on the work as per ANNEXURE-II to SCC and shall deploy site organization and augment the same as decided by the Engineer-in-Charge depending on the exigencies of work so as to complete all works within the contracted time schedule and without any additional cost to employer. The prerequisite requirement includes the details of the manpower mobilized and a letterhead request for gate pass.



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20.2.2 Qualification and Experience of key construction personnel (as per ANNEXURE-II to SCC) and penalty for their non-mobilization of key personnel shall be as mentioned below:

Penalty for non-mobilization per day per person after the contractual mobilisation period / mobilisation schedule agreed during Kick off Meeting / jointly agreed between contractor and PMC / owner based on front availability etc.

- Rs. 5000/- for Resident Construction Manager/ Resident Engineer/ Site-in-Charge;
- Rs. 3000/- for Lead QA/QC Engineer, Lead Planning Engineer, Warehouse In-charge, Lead Discipline Engineer, Lead Welding/ NDT Engineer and the Quantity Surveyor
- Safety Officer (As per HSE Specification)

Notes: (for Penalty clauses)

- a. All intervening off days (Sundays etc.) and holidays will be counted for levy of penalty
- b. Mobilised personnel shall not be demobilised till contractual completion or based on consent of Engineer-in-Charge else penalties as above shall be applied.
- c. Total of above penalties shall not exceed 3% of the contract value.
- d. The above penalties

20.2.3 In addition to this, CONTRACTOR shall deploy Safety Supervisors to ensure safer working conditions at site. In case where the works are further sub-contracted by the PDIL selected CONTRACTORS, Safety Supervisors are to be provided by the PDIL selected CONTRACTORS.

## **21.0 MECHANISED CONSTRUCTION**

21.1 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. Contractor agrees that he will deploy the required numbers and types of the plant & machinery applicable for different activities in consultation with the Engineer-in-charge during execution of works.

21.2 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 mechanised construction techniques and that the Employer/Consultant in this regard shall entertain no claim whatsoever.

## **22.0 GENERAL GUIDELINES**

22.1 Contractor shall be responsible for organising the lifting of the equipment in the proper sequence, that orderly progress of the work is ensured and access routes for erecting the other equipments are kept open.

22.2 Orientation of all foundation, elevations, lengths and disposition of anchor bolts and diameter of holes in the supports saddles shall be checked by contractor, well in advance. Minor rectifications including chipping of foundations as the case may be shall be carried out at no extra cost by the contractor after obtaining prior approval of the Engineer-in-Charge. The Contractor shall also be provided with the necessary structural drawings and piping layouts etc., wherever required for reference. During the structural member need to be dismantled, to facilitate the

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equipment erection, same shall be done by the contractor after ensuring proper stability of main structure with prior permission of Engineer-in-Charge. All such dismantled members shall be put in position back after the completion of equipment erection to satisfaction of Engineer-in-Charge.

22.3 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.

22.4 Manufacturer's recommendations and detailed specifications for the installation of the various equipment and machines will be passed on to the contractor to the extent available during the performance of work. The requirements stipulated in these clauses shall be fulfilled by the Contractor.

22.5 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.

22.6 DELETED

### **23.0 MEASUREMENT OF WORKS**

23.1 In addition to the provisions of relevant clause of GCC and associated provisions thereof, the provisions of CPWD Manual shall also apply.

### **24.0 TERMS OF PAYMENT**

24.1 Basis and terms of payment for making "On Account Payment" shall be as set out in ANNEXURE-III to SCC.

### **25.0 STATUTORY APPROVALS**

25.1 Unless otherwise specified in Bidding Documents, it shall be the CONTRACTOR's sole responsibility to obtain all statutory approvals from any authority such as Inspector of Factories, Development Authorities, Municipal Corporation and other concerned authorities (except for environment clearance and Consent to Establish/Operate, however the data and information required for the same shall be made available by the contractor) required under any statute, rule or regulation of the Central or State Government concerned with the performance of the CONTRACT and/or the contractual Work. 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 by the CONTRACTOR well ahead of time so that the actual execution of the WORKS is not delayed for want of the APPROVAL/inspection by the concerned authorities. The CONTRACTOR shall arrange for the inspection of the works by the authorities and will undertake necessary coordination and liaison required and shall not be entitled to any extension of time for any delay in obtaining such approval.

25.2 Identifying the dumping site outside plant battery limit for disposal of unserviceable materials etc and taking all necessary statutory approvals from local municipal corporations for dumping sites shall be under contractor's scope. Nothing extra shall be paid on this account.

25.3 Any deficiency(ies) as pointed out by any such authority shall be rectified by the CONTRACTOR within the scope of relative supply and/or WORK at no extra cost to

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the OWNER. The inspection and acceptance of the WORKS by such authorities shall, however, not absolve the CONTRACTOR from any of its responsibilities under this CONTRACT.

25.4 Statutory fees paid, if any, for all such inspections and approvals by authorities shall be deemed to be included in the quoted prices, if not specified otherwise.

## **26.0 TESTS AND INSPECTION**

26.1 The Contractor shall carry out the various tests as enumerated in the technical specifications of this bid document and the technical documents that will be furnished to him during the performance of the work.

26.2 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.

26.3 The work is subject to inspection at all times by the Engineer-in-Charge. The contractor shall carry out all instructions given during inspection and shall ensure that the work is being carried out according to the technical specifications of this bid document, the technical documents and the relevant codes of practice will be furnished to him during the performance of the work.

26.4 The Contractor shall provide for purposes of inspection access ladders, lighting and necessary instruments at his own cost.

26.5 Any work not conforming to execution drawings, specifications or codes shall be rejected forthwith and the Contractor shall carryout the rectifications at his own cost.

26.6 All results of inspection and tests will be recorded in the inspection reports, proforma of which will be approved by the Engineer-in-Charge. These reports shall form part of the completion documents.

26.7 For materials supplied by Employer, Contractor shall carryout the tests, if required by the Engineer-in- Charge, and the Employer shall reimburse the cost of such tests at actual to the Contractor on production of documentary evidence.

26.8 Statutory fees paid to IBR authorities and for repeat tests and inspection due to failures, repairs etc. such reasons attributable to the Contractor shall be borne by the Contractor.


26.9 Inspection and acceptance of work shall not relieve the Contractor from any of his responsibilities under this Contract.

## **27.0 INSPECTION OF SUPPLY ITEMS**

### **27.1 MATERIALS**

The supply / procurement of all materials, required for the job, shall be the responsibility of the Contractor unless otherwise stated in the "Schedule of Rates" and elsewhere in the tender documents. The quality of the materials procured by the Contractor shall be subject to the approval of Engineer-in-Charge or his authorized representative before the materials are allowed to be used in the works. All the materials to be procured by the Contractor shall be in conformity with the CPWD Specifications with correction slips (latest) and in absence of which as laid down in the relevant Indian Standard Codes of practices (latest).

Transport of all materials shall be the Contractor's responsibility and it shall be at

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their own risk and cost.

The Engineer-in-Charge shall determine the suitability of materials to be used on the job and the Contractor shall get all materials approved by the Engineer-in-Charge. Any material procured and brought to site by the Contractor, found not to conform to the specifications and does not meet the approval of the Engineer-in-Charge, for use, will be rejected, and the Contractor shall remove and dispose off the same at his own cost and he shall not have any claim for compensation in this regard.

## 27.2 TESTS

According to the nature and importance of works, Owner / Consultant will demand the conduct of tests on concrete and other building materials etc., in which case the Contractor shall get the same done at his own cost in a laboratory to be approved by the Owner / Consultant.

Providing and operating necessary measurements and testing devices, materials and consumables are included in the scope of work and the rates quoted shall be deemed to include the cost of such tests which are required to ensure achievement of specified quality of work.

## 28.0 **FINAL INSPECTION**

28.1 After completion of all tests as per specification the whole work will be subject to a final inspection to ensure that job has been completed as per requirement. If any defects noticed in the work attributable to Contractor, the Contractor at his own cost shall attend these, as and when the Employer/Consultant brings them to his notice. The Employer/Consultant shall have the right to have these defects rectified at the risk and cost of the contractor if he fails to attend to these defects immediately.

## 29.0 **COMPUTERIZED CONTRACTORS BILLING SYSTEM**

29.1 Without prejudice to stipulation in General Conditions of Contract, Contractor should follow following billing system.

29.2 The bills will be prepared by the contractors on their own PCs as per the standard formats and codification scheme proposed by GAIL/PDIL. The contractors will be provided with data entry software to capture the relevant billing data for subsequent processing. Contractors will submit these data to Employer/Consultant in an electronic media along with the hard copy of the bill, necessary enclosures and documents. The contractor will also ensure the correctness and consistency of data so entered with the hard copy of the bill submitted for payment.

29.3 Employer/Consultant will utilize these data for processing and verification of the Contractor's bill and payment.

## 30.0 **TEMPORARY WORKS**

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

## 31.0 **DISTINCTION BETWEEN FOUNDATION AND SUPERSTRUCTURE**

**NOTHING EXTRA FOR INTRICATE CONCRETE SHUTTERING OR REINFORCEMENT WORK**

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Nothing extra shall be paid for any intricate concrete, shuttering or reinforcement work for foundations of equipment and machinery and for other foundation/superstructure works or for any delay inherent in concreting in small and thin sections in concrete or RCC work set.

### **32.0 QUALITY MANAGEMENT SYSTEM**

- 32.1 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 the contract detailed quality assurance programme shall be prepared by the contractor for the execution of contract for various works, which will be mutually discussed and agreed to.
- 32.2 The Contractor shall establish document and maintain an effective quality assurance system outlined in recognised codes.
- 32.3 Quality Assurance System plans/procedures of the Contractor shall be furnished in the form of a 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 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 manufacture's works and dispatch of materials.
- 32.4 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.
- 32.5 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 carry out 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.
- 32.6 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.
- 32.7 The Contractor shall adhere to the Quality Management System as per PDIL Specification enclosed in the Bidding Document as ANNEXURE-IV to SCC<sub>2</sub>.
- 32.8 The Contractor shall adhere to Specification for Documentation Requirements from contractors as per PDIL Specification enclosed in the Bidding Document as per SOR<sub>2</sub>.

### **33.0 HEALTH, SAFETY AND ENVIRONMENT (HSE) MANAGEMENT**

- 33.1 In addition to the provisions of relevant clause of General Conditions of Contract (GCC) and associated provisions thereof, the Contractor, during entire duration of the Contract, shall adhere to HSE requirement as per PNCN-HSE-01 on Health, Safety and Environment (**HSE) Management** and requirement of **OISD-192 & OISD-207**.
- 33.2 The Contractor shall establish document and maintain an effective Health, Safety and Environment (HSE) management system.
- 33.3 In case Contractor fails to follow the instructions of Engineer-in-charge with respect

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to above clauses, next payment due to him shall not be released till Contractor complies with the instructions to the full satisfaction of Engineer-in-charge.

- 33.4 The Contractor shall be required to take a suitable Insurance Policy with a view to cover themselves against the above penalties and submit a copy of the said policy to the Engineer-in-Charge before possession of site is given to them.

### **34.0 SITE CLEANING**

- 34.1 The Contractor shall clean and keep clean the work site from time to time to the satisfaction of the Engineer- in-Charge for easy access to work site and to ensure safe passage, movement and working.
- 34.2 If the work involves dismantling of any existing structure in whole or part, care shall be taken to limit the dismantling up to the exact point and/or lines as directed by the Engineer-in-Charge and any damage caused to the existing structure beyond the said line or point shall be repaired and restored to the original condition at the Contractor's cost and risks to the satisfaction of the Engineer-in-Charge, whose decision shall be final and binding upon the Contractor.
- 34.3 The Contractor shall be the custodian of the dismantled materials till the Engineer-in-Charge takes charge thereof.
- 34.4 The Contractor shall dispose off the unserviceable materials, debris etc. To any areas as decided by the Engineer-in-Charge.
- 34.5 The Contractor shall sort out, clear and stack the serviceable materials obtained from the dismantling/renewal at places as directed by the Engineer-in-Charge.
- 34.6 No extra payment shall be paid on this account.

### **35.0 UNDERGROUND AND OVERHEAD STRUCTURES**

- 35.1 The information to possible extent regarding existing structures/overhead lines, existing pipelines and utilities are already indicated on alignment sheets. Over and above contractor may encounter other structure/pipelines/ OFC etc. which may not be appearing on alignment sheet, the contractor is required to collect such information on his own before commencing the work. The Contractor shall execute the work in such a manner that the said structures, utilities, pipelines etc. are not disturbed or damaged, and shall indemnify and keep indemnified the Employer/Consultant from and against any destruction thereof or damages thereto.

### **36.0 ROYALTY**

- 36.1 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. Any increase in prevailing rate of Royalty shall be borne by the Contractor at no extra cost to the Employer. The contractor should indicate the rate of Royalty considered in their offer.

### **37.0 EXCAVATION BY BLASTING**

- 37.1 The Contractor shall obtain licence from the District authorities for undertaking blasting work as well as for obtaining and storing the explosive as per Explosive Rules 1940, corrected up to date. He shall purchase the Explosives, fuses, detonators etc. only from a licensed dealer. He shall be responsible for the safe custody and proper accounting of the explosive materials. The Engineer-In-Charge and his authorised representative shall have the access to check the contractor's store of explosives and his accounts. In case where the explosive are required to

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be transported and stored at site, relevant clauses of the Explosive rules 1940 as amended subsequently shall apply. The Contractor shall be responsible for any accident to workman, public or property, due to blasting operations.

### **38.0 SITE FACILITIES FOR WORKMEN**

38.1 Following facilities are to be ensured at all work places where workmen are deployed/engaged by Contractor.

- i) Arrangement of first aid
- ii) Arrangement for clean drinking water.
- iii) Toilets
- iv) Canteen where tea & snacks are available
- v) A crèche where 10 or more women workmen are having children below the age of 6 years.

### **39.0 EXECUTION OF ELECTRICAL WORKS**

39.1 The Contractor shall engage an approved electrical agency for execution of electrical works, holding valid electrical contractor licence. In case contractor himself executes electrical works then he shall arrange valid electrical contractor licence before start of electrical works at site. Notwithstanding, contractor shall adhere to all the safety standard as included in bidding document.

### **40.0 MAKE OF MATERIALS**

40.1 The materials required to be supplied by the contractor under this contract shall be procured only from Employer/Consultant approved vendors. Where the makes of materials are not indicated in the Bidding document contractor shall furnish the details of makes and shall obtain prior approval of Engineer-in-Charge of vendors/sub-vendors before placing order.

### **41.0 ADDITIONAL WORKS / EXTRA WORKS**

41.1 Employer/Consultant reserves 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 Employer/Consultant Contractor is required to extend necessary cooperation, and act as per the instructions of Engineer-in-Charge.

### **42.0 PRICE REDUCTION SCHEDULE FOR DELAY**

Price Reduction Schedule for Delay shall be in line with Clause No: 27.0 of GCC and Clause 50.0 of ITB.

The value referred in PRS clause is excluding taxes and duties reimbursable by GAIL.

### **43.0 RESPONSIBILITY OF CONTRACTOR**

43.1 It shall be the responsibility of the Contractor to obtain the approval for any revision and/or modifications decided by the Contractor from the Employer/Consultant/ Engineer-in-charge before implementation. Also such revisions and/or modifications if accepted/ approved by the Employer/Consultant/Engineer-in-charge shall be carried out at no extra cost to the Employer/Consultant. Any changes required during and/or after approval for detailed construction drawings due to functional

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requirements or for efficient running of system keeping the basic parameters unchanged and which has not been indicated by the Contractor in the data/drawings furnished along with the offer will be carried out by the Contractor at no extra cost to the Employer/Consultant.

- 43.2 All expenses towards mobilisation at site and demobilisation including bringing in equipment, clearing the site etc. shall be deemed to be included in the prices quoted and no separate payments on account of such expenses shall be entertained.
- 43.3 It shall be entirely the Contractor's responsibility to provide, operate and maintain all necessary construction equipment's, scaffoldings and safety gadgets, cranes and other lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all the jobs as per time schedules.
- 43.4 Preparing approaches and working areas for the movement and operation of the cranes, levelling the areas 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. to provide suitable allowances in his quotation. The Contractor may have to build temporary access roads to aid his own work, which shall also be taken care while quoting for the work.
- 43.5 The procurement and supply in sequence and at the appropriate time of all materials and consumables shall be entirely the Contractor's responsibility and his rates for execution of work will be inclusive of supply of all these items.

#### **44.0 STORAGE FACILITIES**

- 44.1 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.

#### **45.0 PROJECT PLANNING, SCHEDULING AND MONITORING SYSTEM**

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

- 45.1 After the Award of Contract

##### **A. Time Schedule**

The Completion Time Schedule for the work (including mobilization period) as per ANNEXURE-V to SCC of Tender in all respect, from the date of issue of Fax of Acceptance.

The Bidder is required to submit a Project Time Schedule in Primavera. The Schedule shall cover all aspects like sub-ordering, manufacturing and delivery, indicated in the Bid Document. The Owner interface activities shall be clearly identified with their latest required dates. Owner reserves the right to disqualify the Bidder if the above Schedule submitted by the Bidder is not in line with the overall Project requirement.

##### **B. Scheduling & Monitoring System**

The Bidders should describe their system of Project Scheduling and monitoring, the extent of computerization, level of detailing, tracing methodology etc. with the name of computer package and sample outputs.

##### **C. Overall Project Schedule**

The Contractor shall submit within 1 week of Fax of Acceptance, a sufficiently detailed overall Project Schedule in the activity network form, clearly indicating



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the major milestones, interrelationship/ interdependence between various activities together with analysis of critical path and floats.

The network will be reviewed and approved by Engineer- in-Charge and the comments if any shall be incorporated in the network before issuing the same for implementation. The network thus finalized shall form part of the contract document and the same shall not be revised without the prior permission from Engineer-in- Charge during the entire period of contract.

#### D. Progress Measurement Methodology

The contractor is required to submit within 1 week of award of WORK, the methodology of progress measurement of sub-ordering, manufacturing/ delivery, sub- contracting construction and commissioning works and the basis of computation of overall services/physical progress informed. Owner reserves the right to modify the methodology in part or in full.

#### E. Functional Schedules

The contractor should prepare detailed functional schedules in line with network for functional monitoring and control and submit scheduled progress covers for each function viz. ordering, delivery and construction.

### 45.2 Project Review Meetings

The Contractor shall present the programme and status at various review meetings as required.

#### A. Weekly Review Meeting

Level of Participation	Contractor's/ Consultant's RCM/ Site In charge & Job Engineers
Agenda	<ul style="list-style-type: none"> <li>a. Weekly programme v/s actual achieved in the past week &amp; programme for next week</li> <li>b. Remedial Actions and hold up analysis.</li> <li>c. Client query/approval.</li> </ul>
Venue	Site office

#### B. Monthly Review Meeting

Level of Participation	Senior Officers of GAIL/ PDIL and Contractors.
	<ul style="list-style-type: none"> <li>a. Progress Status / Statistics</li> <li>b. Completion Outlook</li> <li>c. Major hold ups / slippages</li> <li>d. Assistance required</li> <li>e. Critical issues</li> <li>f. Client query / approval</li> </ul>
Venue	GAIL/PDIL Office/ Site at the discretion of Owner/PDIL

### 45.3 Progress Reporting Proforma

#### A. Monthly Progress Report

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This report shall be submitted on a monthly basis within 10 (ten) calendar days from cut-off date, as a greed up on covering over all scenarios of the work. The report shall include, but not limited to the following:

- i) Brief Introduction of the work.
- ii) Activities executed/ achievements during the month.
- iii) Schedule versus actual percentage progress and progress curves for Sub-ordering, Manufacturing/ Delivery, Sub-contracting, Construction, Commissioning and Overall and quantum wise status & purchase orders against schedule.
- iv) Area of concern/ problem/ hold-ups, impacts and action plans.
- v) Resources deployment status.
- vi) Annexures giving status summary for drawings, MRs, deliveries, sub-contracting and construction.
- vii) Procurement status for items to be supplied by Contractor.

**B. Weekly Reports**

The report will be prepared and submitted by the Contractor on weekly basis and will cover following items:

- i) Activities programmed and completed during the week.
- ii) Resource deployed men and machines.
- iii) Quantities achieved against target in construction.
- iv) Record of Man days lost.
- v) Construction percentage progress schedule and actual.

**C. Daily Reports**

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

**D.** Any other additional reports / information as may be required by E.I.C.

**45.4 Progress Reports**

46.4.1 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.

46.4.2 By the 10<sup>th</sup> (tenth) of each month, CONTRACTOR shall furnish the OWNER a detailed 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

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general comments of interest or the progress of various phases of the WORK. The frequency of progress reporting by the CONTRACTOR shall be weekly.

- 46.4.3 Once a week, CONTRACTOR shall submit a summary of the WORK accomplished during the preceding week in form of percentage completion of the various phases of the WORK, to the OWNER.
- 46.4.4 Progress reports shall be supplied by CONTRACTOR with documents such as chart, networks, photographs, test certificate etc. Such progress reports shall be in the form and size as may be required by the OWNER and shall be submitted in atleast 3 (three) copies.
- 46.4.5 Contractor shall prepare daily progress report (DPR) in the desired format and submit it to Engineer-in-charge along with schedule of next day to Engineer-in-charge.

#### **46.0 INSURANCES**

Clause No. 101 of GCC stands modified to the extent as below:

- 46.1 GAIL shall at its own Cost, take out and maintain in effect, or cause to be taken out and maintained in effect, during the execution of the Works, a comprehensive Erection All Risks Policy.
- 46.2 Without prejudice to Clause 47.1 above, the Contractor shall be required to take out and maintain at all times during the subsistence of this Contract, adequate insurance coverage in respect of:
- a. any other part of insurance related to permanent incorporation of works which is not covered in GAIL's Insurance but required as per Clause No. 101 of GAIL's GCC Works.
  - b. any damages or compensation against claims, demands, proceeding, costs, charges and expenses, whatsoever in respect or in relation thereto, payable under Applicable Laws in respect or any consequence of any accident or injury to any Contractor's Personnel during or pursuant to their employment by the Contractor or by the Contractor's Subcontractors, save and except an accident or injury resulting from any act or fault of GAIL;
  - c. all Contractor's Equipment brought on to the Site by the Contractor or its Subcontractors for use in connection with the Works, to the extent of their full value against all loss or damage from whatever cause arising; and
  - d. third party liability for physical loss of or damage to any third party property or injury to or death of any third party which may arise out of or in connection with the execution of the Works at the Site by the Contractor or GAIL, (collectively "Contractor's Insurance").
- 46.3 Each Party shall ensure that it and its personnel, Subcontractors, servants and agents at all times:
- a. Comply with the terms and conditions of GAIL's Insurance or the Contractor's Insurance, as relevant;
  - b. Comply with the procedures for claims notification and administration there under; and
  - c. Do nothing nor omit to do anything which might entitle any insurer to refuse to pay any claim under, or which might otherwise prejudice any of GAIL's Insurance or the Contractor's Insurance.
- 46.4 Regardless of the extent of settlement of claims for insurance proceeds under GAIL's Insurance or under the Contractor's Insurance or the time taken for settlement of such claims, the Contractor shall promptly make good any loss or

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damage for which it is responsible under the terms of this Contract. The Contractor shall be reimbursed to the extent that any insurance proceeds are received and payable to the Contractor.

46.5 **PRADHAN MANTRI SURAKSHA BIMA YOJANA (PMSBY) AND PRADHAN MANTRI JEEVAN JYOTI BIMA YOJANA (PMJJBY):**

Contractor shall ensure that all its personnel deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of GAIL. The cost of the insurance premium amount for both the above schemes shall be borne by the contractor giving evidence/proof to GAIL in this respect and Contractor shall suitably consider the same in their bid.

Both the schemes are to be regulated continuously on yearly basis and the same should be renewed on each successive relevant date in subsequent years.

46.6 **INSURANCE FOR FREE ISSUE MATERIAL**

- a. Contractor shall at his own expense arrange, secure and maintain insurance cover for Employer / Consultant's supplied free issue materials as defined in Bidding Document. 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 GAIL (India) Limited (GAIL). The insurance cover of the free issue material shall be for the period from the date of handing over the material to Contractor from Employer / Consultant's designated place of issue / dumpsite to date of handing over the completed work to Employer / Consultant. The approximate cost of free issue materials as defined below:

**Value of FIM: NIL**

- b. In case of No FIM this clause shall not be applicable.

46.7 **DELETED**

46.8 **BUILDING AND OTHER CONSTRUCTION WORKER'S ACT**

In order to govern welfare and working conditions of labourers engaged in construction activities, the Building and other Construction Workers' (Regulation of Employment and Conditions of Service "RE &CS") Act, 1996 came into force. RE&CS Act'1996 is applicable in respect of building and other construction work. Wherever applicable, The CONTRACTOR shall strictly comply with the following provisions pertaining to RE &CS Act'1996.

- a. The CONTRACTOR must be registered with the concerned authorities under the Building and Other Construction Workers' (RE&CS) Act, 1996 or in case of non-registration; the CONTRACTOR should obtain registration within one month of the award of contract.
- b. The CONTRACTOR shall be responsible to comply with all provisions of the Building and Other Construction Workers' (RE&CS) Act, 1996, the Building and Other Construction Workers' Welfare Cess Act, 1996, the Building and other Construction Workers' (RE&CS) Rules, 1998 and the Building and Other Construction Workers Welfare Cess Rules, 1998.
- c. Cess as per the prevailing rate, shall be deducted at source from bills of the CONTRACTOR by the engineer-in-Charge of the contract and remitted to the "Secretary, Building and Other Construction Workers Welfare Board" of the

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concerned State. The CONTRACTOR shall be responsible to submit final assessment return of the cess amount to the assessing officer after adjusting the cess deducted at source.

**46.9 SINGLE POINT RESPONSIBILITY**

The entire work as per Scope of Work covered under this contract shall be awarded on single point responsibility basis.

**47.0 ENTRY PASSES, GATE PASSES, WORK PERMITS AND SAFETY REGULATIONS**

The works under this contract are to be carried out in areas within the near vicinity of operating plant. As such, CONTRACTOR is required to abide by safety and security regulations of OWNER/ PDIL enforced from time to time.

**47.1 ENTRY PASSES**

The CONTRACTOR has to apply for photo entry passes for his workers & staff in a prescribed proforma available with OWNER/PDIL. The photo entry passes shall be issued by OWNER/PDIL for a maximum period of 3 months and if extension is required by the CONTRACTOR, he has to apply separately for extension. As a special case temporary passes for a maximum period of 7 days may be issued.

Unutilised/ Expired entry passes shall have to be submitted immediately to OWNER/PDIL.

In case of loss of any entry pass, the CONTRACTOR has to lodge FIR with local police station and inform the Engineer-in-charge and shall have to pay Rs. 150/- against each entry pass. The CONTRACTOR is required to keep track of all entry passes issued and returned.

Identity card issued by the Security Section should always be carried/ displayed by the CONTRACTOR's employee or person while working inside the Plant.

**47.2 GATE PASSES**

To bring materials/ equipments/ tools/ tackles etc. inside the plant for construction work, the CONTRACTOR has to produce challans/ proper documents to OWNER's/ PDIL's personnel at gate. The materials shall be checked thoroughly by OWNER's/ PDIL's personnel at Gate and recorded in their register before allowing any material to bring inside the plant by CONTRACTOR. It is CONTRACTOR's responsibility to see that the recorded entry no., date, signature of OWNER's/ PDIL's authorised representative with stamp challans/ supporting documents signed by company's personnel at gate during entry.

**47.3 WORK PERMIT**

When the work is to be carried out in hazardous areas, hot work permit are to be obtained before start of work for all the jobs which are capable of generating flame, spark, heat etc. namely, Gas cutting, grinding, welding, use of any electrical/ diesel/ petrol/ battery operated prime mover/ machine/ tools/ equipment/ generator sets/ mixer machine/ drilling machine/ pumps/crane, fork lifter/ hand truck/ trailer, chipping/ breaking of rocks/concrete, hacksaw cutting and drilling, etc.

Cold work permits are to be obtained for the jobs which are not coming under the category of hot work and where there is no risk of fire, viz, transportation/ backfilling of ordinary soil in manual process, piling testing, hydro testing, shuttering, fixing of reinforcement, hand mix concreting, plastering, brick work etc.

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According to nature of work and use of various types of equipments & tools the CONTRACTOR has to apply for cold/hot permits in a prescribed format at least 2 days before the work is planned to start. No work permit shall be issued by OWNER/ PDIL unless proper arrangement is made by the CONTRACTOR to ensure safe performance of work inside the plant. Job wise and area wise permits shall be issued to the CONTRACTOR and against each permit at least one construction supervisor and one safety supervisor of required level shall always be made available at site by the CONTRACTOR. These safety permit shall be issued at one point contact by OWNER/ PDIL.

#### 47.4 VEHICLE PERMIT

Permits are to be obtained separately for entry/use of vehicles/ trailers etc. inside the plant. The following requirements are to be met to obtain vehicle permit:

- i. Vehicle/Equipment etc. should be brought to site in good conditions.
- ii. Valid Road tax certificate, fitness certificate and insurance policy from competent authority.
- iii. Valid operating/ driving licence of driver/operator.

#### 47.5 VALIDITY OF THE WORK PERMIT

- i. Permit is valid for 24 hours.
- ii. No permit is valid if it is not renewed by the shift in charge/ shift representative in shifts (Morning & Evening)
- iii. The permit shall be issued for a maximum period of one month and if extension is required, the CONTRACTOR has to apply for fresh permit.
- iv. No permit is valid on holidays unless special permission is obtained from the competent authority.

#### 47.6 SAFETY REGULATIONS

- Regarding work Permit

- i. The work shall be carried out inside the plant as per safety practices enforced by OWNER's/ PDIL's safety section and instructions of Engineer-in-charge issued from time to time. Many times it may happen that the working hours shall be drastically reduced or increased to meet certain safety requirements and the CONTRACTOR shall meet these requirements without any argument for time and financial implications. To obtain work permit and to satisfy all conditions laid down therein, shall be the responsibility of the CONTRACTOR. No claim for idling of machinery, plant, manpower etc. for safety reasons or non-issuance of work permit by incharge, Safety Section shall be considered.
- ii. The CONTRACTOR shall abide by all safety regulations of the plant and ensure that safety equipment for specific job kit as stipulated in the factory act/ safety handbook is issued to the employee during the execution of work, failing which all the works at site shall be suspended.

GAIL shall permit contractor/consultant and his authorised construction personnel to freely move, in and out of the site, subject to the observance of security and safety regulations of OWNER/ PDIL. In view of specific security requirement for the petrochemical installation and its Strictest observance, all personal of consultant or his authorised construction personnel (skilled/ unskilled) are required to have detail police verification for the purpose of issue of photo pass required for entry and free movement at work site.

They will also have to bear with the restriction and limitation of entry/exit to

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work site as per the security requirement.

- Regarding Hot work

- i. When doing hot work inside the plant the CONTRACTOR must ensure that the fire hose is hooked up with the fire water system and extended to the work spot. Fire extinguisher must be kept near the working spot. Area around and below the hot working place must be adequately protected from falling/ coming out of sparks/hot metals from the booth made of asbestos cloth/sheet and wetting them with water. The CONTRACTOR must arrange sufficient number of fire hoses and fire fighting equipment of approved quality at his own cost to carry out hot job inside the plant.
- ii. Welding & electrical cables should be of approved quality, and no jointing and loose connection shall be permitted.
- iii. At the end of the working day the CONTRACTOR must inform electrical section to switch off power at sub-station end.
- iv. The CONTRACTOR must provide cotton dress, safety shoe, safety helmet, safety belt, hand gloves of approved quality to his workers to meet the safety requirement of various jobs to be carried out inside the plant.

- Regarding use of Vehicle

- i. Vehicle must not ply on any road within the plant at speed exceeding 20KM/hr.
- ii. Mobile crane/ loaded trucks/ trailers must not exceed speed limit of 15 KM/hr inside the plant.
- iii. No crane is allowed to move inside the plant with load.
- iv. No vehicle is allowed to park inside the plant.

**48.0 SURPLUS MATERIALS**

- 48.1 Upon Completion of the Works, the Contractor shall remove from Site, the entire Contractor's Equipment, Temporary Works and surplus materials as defined below, as per the directions of the Engineer-in- Charge.
- 48.2 Disposal of waste materials like construction waste, plastic bags, wooden cartoons, plastic or metallic drums etc. is done by the contractor at locations designated for type of waste as per Solid Waste Management Policy at GAIL, Pata, after segregation and as per the directions of the Engineer-in- Charge.
- 48.3 Surplus civil construction materials comprising sand, cement, bricks, stones, aggregates and the products of dismantling the Temporary Works erected by the Contractor shall vest in and belong to the Contractor upon Completion of the Works and/or earlier termination of the Contract for any cause. The Contractor shall have the right, subject to the other terms & conditions of the Contract, to remove the surplus civil construction material from the Site, subject to satisfactory proof of supply. No other surplus material will be allowed to be removed from the Site and shall be deemed to be the property of Owner and the same shall be transported properly to Owner's store or as directed by Owner. The Contract Price quoted by the Contractor shall be deemed to include the cost of all surplus materials which are deemed to be the property of Owner.
- 48.4 All Non-serviceable materials shall be disposed outside plant boundary at a location after permission from Municipal Corporation or local authority and same shall be under bidders scope.

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**49.0 LEADS**

49.1 For the various works, in case of contradiction, leads mentioned in the Schedule of Rates shall prevail over those indicated in the Technical specifications.

**50.0 COORDINATION WITH PMC**

50.1 CONTRACTOR shall coordinate with PMC for his day-to-day activities and provide free access and assistance during the inspections and other activities to be carried out by PMC. CONTRACTOR shall comply to the requirements of PMC and obtain all the clearances from PMC for his work.

**51.0 INVOICE & PAYMENT:**

All Invoices to be raised in the name of GAIL, Pata with GSTIN of Pata through Anjani Portal.

**“Anjani” e-Measurement Book & e-Billing Portal**

GAIL has implemented “Anjani” e-Measurement Book & e-Billing Portal for ease in submission of measurement book/bill and reduction in paper transaction. Accordingly, GAIL will process the Bill with Measurement Book through “Anjani” e-Measurement Book & e-Billing Portal (link: <https://gailebank.gail.co.in/MBAutomation/frmlogin.aspx>). Accordingly,

Contractor/ Service Provider/ Consultant is requested to forward the RA Bill on “Anjani” e-Measurement Book & e-Billing Portal through concerned EIC/CIC/SIC, whichever is applicable. Further, User Manual is also available on aforesaid portal

**52.0 CONDITIONS FOR ISSUE AND RECONCILIATION OF MATERIALS**

52.1 Free Issue Materials (FIM) if any shall be issued as per terms and conditions set forth in the General Conditions of Contract (GCC).

52.2 Every month, Contractor shall submit an account for all materials issued by Owner in the proforma prescribed by the Engineer-in-Charge. On completion of work the Contractor shall submit “Material Appropriation Statement” for all materials issued by the Owner. Wherever materials are under Contractor’s scope of supply whether part or in full for any item of work covered under SOR, no allowances towards wastage/scrap etc. shall be accounted for.

**53.0 BONUS FOR EARLY COMPLETION**

53.1 The Clause 27.3 of GCC for Bonus for early completion is not applicable.

**54.0 NO CLAIM AND INDEMNITY BOND**

Bidder shall submit NO Claim and Indemnity bond along with the final bill as per the formats attached as ANNEXURE-VI of SCC.

**55.0 SUB-LETTING OF WORKS**

The clause no.37 of GCC shall stand modified to the following extent only:

55.1 The contractor shall not, saved 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.



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However, Subletting of WHOLE WORKS is prohibited. An undertaking to this effect will be given by Vendor/ Contractor along with each invoice/bill.

#### **56.0 ENGAGEMENT OF CONTRACTUAL MANPOWER**

While engaging the contractual manpower, Contractors are required to make efforts to provide opportunity of employment to the people belong to the scheduled castes and weaker sections of the society also in order to have a fair representation of these sections. In order to encourage local employment contractor shall endeavour to deploy personnel pass-out from local institutes including execution of non-critical activities through local agencies. However, preference should be given to engage more unskilled manpower resources locally to boost local employment.

#### **57.0 JOINTS MEASUREMENT OF WORK EXECUTED, BILLING, INVOICE AND PAYMENTS.**

- The measurement of the work executed, billing, invoice and payment shall be as per the provisions of contract.
- Measurement shall be recorded as per the methods of measurement spelt out in Specifications/Contract Documents. The responsibility for checking the measurements as recorded in the Measurement Books/Bills shall be as under:
  - a. PMC will check 100% measurements of executed work.
  - b. GAIL Site Engineer will check measurements of at least 15% of bill value, certified by PMC.
  - c. An officer at least one level above Site Engineer not below level of E-7 (or next available highest officer below E-7, where E-7 is not available) will further check measurements of 5% of bill value.
- OIC (or HOD in case of Corporate Office) or an officer of higher level to that of EIC authorized by OIC may carry out random checking of executed items where the executed quantity exceeds SOR quantities.
- While exercising aforesaid test check and random checking, it should be ensured that high value items, AHR items and items exceeding SOR quantity have been covered in the items selected for checking.
- The superior officer should preferably check such items /quantities other than those already checked by GAIL 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 while signing should indicate the measurements of SOR items checked by them and marked as "Checked and verified".
- GAIL will process the Bills with MB through E-Measurement Portal available in GAIL INTRANET under Project Department. Accordingly, Contractor is required to forward the RA Bills in E-Measurement& E-Billing Portal i.e. Anjani Portal through PMC, CIC/EIC/SIC whichever is applicable.

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**58.0 PLANNING AND DESIGNING IN PURVIEW OF VULNERABILITY ATLAS OF INDIA**

*(The following provision shall be considered as a part of GCC-Works)*

Vulnerability Atlas of India (VAI) is comprehensive document which provides existing hazard scenario for the entire country and presents the digitized State/UT-wise hazard, maps with respect to earthquakes, winds and floods for district-wise identification of vulnerable areas. It also includes additional digitized maps for thunderstorms, cyclone and landslides. The main purpose of this Atlas is its use for disaster preparedness and mitigation at policy planning and project formulation stage.

This Atlas is one of its kind single point source for the various stakeholders including policy makers, administration, municipal commissioners, urban managers, engineers, architects, planners, public etc. to ascertain proneness of any city/location/site to multi-hazard which includes earthquake, wind, floods thunderstorms, cyclones and landslides. While project formulation, approvals and implementation of various urban housing, buildings and infrastructures schemes, this Atlas provides necessary information for risk analysis and hazard assessment.

The vulnerability Atlas of India has been prepared by Building Materials and Technology Promotion Council under Ministry of Housing and Urban Affairs, Government of India and available at their website [www.bmtpc.org](http://www.bmtpc.org).

It is mandatory for the bidders to refer Vulnerability Atlas of India for multi-hazard risk assessment and include the relevant hazard proneness specific to project location while planning and designing the project in terms of:

- i) Seismic zone (II to V) for earthquakes,
- ii) Wind velocity (Basic Wind Velocity: 55, 50, 47, 44, 39 & 33 m/s)
- iii) Area liable to floods and Probable max. Surge height
- iv) Thunderstorms history
- v) Number of cyclonic storms/ severe cyclonic storms and max sustained wind specific to costal region.
- vi) Landslides incidences with Annual rainfall normal
- vii) District wise Probable Max. Precipitation.

**59.0 OTHER MODIFICATION(s) TO GCC**

59.1 Clause 67 of GCC is modified to the extent that wherever the Contractor is required to take out any material to allocation outside the Project premises, the Contractor shall be required to submit the Bank Guarantee for an equivalent amount of the material taken outside the Project premises with validity till receipt of materials at Project premises plus 03 months claim period.

**60.0 IN ADDITION TO THE LABOUR LAWS MENTIONED IN STANDARD CONDITIONS OF SCC AND SECTION-VIII OF GCC WORKS, BIDDERS SHALL ALSO COMPLY TO LABOUR LAW.**

**61.0 PLANT, MACHINERY AND SHUTTERING MATERIAL ADVANCE**

61.1 An interest-bearing advance of five per cent of the contract price, depending on nature of job can be provided against the new key construction equipment purchased for the work and brought to the site, if so provided in the Bid Documents and so requested by the contractor. The advance should normally not be more than 50 (fifty) percent of the depreciated cost of such plants and machinery and should

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be hypothecated to GAIL, before the payment of advance is released. This advance shall be subject to the following conditions: (i) the contractor shall produce satisfactory proof of payment; (ii) such equipment is considered necessary for the works; (iii) the equipment has been verified to have been brought to site; (iv) the contractor gives an undertaking on stamp paper that the equipment will work only on that job and will not be removed from the site without obtaining written approval of EIC; and (v) the contractor furnishes a BG to cover the advance. No advance shall be admissible on equipment purchased under a hire purchase scheme/ financing arrangement or on hired equipment.

- 61.2 The rate of interest shall be same as per provision for Mobilization advance.
- 61.3 The repayment of advances shall be done through proportionate percentage deductions from running bill. The time of commencement of repayment, rate of deductions from interim payments, and time by which the advance should be fully repaid will be as specified in the contract.
- 61.4 All advances shall be used by the contractor exclusively for mobilisation expenditure, including the acquisition of construction-related plant and equipment. Should the contractor misappropriate any portion of the advance, it shall become due and payable immediately, and no further advance will be made to the contractor thereafter. In such cases, the contractor shall also be liable for action under the contract.



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**SECTION-VI**  
**TECHNICAL DOCUMENT**  
**FOR**  
**LAND DEVELOPMENT**  
**TOPOGRAPHICAL & CONTOUR SURVEY WORK**  
**FOR PROPOSED WWTP AND ZLD PLANT**  
**AT GAIL, PATA**

**CLIENT: GAIL (INDIA) LIMITED**  
**CONSULTANT: PDIL, NOIDA**

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	<b>LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b>	SECTION-VI	1	
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2)	PC286-PNCV-TS-LS-0201	TECHNICAL SPECIFICATIONS FOR LAND SURVEY WORK
3)	PC286-PNCV-TS-LD-0201	TECHNICAL SPECIFICATIONS FOR LAND DEVELOPMENT WORKS
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**GENERAL SPECIFICATIONS**  
**FOR**  
**LAND DEVELOPMENT**  
**TOPOGRAPHICAL & CONTOUR SURVEY WORK**



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**1.00 GENERAL**



- 1.01 This section of tender document deals mainly with the Scope and Technical Specifications needed for the execution of Topographical & Contour Survey Works with Land development work on item Rate basis. The work which shall have to be carried out is associated with the proposed WWTP and ZLD plant at GAIL, Pata (Uttar Pradesh).
- 1.02 In the event of conflict between the requirements of two or more clauses of the Specifications / Documents, the more stringent requirement as per the interpretation of the Owner / Consultant shall prevail.
- 1.03 The Bidder shall inspect and examine the site and its surroundings and shall satisfy himself before submitting his bid as, the form and nature of the site, the quantum and nature of work and material necessary for successful completion of the works and the means of access to site and in general, shall himself obtain all necessary information as to risks, contingencies and other circumstances, which may influence or affect his tender. Under no circumstances, extra payment consequent on any misunderstanding or otherwise on the part of the Bidder shall be allowed.
- 1.04 Works covered herein below may have to be executed also near existing buildings, if required. The Bidder shall have to take all necessary precaution to protect all existing structures, facilities and buildings etc. from damage. In case, any damage occurs due to the activities of the Contractor on account of negligence, ignorance, accidental or any other reasons whatsoever, the damage shall be made good by the Bidder at his own cost to the satisfaction of the Owner / Consultant. The Bidder shall also take all necessary safety measure, at his own cost, to avoid any harm / injury to his workers and staffs and existing facilities.
- 1.05 All works related to access and site clearance, like cutting of trees and bushes for line of sight is included in scope. No extra payment shall be paid for this works.

**2.00 SCOPE OF WORK**

The Scope of Work consist of carrying out Topographical & Contour Survey Works and land development work for the proposed site area of approx 22 Acre of land ,associated with the proposed WWTP and ZLD plant at GAIL, Pata (Uttar Pradesh).

The work consist of supplying & providing of all labour, material except if indicated in Schedule of Rates, supervision, scaffolding, construction equipments, tools, tackles and plants, supplies & transportation of all incidental items though not indicated or specified, but reasonably implied or necessary for successful completion of the work including Specifications” and Schedule of Rates” of this Tender on item Rate basis. The nature of work shall generally involve carrying out Topographical as well Spot Leveling by TOTAL



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STATION system of the proposed site area. The Tender Drawings attached with these specifications provides a general idea about the work to be performed under the scope of this Contract. The enclosed Drawings are preliminary Drawings which are for bidding purposes only and are by no means the final Drawings or show the full range of the work under the scope.

## **2.01 TOPOGRAPHICAL & CONTOUR SURVEY WORKS**



The Topographical & Contour Survey Works shall be carried out at the desired locations, as shown in Tender Drawing enclosed with this document. The work consists of mobilization of all relevant and adequate equipment, plants, tools, machineries etc. and providing necessary engineering supervision though qualified and technical personnel, skilled and unskilled labour etc., required to match the work schedule and to carry out the complete work in all respects as per direction of Engineer-in-Charge.:

- a) Preparation and submission of Interim Report in 2 copies and Final Report in 3 – copies and all soft copies (including drawing in auto cad format) for the Topographical & Contour Survey Work, all readings with all documents as mentioned in the Technical Specification enclosed.

## **2.02 LAND DEVELOPMENT WORK**

The Land development works shall be carried out at the desired locations and upto same level of the plant FGL (140.70 = RL 99.60 M) as shown in Tender Drawing enclosed with this document. The work consists of mobilization of all relevant and adequate equipment, plants, tools, machineries etc. and providing necessary engineering supervision though qualified and technical personnel, skilled and unskilled labour etc., required to match the work schedule and to carry out the complete work in all respects as per direction of Engineer-in-Charge.



**Note:All the above work shall be carried out in accordance with the “Technical Specifications” Preamble to SOR “Schedule of Rates” and Tender Drawing enclosed with this document.**

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## **INTRODUCTION**

GAIL (India) Limited is India's leading natural gas company with diversified interests across the natural gas value chain of trading, transmission, LPG production & transmission, LNG re-gasification, petrochemicals, city gas, E&P, etc. GAIL owns and operates a gas based Petrochemical Complex at PATA, District Auraiya, near Kanpur in UP (around 380 km from Delhi).

GAIL (India) Limited intends to setup a new WWTP and ZLD plant at GAIL, Pata complex (Uttar Pradesh).

It is proposed to conduct Topographical Survey of the area for setting up new WWTP and ZLD plant inside the existing plant premises of GAIL, Pata complex (Uttar Pradesh). The Land survey shall have to be conducted in the proposed area in the existing plant premises as indicated in the Drawing No. PC286 –PNCV-TDRG-0201\_P.



### **1 . 00 GENERAL**

- 1 . 01 The intent of this specification is to cover the basic requirements for conducting the land survey to generate requisite topographical information's for the design and field engineering activities.
- 1 . 02 The work shall be executed as per specifications to fulfill the objectives of the survey work, strictly in accordance with the direction of the Engineer-in-Charge at site.
- 1 . 03 This specification shall be read in conjunction with the description of items in the Schedule of Rates. The contractor shall refer to the Client / Consultant any discrepancy which may exist between the drawings, specifications and corresponding items of Schedule of Rates for clarification before submission of quotation and the Clients / Consultants decision as to clarification of the points raised shall be final binding to the Contractor.

### **2 . 00 WORK PROCEDURES**

This work procedure will include but not limited to the following works:

- 2 . 01 All survey work shall be carried out using approved methodology & equipment-TOTAL STATION.
- 2 . 02 Establishment of permanent bench marks at site with reference to approved existing permanent bench mark.
- 2 . 03 Development of topographical information's as per site survey plan.
- 2 . 04 Establishment of basic line, zero line and grid system for defining co-ordinates of various areas.
- 2 . 05 Carrying out all the field work for contour surveying of the entire area and taking spot levels at every specified interval both ways & calculate reduced level for all the location surveyed at site.
- 2 . 06 Establishment of Highest Flood Level (H.F.L) of the site or near by streams.

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- 2 . 07 Collection of data for latitude and longitude of the site from Survey of India Map.
- 2 . 08 Preparation of survey and contour drawings.
- 2 . 09 Provision of personnel, materials, labour, license, facilities, equipments and everything required for the complete performance of the work.
- 2 . 10 Submission of Technical Report and Drawings.
- 2 . 11 Construction of Grid Pillars and Permanent Bench Mark at Site.

### **3 . 00 KEY ACTIVITIES**

The Key activities to be covered by this specification are as follows:

- 3 . 01 Undertake the field work.
- 3 . 02 Supervise the field work including continuous reporting.
- 3 . 03 Determination of levels and coordinates of all survey points.
- 3 . 04 The contractor shall provide one representative who will be a qualified surveyor. This representative shall be made available full time at site to oversee all aspects of the work for the entire duration of the field work.



### **4 . 00 ENGINEERING OBJECTIVES**

The primary objective of the work is to establish the followings:

- 4 . 01 The detailed location of existing interesting items, e.g. buildings, structures, roads, nallah, trees, poles, tube wells, ponds, falling within the plot boundary, etc.
- 4 . 02 Horizontal and vertical variation in terrain, profile and characteristics across the site.
- 4 . 03 Establishing bench mark at the site in relation with the existing approved permanent bench mark.

### **5 . 00 FIELD WORK PROGRAMME**

- 5 . 01 The Contractor shall identify the existing permanent bench mark and transfer the reduced levels to the site for establishing new bench mark at site.
- 5 . 02 The contractor shall furnish the following information for each bench marks installed:
  - Identification number
  - Reduced level
  - Co-ordinates of bench mark.
- 5 . 03 The contractor shall develop topographical information within the limits of the site by establishing a grid system for survey points.
  - 5 . 03 .01 The grid system shall be established by constructing grid pillars at specified intervals in square pattern.
  - 5 . 03 .02 The above grid system shall be further subdivided into smaller intervals for taking spot levels.

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5 . 04 The contractor shall determine the location, co-ordinates and elevation of the nearby existing roads, compound walls, railway lines etc.

5 . 05 The contractor shall record the High Flood Level (H.F.L) of site and nearby rivers / streams.

**6 . 00 DOCUMENTATION**

**6 . 01 Drawings:**

The contractor shall prepare the following maps, plans and drawings to be submitted with the report.

**6 . 01 .01 Key Plans:**

- a) Key Plan of the surveyed area with reference to the nearest railway station and / or State Highway / National Highway.
- b) Key Plan of the survey area showing relative location of different areas within the limits of the survey area.



**6 . 01 .02 All survey information will be shown in the drawing using the guidelines listed below:**

- a) Project Title Block with all information's.
- b) Project Name and Location.
- c) Client / Consultations / Contractor's Name.
- d) Date.
- e) Maximum Drawing size 1189 x 850 mm (A0 Size).
- f) Scale for survey map 1:1000 for 20 m x 20 m grids.
- g) Surface contours at 0.50 m intervals.
- h) Existing bench mark, and monuments and over ground features.
- i) Horizontal control system shall use the grid pattern.
- j) Location of base, zero and grid lines on survey drawings.
- k) Co-ordinates and levels of grid pillars, other survey stations and bench marks corrected up to three decimals.
- l) Relationship between true North and grid North.
- m) GAIL, Pata established benchmark & reference.

**6 . 01 .03 Following survey drawings shall be submitted by the Contractor.**

- a) Drawing showing spot levels of existing ground at 20 m interval both ways.
- b) Drawing showing 0.50 m contours and all existing over ground features.

However, base; zero and grid lines, bench marks and grid pillars established at site shall be shown on both the types of drawings.

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**6 . 02      Reports:**

6 . 02 .01 The Contour Surveying Report shall include but not limited to the following:

- a) A plot plan showing all the grid locations.
- b) General physical observations, all existing structures & buildings, roads, nallah, trees, poles, tube wells, ponds , etc of the site.
- c) Method adopted & procedure for surveying.
- d) Sketch /Drawing showing:
  - (i)Reduced Levels at corners
  - (ii)Contour lines with reduced levels marked along with them.
  - (iii)Difference of angle between plant north & magnetic north.
  - (iv)Nearby existing structures such roads, compounds walls, nallah etc.
- e) Sketch/Drawing shall have descriptive Notes of following:
  - (i)Grid Interval
  - (ii)Contour Interval
  - (iii)GTS benchmark & their reference
- f) Method adopted & procedure for plotting of contours.
- g) Total Station level readings taken at the surveyed locations & hence.

6 . 02 .02 Two sets of Interim Report along with complete drawings & documents as stated above shall be submitted by the contractor to the consultant.

6 . 02 .03 On approval of check prints, Final Report, drawings /documents as stated in sec 6.02.01, after incorporating consultants/ Engineer-In-Charge's comments shall be submitted in 3 sets within 1 week, after receipt of comments.

In addition the contractor shall also submit soft copy of the drawings on latest revision of Auto-CAD along with the Report.

**7 . 00      PERFORMANCE RQUIRMENTS**



**7 . 01      UNITS**

The survey work shall be carried out in metric system and distances, levels, contours etc., shall be recorded in meters and its decimals.

**7 . 02      Base, Zero and Grid Lines**

The base and zero lines shall be established with an accuracy of 1:10,000 and grid lines shall be established with an accuracy of 1:5000 minimum.

**7 . 03      Angular Measurement**

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The error for angular measurement shall not exceed six (6) seconds per station.

**7 . 04 Levelling**

7 . 04 .01 The levels shall be established with reference to the nearest existing permanent bench mark or as directed.

7 . 04 .02 Sub- Grid points for establishing spot levels shall be spaced at 20 meter intervals in both directions with permissible tolerance of 0.5%. The spot levels shall be so obtained to get a contour interval of 0.50 m. Pointed wooden pegs with identification marking shall be fixed at each and every sub-grid points. The bench mark levels shall be established to an accuracy of 12 mm per Kilometer of the distance covered for leveling. The spot levels shall be established by fly leveling with reference to the bench mark and corrected up to three decimals of a meter. Each days work shall be checked by the Contractor by closing the levels at the 'end' of the day.

**7 . 05 Grid Pillars**

Grid Pillars of Hume pipe filled with concrete shall be constructed at an interval of 200 meters in both directions and also at corners.. These shall be provided with mild steel plate at top embedded in the concrete through lugs. The plates shall carry central punch lines and shall be painted with anti-corrosive paint. All grid pillars shall be numbered for easy identification and future reference.

**7 . 06 Permanent Bench Mark Pillar**

Permanent Bench Mark Pillar of plain cement concrete shall be constructed at the location indicated in the tender drawing / land or as directed. Intersecting point, alignment marks, co-ordinates, level and date of installation shall be marked on the top surface of the pillar, which shall be used in future as reference bench marks. Mild steel plates shall be fixed on the top of the pillar through lugs. These plates shall carry central punch lines and shall be painted with anti-corrosive paint.

**8 . 00 AUTHORITY**

Maps prepared by the contractor based on the survey work carried out under this scope of work shall be the sole property of the client. The contractor shall have no right to use, reproduce or pass on to the third party without prior written permission of the Client.

**9 . 00 PAYMENT**

Payment for survey work shall be made on area basis as per Schedule of Rates, payment for grid pillars, boundary pillars and bench mark pillars shall be made on the unit basis as per Schedule of Rates. All connected works including supply of drawings and documents shall be considered as a part of total work. No other payment shall be made on any account.

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**Abbreviations:**

cms	CENTIMETERES
DGMS	DIRECTOR GENERAL OF MINES SAFETY
gm/cc	GRAM PER CUBIC CENTIMETRE
M	METRE
M <sup>2</sup>	SQUARE METRE
mm	MILIMETRE
sqm	SQUARE METRE

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10.	EXCAVATION IN ROCK	

**1.0 SCOPE**

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This specification and the method of measurements described thereon are applicable for earthwork involved in Site Grading & Rock Cutting.

**2.0 CODES & STANDARDS**

- IS:2720 Part-IV Methods of tests for soils.
- IS:2720 Part-V Methods of tests for soils- Part 5, Determination of liquid & plastic limit.
- IS:2720 Part-VII Methods of tests for soils-Part 6, Determination of shrinkage factors.

**NOTE:-** Latest Edition of all Codes and Standards shall be followed.

**3.0 GENERAL**

- 3.1 CONTRACTOR shall maintain adequate drainage facilities at SITE at all times during the execution of work. Additional ditches, drains & such other temporary means to achieve this, over and above what is shown in the drawings, shall be provided and maintained by CONTRACTOR at his own cost.
- 3.2 Adequate dewatering facilities like dewatering pumps and piping etc. shall also be provided by the CONTRACTOR for this work, including dewatering during excavation etc. as required, at his own cost.

**4.0 MATERIAL FOR EARTHWORK**

- 4.1 Only soil considered suitable by the Engineer-in-charge shall be deployed for the construction and that considered unsuitable shall be disposed off, as directed by Engineer-in-charge, at his own cost and no claim for compensation will be entertained.
- 4.2 The CONTRACTOR shall give the samples of soil he proposes to use for filling, along with the following characteristics of the samples, to Engineer-in-charge for approval, prior to collection and use. The tests for these characteristics shall be done in a laboratory / test house as approved by Engineer-in-charge.
- Mechanical analysis or grain size analysis as per IS: 2720 Part-IV.
  - Liquid limit as per IS: 2720 Part-V.
  - Plastic limit as per IS: 2720 Part-V.
  - Moisture density relationship as per IS: 2720 Part-VII.
- 4.3 The soil used for filling shall be free from boulders, lumps, tree roots, rubbish or any organic deleterious matter.
- 4.4 Soil having plasticity index less than 20 shall be used, for filling purpose.



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- 4.5 Soil having laboratory maximum dry density of less than 1.5 gms/cc shall not be used.
- 4.6 Care shall be taken to see that unsuitable waste material is disposed off in such a manner that there is no likelihood of its getting mixed with the material, proposed to be used, for filling.
- 4.7 The work shall be so planned and executed that the best available soil are reserved for the top portion of Embankments.

**5.0 CUTTING TREES**

- 5.1 All trees having girth above 30 cms, which are not marked for preservation, shall be cut down and their roots dug up to a depth of 1 metre from the existing ground level.
- 5.2 All holes or hollows produced by digging up roots shall be carefully filled with approved soil, including all leads and lifts, rammed and compacted to obtain 90% of maximum laboratory dry density of soil and levelled as directed.
- 5.3 All uprooted trees shall be stacked or disposed off as directed by Engineer-in-charge.

**5.4 Payment**

Cutting of trees above 30 cms girth shall be paid per number. The rate quoted shall include cutting, uprooting removing the trees within plant boundary as directed, including filling holes or hollows produced by removal of roots etc. as per specifications.

**6.0 CLEARING AND STRIPPING**

- 6.1 All the areas, including depressions, where filling or cutting is to be carried out shall be cleared and stripped completely of bushes, roots, vegetation, plantation trees, shrubs, trees. up to 30 cms girth, organic and other objectionable materials. All these shall be completely uprooted and virgin soil exposed and not merely scrapped at the surface. The roots of trees of girth up to 30 cms shall be removed to a minimum depth of 1M below existing ground level and holes, hollows filled up with selected approved available soil within all leads and lifts and compacted to obtain 90% of laboratory dry density of soil as per IS: 2720, Part VII and levelled as directed by Engineer-in-charge. All soft patches must be worked out to remove soft soil and selected approved earth must be filled back and the areas (areas coming under filling) compacted to obtain 90% of maximum laboratory dry density of soil, as per IS: 2720 Part VII. The depth of stripping shall be generally 50 to 150 mm as decided by Engineer-in-Charge.
- 6.2 Material obtained from clearing shall be stacked or disposed off as directed by Engineer-in-charge within a lead as per directions of Engineer-in-Charge.

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**6.3 Payment**

No separate payment shall be made for clearing, stripping and disposal of materials obtained from clearing. This shall be considered as part of cutting work in areas of cutting and filling work in areas of filling and the rates quoted under the respective items of

- i.. Earthwork in Excavation/ Cutting
- ii. Earthwork in filling (both with available earth & earth obtained from approved borrow areas); shall be inclusive of clearing and stripping with all operations described above in clause no.6 in respective areas of cutting and filling.

No separate payment shall be made for clearing, stripping and disposal of materials obtained from clearing of borrow areas for earth. This shall be considered as part of filling work in area of filling and the rate quoted under the respective items.

**7.0 EARTHWORK IN EXCAVATION/CUTTING**

7.1 After clearing and stripping of areas as specified above in clause No.6, spot levels at intervals and pattern as decided by the Engineer-in-charge, shall be taken jointly by CONTRACTOR and Engineer-in-charge. Excavation / cutting shall commence only after the levels are signed by the contractor as a token of his acceptance.

7.2 Excavation / cutting shall be carried out strictly as per the instruction of Engineer-in-charge.

7.3 If the contractor excavates / cuts beyond the required level, additional quantity of earthwork shall not be paid for. The excavation taken below the specified level shall be made good by filling with approved material, to the required compaction, at Contractor's cost.

7.4 The final bed and sides of excavation, must be levelled, dressed and compacted. In case of areas under excavation for site grading, the final surface shall be levelled, dressed and consolidated by means of sheep foot' power driven rollers to obtain maximum compaction. However, no test control is required in such areas.

7.5 Shoring and strutting shall be adopted only with the permission of Engineer-in-charge in writing. Such shoring and strutting shall follow the necessary specification.

7.6 Provisions for dewatering shall be governed by the relevant clauses.

**7.7 Payment**

Payment for Excavation shall be on the basis of volume of excavation calculated on the basis of joint level taken as per clause 7.1 and the final finished grade levels, the



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volume being calculated by the Trapezoidal rule including dewatering, if required. Intermediate payment will be on the basis of volume calculated based on spot levels taken during the time of the billing. Reference is also invited to clause 7.3.

#### 8.0 EARTHWORK IN FILLING

8.1 After clearing, stripping and consolidation of areas as specified in clause 6, spot levels at intervals and pattern as decided by Engineer-in-charge shall be taken jointly by the CONTRACTOR and Engineer-in-Charge and filling shall commence only after the levels are signed by the CONTRACTOR as a token of his acceptance. Approved fill Material shall be spread in uniform layers not exceeding 30 cms in loose depth.

The contractor has to make his own approach and access roads from the borrow area to the demarcated filling areas. While the CONTRACTOR may make use of such short cuts as may be available to him for earth movement from borrow areas to the filling areas, the OWNER does not guarantee any passage way or right of way for the CONTRACTOR's work other than available at site. No claim shall also be admissible to the CONTRACTOR on account of his having to take longer leads or routes for earth movement, than envisaged by him, either due to any road cuttings, non-availability of routes, or any other grounds whatsoever.

In case total filling required in any area consists of soil both from borrow areas and available approved excavated material from within plant area, then joint levels, shall be taken before commencing filling with earth from borrow area.

However, earth available from borrow areas required for filling can be used only after the available earth from excavation within demarcated area has been utilised and clearance to this effect obtained from the Engineer-in-charge.

8.2 All clods, lumps etc, shall be broken before compaction.

8.3 Successive layers of filling shall not be placed until the layer below has been thoroughly compacted and tested to satisfy the requirements laid down in this specification.

8.4 Prior to Earth filling work, the Soil sample taken from available excavated earth or an outside source shall be sent to laboratory for establishing Optimum moisture content and Maximum dry density of the soil type.

8.5 Prior to rolling, the moisture content of material shall be brought to within plus or minus 2% of the Optimum Moisture Content as described in IS: 2720 Part VII. The moisture content shall preferably be on the wet side for potentially expansive soil.

8.6 After adjusting the Moisture Content as described in clause 8.5, the layers shall be thoroughly compacted by either sheep foot roller or power driven roller or vibratory roller, as approved by Engineer-in-charge, so as to obtain compaction of 95% of maximum laboratory dry density is obtained. All such tests including the In-situ tests carried out on site shall be in Contractor's scope and nothing extra shall be payable on this account.



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8.7 Each layer shall be tested in field for density and accepted by Engineer-in-charge, subject to achieving the required density, before laying the next layer. A minimum of one test per 500m<sup>2</sup> for each layer shall be conducted.

8.8 If the layer fails to meet the required density, it shall be reworked or the material shall be replaced and method of construction altered as directed by Engineer-in-charge to obtain the required density.

8.9 The filling shall be finished in conformity with the alignment, levels, cross-section and dimensions as shown in the drawing.

Earthen embankment shall be filled 300mm more on both sides, where height is more than 1M and this extra filling shall be dressed, after compaction, in conformity with alignment, level, cross-section and dimension as shown in the drawing, to achieve proper compaction in the slope. No extra payment shall be made in this regard.

8.10 Extra material shall be removed and disposed off as directed by the Engineer-in-charge.

**8.11 Tolerances**

General site grading, including cutting and filling in depressions, shall be carried out to within up down tolerance of  $\pm 5$  cms of final lines, grades and slopes.

**8.12 Earth Work in Filling in Open Lined / Unlined Wells**

For earth work in filling in open lined/unlined wells, only locally available coarse sand shall be used, in layers of 500 mm thickness. Each layer shall be thoroughly wetted by sprinkling water, before next layer is filled up. Filling shall be done up to 1m depth below NGL as above. Layers from a depth of 1m below NGL, up to NGL, shall also comprise of locally available coarse sand and compacted with suitable Mechanical manual means, to obtain same level of compaction as required for filling above NGL. Filling above NGL shall be done as per Cl. 8.1 to 8.10 above.

**8.13 Payment**

8.13.1 Payment for filling shall be made on cubic metre of volume calculated on the basis of cross section plotted from the levels of ground, where filling is to be carried out and the levels reached after filling is duly consolidated, volume being calculated by Trapezoidal method.

8.13.2 In case of simultaneous cut and fill operation, wherever specified, payment shall be made on the basis of one composite rate for cutting and filling. All other details about measurement etc. remaining same as above.

8.13.3 Payment for filling in open wells, lined or unlined, shall be made on the basis of volume calculated on the basis of average area multiplied with depth of open well.

8.13.4 No extra payment shall be made towards testing.



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**9.0 REMOVAL OF SURPLUS EARTH**

9.1 Surplus earth and soil from excavation and general site grading shall be removed from the construction areas to the area demarcated by the Engineer-in-charge.

**9.2 Payment**

Payment shall be made only for lead beyond initial lead from construction area. Rate shall include loading, transportation, dumping, stacking the surplus earth and soil in the area demarcated by the Engineer-in-charge.

Payment shall be made on cubic metre basis of the difference of measurements of the volumes of the excavation and the measurement of the filling with the excavated earth. However, the contractor's entitlement to payment shall be restricted to the actual quantity of earth removed. Quantity generated due to void in back filled volume of earth shall also be removed by the contractor at no extra cost and this disposal of earth shall not be measured and paid under any item.

**10.0 EXCAVATION IN ROCK**

10.1 Blasting operations shall be carried out with the prior permission and in the presence of the Engineer-in-charge or his authorised representative and during fixed time hours of the day. Blasting operations shall be carried out as per Indian Explosive Rules 1983, amended up to date. The contractor shall obtain license from Controller of explosives to carry out blasting operations as well as for obtaining and storing the explosives as per Indian Explosive Rules (latest). All safety precautions such as providing safety nylon netting etc. shall be carried out as per instructions of the Engineer-in-charge.

10.1.1 The contractor shall ensure that all workmen and the personnel at site except those who have actually to light the fuse are evacuated from the unsafe area to be determined by the Engineer and warned by loud speaker in local language to safe distance, not less than 200 metres at least 15 minutes before firing time by sounding warning siren. The area shall be encircled by red flags. The contractor shall be responsible for any accident to workmen, public or property due to blasting operation.

10.1.2 Gunpowder, gelatine and other safe explosives only shall be used wherever possible. Explosives with nitro-glycerine shall be used only under exceptional circumstances, with prior approval of the Engineer-in-Charge.

10.1.3 All fuses shall be cut to the length required, before being inserted into the holes.

10.1.4 The no. of charges to be fired and the actual no. of shots heard shall be compared and the person responsible must satisfy himself by examination that all the charges have exploded before work people are permitted to approach the scene. The withdrawal of a charge, which has not exploded shall under no circumstances be permitted, such charges shall be flooded with water and the hole marked into a distinguishing manner. The next hole to be fired shall be at a distance of about 500





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mm from the unexploded hole and fired in the usual way.

The contractor or any of his competent authorised person shall be in charge of the blasting operations and shall be held responsible for strictly observing the safety rules, particularly applicable to blasting operations, in addition to other safety rules.

10.1.5 For blasting rocks with dynamite, the following general principles shall be observed.

In general, the following diameter of drills shall be used for different depth of borehole's.

From 1-2 metres	25mm diameter
From 2-3.25 metres	37-50mm diameter
From 3.25-4.75metres	50-65mm diameter

The boreholes should generally be not more than 1.5m'deep and the distance apart should be from one and a half to twice their depth.

Cracks and fissures in the rock to be blasted shall be carefully studied to ascertain the best position for the boreholes. The charge shall always be placed in a sound piece of rock, if possible not nearer than 300mm from the crack.

## 10.2 Rules for Blasting with Dynamite and other High Explosives

10.2.1 The Person-in-charge must show that he is thoroughly acquainted with the blasting operations and that he understands the rules laid down herewith. He will be held responsible for any accident that may occur. He must be a licenced blaster with a valid licence from DGMS.

10.2.2 Boreholes must be of such a size and uniform that the cartridges can easily pass down them.

10.2.3 The position of all holes to be drilled must be marked out with white paint and the person in-charge must take particular note of these positions.

10.2.4 The drilling operation after being finished, the person-in-charge must make a second inspection and satisfy himself that the boreholes marked out by him have been drilled and cleaned properly.

10.2.5 The person-in-charge must prepare all charges necessary for boreholes.

10.2.6 Number of holes to be loaded and fired at one time shall be as per explosive rules. Boreholes must be thoroughly cleared before a cartridge is inserted.



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The loading is to be done by the person-in-charge himself and the position of the charge holes' carefully noted by him. Circular wooden 'tamping rods only to be used in charging holes with flat bottom, (one cartridge at a time must be inserted) and cartridge gently pressed with the tamping rod.

10.2.7 Immediately before firing a blast, due warning must be given and the person-in-charge must see that all the labours have retired to safety.

10.2.8 The safety fuses of the charged holes are to be lighted in the presence of the person-in-charge, who must see that the fuses of the holes charged have properly ignited.

After the blast, the person-in-charge must carefully inspect the work and satisfy himself that all the charges have exploded.

### 10.3 Misfires

10.3.1 Misfires are a source of great danger. If it is suspected that part of the blast to fire is delayed, sufficient time shall be allowed to elapse before entering the danger zone. When fuse and blasting caps are used, a safe time of at least an hour should be allowed.

10.3.2 None of the drillers are to work near these holes until the three following operations have been done by the person-in-charge.

- a. The Person-in-charge should very carefully extract the tamping with a wooden scrapper and withdraw the fuse with the primer and detonator attached, after which a fresh primer and detonator with fuse should be placed in this hole and fired; or
- b. The hole may be cleared of 300mm of tamping and the direction then ascertained by placing a stick in the hole. Another hole may then be drilled 150mm away and parallel to it: this hole to be then charged and fired when the other charge should explode.
- c. Drilling in holes not completely exploded by blasting shall not be permitted.

### 10.4 Precautions Against Misfire

10.4.1 The safety fuse should be cut in an oblique direction with a knife.

10.4.2 All saw dust must be cleared from the inside of the detonator; this can be done by blowing down the detonation and tapping the open end. No instrument shall be inserted into the detonator for this purpose.

10.4.3 After inserting the fuse in the detonator, it shall be fixed by means of nippers.

10.4.4 If there is water present, or if the boreholes be damp, the junction of the fuse and detonator must be made water tight by means of grease, white lead or tar.

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10.4.5 The detonator should be inserted into the cartridge, so that about one third of the copper tube is left exposed outside the explosives. The safety fuse outside the detonator, should be necessarily tied in position in the cartridge. Waterproof fuse only to be used in the damp boreholes, or when water is present in the borehole.

10.4.6 If a misfire has been found to be due to defective fuse, detonator or dynamite, the whole quantity or box from which the defective article was used shall be rejected.

10.4.7 Storage of materials for blasting shall be as per statutory regulations / stipulations of the concerned authorities.

It shall be the Contractor's responsibility to arrange for proper storage of explosives and obtain required permissions from concerned authorities. No separate payment shall be payable for the above.

**10.4.8. Cleaning of Excavation**

Excavation shall be cleaned, trimmed to exact shape and all disturbed material and other debris shall be removed. When the excavation have been taken out to the lines specified as shown on the drawings and the surface cleaned as specified, the contractor shall notify the Engineer that the excavation is ready for inspection and no further work shall be done with concrete or backfill until it has been inspected and approved by the Engineer. Cost of this work is deemed to have been included in the unit rates for excavation.

**10.4.9. Use of Excavation Material**

Where any material obtained from the excavation is, in the opinion of the Engineer, suitable for use in a particular section of the work as fill or backfill, such material shall be selected and if necessary, loaded, hauled, placed, spread and used to construct the fill or backfill with respect to the lines and grades specified for the work. As far as possible the most suitable of the materials excavated for the work shall be used to construct the fill and backfill embankments, roads and storage areas, where required. The useful rock available shall be stacked at the locations as decided by the Engineer and the cost of this work is deemed to have been included in the Unit rate of excavation.

Materials containing brush roots or other perishable materials shall not be considered suitable. The suitability of the materials and their disposition in the work shall be subject to the approval of the Engineer-in-Charge.

**10.4.10 Disposal of Surplus material**

All surplus materials shall be carried away from the site and disposed at dumping sites selected by the Engineer, up to a lead as indicated in the relevant items of the schedule of rates. All serviceable materials shall be stacked at a location in the plant



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boundary as directed by the Engineer-in-charge and the Non-serviceable materials shall be disposed outside plant boundary at a location after permission from Municipal corporation or local authority. The Engineer may ask the contractor to dump the excavated materials in regular heaps, bunds, blankets', riprap with regular slopes as directed by the Engineer and levelled so as to provide natural drainage. As a rule, all softer material shall be laid along the centre of heaps, with the harder and more weather resisting materials forming the casing on the sides and the top. Excavated rocks, which can be used in soling as road metals or for making concrete aggregate shall be stacked separately, as directed by the Engineer. All such works as mentioned above is deemed to have been taken into account while quoting for the excavation and the contractor for the above works shall claim no extras. All rock excavated from the pits shall be the property of the Owner.

**10.4.11 Stock Piles**

When the removal of material from excavation progresses at a faster rate or at different times than placement in backfill is being accomplished, such excavated materials shall be stock piled at approved locations adjacent to the work until their use is authorised.

**10.4.12 Spoil Areas**

Material excavated for the works, which is rejected as unsuitable or not required by the Engineer, shall be disposed of in spoil areas as specified-by the Engineer.

The spoil areas shall be left in a neat and sight condition and sloped to drain properly as may be directed by the Engineer.

**10.5 Control Blasting**

**10.5.1 General**

This specification lays down .the requirements for control blasting for rock excavations wherever required.

Wherever required by the Engineer, the rock blasting shall be controlled, so that vibration generated during the blasting do not cause damage to the buildings and installation around built up areas. Similarly the rock pieces should not fly off the pits and thus damage the buildings and installation around. Apart from the general precautions mentioned in the preceding paragraphs, following protective measures are suggested as guidelines. Tenderers are requested to carefully check the site conditions and submit the details of the scheme they propose to adopt for controlling the blast.

**10.5.2 Protective Measures**

a.Short delay blasting with light charges shall be used.



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- b. The blast hole shall be covered with 0.6 to 1.0 sqm. Mild steel plate of minimum 6mm thickness.
- c. Reinforcement rod mesh, not less than 20mm dia at 150mm centres in both directions, shall be put over the steel plates.
- d. Steel plate and reinforcements shall be inspected after every blasting operation and all twists shall be removed before reuse, to the satisfaction of the Engineer-in-Charge.
- e. The thickness of the covering plate and the kind of dead weight shall be duly got approved from the Engineer-in-Charge.

When blasting is necessary adjacent to partially or completely built structures, the contractor shall take all precautions necessary to prevent flying rock from causing damage to the structures.

In no case shall blasting be allowed closer than 15m to any structure after concrete placing has started.

The contractor shall be responsible for all damage caused by blasting, whether permanent or temporary structure and shall replace or repair the structures at his own cost.

**10.6 Classification of soil**

If soil of any classifications other than that specified in the Schedule of Rates is met during excavation, the decision of the Engineer-in-charge as to the classification of soil, levels of the strata of different classifications and their locations shall be binding.

In above case, the total quantity of Excavation shall be computed from the measurement of the area excavated. The hard rock and soft rock shall be measured' separately from the relevant stacks and each shall be reduced by fifty percent for voids, and paid under the relevant items. The balance, that is the total quantity of excavation minus the reduced (for voids) quantity of excavation for rocks shall be paid as soil as per the discretion of the Engineer-in-Charge. However, the maximum payment shall be limited to the volume of the area excavated, as approved by Engineer-in-charge.

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**TECHNICAL SPECIFICATION**

**FOR**

**DISMANTLING AND DEMOLISHING WORKS**

1	11.01.24	11.01.24	Issued for Tender	RU	VP	RNS
0	15.12.23	15.12.23	Issued for Tender	RU	VP	RNS
REV	REV DATE	EFF DATE	PURPOSE	PREPD	REVWD	APPD

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## 1.0 SCOPE

This specification covers the technical and precautionary requirements for the dismantling & demolition of foundation, RCC / steel structure, brick works etc.

These technical Specifications shall be supplementary to the specifications contained in the CPWD specifications, wherever at variance, these Particular Specifications shall take precedence over the provisions in the CPWD Specifications.

All the measurements shall be as per IS 1200 (relevant part with latest revision) and precautions should be taken as per guidelines mentioned in IS 4130 (latest)

## 2.0 TERMINOLOGY



- (i) Dismantling: The term 'Dismantling' implies carefully separating the parts without damage and removing. This may consist of dismantling one or more parts of the building as specified or shown on the drawings.
- (ii) Demolition: The term 'Demolition' implies breaking up. This shall consist of demolishing whole or part of work including all relevant items as specified or shown on the drawings.

## 3.0 PRECAUTIONS

- (i) The demolition shall always be well planned before hand and shall generally be done in reverse order of the one in which the structure was constructed. The operations shall be got approved from the Engineer-in-Charge before starting the work.
- (ii) Due care shall be taken to maintain the safety measures prescribed in IS 4130.
- (iii) Necessary propping, shoring and or under pinning shall be provided to ensure the safety of the adjoining work or property before dismantling and demolishing is taken up and the work shall be carried out in such a way that no damage is caused to the adjoining work or property. Wherever specified, temporary enclosures or partitions and necessary scaffolding with suitable double scaffolding and proper cloth covering shall also be provided, as directed by the Engineer-in-Charge.
- (iv) Necessary precautions shall be taken to keep noise and dust nuisance to the minimum. All work needs to be done under the direction of Engineer-in-Charge. Helmets, goggle, safety belts etc. should be used whenever required and as directed by the Engineer-in-Charge.

The demolition work shall be proceeded with in such a way that it causes the least damage and nuisance to the adjoining building and the public.

- (v) Dismantling shall be done in a systematic manner. All materials which are likely to be damaged by dropping from a height or by demolishing roofs, masonry etc. shall be carefully removed first. Chisels and cutters may be used carefully as directed. The dismantled articles shall be removed manually or otherwise, lowered to the ground (and not thrown) and then properly stacked as directed by the Engineer-in-Charge.

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- (vi) Where existing fixing is done by nails, screws, bolts, rivets, etc., dismantling shall be done by taking out the fixing with proper tools and not by tearing or ripping off.
- (vii) Any serviceable material, obtained during dismantling or demolition, shall be separated out and stacked properly within a lead of 50 meters or as directed by the Engineer-in-Charge. All unserviceable materials, rubbish etc. shall be disposed off as directed by the Engineer-in-Charge.
- (viii) The contractor shall maintain/disconnect existing services, whether temporary or permanent, where required by the Engineer-in-Charge.
- (ix) No demolition work should be carried out at night especially when the building or structure to be demolished is in an inhabited area.
- (x) Screens shall be placed where necessary to prevent injuries due to falling pieces.
- (xi) Water may be used to reduce dust while tearing down plaster from brick work.
- (xii) Safety belts shall be used by laborers while working at higher level to prevent falling from the structure.
- (xiii) First-aid equipment shall be got available at all demolition works of any magnitude.

#### 4.0 **RECOMMENDATIONS FOR DEMOLITION OF CERTAIN SPECIAL TYPES AND ELEMENTS OF STRUCTURES**

- (i) **Roof Trusses** If a building has a pitched roof, the roof structure should be removed to wall plate level by hand method. Sufficient purlins and bracing should be retained to ensure stability of the remaining roof trusses while each individual truss is removed progressively.
- (ii) Temporary bracing should be added, where necessary, to maintain stability. The end frame opposite to the end where dismantling is commenced, or a convenient intermediate frame should be independently and securely guyed in both directions before work starts.
- (iii) On no account should the bottom tie of roof trusses be cut until the principal rafters are prevented from making outward movement.



#### (iv) **Heavy Floor Beams**

Heavy bulks of timber and steel beams should be supported before cutting at the extremities and should then be lowered to a safe working place.

#### (v) **Brick Work**

- 1 Expert advice should be obtained and at all stages of the demolition, the closest supervision should be given by persons fully experienced and conversant in the type of work to ensure that the structure is stable at all times.
- 2 As much dead load as possible may be removed provided it does not interfere with the stability of the main structure.
- 3 Where it is impossible to allow debris to fall to the ground below, centering ~~designed to carry the load should be erected and the arch demolished~~



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progressively. The design of the centering should make appropriate allowance for impact.

- 4 Collapse of the structure can be effected in one action by the use of explosives. Charges should be inserted into boreholes drilled in brick work. This method is the most effective for demolition of tall viaducts.
- 5 Where explosives are used it is preferable to ensure the collapse of the whole structure in one operation to obviate the chance of leaving unstable portions standing. Cantilevers (Not part of a Framed Structure) A cantilever type of construction depends for its stability on the super imposed structure. Canopies, cornices, staircases and balconies should be demolished or supported before the tailing down load is removed.

(vi) Cantilevers (Not part of a Framed Structure)

A cantilever type of construction depends for its stability on the super imposed structure. Canopies, cornices, staircases and balconies should be demolished or supported before the tailing down load is removed.

(vii) In-situ Reinforced Concrete

- 1 Before commencing demolition, the nature and condition of the concrete, the condition and position of reinforcement, and the possibility of lack of continuity of reinforcement should be ascertained.
- 2 Attention should be paid to the principles of the structural design to determine which parts of the structure depend on each other to maintain overall stability.
- 3 Demolition should be commenced by removing partitions and external non-load bearing cladding. It should be noted that in some buildings the frame may rely on the panel walls for stability.

(viii) Where hard demolition methods are to be used, the following procedures should be used.

(a) Reinforced Concrete Beams

For beams, a supporting rope should be attached to the beam. Then the concrete should be removed from both ends by pneumatic drill and the reinforcement exposed. The reinforcement should then be cut in such a way as to allow the beam to be lowered under control to the floor.

(b) Reinforced Concrete Columns

For columns, the reinforcement should be exposed at the base after restraining wire guy ropes have been placed round the member at the top. The reinforcement should then be cut in such a way as to allow the column to be pulled down to the floor under control.

(c) Reinforced Concrete Walls



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Reinforced concrete walls should be cut into strips and demolished as for columns.

## 5.0 MEASUREMENTS

- (i) All work shall be measured net in the decimal system, as fixed in its place, subject to the following limits, unless otherwise stated hereinafter.
  - (a) Dimensions shall be measured correct to a cm.
  - (b) Areas shall be worked out in sqm correct to two places of decimal.
  - (c) Cubical contents shall be worked out to the nearest 0.01 cum.
- (ii) Parts of work required to be dismantled and those required to be demolished shall be measured separately.
- (iii) Measurements of all work except hidden work shall be taken before demolition or dismantling and no allowance for increase in bulk shall be allowed.
- (iv) Specifications for deduction for voids, openings etc. shall be on the same basis as that adopted for new construction of the work.
- (v) Work executed in the following conditions shall be measured separately.
  - (a) Work in or under water and/or liquid mud
  - (b) Work in or under foul position.
- (vi) Roofs
  - a. Roof coverings generally including battens boarding, mats, bamboo jaffari or other subsidiary supports shall be measured in square metres except lead sheet roof covering which shall be measured in quintals (15.2.3) and stone slab roof covering which shall be measured in cubic metres.
  - b. Ridges, hips and valleys shall be girthed and included with the roof area. Corrugated or semi corrugated surfaces shall be measured flat and not girthed.
  - c. Mud phuska on roofs shall be measured in cubic meters.
  - d. Lead sheets in roofs shall be measured in quintals and hips, valleys, flashings, lining to gutter etc. shall be included in this weight.
  - e. R.B. or R.C.C. roofs shall be measured as specified in 15.3.11.
  - f. Supporting members, such as rafters, purlins, beams joists, trusses etc. of wood shall be measured in cubic meters and steel or iron sections, in quintals.
- (vii) Ceiling
  - a) The stripping of ceilings shall be measured in square metres.
  - b) Dismantling of supporting joists, beams, etc. shall be measured in cubic metres or in quintals.

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- c) Height above floor level, if it exceeds 3.5 m shall be paid for separately.

(viii) Flooring and Pavings

- a. Dismantling of floors (except concrete and brick floors) shall be measured in square metres.
- b. Supports such as joints, beams etc. if any shall be measured in quintal.
- c. Concrete and Brick Roofs and Suspended Floors
- d. Demolition of floors and roofs of concrete or brick shall be measured in cubic metres. Beams cantilevers or other subsidiary supports of similar materials, shall be included in the item. In measuring thickness of roofs provide with water proofing treatments with bitumen felts, the thickness of water proofing treatment shall be ignored.

(ix) Walls and Piers

- a) Taking down walls and independent piers or columns of brick, stone or concrete shall be measured, in cubic metres. All copings, corbels, cornices and other projections shall be included with the wall measurements.
- b) In measuring thickness of plastered walls, the thickness of plaster shall be ignored.
- c) Ashlar face stones, dressed stone work, pre-cast concrete articles, etc. if required to be taken down intact shall be so stated and measured separately in cubic metres.
- d) Cleaning bricks stacking for measurements including all extra handling and removal and disposing off the rubbish as stated shall be enumerated in thousand of cleaned bricks.
- e) Cleaning stone obtained from demolished/dismantling stone masonry of any description including ashlar facing dressed stone work, stone slabs or flagging and pre-cast concrete blocks including all extra handling and disposing off the rubbish as stated shall be measured in cubic metres of cleaned stone.
- f) Honey comb works or cavity walls of bricks stone or concrete shall be measured as solid.

(x) Reinforced Concrete and Brick Work

- a. Reinforced concrete structures and reinforced brick roofs and walls shall be measured in cubic metres and if reinforcement is required to be salvaged, it shall be so stated.
- b. Where reinforcement is required to be separated, scraped and cleaned, the work shall be measured separately in quintal of salvaged steel.

c. ~~Partitions, Trellis Work etc.~~

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- d. Partitions or light walls, of lath and plaster, trellis work, expanded metal, thin concrete or terracotta slabs and other similar materials including frame work if any shall be measured in square metres stating the over all thickness.

(xi) Wood Work

All wood work including karries average 40 sq cm or over in section, shall be measured in cubic metres, while that under 40 sq cm in section, in running metres.

Ballies shall be measured in running metres.

Boarding including wooden chajjas and sun shades along with supports shall be measured in square metres in its plane.

Steel and Iron Work

- a. All steel and iron work shall be measured in quintals. The weight shall be computed from standard tables unless the actual weight can readily be determined.
- b. Riveted work, where rivets are required to be cut, shall be measured separately.
- c. Marking of structural steel required to be re-erected shall be measured separately.
- d. In framed steel items, the weight or any covering material or filling such as iron sheets and expanded metal shall be included in the weight of the main article unless such covering is not ordered to be taken out separately.

(xii) Doors and Windows

Dismantling of doors, windows, clerestory windows, ventilators etc. (wood or metal) whether done separately or along with removal of wall by making recess in the wall shall be enumerated. Those exceeding 3 sqm each in area shall be measured separately. The item shall include removal of chowkhats architraves, holdfasts and other attachments. If only shutters are to be taken out it shall be measured separately.

(xiii) Pipes and Sewer Lines

- a) Water pipe lines including rain water pipes with clamps and specials, sewer lines (salt glazed ware or concrete) etc. shall be described by their diameter and length measured in running metres inclusive of joints.
- b) If the joints, special and fittings etc. are required to be separated, it shall be so stated and enumerated.
- c) Pucca drains shall be measured under relevant items.

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- d) Valve cistern, public fountain platform, fire hydrants, etc. shall be enumerated.
- e) Manholes and inspection chambers shall be enumerated stating the size and depth of manhole/inspection chamber. They shall be classified into different groups depending upon the depth, in unit of half and one metre depth. The depth of the manhole shall be the distance between the top of manhole cover and invert level of the drain.
- f) Ventilating shafts, gully traps, flushing cisterns and other appurtenant items of work shall be enumerated.

(xiv) Posts or Struts

Posts or struts (wood, steel or RCC) section including taking out embedded portion shall be measured in running metres.

(xv) Fencing Wire Mesh

Wire mesh fencing of any type with frame shall be measured in square metres.

(xvi) Glazing

Taking out any portion of serviceable glass except polished plate, from old sashes, skylights, etc. (any thickness, weight or size) raking out old putty, etc. shall be measured in square metres. Irregular circular panes shall be measured as rectangle or square enveloping the same. The width and height being measured correct to the nearest 0.5 cm.

(xvii) Road Work

- a. Different types of road surfaces shall be measured separately.
- b. Road surfaces metalling or soling (base) shall be measured in square metres.
- c. Concrete paving shall be measured as in 15.3.8 or 15.3.9 as the case may be.

## 6.0 RATES

The rate shall include the cost of all labour involved and tools used in demolishing and dismantling including scaffolding. The rate shall also include the charges for separating out and stacking the serviceable material properly and disposing off unserviceable material beyond distance of 50 metres up to plant battery limit or any other area as specified by Municipal Corporation with consultation of the Owner. The rate shall also include for temporary shoring for the safety of portions not required to be pulled down, or of adjoining property, and providing temporary enclosures or partitions, where considered necessary.

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**TECHNICAL SPECIFICATIONS**

**FOR**

**CIVIL AND STRUCTURAL WORKS**



REV	REV DATE	EFF DATE	PURPOSE	PREPD	REVWD	APPD
1	11.01.24	11.01.24	Issued for Tender	RU	VP	RNS
0	15.12.23	15.12.23	Issued for Tender	RU	VP	RNS

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## 1.0 GENERAL

- 1.1 Specifications of materials and workmanship shall be as described in the Central Public Works Department Specifications Vol. I to VI (latest) including latest amendments, unless otherwise specified. These CPWD Specifications shall be deemed to form part of this contract. The **CONTRACTOR** shall procure and maintain copies of the latest CPWD Specifications at site for reference.
- 1.2 These technical Specifications shall be supplementary to the specifications contained in the CPWD specifications, wherever at variance, these Particular Specifications shall take precedence over the provisions in the CPWD Specifications.
- 1.3 Site clearing - Site clearing means the cutting of trees, bushes, shrubs etc. and the pulling out of roots and stumps to effect a general cleaning of the site area. All these materials shall be removed from the site area at the **CONTRACTOR's** expenses and responsibility and shall be disposed off as directed by **Engineer-in-Charge**. Trees, bushes, roots, stumps and other materials shall not be disposed off by burning within the site boundaries unless the **Engineer-in-Charge** permits.

## 2.0 REFERENCE CODES & STANDARDS

- 2.1 Wherever reference of BIS Specifications/ or BIS Codes of Practice are made in the Specifications/ Schedule of Rates or Preambles, reference shall be to the latest edition of BIS (Bureau of Indian Standards).

BIS - 109	Ready mixed paint, brushing, priming, plaster to Indian Standard colour No. 631 & 361 white and off-white.
BIS - 383	Coarse & Fine aggregates from natural sources for concrete.
BIS - 432	Mild Steel & Medium tensile steel bars.
BIS - 456	Code of Practice for Plain and Reinforced Concrete.
BIS - 515	Natural and Manufactured aggregates for use in mass concrete

## 3.0 PLAIN AND REINFORCED CONCRETE WORK



This specifications deals with cement concrete, plain or reinforced, for general use, and covers the requirements for concrete materials, their storage, grading, mix design, strength & quality requirements, pouring at all levels, reinforcements, protection, curing, form work, finishing, painting, admixtures, inserts and other miscellaneous works.

### 3.1 MATERIALS

- 3.1.1 Cement: Any of the following cements may be used as required.

BIS - 269	Ordinary Portland cement, 33 grade
BIS - 8041	Rapid hardening Portland cement
BIS - 455	Portland slag cement



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- BIS - 8112 43 Grade ordinary Portland cement
- BIS - 12330 Sulphate resistant ordinary Portland cement
- BIS - 12269 53 Grade ordinary port land cement
- BIS - 6909 Specifications for super Sulphate cement
- BIS- 1489 Portland Pozzolana cement

3.1.2 Water: Water used for mixing and curing concrete and mortar shall conform to the requirements as laid down in BIS: 456. Sea water shall not be used for concrete work.

3.1.3 Aggregates: Coarse and fine aggregates for cement concrete plain and reinforced shall conform to the requirements of BIS 383 and / or BIS 515. Before using, the aggregates shall be tested as per BIS: 2386.

Coarse aggregate: Coarse aggregate for all cement concrete work shall be broken or crushed hard stone, black trap stone obtained from approved Quarries or gravel.

Sand: Fine aggregate for concrete work shall be coarse sand from approved sources. Grading of coarse sand shall be within grading zones I, II or III laid down in BIS: 383, table 4. If required the aggregates (both fine and coarse) shall have to be thoroughly washed and graded as per direction of **Engineer-in-Charge**.

### 3.2 MIXING

All cement concrete plain or reinforced shall be machine mixed. Mixing by hand may be employed where quantity of concrete involved is small, with the specific prior permission of the **Engineer-in-Charge**. 10% extra cement shall be added in case of hand mixing as stipulated in BIS-456.

For large and medium project sites the concrete shall be sourced from ready- mixed concrete plants or from on site or off site batching and mixing plants (BIS 4926)



### 3.3 WATER CEMENT RATIO

Once a mix, including its water-cement ratio, has been determined and specified for use by the **Engineer-in-Charge**, that water cement ratio shall be maintained.

### 3.4 LAYING

Concreting shall be commenced only after the **Engineer-in-Charge** has inspected and passed the sub-base / base or the centering, shuttering and reinforcement. Concrete in slab beams, columns, footings etc. shall be laid gently in layers not exceeding 15 cm and shall be properly consolidated by means of approved mechanical vibrators.

### 3.5 CURING

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- a. After the concrete has begun to harden, it shall be protected with moist gunny bags, sand or any other material approved by the **Engineer-in-Charge** against quick drying. After 24 hours of laying concrete, the surface shall be cured by flooding with water or by covering with wet absorbent materials for 7 days as per the direction of **Engineer-in-Charge**.
- b. Approved curing compounds may be used in lieu of moist curing with the permission of the **Engineer-in-Charge**. Such compounds shall be applied to all exposed surfaces of the concrete as soon as possible after the concrete has set. No extra payment shall be made for the same.

### 3.6 GRADES OF CONCRETE

3.6.1 Grades of cement concrete shall be as given below:

	Grade Specified	Characteristic compressive strength at 28 days ( N/mm <sup>2</sup> )
i.	M 7.5	7.5 ( 75 Kg/cm <sup>2</sup> )
ii.	M 10	10 ( 100 Kg/cm <sup>2</sup> )
iii.	M 15	15 (150 Kg/cm <sup>2</sup> )
iv.	M 20	20 ( 200 Kg/cm <sup>2</sup> )
v.	M 25	25 (250 Kg/cm <sup>2</sup> )
vi.	M 30	30 ( 300 Kg/cm <sup>2</sup> )

3.6.2 Grades lower than M 20 shall not be used in reinforced concrete.



3.6.3 M 7.5 grades of concrete may be used for lean concrete bases & M 10 for simple foundation of masonry walls.

3.6.4 A sieve analysis test of aggregates shall be carried out as and when the source of supply is changed without extra charge notwithstanding the mandatory test required to be carried out as per CPWD specification.

3.6.5 All test in support of mix design shall be maintained as a part of records of the contract. Test cubes for mix design shall be prepared by the CONTRACTOR under his own arrangements and at his costs, but under the supervision of the **Engineer-in-Charge**.

### 3.8 DESIGN MIX CONCRETE

3.8.1 Design mix shall be allowed for major works where it is contemplated to be used by installing weigh batch mixing plant as per BIS 4925. At the time of tendering, the **CONTRACTOR**, after taking into account the type of aggregates, plant and method

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of laying he intends to use, shall allow in his tender for the design mix i.e., aggregate/cement and water/cement ratios which he considers will achieve the strength requirements specified, and workability for concrete to be properly finished.

- 3.8.2 Before commencement of concreting, **CONTRACTOR** shall carry out preliminary tests for design mix on trial mixes proposed by him in design of mix to satisfy the **Engineer-in-Charge** that the characteristic strength is obtained. In this regard, CONTRACTOR may consult govt. approved/reputed institute to get design mix done as per BIS 10262 at his own cost. The concrete mix to be actually used shall be approved by the **Engineer-in-Charge**.
- 3.8.3 Notwithstanding the above, the following shall be the maximum combined weight of coarse and fine aggregate per 50 kg of cement.



	<u>Grade of Concrete</u>	<u>Maximum weight of fine &amp; coarse aggregates together per 50 kg of cement</u> (for nominal mix only)
i.	M - 10	480 kg
ii.	M - 15	350 kg
iii.	M - 20	250 kg

- 3.8.4 The workability of concrete produced shall be adequate, so that the concrete can be properly placed and compacted. The slump shall be as per BIS 456.
- 3.8.5 The minimum consumption of the cement irrespective of design mix shall not be less than the following:

M 7.5 (1:4:8)	170 kg/cu m
M 10 (1:3:6)	220 kg/cu m
M 15	300 kg/cu m
M 20	350 kg/cu m
M 25	400 kg/cu m

### 3.9 TESTING OF CONCRETE

- 3.9.1 Testing of concrete, sampling and acceptance criteria shall be in accordance with BIS 456.
- 3.9.2 A slump test shall be taken at each mixer at least once in every fifty batches mixed. Any batch for which a slump test is being made shall not be transferred to the place

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of laying until the slump test has been completed. Any batch which gives a slump in excess of that described at the time of preliminary tests shall be rejected and removed from the site.

- 3.9.3 At least six cubes shall be taken for every 30 cu. metres of concrete or part thereof deposited in the work on any day. Three cubes shall be tested for 28 days strength.
- 3.9.4 If a test for particular work does not meet the specified requirements, the **Engineer-in-Charge**, in his absolute discretion may accept the work at a correspondingly reduced rate provided the average strength at 28 days is not less than 85% of the specified strength.
- 3.9.5 If the results are poorer than 85% of the specified strength, the **Engineer-in-Charge** may order further testing of any kind as may be deemed necessary in his opinion, including load tests. The load tests shall be carried on the portion of the structure involving concrete represented by the unsatisfactory works test and such other adjoining elements of a building as the **Engineer-in-Charge** may decide. If the results of the load tests are not satisfactory, the CONTRACTOR shall at his own cost undertake remedial measures including dismantling and reconstruction according to the directions and to the satisfaction of the **Engineer-in-Charge**. If the load test is successful, the **Engineer-in-Charge** may exercise his judgment before accepting or rejecting the work and shall still have the power to apply a reduction in rate as herein-stated before, in case the work in question is accepted.



### 3.10 PROPORTIONING

Mixes of cement concrete shall be as ordered. Where the concrete is specified by grade, it shall be prepared by mixing cement, sand and coarse aggregate by weight as per mix design. In case the concrete is specified as volumetric mix, then dry volume batching shall be done, making proper allowances for dampness in aggregates and bulking in sand. Equivalent volume batching for concrete specified by grade may however be allowed by the **Engineer-in-Charge** at his discretion.

### 3.11 PRE CAST CONCRETE

The specifications for pre cast concrete will be similar as for the cast in situ concrete. All pre cast work shall be carried out in a yard made for the purpose. This yard shall be dry, properly leveled and having a hard and even surface. If the ground is to be used as a soft former of the units, shall be paved with concrete or masonry and provided with a layer of plaster (1:2 proportion) with smooth neat cement finish or a layer of MS sheeting. The casting shall be over suitable vibrating tables or by using form vibrators as per directions of **Engineer-in-Charge**.

The yard, lifting equipment, curing tank, finished material storage space etc. shall be designed such that the units are not lifted from the mould before 7 (seven) days of curing and can be removed for erection after 28 (Twenty Eight) days of curing. The moulds shall preferably be of steel or of timber lined with G.I. sheet metal. The yard shall preferably be fenced.

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Lifting hooks, wherever necessary or as directed by **Engineer-in-Charge** shall be embedded in correct position of the units to facilitate erection, even though they may not be shown on the drgs. and shall be burnt off and finished after erection.

Pre cast concrete units, when ready shall be transported to site by suitable means approved by **Engineer-in-Charge**. Care shall be taken to ensure that no damage occurs during transportation. All adjustments, leveling and plumbing shall be done as per the instructions of the **Engineer-in-Charge**. The CONTRACTOR shall render all help with instruments, materials and staff to the **Engineer-in-Charge** for checking the proper erection of the pre cast units.

After erection and alignment the joints shall be filled with grout or concrete as directed by **Engineer-in-Charge**. If shuttering has to be used for supporting the pre cast unit they shall not be removed until the joints has attained sufficient strength and in no case before 14 (fourteen) days. The joint between pre cast roof planks shall be pointed with 1:2 (1 cement : 2 sand) mortar where called for in the drgs.

### 3.12 PROTECTION OF CONCRETE

All concrete shall be protected from damage by rain or by workmen, equipment, overload or any other causes. All edges, corners and projections of concrete members likely to be damaged, shall be protected by means of wooden cover fillets.

### 3.13 CONSTRUCTION JOINTS

Construction joints shall be made only where shown on the drawings or as approved by the **Engineer-in-Charge**. The procedure given in clause 13.4 of BIS: 456 shall be followed for general guidance.

### 3.14 SEPARATION JOINT

Separation Joint shall be obtained by using an approved alkathene sheet struck on the surface against which concrete shall be placed. Adequate care should be taken to cause no damage to the sheet.

### 3.15 DAMP PROOF COURSES



Damp proof course shall consist of cement concrete of specified proportions and thickness. Surface of brick or stone masonry shall be leveled and prepared before laying the cement concrete.

### 3.16 SAMPLING OF CONCRETE

Sampling & strength Test of concrete, Acceptance criteria and Inspection & Testing of Structure: This shall be as per the requirements laid down in clause Nos: 14, 15 & 16 of BIS: 456.

## 4.0 STEEL REINFORCEMENT

### 4.1 Steel reinforcement shall comprise

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- i. Mild steel bars conforming to BIS: 432 Part-I.
- ii. Cold twisted bars conforming to BIS: 1786
- iii. CRS bars
- iv. TMT bars
- v. Hard drawn steel wire fabric conforming to BIS: 1566

4.2 All joints in reinforcement shall be lapped adequately to develop the full strength of the reinforcement as per provision of BIS: 456 or as per instruction of **Engineer-in-Charge**.



As and when required, welded laps shall be provided as specified by **Engineer-in-Charge**. Following procedure shall be followed for welding of Tor steel reinforcement bars.

1. Welding of Tor steel reinforcement bars shall be taken up only after specific approval by **Engineer-in-Charge**.
2. Lap welding with longitudinal beads shall only be adopted.
3. Welding shall be carried in accordance with BIS 2751 & 9417. Only qualified welders shall be permitted to carry out such welding.
4. For cold twisted reinforcement, welding operations shall be controlled to prevent a supply of large amount of heat, larger than can be dissipated. The extreme non-twisted end portion shall be cut off before welding. Electrodes with rutile coating should be used.
5. Welding procedure shall be approved by **Engineer-in-Charge** and tests shall be made to prove the soundness of the welded connection
6. Stripper at closer spacing shall be provided in the lap welded joints as directed by **Engineer-in-Charge**.

4.3 M.S. round bars shall be hooked at ends as specified. Ribbed Tor-Steel shall be bent at right angles at ends as indicated or directed.

## 5.0 FORM WORK

5.1 The shuttering or form work shall conform to the shape, lines and dimensions as shown on the drawings and be so constructed as to remain sufficiently rigid during placing and compacting of the concrete and shall be sufficiently tight to prevent loss of liquid from the concrete. The surface that becomes exposed on the removal of forms shall be examined by **Engineer-in-Charge** or his authorized representative before any defects are made good. Work that has sagged or bulged out, or contains honey combing, shall be rejected. All shuttering shall be plywood or steel shuttering.

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5.2 The **CONTRACTOR** shall be responsible for sufficiency and adequacy of all form work. Centering and form work shall be designed & detailed in accordance with BIS 14687 and approved by the **Engineer-in-Charge**, before placing of reinforcement and concreting.

### 5.3 **STRIPPING TIME**

Forms shall not be struck until the concrete has reached strength at least twice the stress to which the concrete may be subjected at the time of removal of form work. The strength referred to shall be that of concrete using the same cement and aggregates, with the same proportions and cured under conditions of temperature and moisture similar to those existing on the work. Where possible, the form work shall be left longer as it would assist the curing.

Note 1 - In normal circumstances and where ordinary Portland cement is used, forms may generally be removed after the expiry of the following periods:

- |    |   |   |
|----|---|---|
| a. | Walls, columns and vertical faces of all structural members | 24 to 48 hours as may be decided by the <b>Engineer-in-Charge</b> |
| b. | Slabs (props left under)                                    | 3 days  |
| c. | Beam soffits (Props left under)                             | 7 days  |
| d. | Removal of props under slabs                                |   |
|    | 1. Spanning up to 4.5 m                                     | 7 days  |
|    | 2. Spanning over 4.5 m                                      | 14 days   |
| e. | Removal of props under beams and arches :                   |   |
|    | 1. Spanning up to 6 m                                       | 14 days   |
|    | 2. Spanning over 6m   | 21 days   |



For other types of cements, the stripping time recommended for ordinary Portland Cement may be suitably modified.

Note 2 - The number of props left under, their sizes and disposition shall be such as to be able to safely carry the full dead load of the slab, beam or arch as the case may be together with any live load likely to occur during curing or further construction.

## 6.0 **BRICK WORK**

This specification covers the construction of brick masonry in foundations, arches, walls, etc. at all elevations. The provision of BIS: 2212 shall be complied with unless permitted otherwise.

### 6.1 Bricks

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All bricks shall conform to minimum class 7.5 as designated in CPWD Specifications unless specified otherwise.

6.2 Mortar

6.2.1 Cement and water shall conform to the requirements laid down for cement concrete work.

6.2.2 Sand for masonry mortar shall be coarse sand conforming to BIS: 2116. Maximum quantities of clay, fine dust shall not be more than 5% by weight. Organic impurities shall not exceed the limits laid down in BIS: 2116.

6.2.3 Mix of mortar for building brick work shall be as specified in the item of work.

6.2.4 Mixing of mortar shall be done in a mechanical mixer. When quantity involved is small, hand mixing may be permitted by the **Engineer-in-Charge**. Any mortar remaining unused for more than 30 minutes after mixing shall be rejected.

6.3 Brick Masonry

Brick work shall be built in English bond, unless otherwise specified. The thickness of joints shall be 10 mm  $\pm$  3 mm. Thickness of joints shall be kept uniform. In case of foundations and manholes etc. Joints up to 15 mm may be accepted.

6.4 Half Brick Masonry

All courses shall be laid with stretchers. Reinforcement comprising 2 Nos.6 mm dia MS bars shall be provided over the top of the first course and thereafter at every third course.

6.5 Fixtures

All iron fixtures, pipe spouts, hold fasts of doors and windows, which are required to be built into the wall shall be embedded in cement concrete blocks 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size indicated in the item.



6.6 Curing

Brick work shall be protected from rain by suitable covering when the mortar is green. Masonry work shall be kept constantly moist on all faces for a minimum period of seven days.

6.7 Cement Concrete Block

Cement concrete block shall be machined made in the proportion of such that mix shall not be leaner than one cement to Twelve combined aggregates ( by volume ) but having minimum strength of M 7.5. Combined aggregate shall be graded as near as possible to BIS : 383. The fineness modules of combined aggregate shall be between 3.6 and 4. The concrete block shall be properly cured as per BIS-456. The



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surface of conc. block shall have even face without any honeycomb and free from cracks.

**6.7.1 Mortar**

Cement and water shall conform to the requirements laid down for cement concrete work.

6.7.2 Sand for concrete block masonry mortar's shall be coarse sand generally conforming to BIS: 2116. Maximum quantities of clay, fine dust, shall not be more than 5% by weight. Organic impurities shall not exceed the limits laid down in BIS: 2116.

6.7.3 Mix of mortar for building concrete block shall be as specified in the item of work.

6.7.4 Mixing of the mortar shall be done in a mechanical mixer. When quantity involved is small hand mixing may be permitted by **Engineer-in-Charge**. Any mortar remaining unused for more than 30 minutes after mixing shall be rejected.

**6.8 Concrete Block Masonry**

The thickness of joints shall be 10 mm +/- 3mm. Thickness of joints shall be kept uniform. In case of foundation and manholes etc. joints up to 15 mm may be accepted.

**6.9 Half Concrete Block**

All courses shall be laid with stretchers. Reinforcement comprising 2 nos. 6 mm dia MS bars shall be provided over the top of the first course and thereafter at every fourth course.

**6.10 Fixtures**

All iron fixtures, pipes spouts, hold fasts of doors and windows which are required to be built into the wall shall be embedded in cement concrete blocks 1:2:4 mix (1 cement :2 coarse sand :4 graded stone aggregate. 20 mm nominal size) of size indicated in the item.

**6.11 Curing**

Concrete block masonry shall be protected from rain by suitable covering when mortar is green. Masonry work shall be kept constantly moist on all faces for a minimum period of seven days.

**6.12 Tests and Records**

All tests, Field or Laboratory (Field and an approved outside Lab.) is in the Contractor's scope and all Test Records are to be maintained in line with the CTE format. For this purpose, the Contractor has to establish a Laboratory for Field tests, well equipped with all necessary tools and tackles e.g. Sieves of different sizes, Universal testing machine, slump cone and cube mould etc. For conducting such tests, nothing extra shall be payable.

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**FOR**  
**GAIL,PATA**

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## 1.0 INTRODUCTION

1.1 The purpose of the present document is to outline the minimum safety requirements applicable to personnel, equipment and facilities during erection, pre-commissioning and commissioning activities of OWNER / CONSULTANT Construction Sites. Constructing safe structure and providing safe working environment to the personnel is a vital factor in successful construction business. Safety and health are as much as part of effective project planning and control as the cost, schedules, procurement and quality. Indeed they are all closely interrelated. Productivity, safety and quality can move forward in close proximity.

## 1.2 OBJECTIVES

OWNER/CONSULTANT Site Management has following main objectives regarding safety at site.

- a) No Accident
- b) To make the environment safe
- c) No harm to people
- d) Safety is everyone's responsibility
- e) To make the job safe

## 2.0 GENERAL

- 2.1 These rules do not exempt the Contractor from statutory Health, Safety and Environmental duties but are intended to assist in attaining a high standard of compliance with those duties, in order to provide a safe and healthy working environment.
- 2.2 OWNER/CONSULTANT will assist Contractors in any practical way to facilitate safe working, and requires full co-operation in observing these rules.
- 2.3 The rules for Health and Safety specified herein are in no way intended to relieve the Contractor from any obligation or liability under the Contract, nor is it intended to relieve the Contractor of any of his legal obligations for the avoidance of accidents.
- 2.4 In all matters arising in the performance of the Contract, the Contractor shall conform with all Statutory Regulations and By-Laws made with statutory authority by Government Departments or by Local or other Authorities that shall be applicable to the Works.
- 2.5 The Contractor, in the performance of the Contract, shall not endanger the safety or unlawfully interfere with the convenience of the public in any manner.
- 2.6 The Contractor's representative on Site shall communicate details of these rules for Health, Safety and Environment to all Contractors' employees and to all Subcontractors and Subcontractors' employees employed on the Site.

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2.7 The requirements of the Client/Owner's existing Site Rules/Regulations form part of the Contract and in the case of conflict between the OWNER/CONSULTANT'S rules, the highest standard shall be applied.

2.8 At the tender stage OWNER/CONSULTANT will require to see a copy of the Contractor's policy, organization and arrangements for the Health and Safety at Work. The Contractor shall submitted complete documents Health and Safety Questionnaire. Contractor shall deploy safety officer of adequate experience at each work site or during each shift including Sunday/holiday with approval of EIC/Owner.

### 3.0 SITE HEALTH, SAFETY AND ENVIRONMENT INDUCTION

3.1 All personnel shall receive OWNER/CONSULTANT and Contractors' site Health, Safety and Environment induction before they commence work on site. The induction shall comprise information on the various hazards which they may come into contact with, instructions on the site emergency procedures, warning and alarm systems, and permit to work system, first aid locations, welfare facilities, access routes and project specific rules.

3.2 It is the responsibility of the Contractor to familiarize all new personnel to the Project on the actual location of muster points, fire alarm points, first aid stations and the like.

### 4.0 DEMARCATION

4.1 Construction personnel are restricted to the construction areas shown on the Contract Drawings. Any personnel found on/in or interfering with the existing works/plant, without permission, will be dismissed from site. Any work outside of these areas may only be carried out with the written agreement of OWNER/CONSULTANT.

Before any work is started on the site, the Contractor's representative shall report to OWNER/CONSULTANT, who will confirm to the Contractor's representative, the limits of the working area(s) and shall be informed of any special requirements appertaining thereto.

### 5.0 ACCESS TO THE CLIENT'S FACILITIES/BUILDINGS

5.1 The Client's Facilities, including the canteen/cafeteria and toilets shall not be used by Construction Personnel.

5.2 Construction Personnel shall not enter any of the Owner's building unless escorted by a member of the OWNER/CONSULTANT'S staff (or working with prior agreement to Owner's Permit to Work System).

### 6.0 BEHAVIOR ON SITE

6.1 All Contractors' personnel shall treat everyone with respect and will refrain from any sexually suggestive or abusive comments or behavior.

### 7.0 SMOKING, EATING AND DRINKING

7.1 Smoking, eating and drinking is allowed in designated areas.

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## 8.0 DRUGS AND ALCOHOL

- 8.1 The possession or use of illicit drugs and alcohol on site is not permitted. Anyone who is found, or suspected to be, under the influence of either will be removed from site (subject to the Contractors' disciplinary procedure).
- 8.2 Anyone taking prescriptive drugs shall advise their employer, in particular those drugs that may impair their performance. Their employer may make arrangements to assign them to more suitable work, but shall ensure that the OWNER/CONSULTANT Construction manager is informed without delay.

## 9.0 PERMIT TO WORK SYSTEM

- 9.1 All construction works will be carried out under a permit to work system. It is designed to protect personnel and plant and consists of an organized and predefined safety procedure. It forms a clear record of all foreseeable hazards which have been considered in advance of construction operations.
- 9.2 The identities of the permit "Issuing Authority" will be OWNER and the "Permit Acceptor" will be the Contractor.
- 9.3 The following types of permits will be issued:
- Clearance Certificate - all other permits are invalid without this Certificate, (this certificate can be used for general work).
  - Hot Job Work Permit.
  - Electrical Work Permit.
  - Confined Spaces Work Permit.
  - Excavations Work Permit.
  - Working at Height work Permit.
  - Radiography Work Permit.
  - Cold Job Work Permit.
  - Road Closure Work Permit.
- 9.4 Written requests for permits must be submitted to Owner at least twenty-four hours in advance and the permits will be issued daily. Permits shall be given to Safety Officers of the contractor, by representatives authorized by Owner in approved formats.

## 10.0 ACCESS, SITE PASSES AND SECURITY

### 10.1 Passes

All personnel and vehicles shall enter and leave the site via the entrance authorized for construction personnel and traffic. Contractors' employees shall not enter any part of the site other than for the purpose of carrying out the Works.

All personnel shall be issued with a site pass. The site pass must be carried (or displayed on the pass holder's lapel) at all times. Details of all personnel requiring site passes shall be submitted to OWNER/CONSULTANT at least seven working days in advance of the

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planned start-on-site date. Site passes shall be submitted for inspection on entering or leaving the site, or when requested for inspection by OWNER/CONSULTANT or Security.

Loss of site passes must be reported immediately to Owner/Consultant. Lack of a site pass may mean delay at the site entrance. Owner/Consultant shall not accept any responsibility for lost time or costs incurred.

On completion of their assignment, or termination or their employment, all personnel will return their site pass to Owner or Owner representative/ Owner authorized personal.

## 10.2 Security

The security of Contractor's plant, tools, equipment, materials (including free issue materials properly handed-over by Owner/Consultant) are the responsibility of the Contractor. It is the Contractor's responsibility to satisfy themselves that the security arrangements in existence on the site are adequate. The Contractor shall provide any other security measure that he deems necessary for the control and security of Contractor owned equipment and plant, including for free-issue plant and materials, both within the site establishment area and the working areas on the site.

Owner accepts no liability for any loss, damage or deterioration to the Contractor's plant tools equipment and materials.

Owner reserves the right to search at random all personnel, any Contractor's employee, or employees of its servants, agents, Contractors or any vehicle entering or leaving the site. Any package or container being taken into or out of the site may be opened and inspected by security staff or any other persons authorized by Owner/Consultant to make such a search or inspection.

It is the Contractor's obligation and responsibility to ensure that OWNER / CONSULTANT right to search and inspect persons and property, extends to and is brought to the attention of all his personnel.

Personnel shall give all possible assistance and make available any facilities required to assist OWNER/CONSULTANT and the Police in pursuance of the prosecution of any person(s) responsible for alleged malicious damage or loss to the Works or existing installations.

Owner shall not accept any responsibility for the loss or damage of personal effects. The security and safekeeping of personal effects is the responsibility of each individual.

- 10.3 Construction personnel will not be admitted to the Construction Areas unless they have undergone Owner/ Consultant's induction, and received a security pass.

### **No Induction, No Pass, No Access to the Site**

- 10.4 OWNER/CONSULTANT reserves the right to deny access to the Construction Site/Areas and/or the Construction Car parks to any person, or vehicle.



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- 10.5 Individuals may be excluded from and refused future entry to the Site and/or Construction Areas for any breach of Safety or Security Rules, or exceeding the speed limit (20 mph on roads leading to the site off the public highway and 5 mph in the construction area).
- 10.6 No plant/skips waste or materials may leave the Construction Area without the clearance of OWNER/CONSULTANT.
- 10.7 The taking of photographs on the site is prohibited.
- 10.8 Vehicles with children under the age of 16 years or animals onboard will not be allowed access.
- 10.9 Visitors will only be allowed by appointment (two days' notice to OWNER/CONSULTANT is required). Visitors shall be accompanied by a member of the Contractor's team (who has received Health, Safety and Environment Induction) at all times. The visitor will have to obtain a visitor's pass, and be collected from and returned to the main gate.
- 10.10 Each Contractor will keep a daily register of who is on site. The register will record name, pass number, time-in and time-out (records on time-clocks will not be permitted). This information shall be used to check personnel (role call) in the event of an emergency

#### **11.0 PARKING, DELIVERIES AND VEHICLE PASSES**

- 11.1 Contractors' personnel shall not be allowed to park any vehicle on the main car park or site. All contractors shall park in the Contractors' Temporary Car Park.
- 11.2 The Contractor shall arrange transport between the parking area(s), the main site gate and the Contractor's establishment and working areas if judged to be necessary.
- 11.3 Vehicles used solely for transporting of tools and equipment may be allowed access to the working area(s) for unloading/loading only.
- 11.4 Owners of vehicles parked illegally will have their car pass taken off them and told to remove the vehicle from site. They may have their site pass withdrawn and be refused further access to the Construction Site.
- 11.5 The Construction Areas will be restricted to construction plant and delivery vehicles.
- 11.6 The speed limit on site is 10 mph on the approach roads leading to the site off the public highway and 5 mph on the construction areas

#### **12.0 SITE OPENING AND CLOSING TIMES**

- 12.1 The site will be open from 8.00am to 6.00pm Monday to Saturday. Work outside the agreed normal working hours will be by agreement with Owner (subject to two working days' notice). All applications for out of hour working will identify the scope of work, supervision arrangements and a list of personnel.

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### 13.0 SITE SUPERVISION

13.1 The Contractor must ensure that an employee of suitable seniority and authority, with responsibility for Health and Safety, is always present on site during the course of the works, to supervise and direct the Works and to receive and implement instructions from OWNER/CONSULTANT. Seven days before commencing works on site, the Contractor must notify OWNER/CONSULTANT of the name of that employee.

13.2 All supervisory staff shall be made aware of their responsibilities for safety.

### 14.0 TRAINING, COMPETENCE OF EMPLOYEES AND NOTIFICATION OF HAZARDS

14.1 Each Contractor must ensure that all his supervision and employees have had adequate safety training and are experienced to carry out their work safely, prior to starting on site. Training should be continuous throughout a project and should include regular toolbox discussions, (on site briefings at the start of each working day/shift).

To this end, the Contractor must also ensure that specific hazards likely to be experienced on the Site, whether notified to them or discovered by them, are notified to their workforce together with any precautions to be taken and local rules to be observed. Similarly, such hazards should be notified to their Subcontractors and, where discovered by them, to OWNER/CONSULTANT.

14.2 Where particularly severe or unusual hazards may arise on site, OWNER/CONSULTANT reserves the right at no additional cost to request Contractors' employees to attend special safety training and instruction sessions, whether carried out on site or externally. OWNER/CONSULTANT also requires Contractors' employees to undergo specified induction safety training. These aspects should be checked prior to submission of Tenders or execution of the works.

### 15.0 METHOD STATEMENTS

15.1 Contractors shall submit Safety Method Statements and JSA for all work activities, for example:

- Piling Operations.
- Excavation works.
- Lifting operations, as specified.
- Steel erection.
- Hot work operations.
- Radiography/NDT.
- Entry into confined spaces.
- Pressure testing.
- Working at height.
- Shot fired tools.
- Installation of pre-cast concrete planks.
- Pre-cast concrete structure.
- The erection of safety nets and fall arrest equipment.

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Safety method statements must also be submitted for activities which have been identified as being of significant risk during the risk assessment process and activities selected by OWNER/CONSULTANT.

15.2 All Safety method statements must be submitted to OWNER/CONSULTANT at least seven days before planned commencement of the works.

15.3 The Safety method statement shall detail:

- The job to be undertaken.
- The individual activities required to complete the job.
- The individual trades/disciplines involved in each activity.
- Plant, equipment and tools to be used in each activity.
- Any substances/chemicals to be used and where, and during which activity they will be used (together with a COSHH assessment).
- The Name(s) of the Supervisor(s) for each activity.
- The Name of the person in overall charge of the job.
- A detailed description of how the work will be done including control measures and procedures to complete each activity and the overall job safety.
- All hot work.

15.4 Compliance with the contents of the safety method statement shall be monitored on a daily basis and addressed during Contractors' safety management meetings.

15.5 The Contractor must ensure that employees executing the works are fully briefed and are made aware of the details within the approved Safety Method Statements, prior to starting the task, this includes highlighting hazards associated, associated risk assessments and reduction measures.

## 16.0 RISK ASSESSMENTS

16.1 Contractors will be required to produce risk assessments for all works under their control. The risk assessment shall be submitted as part of the Safety Method Statement to OWNER/CONSULTANT at least seven days before the job commences, and include the following information:

- Identification of all hazards applicable to significant risk activities.
- Details of measures in place to control the risk.
- Justification that the existing control measures are adequate or if not, a detailed action plan on how the risk(s) shall be controlled.

16.2 The use of Generic Risk Assessments is only acceptable if they follow the logical progression of the method statement and that specific operation, otherwise, task specific risk assessments will be required.

16.3 All risk assessments must be communicated to the workforce who will be responsible for undertaking the work.

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## 17.0 COMPLIANCE WITH STATUTORY REGULATIONS

- 17.1 Contractors shall carry out their work in accordance with statutory legislation. It is the duty of the Contractor to have knowledge of all relevant legislation and take account of it in the planning and execution of the work on OWNER/CONSULTANT' Sites.

## 18.0 INFORMATION TO BE PROVIDED AND POSTED

- 18.1 Contractors shall have in place, and issue to OWNER/CONSULTANT the following documents or information prior to commencement of their work, (where detailed within these rules):

- 18.1.1 Safety, Health and Environmental Policy.
- 18.1.2 Employer's Liability Insurance Certificate.
- 18.1.3 A detailed Health, Safety and Environment Plan, compliant with the project plan developed by the Planning Supervisor and/or Principal Contractor.
- 18.1.4 Work Method Statement Lifting Studies.
- 18.1.5 COSHH Procedures and Assessments.
- 18.1.6 Noise Procedures and Assessments.
- 18.1.7 Name of the individual appointed as the Site Safety Supervisor/Advisor.
- 18.1.8 Test certificates and examination for lifting gear, plant and appliances to be used on site. (Duplicates to be provided for OWNER/CONSULTANT's records.)
- 18.1.9 Drawings and calculations relating to false work, designed scaffolds, ground works and supporting temporary works.
- 18.1.10 Details of young persons to be employed on site.
- 18.1.11 Information relating to hazards associated with plant, operation and materials used in the works.
- 18.1.12 Proof of training for all personnel engaged in the works.
- 18.1.13 Daily Labour Returns.
- 18.1.14 Monthly Return of Accident Statistics to submitted OWNER/CONSULTANT format (Nil returns required).
- 18.1.15 Personal Injury Report to submitted to OWNER/CONSULTANT format (all injuries, however minor, to be reported). OWNER/CONSULTANT may request a detailed investigation into an accident. OWNER/CONSULTANT' decision on which incidents require detailed investigation is final.
- 18.1.16 Dangerous Occurrences, Incidents, Damage to Equipment and/or Property report to be submitted to OWNER/CONSULTANT format.
- 18.1.17 All entries/records of accidents entered into the Contractor's Accident Book shall also be copied into OWNER/CONSULTANT' Accident Book by the Contractor.
- 18.1.18 Copies of all Statutory Registers to be submitted weekly to OWNER/CONSULTANT.
- 18.1.19 Copies of the Contractor's Safety Officer/Advisor's reports of their findings on site visits/inspections.

## 18.2 Accidents, Incidents, Dangerous Occurrences and Notifiable Diseases

- 18.2.1 Accidents/Incidents/ Dangerous Occurrences/Near Misses

All accidents/incidents/dangerous occurrences/near misses must be notified to OWNER/CONSULTANT immediately, and a report prepared.

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For reportable incidents, a copy the report to the Authority must be submitted to OWNER/CONSULTANT on completion but no later than two calendar days after the accident.

18.2.2 OWNER/CONSULTANT reserves the right to decide which accident, incidents or minor injuries shall be Investigated, and to what extent/format/contents of any investigation.

**Note:** All such notification or reports to OWNER/CONSULTANT do not release the Contractor of his statutory duties to report such matters to the Authorities by the quickest possible means (viz, telephone, fax and e-mail) immediately following the incident/accident.

## 19.0 PERSONAL PROTECTIVE EQUIPMENT/CLOTHING

19.1 All personnel on OWNER/CONSULTANT' site must wear as a minimum safety helmet, hi-vis vest, safety glasses and protective footwear. Additional personal protective equipment may be required dependent on the tasks being undertaken or as dictated by the risk assessment.

19.2 Contractors shall provide all necessary personal protective clothing and equipment for their employees and renew as necessary. Records of the issue of such equipment must be maintained for inspection by OWNER/CONSULTANT.

19.3 The Contractor shall:

- Provide personal protective equipment which is comfortable and fit for purpose.
- Maintain and clean personal protective equipment.
- Replace free of charge defective, broken or lost personal protective equipment.
- Provide storage for personal protective equipment when not being used.
- Ensure that personal protective equipment is properly used.
- Give training, information and instruction on its use to employees.
- Ensure that all personnel wear suitable clothing at all times (**no shorts, no sports shirts and no colours that may invite aggression - HSE "Keep Your Tops On" is enforced**).
- OWNER/CONSULTANT reserves the right to direct the contractor to change/replace personal protective equipment if they determine that it is unsuitable or inadequate for its proposed use.

## 20.0 SUBSTANCES (Control of Substances Hazardous to Health – COSHH)

20.1 Substances hazardous to health must be identified prior to taking them onto site and, if they cannot be substituted or eliminated, assessments stating how the substances will be controlled and what precautions will be introduced must be carried out and recorded in writing by a competent person. This assessment must be communicated to, and understood by, the members of the workforce who are likely to come into contact with the substance(s). A copy of all assessments should be submitted to OWNER/CONSULTANT.

20.2 Hazardous substances may only be brought to site with OWNER/CONSULTANT' permission. They shall be kept to a minimum and must be stored in secure, appropriate containers with the contents clearly labelled. The containers must be stored in a secure

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area, preferably quarantined from the main stores areas, with suitable warning notices and signage posted.

- 20.3 Hazardous materials must not be allowed to discharge into natural watercourses or drainage systems.
- 20.4 All hazardous material waste must be kept separate from normal waste and be disposed of in a specialist disposal facility.

## 21.0 NOISE

- 21.1 When any operation of a Contractor is likely to expose any employee on site to an average noise level of 85 dB(A) and above, an assessment shall be carried out, by the Contractor, and records maintained for OWNER/CONSULTANT' inspection. In such circumstances, the Contractor must keep stocks of adequate ear defenders or other suitable hearing protection.
- 21.2 In addition to the foregoing, noise must be kept to a minimum at all times and must not exceed acceptable and/or locally specified rules and conditions relating to noise imposed by the Contract. Due regard must always be given to noise levels, and their effects on the local community and persons not involved in the operations. Permissible times for noisy work operations, and other restrictions, may be imposed by the Local Authority. Contractors receiving Notices or Prohibition Notices under the related legislation must notify OWNER/CONSULTANT of such Notices.

## 22.0 FIRST AID

- 22.1 All Contractors shall provide or ensure that they are provided with, such equipment and facilities as are adequate and appropriate in the circumstances for enabling first-aid to be rendered to any of their employees if they are injured or become ill at work.
- 22.2 No work shall commence on site until Contractors have trained first aid personnel on site. Contractor at all times during execution, shall station at site an emergency vehicle without any extra cost or claim.

## 23.0 TOOL BOX TALKS

- 23.1 Tool Box Talks will be implemented by all Contractors. The agenda for these talks will be agreed with OWNER/CONSULTANT prior to the commencing of work.

## 24.0 HEALTH, SAFETY AND ENVIRONMENT INSPECTIONS/HEALTH, SAFETY AND ENVIRONMENT ADVISORS

- 24.1 The OWNER/CONSULTANT' Health, Safety and Environment Engineer/Advisor will visit the sites and carry out Site Safety Inspections. Contractors must co-operate in these inspections. Whenever Contractors' own Health, Safety and Environment Advisors visit site they must report their arrival and departure to the OWNER/CONSULTANT' Senior Representative, and provide a report of their findings and any necessary corrective action to be undertaken.

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24.2 Contractors on the project must provide a full-time site based Health, Safety and Environment Advisor, when the intensity of the work requires or at the request of the OWNER/CONSULTANT.

24.3 Contractors who do not have full-time site based Health, Safety and Environment Advisors, shall ensure that their Health, Safety and Environment Advisor visits site once per week as a minimum.

**24.4 Appointment of Health, Safety and Environment Supervision**

The Contractor shall appoint safety supervision. The name of each appointee, together with evidence of his or her competence to carry out the requirements of the role, shall be submitted to OWNER/CONSULTANT for their approval.

**25.0 HEALTH, SAFETY AND ENVIRONMENT MEETINGS**

25.1 Health, Safety and Environment will form part of the agenda at all Site Progress Meetings. The Contractor's Safety Advisor may be asked to attend these progress meetings.

25.2 Once per month OWNER/CONSULTANT' Resident Construction Manager shall convene a Health Safety and Environment Meeting of all Contractors. Attendees at the meeting shall be all Contractors' Safety Advisors and Site Managers.

**26.0 HEALTH, SAFETY AND ENVIRONMENT COMMITTEES AND SAFETY REPRESENTATIVES**

26.1 OWNER/CONSULTANT encourages the workforce to nominate Safety Representatives as a way of improving communication on Health, Safety and Environment issues. Wherever Contractors' Safety Representatives have been appointed, OWNER/CONSULTANT must be informed of their appointment in writing.

**27.0 HOUSEKEEPING**

27.1 Contractors are expected to carry out their work in a clean, safe and orderly manner.

27.2 Dust shall be kept to acceptable levels for the work being carried out. Waste materials and rubbish shall be cleared up as the work progresses and not left to introduce a safety hazard for other personnel engaged on the works.

27.3 Construction waste should never obstruct emergency exit routes, Firefighting equipment, emergency alarm call points or other emergency facilities.

27.4 From time to time as judged necessary, at the expiration of the contract, or when instructed to do so by OWNER/CONSULTANT, the Contractor shall undertake to clean and tidy his areas of occupation and work to the satisfaction of OWNER/CONSULTANT. Should the Contractor fail to do this, OWNER/CONSULTANT reserves the right to remove all offending materials and debris and to deduct the cost of this operation from the Contract Price. OWNER/CONSULTANT accepts no responsibility for any materials and/or tools which may be removed during this operation.

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27.5 The Contractor must ensure that the following requirements are strictly enforced:

- Ample provision of refuse bins for all rubbish including organic waste such as food scraps, etc.
- Daily clearance of all such bins to the area designated for this discharge.
- No discharge of deleterious matter such as oils or other industrial waste.

27.6 All site offices, toilets, eating facilities, changing rooms, drying areas, stores, etc, which are the responsibility of the Contractor, shall be cleaned daily as a minimum by the Contractor. These facilities shall be checked for vermin on a two weekly rota.

## 28.0 FIRE PREVENTION

28.1 Before welding, flame or arc cutting of metals, or other processes involving heat or naked lights are permitted, a fire risk assessment shall be carried out by the contractor and arrangements agreed with OWNER/CONSULTANT who will issue a Permit to Work.

28.2 Contractors shall familiarize both themselves and their employees with the fire safety arrangements, fire alarms, means of escape and emergency evacuation procedures.

28.3 Before leaving the premises and site, contractors shall ensure that naked lights and other ignition sources have been extinguished and electrical apparatus, where practicable, switched off and/or disconnected.

28.4 Contractors shall store Highly Flammable Liquids and Liquefied Petroleum Gases in a manner approved by OWNER/CONSULTANT.

28.5 OWNER/CONSULTANT' fire protection equipment shall only be used in an Emergency. Fire extinguishers/fire blankets for use when carrying out hot work shall be provided by the Contractor.

## 29.0 REMOVAL OF WASTE FROM CONSTRUCTION SITES

29.1 The removal of waste shall only be undertaken by Licensed Waste Carriers.

29.2 Where there is any doubt of the composition of excavation spoil, it must be analyzed before it is removed from site.

29.3 Evidence of compliance shall be submitted to OWNER/CONSULTANT prior to the removal of any waste from site.

29.4 Controlled waste is any kind of household, industrial or commercial waste. This includes, for example:

- Scrap metal.
- Building, construction, demolition and excavation waste, including waste from any repair or renovation.
- Clinical waste.



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- Anything which is unwanted because it is surplus, broken, worn out, contaminated or spoiled in some other way.

Controlled waste disposal must be managed via a chain of transfer notes, maintained by the contractor and readily retrievable for OWNER/CONSULTANT' inspection.

### 30.0 EXCAVATIONS AND OPENINGS

- 30.1 No excavation work shall be commenced by the Contractor unless a valid excavation permit has been issued. The Contractor shall have on site at all times while excavation work is being carried out, detection equipment which meets the latest technology.
- 30.2 Prior to the start of any excavation, OWNER/CONSULTANT shall be consulted and the presence of overhead and buried service records shall be checked. Where "live" services are present, hand excavation must be carried out until the location of the service has been identified, recorded and made safe.
- 30.3 The Contractor must erect suitable solid edge protection (i.e., double handrails) around excavations or openings. During the hours of darkness any excavations, openings or obstructions near or on roadways and walkways must be indicated by a sufficient number of warning lamps.
- 30.4 The sides of all excavations should be properly shored, battered or stepped to prevent collapse. No excavation work shall commence unless there are adequate resources present to ensure the stability of the excavation. Excavations shall be inspected prior to, or re-commencement of the work to ensure the excavation is still in a safe condition.
- 30.5 All excavations shall have a proper ladder access point provided.
- 30.6 Spoil from excavations must be piled at least 1m from the edge of the hole.
- 30.7 Vehicular traffic shall be restricted from the edges of excavations, to prevent possible collapse.

### 31.0 ELECTRICITY

- 31.1 All Contractors must provide their own electrical power supplies or as per Technical ITB.
- 31.2 Contractors must not interfere with, or work on any of, the Client's electrical installations or equipment without written consent.
- 31.3 Where Contractors have to work in the vicinity of electrical equipment they must carry out a risk assessment prior to commencement of any works.

#### **ALL EQUIPMENT MUST BE TREATED AS "LIVE" UNLESS ISOLATED/LOCKED OFF AND TAGGED.**

- 31.4 Repair or installation of any electrical equipment must only be carried out by a competent qualified electrician.

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31.5 The electrical supply to powered hand tools must not exceed permissible volts, centre tapped giving appropriate volts to earth. Where this is not possible, due to the type of tool being used, the approval of OWNER/CONSULTANT must be sought in writing.

Electrical lighting for use in confined spaces must not exceed 24 volts (and be explosion proof where applicable). Powered hand tools used in confined spaces should, where possible, be air operated.

31.6 Contractors requiring to install temporary electrical supply equipment shall submit a temporary electrical supply procedure to OWNER/CONSULTANT for approval. The procedure shall, where necessary, cover installation of 380/440 volt system, installation of 110 volt system, lighting system, welding equipment installation, inspection testing operation and maintenance of temporary electrical systems.

**31.6.1 Distribution Boards - Semi-permanent or Long Term**

These should be accommodated in weatherproofed locations and be so arranged, if possible, that they will not need to be moved during the Contract. They should be proofed against interference or unauthorized operation and they should be large enough to accommodate all the necessary apparatus required. Each circuit should be clearly labeled and a circuit diagram should be located at each board.

**31.6.2 Distribution Boards – Temporary**

These are usually small portable panels or boards containing two or three socket outlets. They must be of robust construction, preferably all-insulated and should be supplied by heavy duty flexible cables, these cables shall not be spliced. Socket outlets, plug connectors and cable couplers should comply with High Standards or equivalent industry standard.

**31.6.3 Distribution Cables**

These cables run from the main distribution boards to the local distribution boards throughout the site.

The cables will normally be multi-strand multi-core armored PVC cables but, in certain cases, may take the form of Mineral Insulated Copper Clad (MICC) cables. The latter type should be sheathed with PVC.

The installation must be so arranged as to prevent the need for long trailing cables. Socket outlets should be located as near the working point as possible.

Power and lighting circuits should be kept separate.

A full record should be made of all parts of the installation and should be kept up to date when alterations or extensions are made.

**31.6.4 Underground Cables**

Cables may be provided by the Contractor and laid underground or overhead to connect the supply or metering point to the semi-permanent site distribution boards.

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The cables must be suitable for the duty and loading expected, e.g., armored PVC cables.

The cables should be buried at a safe depth or taken from a height so as not to obstruct the movement of persons and vehicles and their routes clearly marked both on the site and on the site plans.

The cables should be properly terminated and be provided with efficient circuit protection.

Cable routes should be so arranged that the minimum of obstruction is caused. The cables should be treated with care and given the same supervision and protection as other cables.

31.7 No temporary electrical supply shall be installed or modified without the agreement and approval of OWNER/CONSULTANT.

31.8 Any tool, plant or equipment exceeding 110 volts (55v to earth) shall be connected to an earth leakage circuit breaker (ELCB).

## 32.0 WORK IN CONFINED SPACES

32.1 All work in confined spaces must be covered by a safety method statement.

Safety method statements for work in confined spaces should include arrangements for the following as a minimum:

- Issue of a permit to work
- Work scope and method.
- Nominated Supervisor.
- Tally man.
- Rescue procedures and equipment.
- Training.
- Tools and equipment to be used, including low voltage or pneumatic.
- Lighting requirements, including standby/emergency.
- Explosion proof fittings.
- Low voltage or pneumatic tools.
- Ventilation.
- Access.
- Bonding to prevent both electrical shock and static discharge.
- Work cycles, to reduce risk of heat exhaustion.
- Fire safety and extinguisher requirements.

32.2 Contractors shall not enter or commence work in any excavation, tank, vessel, pipe or chamber or other enclosed space, until a valid permit to work has been issued. Where Contractor's operations result in a dangerous atmosphere arising during the monitoring of the work activity, the permit to work issuing authority must be informed and all personnel removed from the area.

No new activity shall be introduced into a confined space without the permission and signed approval of the permit to work issuing authority.

Whilst work is ongoing within a confined space, the Contractor will be required to provide a trained standby/tally man.

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32.4 All personnel who have to enter confined spaces must have undertaken the training appropriate to this task.

### 33.0 MOBILE CRANES

33.1 All cranes (including piling rigs, fork lift trucks, mobile elevated work platforms, hand lorries and similar equipment), whether owned by the Contractor or hired, must carry relevant test certificates and thorough examination reports, together with the manufacturer's handbook. Copies of this documentation must be submitted to Owner/Consultant prior to commencing work.

33.2 Only persons who are certificated as competent and authorized shall be allowed to operate cranes. The Contractor must be able to prove the competence of their employees to operate such equipment prior to its use.

33.3 Crane operators or other competent persons must carry out daily inspections and enter these in the crane register. Failure to maintain the register properly may lead to suspension of operations. This obligation is the responsibility of the crane hirer when he is supplying the crane and the operator. In addition, the Contractor will implement a regular inspection and maintenance programme to ensure that all components of the lifting device are in good condition.

33.4 Travel routes for cranes and crane standing must be agreed with OWNER/CONSULTANT in order to avoid such things as overhead lines and other structures, underground services, excavations, made up ground, etc. Load spreader pads of sufficient size and thickness area, and of suitable material, e.g., metal plates, timber, etc, are to be placed under each outrigger foot, before all crane lifting operations are allowed to commence.

33.5 Crane duty charts (Load Radius Tables) must be displayed on or be available in the crane for easy reference. In addition, crane manufacturers' rigging/de-rigging instructions must be available on site. During rigging/de-rigging of jibs/booms, provision must be made to support sections/either side of rigging points, from below, utilizing tightly packed blocks.

33.6 All cranes shall be fitted with:

- A reverse warning audible alarm.
- Load radius indicator.
- Automatic safe load indication.
- Crane hooks with safety catches.

All of which must be serviceable.

33.7 All lifting equipment accompanying the crane shall comply with the requirements of lifting regulations.

33.8 The assembly, rigging and de-rigging of any crane components, including fly jibs, shall only be done under the supervision of a competent lifting supervisor. An approved risk assessment, together with the manufacturers' rigging/de-rigging instructions must be in place covering rigging activities for the equipment.

33.9 Every Contractor involved in lifting operations with a crane (including a piling rig) or mobile crane shall appoint, in writing, a lifting supervisor to oversee all lifting operations.

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33.10 No crane shall travel with a suspended load.

33.11 Outriggers, when installed, must always be used.

#### **34.0 LIFTING OPERATIONS**

34.1 A Lifting Study and Safety Method Statement must be prepared for all heavy lifts exceeding 10 tons, or of a complex nature, e.g., tandem lifts or as specified by the Construction Manager (or the Rigging and Lifting Supervisor) and submitted to OWNER/CONSULTANT for review.

34.2 Every lifting operation must be properly planned by a nominated, competent person.

34.3 Every lifting operation shall be appropriately supervised.

34.4 All slinging and rigging of loads must be carried out by competent personnel.

34.5 Clear communications between the crane operator and the person responsible for controlling the lift must be established.

All statutory Inspection Reports/Certification/Documentation and proof of the driver's training shall be photocopied and handed to OWNER/CONSULTANT prior to the setting up of the crane. Certification for lifting equipment to be used in the lift shall be identified and cross checked with the item of plant

#### **35.0 STEEL ERECTION**

35.1 The weight of each component in excess of 500 kg shall be clearly marked upon it.

35.2 Erectors must be fully informed of the correct erection sequence, by their supervisor, prior to each stage of work commencing.

35.3 Vertical access provision should, whenever possible, be fixed to the steel before it is lifted into position. Where this is not possible permanent access, ie, stairways or permanent metal ladders, shall be installed as early as possible.

35.4 Where horizontal access along structural members is required, as much work as possible must be completed before the steel is lifted into position. This includes:

Fixing of handrails or posts for securing steel wire ropes to be used in conjunction with safety harnesses or inertia reels.

The fixing of scaffold tubes (needles) to the lower flange of an I-beam to allow a working platform to be erected.

Where scaffold tubes (needles) are used they shall not support a working platform wider than three boards, or one lightweight staging without being "picked up".

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Where no ladder access, permanent stairway, etc, leads onto working platforms, as described above, employees must use man riding baskets or mobile elevated work platforms as far as reasonably practicable to access working areas.

### 36.0 SCAFFOLDING

- 36.1 All scaffolding must be of good quality, be erected in compliance Good Practices for Access and Working Scaffolds, and special scaffold structures in steel. In addition to the main guard rail, an additional guardrail is required such that the gap between the toe-board and main guardrail does not exceed 470mm and all boards must be secured, without causing a tripping hazard.
- 36.2 All scaffolding shall be erected, modified and inspected by qualified competent scaffolders.
- 36.3 Where materials are to be positioned on scaffolding the Contractor's supervision must ensure that the scaffolding is not overloaded.
- 36.4 Before use, scaffolding shall be inspected by an authorized Scaffold Inspector who shall complete a "scaffold tag" and secure it in a prominent position at the base of all ladder access points. The scaffolding tag will clearly show the following information as a minimum:
- Location.
  - Reference number.
  - Requested by.
  - Access Scaffold Classification.
  - Maximum distributed load/working lift.
  - Maximum number of working lifts to be used simultaneously.
  - Date erected.
  - Erected by.
  - Inspected by.
- 36.5 Scaffolds shall be inspected at weekly intervals or after storms by the authorised Scaffold Inspector who shall sign and date the "Scaffold Tag" after each inspection. Scaffolding not considered safe shall have the Scaffold Tag withdrawn and a prominent "DO NOT USE" sign displayed.
- 36.6 A scaffold register shall be maintained by the authorized Scaffold Inspector. This shall contain:
- Date of first and subsequent weekly inspections.
  - Individual identifications of all scaffolds which shall be cross-referenced to the Scaffold Tag identity number.
  - Clear name and signature of the authorized Scaffold Inspector against each separate scaffold inspected.
- 36.7 No scaffold may be erected which impedes normal access or can be accidentally struck by moving plant without prior consultation with OWNER/CONSULTANT to ensure that a safe system of work is in place.

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- 36.8 Contractors are not permitted to erect or carry scaffolding near live overhead electrical cables, or equipment because of the danger of tubes making accidental contact with electrically charged apparatus.
- 36.9 If there is any doubt about the security of any anchorage, suspension points or ties for a scaffold, e.g., strength of existing buildings/structures, or those under construction, OWNER/CONSULTANT must be consulted before proceeding with erection.
- 36.10 All scaffolds must be provided with suitable access. Where ladders are used for this purpose they must be of adequate length and properly secured by lashing or fixing to prevent displacement.
- 36.11 Action shall be taken to warn personnel against using partly erected or dismantled scaffolds. A prominent "DO NOT USE" sign shall be clearly displayed.
- 36.12 OWNER/CONSULTANT shall approve the sitting of the scaffold material racks/compounds.
- 36.13 Mobile tower scaffolds shall not be constructed with a height greater than 3 times the minimum base width and shall only be used on level ground. Towers shall only be erected by trained personnel.
- 36.14 In addition to weekly inspections, wooden scaffold boards shall be subject to a monthly inspection to ensure wood has not rotted or been subject to insect damage
- 36.15 The Contractor shall ensure that the system of work employed for the erection and dismantling of scaffolding shall not expose the Scaffolders to any risk.
- 36.16 All scaffolding must be erected and dismantled to the requirements laid down in the current regulations and guidance notes and to the requirements of OWNER/CONSULTANT.

### **37.0 LADDERS/STEPS**

- 37.1 Ladders must be in good condition and free from defects, i.e., broken rungs, split stiles.
- 37.2 Ladders must not be painted.
- 37.3 Ladders must:
- Be securely fastened at the top.
  - Be properly positioned at the base.
  - Extend at least 1m (5 rungs) above the working platform.
  - Be at an angle of 300mm out for every 1.2m vertical drop.
- 37.4 **All steps used on the project Site.**
- 37.5 Only one person must be allowed on a set of steps at any one time.
- 37.6 Persons must work with a set of steps of the appropriate height for the task.
- 37.7 The top rung of the steps must be kept at waist height, no work to be carried out above this height on steps.

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37.8 Ladders are to be used as a means of access not as a working platform except for light, minor or one off activities. Then the person must wear a harness and tie-off to a suitable anchorage whilst carrying out the minor task.

### **38.0 FALL PROTECTION**

38.1 Depending on the task and the risks, harnesses and appropriate anchorages/running lines will be used for activities carried out above a height of 2 meters.

38.2 Fall protection equipment shall be subject to regular inspection by a competent person, and a register maintained for OWNER/CONSULTANT' inspection.

38.3 During the execution of work at height, where it is not practicable to work from within a standard working platform with double handrail and toe boards (for example erection of structural steelwork, installation of roof components, etc), safety netting capable of catching a falling person must be installed as far as reasonably practicable.

38.4 The provision of safety netting does not relieve individuals from utilizing fall protection devices during the execution of the works.

38.5 The safety nets should be manufactured to Indian Standard and erected in accordance with good practices by a competent person.

38.6 The safety nets must bear a label stating the normal size of the net; the date of manufacture, the deflection at the centre of the net during the prescribed test and the maximum distance below the working height for which the net is designed to be used.

38.7 Test certificates must be provided for all safety nets, which will state the breaking strength of the net and provide details of the drop test carried out.

38.8 All safety nets must be periodically tested at intervals not exceeding three months – and records of these tests must be retained.

38.9 A formal inspection of safety nets must be carried out weekly to check for damage, loose ties, changes in anchorage points, etc. Records of these inspections must also be retained.

### **39.0 MOBILE ELEVATED WORK PLATFORMS**

39.1 The term Mobile Elevated Work Platform (MEWP) covers the following types of equipment:

- Scissor lifts.
- Telescopic booms or jibs.
- Articulating and telescopic booms.

39.2 Anyone who is to operate a MEWP must be competent and have received formal training accredited by manufacturer.

39.3 Prior to any MEWP being used on site, a formal risk assessment must be carried out to identify any potential hazards which may exist as a consequence.



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- 39.4 Whilst working within the platform of a MEWP, all personnel must wear a safety harness which is attached to a secure anchorage point within the platform.
- 39.5 Before commencing work from a MEWP, the surrounding area should be cordoned-off to prevent personnel straying into a potentially hazardous area.
- 39.6 The Safe Working Load specified on the MEWP must not be exceeded.
- 39.7 If the MEWP has been manufactured with outriggers or stabilizers, they must always be deployed.
- 39.8 Prior to commencing work, ground conditions must be checked to ensure that the ground bearing capacity will not be exceeded by the loading from the MEWP. Where required, spreader plates shall be used to distribute the loading.
- 39.9 The MEWP shall only be permitted to travel with the platform occupied and/or the boom extended if it is within the machine's specified operational capabilities.
- 39.10 MEWP shall not be used as a jack, prop or support.
- 39.11 MEWP shall not be used as a crane or lifting device.
- 39.12 MEWP shall not be used primarily for the transport of goods or materials.
- 39.13 MEWP shall not be used in wind speed exceeding 30 mph (12.5 m/s).
- 39.14 All MEWPs must be subjected to a regular maintenance and inspection regime, which as a minimum will require weekly inspections by a competent person and a thorough examination every six months.

#### **40.0 CONTRACTORS' TOOLS AND EQUIPMENT**

- 40.1 All Contractors' tools and equipment must be fit for purpose. Tools should be CE marked.
- 40.2 Guards and electrical trip switches must work effectively and must not be removed or by-passed.
- 40.3 All tools shall be of good quality and maintained in a safe working condition. Home made tools are not permitted.
- 40.4 The Contractor shall provide suitable storage with suitable racks and bins for storing tools and equipment.
- 40.5 All temporary construction leads, lighting and portable electric tools shall be of appropriate volts.
- 40.6 The Contractor shall nominate or employ the services of a competent qualified person to inspect and tag electrical power hand tools, transformers, distribution boards, extension cables, etc, on an at least a three monthly basis (PAT testing). The tag shall display name, signature of the individual inspecting the tool and date of inspection.

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40.7 The Contractor shall keep, on site, a register of all electrical power hand tools in use. The register shall detail:

- Individual identity number of the tool.
- Name, signature and company of the qualified electrician carrying out the inspection.
- Date of inspection.
- Maintenance and Inspection schedule.
- Remarks on condition of tool and whether repaired or withdrawn from use.

40.8 No electrical powered hand tool shall be used unless it is tagged with a current "INSPECTION" tag.

40.9 All electrical leads must be connected to the power source through standard industrial waterproofed plugs and sockets, which shall be in good condition.

#### **41.0 MECHANICAL PLANT AND EQUIPMENT**

41.1 Mechanical plant and equipment is defined as:

- Earthmoving plant.
- Road making plant and equipment.
- Concrete batching plant and mixers.
- Forklift trucks.
- Miscellaneous plant, including generators and compressors.
- Mobile elevating work platforms (e.g., star- lift, cherry picker, etc).

41.2 All items of mechanical plant transported to the project shall be in a safe and sound condition and shall be properly maintained. Emissions shall be to acceptable limits and no smoke shall be discharged.

41.3 A programme of regular, preventative maintenance shall be established by the Contractor, as per the manufacturer's handbook, to ensure that all plant equipment is systematically inspected, maintained and repaired as necessary.

41.4 The preventative maintenance programme and the Contractor's employee responsible for taking the action shall be clearly detailed, identified and given to OWNER/CONSULTANT.

41.5 A safe system of work must exist during all maintenance and repair operations to ensure that no part of the machinery is set in motion while work is being carried out.

41.6 Plant maintenance must not be carried out within the main construction site.

41.7 Where refueling is required, facilities provided shall be adequately covered by fire extinguishers, earthing, warning signs, bonding and proper fuel dispensers. Refueling areas shall be curbed to avoid spills.

41.8 Waste oil removed from vehicles after servicing shall be sent to the appropriate off-site waste disposal facility and this is the responsibility of the Contractor.

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41.9 The OWNER/CONSULTANT'S tools, plant and equipment may not be used by Contractors without their express permission.

#### 42.0 COMPETENCY/PLANT EQUIPMENT

42.1 All drivers and operators of mobile plant (mechanically propelled vehicles) shall be in possession of the appropriate license for the class of vehicle.

42.2 It is the responsibility of the contractor to ensure that all drivers, operators and banks men of mobile plant (mechanically propelled vehicles) are certificated as competent.

#### 42.3 General

42.3.1 Every dangerous part of machinery shall be securely guarded.

42.3.2 Any guards removed for maintenance or repair purposes must be replaced before the machine is set in motion.

42.3.3 No mobile plant (mechanically propelled vehicles) shall carry passengers unless a proper fixed seat is provided, except when the equipment is specifically designed for standing personnel.

42.3.4 Mobile plant (mechanically propelled vehicles) must be parked on firm level ground when unattended, the engine stopped, brakes on and any load or attachment lowered to the ground and the keys left in the ignition.

42.3.5 No mechanical plant or equipment shall be sited on or operated on any area of the project without express the permission of OWNER/CONSULTANT.

42.3.6 All items of mobile plant (mechanically propelled vehicles) shall be fitted with a reverse warning audible alarm.

42.3.7 All drivers/operators of mobile plant (mechanically propelled vehicles) shall strictly obey the instructions of the site security, traffic regulations and speed limits. A banks man shall be in attendance during all reversing procedures.

#### 42.4 Inspection

All mobile equipment (mechanically propelled vehicles) shall be inspected by a competent person appointed by the Contractor prior to use on site. Equipment considered to be unsafe, by OWNER/CONSULTANT, shall not be allowed access to the site.

#### 42.5 Flame Arrestors

42.6 All mobile plant for use in Petro Chemical Live Plant Areas, or during the Start-up and Commissioning Phase of the project, must be fitted with Exhaust Flame Arrestors and Chalwyn Valves where there is a risk of flammable gas releases.

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### 43.0 MACHINERY GUARDING

- 43.1 Unauthorized personnel must not operate, interfere or tamper with plant or equipment.
- 43.2 Persons authorized to use machines must first check that guards are in position and that any other safety devices, e.g., emergency stops, are in working order.
- 43.3 All plant or equipment brought onto the site must be properly guarded to prevent injury and be CE marked.

**NO GUARD OR FENCE MAY BE REMOVED FROM MACHINERY.**

### 44.0 WELDING

- 44.1 Welding sets shall be in good condition, properly maintained and earthed.
- 44.2 Isolation switches on welding sets shall be readily accessible.
- 44.3 Terminals and live components shall be adequately protected.
- 44.4 Cables shall be frequently inspected to ensure the insulation is intact.
- 44.5 Damaged cables or electrical holders shall be properly repaired or replaced.
- 44.6 The welding return cable shall be secured onto the work piece. If this is not practical it shall be as near as possible.
- 44.7 Proper cable connectors shall be used when connecting runs of cables.
- 44.8 Welders shall wear:
- Face and eye protection with correct grade of filter.
  - Welder's gauntlets.
  - Long sleeved flame retardant overalls.

Welders shall wear safety helmets at all times, except whilst welding, when it is agreed as impractical and written permission is granted by OWNER/CONSULTANT, subject to mitigation of hazard, i.e., no work overhead, or shielded from falling objects.

- 44.9 Welding areas should whenever possible be screened off using flame retardant blanket or other suitable material. All combustible materials must be cleared from the vicinity of all welding operations.
- 44.10 Asbestos material shall not be used on the project.
- 44.11 Electric Arc Welding equipment and accessories shall conform to Latest Engineering Standards.
- 44.12 Fire extinguishers must be provided and kept adjacent to any welding or cutting activity.

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#### 45.0 ABRASIVE WHEELS

- 45.1 Contractors must ensure that any of their employees authorized to change Abrasive Wheels have attended an approved course of training and have been appointed in writing.
- 45.2 Details of each employee trained must be entered in the training register kept on site. Contractors must produce certificates and registers on request.
- 45.3 Machines used to drive Abrasive Wheels must be in good condition and properly guarded.
- 45.4 Pedestal or bench mounted grinders must have an emergency stop button and be fitted with a properly adjusted tool rest and guard.
- 45.5 All hand held grinders shall have a “Dead Man” switch and appropriate guards fitted.
- 45.6 The use of hand held angle grinders over 115mm shall only be permitted for specific tasks, subject to Owner’s / Consultant’s approval.

#### 46.0 USE OF GAS AND OXYGEN EQUIPMENT

- 46.1 Compressed gas cylinders shall:
- Be in good condition and not suffering from corrosion.
  - Be properly colour coded (reference should be made to National Standards).
  - Be individually identified.

Hoses shall be properly colour coded to the internationally recognized standard for the gas being used, in good condition and fitted with hose connectors attached by permanent clips.

Check valves and flashback arrestors must be used on both hoses at all times.

- 46.2 Users shall check the equipment for perished, damaged hoses, regulators, and pressure gauges, etc. Defects must be reported to their supervisors and faulty equipment must be replaced.
- 46.3 When on site, cylinders must be in trolleys or secured in an upright position at all times. A bottle key shall be kept with cylinders in use.
- 46.4 Stored oxygen and fuel gas cylinders shall be kept separate with minimum separation distance of 5m. Cylinders must never be stored or used in a horizontal position cylinders must be secured in an upright position. Empty cylinders must also be separated from full cylinders. Cylinders shall be stored in lockable open mesh bottle cages.
- 46.5 All gas cylinders must be handled with care and they must not be misused or abused. They must be properly shut off when not in use and safety caps must be fitted when being moved.
- 46.6 Great care must be taken to ensure that gas equipment, including hoses, are not allowed to cause obstruction of roadways, walkways, manholes, ladders or other means of access where they can cause hazards or be damaged. Hoses not in use should be coiled up and put in a safe place. Hoses should whenever possible be supported off the ground.

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- 46.7 Where any operation involves the use of gas and oxygen equipment in enclosed or semi-enclosed spaces, Contractors' supervision must carry out frequent checks to ensure these procedures are complied with.
- 46.8 During meal breaks and at stopping times, hoses and equipment must be removed from confined spaces or excavations. Oxygen or gas cylinders must not be taken into confined spaces for use or storage.
- 46.9 No modification to tanks or drums which have contained flammable liquid shall be undertaken at the site.

#### **47.0 ABRASIVE AIR BLAST CLEANIN**

- 47.1 Blast cleaning shall be carried out in an enclosed designated area.
- Provision shall be made to prevent the spread of grit and dust out of the blast area and to collect and dispose of the spoil to an approved location.
- 47.2 The blast cleaning area shall be indicated by prominent warning signs.
- 47.3 Only approved abrasives having no free silica shall be used.
- 47.4 Personnel involved in the actual blasting of material shall be protected by a positive pressure, blast hood, meeting approved standards and providing both respiratory and eye protection, with breathing air supplied via a suitable filter.
- 47.5 The nozzle shall be fitted with a properly functioning dead man's handle, and anti-static abrasive blast hoses. It is required that all equipment be grounded and checked for ground potential
- 47.6 A standby man shall stay by the blast pot.

#### **48.0 COMPRESSED AIR**

- 48.1 All air receivers and compressors shall be in good condition and properly maintained.
- 48.2 Air receivers shall be individually identified and marked with their safe working pressure.
- 48.3 Air receivers shall be accompanied by a valid test certificate which shall be kept on site by the Contractor and shown to OWNER/CONSULTANT before bringing the vessel onto site.
- 48.4 All air receivers must be fitted with a properly set pressure relief valve.
- 48.5 Air receivers shall be examined and the pressure relief valve tested by an independent examiner at yearly intervals.
- 48.6 There shall be a register of all air receivers containing:
- Individual identification numbers.
  - Dates of independent inspections.
  - Name and signature of independent examiner.

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- Rates safe working pressure.
- Pressure at which pressure relief valve lifted shall be kept on site by the Contractor along with all current certification.

48.7 The requirements inclusive also apply to compressor mounted air receivers.

48.8 All compressed air fittings shall be wired and/or restrained to prevent them from whipping should the coupling separate.

48.9 Only hose clamps designed for compressed air service shall be used. Worm drive (Jubilee) clips are not acceptable.

**COMPRESSED AIR MUST NEVER BE USED FOR CLEANING CLOTHES.**

48.10 Nozzles used for air blowing must be fitted with a “Dead Man” valve.

**49.0 MOBILE PHONES AND PAGERS**

49.1 Radios, personal CD and tape players are not allowed in the construction areas.

49.2 Mobile phones and pagers are prohibited in the designated construction areas by any hands-on personnel. External to the designated construction areas, providing it does not detract the user from any safety requirements and the user is stationary, then mobile phones and pagers may be used. **Other uses of this equipment will be at the discretion of OWNER/CONSULTANT.**

**50.0 RADIOGRAPHY/NDT**

50.1 Contractors who carry out radiography/NDT on the site must comply with safe systems of work. In particular, they MUST ensure that:

- Radiography areas are clearly marked using barrier tapes, notices and flashing lights.
- Audible warning (horns) must be sounded before a source is exposed.
- Only Classified Workers are engaged in radiography work.
- All other personnel are clear of the area before radiography takes place.
- Radiography work is supervised by a Qualified Radiological Protection Supervisor. Such supervisors must be nominated in writing and notified to OWNER/CONSULTANT.
- Any incident which may have resulted in over-exposure of any personnel is brought to the attention of OWNER/CONSULTANT for investigation.
- They have a written emergency procedure to be followed in the event of loss of an isotope or damage or malfunction of associated equipment. This procedure must be submitted to OWNER/CONSULTANT for approval before commencement.
- A certified meter is available on site.
- Radiography is carried out at the times agreed with OWNER/CONSULTANT normally this will only be during silent hours. OWNER/CONSULTANT requires twenty-four hours notice of such planned work.

50.2 Contractors who are not involved in radiography work must ensure that their employees observe warning notices, alarms and barriers in use where such work is being carried out.

50.3 Contractors must ensure that statutory notification is made to the authorities of radiography works.

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50.4 Disposal of spent radioactive sources shall be agreed with OWNER/CONSULTANT.

**51.0 WORKING OVER WATER/DIVING OPERATIONS**

51.1 The Contractor shall provide a buoyancy aid to any employee working over (or near) water where there is a likelihood of falling in.

The Contractor shall also supply a sufficient number of life buoys to be permanently located at the point(s) of danger. The life buoys shall be attached to a throwing line.

Where rescue of a person falling into the water may be difficult, OWNER/CONSULTANT may require the Contractor to supply a standby boat, crewed by a competent boatman trained in rescue and resuscitation techniques.

51.2 Diving operations may only be carried out using approved specialist diving contractors, employing certified commercial divers, and upon acceptance by OWNER/CONSULTANT of their Health, Safety and Environment plan and method statements (Diving Rules).

**52.0 ASBESTOS**

52.1 Only certified Contractors are allowed to handle asbestos.

**53.0 IMPROVEMENT AND PROHIBITION NOTICES**

53.1 In the event of an Improvement or Prohibition Notice being served by an Inspector, the OWNER/CONSULTANT Senior Representative must be notified immediately and the Contractor shall comply with the terms of such Notice immediately.

**54.0 CARTRIDGE OPERATED FIXING TOOLS**

The use of Cartridge Operated tools shall only be permitted with the express permission of OWNER/CONSULTANT, subject to an approved method statement and risk assessment, and use only by competent, trained operators).

**55.0 SITE ESTABLISHMENT AND AMENITIES**

55.1 Details of temporary services to be provided by Contractor or as Per Technical portion of ITB.

**56.0 ACCOMMODATION**

56.1 An area will be allocated for temporary site establishment facilities/services.

56.2 When required by the Contract, the Contractor shall provide and maintain (including de-watering when necessary) a suitable level and hardcore surface in the area allocated for temporary buildings such as offices, stores, workshops, mess huts and a stores compound.



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56.3 When required by the Contract, the Contractor shall provide all site offices, stores facilities, workshops and mess huts for the accommodation of staff/site personnel. Proposals for the Contractor's temporary buildings shall be submitted to OWNER/CONSULTANT for approval with their tender.

**56.4 Storage in Permanent Buildings**

No Plant, Contractor's Equipment or Construction Aids shall be stored in any permanent building without first obtaining the written permission of OWNER/CONSULTANT. Such permission will not relieve the Contractor of the obligation to protect the building from damage whilst used as a store. If permission to use the building is refused by OWNER/CONSULTANT, the Contractor shall provide alternative storage facilities at no additional cost to OWNER/CONSULTANT.

**56.5 Sanitary Facilities**

All toilets and washing facilities shall be provided by the Contractor. The supply and installation of necessary water sewage/drainage pipe work, pits, etc, for the facilities and the regular emptying and servicing are the responsibility of the Contractor.

**56.6 Canteen**

The Contractor must provide mess-huts for his employees and arrange any canteen facilities required for his employees and those of any others employed by him in connection with the Work.

**57.0 TEMPORARY SERVICES**

**57.1 Telephone, Facsimile, etc**

Arrangements for the provision of telephones, computer modems and/or facsimile facilities shall be made directly with providers of such facilities by the Contractor.

**57.2 Electricity**

If under the contract the Contractor is responsible for providing electricity for the site establishment amenities and working area(s), the Contractor shall ascertain the type, location and available spare capacity of the electrical point(s) of supply and provide cable, connections, isolating switches and earth leakage protection of approved specification.

If the Contractor's requirements for temporary electrical supplies exceed those agreed and render the available service inadequate, the Contractor shall provide the additional requirements at no extra cost to OWNER/CONSULTANT.

Electrical installations including all cables, temporary connections, wandering leads and all electrical facilities and/or equipment required for the execution of the Works shall be properly installed and maintained by the Contractor.

Temporary electrical installations must comply with all appropriate statutory requirements, the latest edition of the Institution of Electrical Engineers Regulations, COP for Distribution of Electricity on Construction and Building Sites and Electrical Safety on Construction Sites.

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Electrical equipment and installation shall at all times be subject to inspection and approval by OWNER/CONSULTANT but this shall not relieve the Installer/User of their responsibilities for the safety of the system.

Electrical equipment or cables forming part of the permanent installation shall not be used by the Contractor for temporary services.

Temporary buildings shall have an external isolating switch.

The Contractor shall supply, install and maintain any temporary workface lighting.

### 57.3 **Water**

Supply of potable water for drinking and raw water for washing/toilet facilities, mixing concrete, hydrostatic testing and other construction purposes shall be in Contractor's scope. The Contractor shall ascertain the location of the supply point and shall provide and install any temporary pipe work necessary for the provision, use and disposal of such water.

### 58.0 **DISCHARGES INTO THE INTERNAL AND EXTERNAL DRAINAGE SYSTEMS, LAND AND CONSTRUCTION AREAS**

58.1 All proposed controlled discharges into the site drainage systems shall be agreed with OWNER/CONSULTANT.

58.2 Any water discharged on existing roads, hard shoulders or drainage systems shall first pass through a filtering interceptor (which must be regularly cleaned) to prevent the discharge of sludge or solids.

58.3 Any damage to the Works caused by prolonged or excessive pumping and any damage or nuisance arising out of pumping operations shall be the liability of the Contractor.

58.4 Subsequent to filling with water and testing of any part of the Works for hydraulic testing, the Contractor shall be responsible for safe disposal of the water, and shall ensure that the rate of discharge is controlled and kept within the capabilities of any drainage system utilized.

58.5 The Contractor shall provide all requisite equipment and materials to ensure that all drains, rivers, streams or waterways are safeguarded against pollution.

### 59.0 **MAINTENANCE OF ROADS AND DRAINS**

59.1 Existing roads, road gullies and drains shall be inspected by OWNER/CONSULTANT and the Contractor prior to work commencing. A record of this inspection shall be compiled and on the completion of the Works, a further inspection will be carried out and any necessary repairs to road surfaces or cleaning of drains shall be to the Contractor's cost.

59.2 The Contractor shall provide temporary protection to any existing roads to prevent all possibility of damage whatsoever arising from the Works.

59.3 The Contractor shall at all times in the execution of the work maintain all public and site roads in a clean condition to the satisfaction of OWNER/CONSULTANT.

59.4 The Contractor shall immediately remove all mud, earth and debris from road surfaces.

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59.5 Track-laying cranes and similar vehicles must not travel on finished roads without written authority from OWNER/CONSULTANT and then only with the use of timber mats or approved precautions to prevent damage to the roads. Timber mats or other approved precautions shall be supplied by the Contractor.

#### 60.0 MATERIALS – STORAGE AND CONTROL

60.1 The Contractor must give a minimum of twenty-four hours notice of the intention to uplift and transport materials/equipment supplied free-issue from OWNER/CONSULTANT/Client's storage facilities to the point of erection or Contractor's storage facility.

60.2 Free-issue materials/equipment furnished by OWNER/CONSULTANT shall be accepted by the Contractor and become the responsibility of the Contractor until acceptance of the Works. Any damage caused to free-issue materials after acceptance shall be repaired or replaced by the Contractor to OWNER/CONSULTANT' satisfaction.

#### 60.3 Storage of Petrol, Fuels, Lubricants etc

All fuel and construction materials which may contaminate the site drains, land or watercourses shall be stored in bounded areas. Refueling of plant shall be via bounded bowers. All construction plant in static locations shall have drip trays which shall be cleared daily.

#### 60.4 Environmental Impacts

The Contractor shall, prior to commencement of the work, present to OWNER/CONSULTANT for their approval a register of environmental impacts that necessarily arise from their works.

Each identified environmental impact shall be accompanied by an individual Risk Assessment, clearly showing the reduction measures put in place to ensure mitigation of residual risk.

#### 61.0 PENALTY

The Contractor shall adhere consistently to all provisions of HSE requirements. In case of noncompliances and also for repeated failure in implementation of any of the HSE provisions, Consultant/Owner may impose stoppage of work without any cost & time implication to the Owner and/or impose a suitable penalty.

The amount of penalty shall be limited to 0.5 % (Zero decimal five percent) of the contract value.

The amount of penalty applicable for the Contractor on different types of HSE violations is as below.

1. For not using personal protective equipment (Helmet, Shoes, Goggles, Gloves, Full body harness, Face shield, Boiler suit, etc.) **Rs 500/- per day/ Item / Person.**
2. Working without Work Permit/Clearance **Rs 20000/- per occasion.**

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- 3 Execution of work without deployment of requisite field engineer / supervisor at work spot **Rs. 5000/- per violation per day.**
4. 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 10000/- per item per day.**
5. Working at height without full body harness, using non-standard/ rejected scaffolding and not arranging fall protection arrangement as required, like handrails, life-lines, Safety Nets etc. **Rs. 10000/- per case per day.**
6. Unsafe handling of compressed gas cylinders (No trolley, jubilee clips double gauge regulator, and not keeping cylinders vertical during storage/handling, not using safety cap of cylinder). **Rs 500/- per item per day.**
7. Use of domestic LPG for cutting purpose / not using flash back arresters on both the hoses/tubes on both ends. **Rs. 3000/- per occasion.**
8. No fencing/barricading of excavated areas /trenches. **Rs. 3000/- per occasion.**
9. Not providing shoring/strutting/proper slope and not keeping the excavated earth at least 1.5M away from excavated area. **Rs. 5,000/- per occasion.**
10. Non display of scaffold tags, caution boards, list of hospitals, emergency services available at work locations. **Rs. 1000/- per occasion per day**
11. Traffic rules violations like over speeding of vehicles, rash driving, talking on mobile phones during vehicle driving, wrong parking, not using seat belts, vehicles not fitted with reverse horn / warning alarms / flicker lamps during foggy weather. **Rs. 2000/- per occasion per day**
12. Absence of Contractor's RCM/SIC or his nominated representative (prior approval must be taken for each meeting for nomination) from site HSE meetings whenever called by Consultant/Owner & failure to nominate his immediate deputy (in the site organ gram) for such HSE meetings. **Rs 10000/- per meeting.**
13. Failure to maintain HSE records by Contractor Safety personnel, in line with approved HSE Plan/Procedures/Contract specifications. **Rs 10000/- per month.**
14. Failure to conduct daily site safety inspection (by Contractor's safety engineers/safety officers), internal HSE meeting, internal HSE Awareness/Motivation Program, Site HSE Training and HSE audit at predefined frequencies (as approved in HSE Plan). **Rs. 10000/- per occasion.**
15. Failure to submit the monthly HSE report by 5th of subsequent month to Project's Engineer-in-Charge /Owner **Rs. 10000/- per occasion and Rs. 1000/- per day of further delay.**
16. Poor House Keeping **Rs. 5000/- per occasion per subject**
17. Failure to report & follow up accident (including Near Miss) reporting system within specific timeframe. **Rs. 20000/- per occasion**

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18. Degradation of environment (not confining toxic spills, spilling oil/lubricants onto ground).Rs10000/- per occasion
19. Not medically examining the workers before allowing them to work at height / to work in confined space / to work in shot-blasting / to work for painting / to work in bitumen or asphalt works, 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 5000/- per occasion per worker.
20. Violation of any other safety condition as per job HSE plan / work permit and HSE conditions of contract (e.g. 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 at site, not using hood with respiratory devices by blaster for shot//grit blasting, etc.) Rs. 5000/- per occasion.
21. Failure to carry-out Safety audit in time (internal & external), close-out of identified shortfalls of Observations of Safety Aspects(OSA),etc. Rs. 20,000/- per occasion.
22. Carrying out sand blasting instead of grit/shot blasting Rs. 50,000/- per day.
23. Failure to deploy adequately qualified and competent Safety Officer Rs. 10000/- per day per Officer.
24. Utilization of hydra/ back-hoe loader for material shifting or any other unauthorized /unsafe lifting works Rs 25,000/- per occasion.
25. Any violation not covered above to be decided by Consultant/Owner.
26. Any physical injury - maximum of Rs.2,00,000 per injury
27. Fatal accident - Rs. 25,00,000 per fatality

**62.0 FOLLOWING SHALL BE APPLICABLE FOR MANDATORY MEDICAL EXAMINATION OF CONTRACTOR WORKERS BEFORE DEPLOYMENT AT WORK SITE:**

Medical examination will be in the scope of the contractors.

Medical examination to be conducted by a doctor with minimum MBBS qualification, having registration number for practicing.

Certificate issued should have endorsement on the photo & clearly mention general health/fitness of the candidate to carryout work inside plant, including eye sight, Vertigo, BP,Heart, convulsion problem etc.

Certificate of fitness is to be issued on letter head of doctor and to be produced with application for photo Gate pass to the E-I-C for the job.

Validity of medical certificate will be for one year from the date of issuance.

Gate pass issued by CISF will bear “Medically Fit” stamp based on the E-I-C’s recommendation.

Accordingly, this shall be treated as part of the tender.

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### MEDICAL CERTIFICATE

**Affix latest PHOTO  
impression of the  
workmen half  
covering the  
photo.**

#### Form for Medical Check Up for the Workman engaged by the Contractor

Certified that I, \_\_\_\_\_ have examined Shri \_\_\_\_\_ Age \_\_\_\_\_

who has signed / thumb impression above on the photo in my presence. The details of his examination as required are given in the enclosed medical examination report. I certify that all clinical and pathological tests were done in my hospital/dispensary under my instructions. General and physical examinations of Shri \_\_\_\_\_ do not reveal any abnormality. He does not suffer from any acute / chronic disease or any contagious or infectious disease. He is medically fit to work inside plant. He is free from Vertigo, Epilepsy or Fits, general giddiness and height related disease. His B.P.Pulse, Eyesight etc. are normal.

In my opinion, Shri \_\_\_\_\_ is physically and mentally fit for undertaking physical labour inside the plant.

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

#### Signature and Rubber stamp of medical practitioner with name

Note: This certificate is to be given on the letterhead of the registered medical practitioner who is possessing MBBS qualification as recognized by the Indian medical council. Below the signature, the rubber stamp of the medical practitioner should be affixed. The letterhead normally should contain the following:

- 1) Name of the Medical practitioner:
- 2) Qualifications:
- 3) Registration Number:
- 4) Designation:
- 5) Address:

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### 63.0 ADDITIONAL SAFETY REQUIREMENT

#### A. Strict implementation of IS marked safety helmets & IS/CE marked safety shoes for contract personnel

All the contractors working inside the plant shall ensure that their supervisors/labourers compulsorily wear IS marked safety helmets & IS/CE marked safety shoes while entering plant premises. No contract personnel shall be allowed inside battery area without wearing IS marked safety helmets & IS/CE marked safety shoes. All EIC's/site engineers and F&S department shall sensitize and spread awareness among the contract personnel.

**Name of Tenderer:** .....

**Signature & Seal of Tenderer:** .....

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## TENDER NO: GAIL/ND/CnP/ZLD/W581/2024

### SCHEDULE OF RATES FOR LAND DEVELOPMENT, TOPOGRAPHICAL & CONTOUR SURVEY WORK

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b>	11.01.24	11.01.24	RU	VP	RNS
		REV DT	EFF DT	PREPD	REVWD	APPD



	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	

PART-A- TOPOGRAPHICAL & CONTOUR SURVEY WORK						
1	Conducting topographical survey in the specified area and plotting the same in a scale of 1 : 1000, indicating all permanent features like Railway lines, Highways, Roads, Rivers, nallahs, lakes, ponds, culverts, existing plant structures, transmission lines, telegraphs, telephones and electric poles, cross drainage works etc. and plotting the same in a scale of 1 : 1000 showing true North including establishing survey reference stations including supply of all equipments, instruments, personnel, labours, etc., required to complete the work in all respects as per enclosed tender drawings, scope of work, specifications and direction of Engineer - in - Charge.	Acre	22	3000		66000
2	Carrying out spot levelling with respect to known reference such as Survey of India / PWD Bench Mark etc. for giving spot levels in a grid of 20 metres both ways and plotting / developing contour maps in scale of 1 : 1000 with contour lines at a contour interval of 0.500 metre, showing true North including establishing survey reference stations and supply of equipments, instruments, personnel, labours, etc., required to complete the work in all respects as per drawings, specifications and directions of Engineer - in - Charge.	Acre	22	500		11000

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	
3	Providing and constructing Permanent Bench Mark Pillars of size 1000 mm x 1000 mm x 1500 mm in plain cement concrete of nominal mix 1:2:4 (1 cement- OPC/PPC : 2 coarse sand : 4 graded stone aggregates of 20 mm nominal size), with 500 mm below ground level and 1000 mm above ground including embedding steel plate of size 150 mm x 150mm x 10 mm on top of the pillar by two nos.10 mm dia Torr. M.S. Anchor Bars of total length 450 mm each, welded to the above plate for marking the permanent reference points, including shuttering, tamping, ramming, vibrating, curing, finishing the top and sides rough or smooth as directed or specified, supply of all labours and materials, etc., complete in all respect as per drawings specifications and directions of Engineer-in - Charge.	Nos.	1	11500		11500
4	Transferring Bench Mark at the proposed site from existing permanent Bench Mark of the nearby area.	Lump-sum	1	4500		4500
Total Amount (Rs.) of PART A						93000
<b>PART-B- LAND DEVELOPMENT WORK</b>						
1	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.					
a)	Beyond 30 cm girth upto and including 60 cm girth	Each	10	528		5280

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	
2	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	Sqm	88000	18		1584000
3	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in- Charge:					
	All kinds of soil	sqm	88000	129		11352000
4	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m (all kind of soil), as directed by Engineer-incharge.					
	depth upto 1.5 m	cum	21000	247		5187000
	depth 1.5 m to 3.0 m	cum	3000	372		1116000
	depth 3.0 m to 4.5 m	cum	800	498		398400
5	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-incharge.					
a)	Ordinary rock	cum	5	413		2065
b)	Hard rock (requiring blasting)	cum	5	712		3560
c)	Hard rock (blasting prohibited)	cum	5	1185		5925

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	
6	Filling / banking the proposed area with available excavated good earth to the required grade levels in layers not exceeding 20 cm in depth including loading unloading, filling, spreading, breaking clods, watering, levelling at site area, consolidating / compacting each deposited layer by ramming, rolling each layer with half tonne roller or wooden / steel rammers and rolling every third layer and the top most layer with minimum 8.0 Tonne capacity power roller upto 95% of maximum dry density of filling materials, dressing up the embankments / graded area within the plant boundary and at all lifts including clearing jungle uprooting of rank vegetation, grass, brush wood, trees, sapling of girth upto 30 cm assumed at a height of one metre above ground level, surface dressing, removal of rubbish / debris upto a distance of 50 metre outside the periphery of the plant boundary leaving the site clear and providing tests for required compaction of the surfaces etc., in all kinds of soil complete in all respects as per specifications, approved drawings and as directed by Engineer-in-Charge.	cum	22000	305		6710000
7	Same as above with selected good earth (soft / dense soil), brought from outside borrow-pits including payment of all cess/royalty/taxes etc. over above item	cum	88000	1056		92928000
8	Disposal of rubbish / malba / similar unserviceable materials by mechanical means, including loading, transporting, unloading to municipal approved dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads	cum	30000	264		7920000

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	
	including all lifts involved.					
9	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineering-charge.	cum	10	843		8430
10	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.					
a)	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	10	2410		24100
b)	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	cum	10	1488		14880
10	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	cum	10	3515		35150
12	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.					
a)	In cement mortar	cum	10	2039		20390
13	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :					

	<b>SCHEDULE OF RATES FOR LAND DEVELOPMENT TOPOGRAPHICAL &amp; CONTOUR SURVEY WORK</b> <b>TENDER NO: GAIL/ND/CnP/ZLD/W581/2024</b>	PC286-PNCV-SOR-TOPO&LD-0201	1		
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Sl. No.	Description of Items	Unit	Qty.	Unit Rate		Amount(Rs.)
				In Figures	In Words	
a)	15 mm to 40 mm nominal bore	meter	10	150		1500
b)	Above 40 mm nominal bore	meter	10	162		1620
14	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-charge:					
a)	Up to 150 mm diameter	meter	10	410		4100
b)	Above 150 mm dia up to 300 mm dia	meter	10	539		5390
c)	Above 300 mm diameter	meter	10	584		5840
15	Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metres lead as per direction of Engineer-in-charge :					
a)	Up to 600 mm diameter	meter	10	690		6900
b)	Above 600 mm diameter	meter	10	1738		17380
Total Amount (Rs.) of PART B						127357910
Total Amount (Rs.) of PART A & B						<b>127450910</b>

Name of Tenderer :

Signature & Seal of Tenderer:

Place :

Date :

	<b>DEPLOYMENT SCHEDULE FOR CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS</b>	ANNEXURE-I	1	
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SL. NO.	DESCRIPTION	CAPACITY	DEPLOYMENT SCHEDULE						TOTAL
			M1	M2	M3	M4	M5	M6	
1.	CRANES								
2.	DIESEL GENERATORS								
3.	WELDING MACHINE								
4.	TRACTORS								
5.	TRAILERS / TRUCKS								
6.	DUMPERS								
7.	EXCAVATORS								
8.	VIBRATOR								
9.	COMPACTORS								
10.	OTHER TOOLS & TACKLES								
11.									
12.									
13.									
14.									

NOTE : Bidder may add more Equipments as per job assessment / experience

STAMP & SIGNATURE OF BIDDER: \_\_\_\_\_

NAME OF BIDDER: \_\_\_\_\_

DATE: \_\_\_\_\_

	<b>DEPLOYMENT SCHEDULE FOR CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS</b>	ANNEXURE-I	1	
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### DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS

SL. NO.	DESCRIPTION	CAPACITY	MINIMUM NOS.	DURATION (IN MONTHS)
1.	CRANES	50 T	02 no.	As per site requirement
2.	TRACTORS / TROLLEY	2.5 m <sup>3</sup>	20 nos.	As per site requirement
3.	TRAILERS / TRUCKS	1000 CFT	20 nos.	As per site requirement
4.	DUMPERS	1000 CFT	50 nos.	As per site requirement
5.	POCLAIN EXCAVATORS	Bucket Size 1 cu. m.	06 nos.	As per site requirement
6.	VIBRO ROLLERS	-	04 nos.	As per site requirement
7.	MINI BATCHING PLANT	5 cu. m / hr	02 nos.	As per site requirement

**NOTE :** Bidder to deploy minimum equipments during the contractual / execution period as per above list for which either the bidder should be in possession of the above equipments or shall submit undertaking along with documentary proof of tie-up for hiring equipments as per above list from equipment owners.

STAMP & SIGNATURE OF BIDDER :

NAME OF BIDDER :

DATE : \_\_\_\_\_



	<b>DEPLOYMENT SCHEDULE FOR CONSTRUCTION EQUIPMENT / DECLARATION FOR MINIMUM DEPLOYMENT OF CONSTRUCTION EQUIPMENTS</b>	ANNEXURE-I	1	
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DETAILS OF PROPOSED EQUIPMENTS, TOOLS & TACKLES

The bidder shall submit the details of construction equipments, Tools & tackles etc. in the following format, proposed to be deployed for this works.

SI. No.	EQUIPMENTS LIST REQUIRED TO BE DEPLOYED				STATUS OF EQUIPMENT		SCHEDULE DEPLOYMENT DATE AT SITE	SCHEDULED COMPLETION DATE OF WORK	REMARKS
	Description of Equipment	Make	Year	Capacity	Own by Contractor	If on Hiring (Give Detail Address)			

Note : 1. In case of equipment are to be hired, bidder shall indicate the source of hiring and enclosed and enclose the consent the letter from such sources.  
2. Bidder shall clearly indicate the expected data of availability of owned / hired equipment.

**NOTE : Bidder may add Equipments as per job assessment / experience.**

SIGNATURE OF BIDDER : .....

NAME OF BIDDER : .....

COMPANY SEAL : .....

**ANNEXURE-II TO SCC  
KEY CONSTRUCTION MANPOWER TO BE DEPLOYED BY THE CONTRACTOR  
DURING EXECUTION OF SITE ENABLING WORKS OF M/s GAIL, PATA**

<b>S. NO.</b>	<b>DESCRIPTION</b>	<b>NOS.</b>
1.	RCM/ SITE-IN-CHARGE Experience - 10 Yrs (minimum)	1
2.	LEAD DISCIPLINE ENGINEER - CIVIL Experience - 8 Yrs (minimum)	1
3.	SAFETY OFFICER, SAFETY SUPERVISOR, ETC. Experience - 5 Yrs (minimum)	1 AS PER HSE
4.	SUPERVISORS Experience - 10 Yrs (minimum) Diploma in Civil	1

**NOTES**

- 1) Above key construction manpower is required to be deployed by the contractor to complete the work within schedule. Contractor is required to augment the above list with additional numbers/categories of personnel as required and directed by Engineer-In charge to complete the work within the completion time schedule and quoted price.
- 2) Key Construction personnel identified above shall be deployed by contractor as and when relevant activities are required to be carried out for completing the job within completion time schedule and as per direction of Engineer In-charge.
- 3) CVs of key persons proposed to be deployed shall be submitted to Owner/Engineer-In-charge prior to their mobilization at site. The mobilization of key personnel shall be done at site subject to prior approval of their CVs by Owner/Engineer-In-charge

(STAMP & SIGNATURE OF BIDDER)

**TERMS OF PAYMENT**  
**ANNEXURE - III TO SPECIAL CONDITIONS OF CONTRACT**

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

- 1) **MOBILIZATION ADVANCE:** Refer SCC.
- 2) **SECURED ADVANCE ON MATERIALS:** Not Applicable.
- 3) **ON ACCOUNT PAYMENTS**

Progressive payments shall be released to Contractor against running account bills duly certified by Engineer-in-charge after affecting the necessary deductions/recovery, if any. The basis for payment against various items shall be as follows:

<b>S. NO.</b>	<b>NATURE OF WORK</b>	<b>PAYMENT TERMS</b>
<b>1</b>	<b><u>CIVIL</u></b>	
1.1	<b>Land Development, Topographical &amp; Contour Survey Works</b>	<ul style="list-style-type: none"><li>- 80% on completion of work on prorated basis as certified in progress bill.</li><li>- 15% on submission of Final Documentation / Reports.</li><li>- 5% on completion of all works in all respects and issuance of completion certificate.</li></ul>

**NOTE:**

1. The above payment terms shall commensurate with the work executed.
2. The above progress payments are subject to deductions towards income tax and other deductions as applicable as per terms of the Contract.
3. Withholding Tax at the prevailing rate shall be deducted as per the Indian Income Tax Act. TDS certificate shall be issued by GAIL.
4. Completion certificate is the certificate issued after attending the defects prior to taking over as specified in the General Conditions of Contract.
5. Part completion certificate whenever essential (in case of job in multi units, offloading case etc.) shall be issued with due concurrence from competent authorities to facilitate release of Final payment.
6. Wherever milestone payment is linked with sub ordering, Engineer-in-charge shall ensure that the total quantity against which the payment is released towards supply shall not exceed the final installed quantity of the item.
7. Wherever milestone payment has been recommended on receipt and acceptance of material, the same shall be released against "Incoming Material Inspection Report" issued by PDIL. Engineer-in- shall release the progressive payment towards supply in such a way ensuring that the total quantity against which the payment is released towards supply shall not exceed the final installed quantity of the item.

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

**ANNEXURES TO SCC**

**QUALITY MANAGEMENT SYSTEM**

**ANNEXURE - IV TO SPECIAL CONDITIONS OF  
CONTRACT**

## **QUALITY MANAGEMENT SYSTEM**

1. 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 the contract detailed quality assurance programme shall be prepared by the Contractor for the execution of contract for various works which will be mutually discussed and agreed to.
2. The Contractor shall establish document and maintain an effective quality assurance system outlined in recognized codes.
3. Quality Assurance System plans/procedures of the Contractor shall be furnished in the form of a 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 completion in all respect till final acceptance by Owner. 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.
4. The Owner/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.
5. 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 carry out 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.
6. 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.
7. The Contractor shall adhere to the approved quality assurance system

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

**ANNEXURES TO SCC**

**TIME SCHEDULE**

**ANNEXURE - V TO SPECIAL CONDITIONS OF  
CONTRACT**

**TIME SCHEDULE**

NAME OF WORK	TIME/ COMPLETION SCHEDULE
NAME OF WORK: SITE ENABLING WORKS. (BIDDING DOCUMENT NO.: PNMM/PC-286/E-001) <b>E-TENDER NO.</b>	<b>06 (SIX) MONTHS FROM THE DATE OF FAX OF ACCEPTANCE (FOA)</b>

Note :

1. The time for completion shall be reckoned from **effective date, as mentioned in Fax of Acceptance / Letter of Acceptance of Work.**
2. The time indicated is for completing all the works in all respects as per scope of work, specifications, codes, drawings and instructions of Engineer-in-Charge.
3. It should be noted that the period of completion of all works given above includes time required for mobilisation at site, carrying out the works as per the requirements Contract Document, demobilisation, preparation of all reports in requisite quantities as mentioned in the Bidding document, rectifications, if any, rework etc. complete in all respects to the entire satisfaction of Engineer-in-Charge.

(SIGNATURE AND STAMP OF BIDDER)



**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

## **ANNEXURE-VI TO SCC**

*[On the Letter-head of Contractor]*

**NO CLAIM CERTIFICATE**

We, \_\_\_\_\_, a company incorporated under the laws of India/ a Consortium between \* \_\_\_ and \* \_\_\_ (*name of Consortium partners to be inserted*)/ a Partnership Firm consisting of \* \_\_\_ and \* \_\_\_ (*name of Partners to be inserted*)/ a Sole Proprietorship (as the case may be), having its registered office at \_\_\_\_\_ and carrying on business under the name and style M/s. \_\_\_\_\_ were awarded the contract by GAIL (India) Ltd. in reference to Tender No. \_\_\_\_\_ dated \_\_\_\_\_ (“Contract”).

After completion of the above-said Work under the contract, we have scrutinized all our claims, contentions, disputes, issues and we hereby confirm that after adjusting all payments received by us against our R.A. Bills, our balance entitlement under the Contract is to a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) as per our Final Bill dated \_\_\_\_\_ towards full and final settlement of all our claims, dues, issues and contentions from GAIL (India) Ltd.

We confirm and declare that with the receipt of aforesaid monies, all our claims, dues, disputes, differences between M/s. \_\_\_\_\_ and GAIL (India) Ltd. under and with reference to said Contract stands fully and finally settled.

We further absolve GAIL (India) Ltd. from all liabilities present or future arising directly or indirectly out of the Contract.

We further confirm that the present settlement has been arrived at after mutual negotiations and is freely and fairly entered into between the parties. There is no economic duress or any other compulsion on us in entering into this settlement.

**Signature with Seal of contractor**

**Dated :**

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

**INDEMNITY BOND**

WHEREAS GAIL (India) Ltd. (hereinafter referred to as “GAIL”) which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at 16, Bhikaiji, Cama Place, R.K. Puram, New Delhi 110066 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.

GAIL has also advised the Contractor to execute an Indemnity Bond in general in favour of GAIL indemnifying GAIL 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)/ sub- contractor(s) etc. who may have been associated or engaged by the Contractor directly or indirectly with or without consent of GAIL for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GAIL 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 GAIL under or in relation to this contract. The Contractor undertakes to compensate and pay to GAIL and/or any of its employees, Directors including Independent Directors, forthwith on demand without any protest the amount claimed by GAIL 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 GAIL that:

(i) This Indemnity shall remain valid and irrevocable for all claims of GAIL 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 GAIL 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

**TENDER NO: GAIL/ND/CnP/ZLD/W581/2024**

GAIL are settled by the Contractor and/or GAIL 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.

	<b>PROJECTS &amp; DEVELOPMENT INDIA LIMITED</b>	PNCN-HSE-01	0	
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**HEALTH, SAFETY AND ENVIRONMENT (HSE) MANAGEMENT**  
**FOR**  
**GAIL,PATA**

0	30.10.17	30.10.17	FOR ISSUANCE	DILIP	GC	SM
<b>REV</b>	<b>REV DATE</b>	<b>EFF DATE</b>	<b>PURPOSE</b>	<b>PREPD</b>	<b>REVWD</b>	<b>APPD</b>

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## 1.0 INTRODUCTION

1.1 The purpose of the present document is to outline the minimum safety requirements applicable to personnel, equipment and facilities during erection, pre-commissioning and commissioning activities of OWNER / CONSULTANT Construction Sites. Constructing safe structure and providing safe working environment to the personnel is a vital factor in successful construction business. Safety and health are as much as part of effective project planning and control as the cost, schedules, procurement and quality. Indeed they are all closely interrelated. Productivity, safety and quality can move forward in close proximity.

## 1.2 OBJECTIVES

OWNER/CONSULTANT Site Management has following main objectives regarding safety at site.

- a) No Accident
- b) To make the environment safe
- c) No harm to people
- d) Safety is everyone's responsibility
- e) To make the job safe

## 2.0 GENERAL

- 2.1 These rules do not exempt the Contractor from statutory Health, Safety and Environmental duties but are intended to assist in attaining a high standard of compliance with those duties, in order to provide a safe and healthy working environment.
- 2.2 OWNER/CONSULTANT will assist Contractors in any practical way to facilitate safe working, and requires full co-operation in observing these rules.
- 2.3 The rules for Health and Safety specified herein are in no way intended to relieve the Contractor from any obligation or liability under the Contract, nor is it intended to relieve the Contractor of any of his legal obligations for the avoidance of accidents.
- 2.4 In all matters arising in the performance of the Contract, the Contractor shall conform with all Statutory Regulations and By-Laws made with statutory authority by Government Departments or by Local or other Authorities that shall be applicable to the Works.
- 2.5 The Contractor, in the performance of the Contract, shall not endanger the safety or unlawfully interfere with the convenience of the public in any manner.
- 2.6 The Contractor's representative on Site shall communicate details of these rules for Health, Safety and Environment to all Contractors' employees and to all Subcontractors and Subcontractors' employees employed on the Site.



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2.7 The requirements of the Client/Owner's existing Site Rules/Regulations form part of the Contract and in the case of conflict between the OWNER/CONSULTANT'S rules, the highest standard shall be applied.

2.8 At the tender stage OWNER/CONSULTANT will require to see a copy of the Contractor's policy, organization and arrangements for the Health and Safety at Work. The Contractor shall submitted complete documents Health and Safety Questionnaire. Contractor shall deploy safety officer of adequate experience at each work site or during each shift including Sunday/holiday with approval of EIC/Owner.

### **3.0 SITE HEALTH, SAFETY AND ENVIRONMENT INDUCTION**

3.1 All personnel shall receive OWNER/CONSULTANT and Contractors' site Health, Safety and Environment induction before they commence work on site. The induction shall comprise information on the various hazards which they may come into contact with, instructions on the site emergency procedures, warning and alarm systems, and permit to work system, first aid locations, welfare facilities, access routes and project specific rules.

3.2 It is the responsibility of the Contractor to familiarize all new personnel to the Project on the actual location of muster points, fire alarm points, first aid stations and the like.

### **4.0 DEMARCATION**

4.1 Construction personnel are restricted to the construction areas shown on the Contract Drawings. Any personnel found on/in or interfering with the existing works/plant, without permission, will be dismissed from site. Any work outside of these areas may only be carried out with the written agreement of OWNER/CONSULTANT.

Before any work is started on the site, the Contractor's representative shall report to OWNER/CONSULTANT, who will confirm to the Contractor's representative, the limits of the working area(s) and shall be informed of any special requirements appertaining thereto.

### **5.0 ACCESS TO THE CLIENT'S FACILITIES/BUILDINGS**

5.1 The Client's Facilities, including the canteen/cafeteria and toilets shall not be used by Construction Personnel.

5.2 Construction Personnel shall not enter any of the Owner's building unless escorted by a member of the OWNER/CONSULTANT'S staff (or working with prior agreement to Owner's Permit to Work System).

### **6.0 BEHAVIOR ON SITE**

6.1 All Contractors' personnel shall treat everyone with respect and will refrain from any sexually suggestive or abusive comments or behavior.

### **7.0 SMOKING, EATING AND DRINKING**

7.1 Smoking, eating and drinking is allowed in designated areas.

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## 8.0 DRUGS AND ALCOHOL

- 8.1 The possession or use of illicit drugs and alcohol on site is not permitted. Anyone who is found, or suspected to be, under the influence of either will be removed from site (subject to the Contractors' disciplinary procedure).
- 8.2 Anyone taking prescriptive drugs shall advise their employer, in particular those drugs that may impair their performance. Their employer may make arrangements to assign them to more suitable work, but shall ensure that the OWNER/CONSULTANT Construction manager is informed without delay.

## 9.0 PERMIT TO WORK SYSTEM

- 9.1 All construction works will be carried out under a permit to work system. It is designed to protect personnel and plant and consists of an organized and predefined safety procedure. It forms a clear record of all foreseeable hazards which have been considered in advance of construction operations.
- 9.2 The identities of the permit "Issuing Authority" will be OWNER and the "Permit Acceptor" will be the Contractor.
- 9.3 The following types of permits will be issued:
- Clearance Certificate - all other permits are invalid without this Certificate, (this certificate can be used for general work).
  - Hot Job Work Permit.
  - Electrical Work Permit.
  - Confined Spaces Work Permit.
  - Excavations Work Permit.
  - Working at Height work Permit.
  - Radiography Work Permit.
  - Cold Job Work Permit.
  - Road Closure Work Permit.
- 9.4 Written requests for permits must be submitted to Owner at least twenty-four hours in advance and the permits will be issued daily. Permits shall be given to Safety Officers of the contractor, by representatives authorized by Owner in approved formats.

## 10.0 ACCESS, SITE PASSES AND SECURITY

### 10.1 Passes

All personnel and vehicles shall enter and leave the site via the entrance authorized for construction personnel and traffic. Contractors' employees shall not enter any part of the site other than for the purpose of carrying out the Works.

All personnel shall be issued with a site pass. The site pass must be carried (or displayed on the pass holder's lapel) at all times. Details of all personnel requiring site passes shall be submitted to OWNER/CONSULTANT at least seven working days in advance of the

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planned start-on-site date. Site passes shall be submitted for inspection on entering or leaving the site, or when requested for inspection by OWNER/CONSULTANT or Security.

Loss of site passes must be reported immediately to Owner/Consultant. Lack of a site pass may mean delay at the site entrance. Owner/Consultant shall not accept any responsibility for lost time or costs incurred.

On completion of their assignment, or termination or their employment, all personnel will return their site pass to Owner or Owner representative/ Owner authorized personal.

## 10.2 Security

The security of Contractor's plant, tools, equipment, materials (including free issue materials properly handed-over by Owner/Consultant) are the responsibility of the Contractor. It is the Contractor's responsibility to satisfy themselves that the security arrangements in existence on the site are adequate. The Contractor shall provide any other security measure that he deems necessary for the control and security of Contractor owned equipment and plant, including for free-issue plant and materials, both within the site establishment area and the working areas on the site.

Owner accepts no liability for any loss, damage or deterioration to the Contractor's plant tools equipment and materials.

Owner reserves the right to search at random all personnel, any Contractor's employee, or employees of its servants, agents, Contractors or any vehicle entering or leaving the site. Any package or container being taken into or out of the site may be opened and inspected by security staff or any other persons authorized by Owner/Consultant to make such a search or inspection.

It is the Contractor's obligation and responsibility to ensure that OWNER / CONSULTANT right to search and inspect persons and property, extends to and is brought to the attention of all his personnel.

Personnel shall give all possible assistance and make available any facilities required to assist OWNER/CONSULTANT and the Police in pursuance of the prosecution of any person(s) responsible for alleged malicious damage or loss to the Works or existing installations.

Owner shall not accept any responsibility for the loss or damage of personal effects. The security and safekeeping of personal effects is the responsibility of each individual.

- 10.3 Construction personnel will not be admitted to the Construction Areas unless they have undergone Owner/ Consultant's induction, and received a security pass.

### **No Induction, No Pass, No Access to the Site**

- 10.4 OWNER/CONSULTANT reserves the right to deny access to the Construction Site/Areas and/or the Construction Car parks to any person, or vehicle.

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- 10.5 Individuals may be excluded from and refused future entry to the Site and/or Construction Areas for any breach of Safety or Security Rules, or exceeding the speed limit (20 mph on roads leading to the site off the public highway and 5 mph in the construction area).
- 10.6 No plant/skips waste or materials may leave the Construction Area without the clearance of OWNER/CONSULTANT.
- 10.7 The taking of photographs on the site is prohibited.
- 10.8 Vehicles with children under the age of 16 years or animals onboard will not be allowed access.
- 10.9 Visitors will only be allowed by appointment (two days' notice to OWNER/CONSULTANT is required). Visitors shall be accompanied by a member of the Contractor's team (who has received Health, Safety and Environment Induction) at all times. The visitor will have to obtain a visitor's pass, and be collected from and returned to the main gate.
- 10.10 Each Contractor will keep a daily register of who is on site. The register will record name, pass number, time-in and time-out (records on time-clocks will not be permitted). This information shall be used to check personnel (role call) in the event of an emergency

#### **11.0 PARKING, DELIVERIES AND VEHICLE PASSES**

- 11.1 Contractors' personnel shall not be allowed to park any vehicle on the main car park or site. All contractors shall park in the Contractors' Temporary Car Park.
- 11.2 The Contractor shall arrange transport between the parking area(s), the main site gate and the Contractor's establishment and working areas if judged to be necessary.
- 11.3 Vehicles used solely for transporting of tools and equipment may be allowed access to the working area(s) for unloading/loading only.
- 11.4 Owners of vehicles parked illegally will have their car pass taken off them and told to remove the vehicle from site. They may have their site pass withdrawn and be refused further access to the Construction Site.
- 11.5 The Construction Areas will be restricted to construction plant and delivery vehicles.
- 11.6 The speed limit on site is 10 mph on the approach roads leading to the site off the public highway and 5 mph on the construction areas

#### **12.0 SITE OPENING AND CLOSING TIMES**

- 12.1 The site will be open from 8.00am to 6.00pm Monday to Saturday. Work outside the agreed normal working hours will be by agreement with Owner (subject to two working days' notice). All applications for out of hour working will identify the scope of work, supervision arrangements and a list of personnel.

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### 13.0 SITE SUPERVISION

13.1 The Contractor must ensure that an employee of suitable seniority and authority, with responsibility for Health and Safety, is always present on site during the course of the works, to supervise and direct the Works and to receive and implement instructions from OWNER/CONSULTANT. Seven days before commencing works on site, the Contractor must notify OWNER/CONSULTANT of the name of that employee.

13.2 All supervisory staff shall be made aware of their responsibilities for safety.

### 14.0 TRAINING, COMPETENCE OF EMPLOYEES AND NOTIFICATION OF HAZARDS

14.1 Each Contractor must ensure that all his supervision and employees have had adequate safety training and are experienced to carry out their work safely, prior to starting on site. Training should be continuous throughout a project and should include regular toolbox discussions, (on site briefings at the start of each working day/shift).

To this end, the Contractor must also ensure that specific hazards likely to be experienced on the Site, whether notified to them or discovered by them, are notified to their workforce together with any precautions to be taken and local rules to be observed. Similarly, such hazards should be notified to their Subcontractors and, where discovered by them, to OWNER/CONSULTANT.

14.2 Where particularly severe or unusual hazards may arise on site, OWNER/CONSULTANT reserves the right at no additional cost to request Contractors' employees to attend special safety training and instruction sessions, whether carried out on site or externally. OWNER/CONSULTANT also requires Contractors' employees to undergo specified induction safety training. These aspects should be checked prior to submission of Tenders or execution of the works.

### 15.0 METHOD STATEMENTS

15.1 Contractors shall submit Safety Method Statements and JSA for all work activities, for example:

- Piling Operations.
- Excavation works.
- Lifting operations, as specified.
- Steel erection.
- Hot work operations.
- Radiography/NDT.
- Entry into confined spaces.
- Pressure testing.
- Working at height.
- Shot fired tools.
- Installation of pre-cast concrete planks.
- Pre-cast concrete structure.
- The erection of safety nets and fall arrest equipment.

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Safety method statements must also be submitted for activities which have been identified as being of significant risk during the risk assessment process and activities selected by OWNER/CONSULTANT.

15.2 All Safety method statements must be submitted to OWNER/CONSULTANT at least seven days before planned commencement of the works.

15.3 The Safety method statement shall detail:

- The job to be undertaken.
- The individual activities required to complete the job.
- The individual trades/disciplines involved in each activity.
- Plant, equipment and tools to be used in each activity.
- Any substances/chemicals to be used and where, and during which activity they will be used (together with a COSHH assessment).
- The Name(s) of the Supervisor(s) for each activity.
- The Name of the person in overall charge of the job.
- A detailed description of how the work will be done including control measures and procedures to complete each activity and the overall job safety.
- All hot work.

15.4 Compliance with the contents of the safety method statement shall be monitored on a daily basis and addressed during Contractors' safety management meetings.

15.5 The Contractor must ensure that employees executing the works are fully briefed and are made aware of the details within the approved Safety Method Statements, prior to starting the task, this includes highlighting hazards associated, associated risk assessments and reduction measures.

## 16.0 RISK ASSESSMENTS

16.1 Contractors will be required to produce risk assessments for all works under their control. The risk assessment shall be submitted as part of the Safety Method Statement to OWNER/CONSULTANT at least seven days before the job commences, and include the following information:

- Identification of all hazards applicable to significant risk activities.
- Details of measures in place to control the risk.
- Justification that the existing control measures are adequate or if not, a detailed action plan on how the risk(s) shall be controlled.

16.2 The use of Generic Risk Assessments is only acceptable if they follow the logical progression of the method statement and that specific operation, otherwise, task specific risk assessments will be required.

16.3 All risk assessments must be communicated to the workforce who will be responsible for undertaking the work.

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## 17.0 COMPLIANCE WITH STATUTORY REGULATIONS

- 17.1 Contractors shall carry out their work in accordance with statutory legislation. It is the duty of the Contractor to have knowledge of all relevant legislation and take account of it in the planning and execution of the work on OWNER/CONSULTANT' Sites.

## 18.0 INFORMATION TO BE PROVIDED AND POSTED

- 18.1 Contractors shall have in place, and issue to OWNER/CONSULTANT the following documents or information prior to commencement of their work, (where detailed within these rules):

- 18.1.1 Safety, Health and Environmental Policy.
- 18.1.2 Employer's Liability Insurance Certificate.
- 18.1.3 A detailed Health, Safety and Environment Plan, compliant with the project plan developed by the Planning Supervisor and/or Principal Contractor.
- 18.1.4 Work Method Statement Lifting Studies.
- 18.1.5 COSHH Procedures and Assessments.
- 18.1.6 Noise Procedures and Assessments.
- 18.1.7 Name of the individual appointed as the Site Safety Supervisor/Advisor.
- 18.1.8 Test certificates and examination for lifting gear, plant and appliances to be used on site. (Duplicates to be provided for OWNER/CONSULTANT's records.)
- 18.1.9 Drawings and calculations relating to false work, designed scaffolds, ground works and supporting temporary works.
- 18.1.10 Details of young persons to be employed on site.
- 18.1.11 Information relating to hazards associated with plant, operation and materials used in the works.
- 18.1.12 Proof of training for all personnel engaged in the works.
- 18.1.13 Daily Labour Returns.
- 18.1.14 Monthly Return of Accident Statistics to submitted OWNER/CONSULTANT format (Nil returns required).
- 18.1.15 Personal Injury Report to submitted to OWNER/CONSULTANT format (all injuries, however minor, to be reported). OWNER/CONSULTANT may request a detailed investigation into an accident. OWNER/CONSULTANT' decision on which incidents require detailed investigation is final.
- 18.1.16 Dangerous Occurrences, Incidents, Damage to Equipment and/or Property report to be submitted to OWNER/CONSULTANT format.
- 18.1.17 All entries/records of accidents entered into the Contractor's Accident Book shall also be copied into OWNER/CONSULTANT' Accident Book by the Contractor.
- 18.1.18 Copies of all Statutory Registers to be submitted weekly to OWNER/CONSULTANT.
- 18.1.19 Copies of the Contractor's Safety Officer/Advisor's reports of their findings on site visits/inspections.

## 18.2 Accidents, Incidents, Dangerous Occurrences and Notifiable Diseases

- 18.2.1 Accidents/Incidents/ Dangerous Occurrences/Near Misses

All accidents/incidents/dangerous occurrences/near misses must be notified to OWNER/CONSULTANT immediately, and a report prepared.

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For reportable incidents, a copy the report to the Authority must be submitted to OWNER/CONSULTANT on completion but no later than two calendar days after the accident.

18.2.2 OWNER/CONSULTANT reserves the right to decide which accident, incidents or minor injuries shall be Investigated, and to what extent/format/contents of any investigation.

**Note:** All such notification or reports to OWNER/CONSULTANT do not release the Contractor of his statutory duties to report such matters to the Authorities by the quickest possible means (viz, telephone, fax and e-mail) immediately following the incident/accident.

## 19.0 PERSONAL PROTECTIVE EQUIPMENT/CLOTHING

19.1 All personnel on OWNER/CONSULTANT' site must wear as a minimum safety helmet, hi-vis vest, safety glasses and protective footwear. Additional personal protective equipment may be required dependent on the tasks being undertaken or as dictated by the risk assessment.

19.2 Contractors shall provide all necessary personal protective clothing and equipment for their employees and renew as necessary. Records of the issue of such equipment must be maintained for inspection by OWNER/CONSULTANT.

19.3 The Contractor shall:

- Provide personal protective equipment which is comfortable and fit for purpose.
- Maintain and clean personal protective equipment.
- Replace free of charge defective, broken or lost personal protective equipment.
- Provide storage for personal protective equipment when not being used.
- Ensure that personal protective equipment is properly used.
- Give training, information and instruction on its use to employees.
- Ensure that all personnel wear suitable clothing at all times (**no shorts, no sports shirts and no colours that may invite aggression - HSE "Keep Your Tops On" is enforced**).
- OWNER/CONSULTANT reserves the right to direct the contractor to change/replace personal protective equipment if they determine that it is unsuitable or inadequate for its proposed use.

## 20.0 SUBSTANCES (Control of Substances Hazardous to Health – COSHH)

20.1 Substances hazardous to health must be identified prior to taking them onto site and, if they cannot be substituted or eliminated, assessments stating how the substances will be controlled and what precautions will be introduced must be carried out and recorded in writing by a competent person. This assessment must be communicated to, and understood by, the members of the workforce who are likely to come into contact with the substance(s). A copy of all assessments should be submitted to OWNER/CONSULTANT.

20.2 Hazardous substances may only be brought to site with OWNER/CONSULTANT' permission. They shall be kept to a minimum and must be stored in secure, appropriate containers with the contents clearly labelled. The containers must be stored in a secure



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area, preferably quarantined from the main stores areas, with suitable warning notices and signage posted.

- 20.3 Hazardous materials must not be allowed to discharge into natural watercourses or drainage systems.
- 20.4 All hazardous material waste must be kept separate from normal waste and be disposed of in a specialist disposal facility.

## 21.0 NOISE

- 21.1 When any operation of a Contractor is likely to expose any employee on site to an average noise level of 85 dB(A) and above, an assessment shall be carried out, by the Contractor, and records maintained for OWNER/CONSULTANT' inspection. In such circumstances, the Contractor must keep stocks of adequate ear defenders or other suitable hearing protection.
- 21.2 In addition to the foregoing, noise must be kept to a minimum at all times and must not exceed acceptable and/or locally specified rules and conditions relating to noise imposed by the Contract. Due regard must always be given to noise levels, and their effects on the local community and persons not involved in the operations. Permissible times for noisy work operations, and other restrictions, may be imposed by the Local Authority. Contractors receiving Notices or Prohibition Notices under the related legislation must notify OWNER/CONSULTANT of such Notices.

## 22.0 FIRST AID

- 22.1 All Contractors shall provide or ensure that they are provided with, such equipment and facilities as are adequate and appropriate in the circumstances for enabling first-aid to be rendered to any of their employees if they are injured or become ill at work.
- 22.2 No work shall commence on site until Contractors have trained first aid personnel on site. Contractor at all times during execution, shall station at site an emergency vehicle without any extra cost or claim.

## 23.0 TOOL BOX TALKS

- 23.1 Tool Box Talks will be implemented by all Contractors. The agenda for these talks will be agreed with OWNER/CONSULTANT prior to the commencing of work.

## 24.0 HEALTH, SAFETY AND ENVIRONMENT INSPECTIONS/HEALTH, SAFETY AND ENVIRONMENT ADVISORS

- 24.1 The OWNER/CONSULTANT' Health, Safety and Environment Engineer/Advisor will visit the sites and carry out Site Safety Inspections. Contractors must co-operate in these inspections. Whenever Contractors' own Health, Safety and Environment Advisors visit site they must report their arrival and departure to the OWNER/CONSULTANT' Senior Representative, and provide a report of their findings and any necessary corrective action to be undertaken.

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24.2 Contractors on the project must provide a full-time site based Health, Safety and Environment Advisor, when the intensity of the work requires or at the request of the OWNER/CONSULTANT.

24.3 Contractors who do not have full-time site based Health, Safety and Environment Advisors, shall ensure that their Health, Safety and Environment Advisor visits site once per week as a minimum.

**24.4 Appointment of Health, Safety and Environment Supervision**

The Contractor shall appoint safety supervision. The name of each appointee, together with evidence of his or her competence to carry out the requirements of the role, shall be submitted to OWNER/CONSULTANT for their approval.

**25.0 HEALTH, SAFETY AND ENVIRONMENT MEETINGS**

25.1 Health, Safety and Environment will form part of the agenda at all Site Progress Meetings. The Contractor's Safety Advisor may be asked to attend these progress meetings.

25.2 Once per month OWNER/CONSULTANT' Resident Construction Manager shall convene a Health Safety and Environment Meeting of all Contractors. Attendees at the meeting shall be all Contractors' Safety Advisors and Site Managers.

**26.0 HEALTH, SAFETY AND ENVIRONMENT COMMITTEES AND SAFETY REPRESENTATIVES**

26.1 OWNER/CONSULTANT encourages the workforce to nominate Safety Representatives as a way of improving communication on Health, Safety and Environment issues. Wherever Contractors' Safety Representatives have been appointed, OWNER/CONSULTANT must be informed of their appointment in writing.


**27.0 HOUSEKEEPING**

27.1 Contractors are expected to carry out their work in a clean, safe and orderly manner.

27.2 Dust shall be kept to acceptable levels for the work being carried out. Waste materials and rubbish shall be cleared up as the work progresses and not left to introduce a safety hazard for other personnel engaged on the works.

27.3 Construction waste should never obstruct emergency exit routes, Firefighting equipment, emergency alarm call points or other emergency facilities.

27.4 From time to time as judged necessary, at the expiration of the contract, or when instructed to do so by OWNER/CONSULTANT, the Contractor shall undertake to clean and tidy his areas of occupation and work to the satisfaction of OWNER/CONSULTANT. Should the Contractor fail to do this, OWNER/CONSULTANT reserves the right to remove all offending materials and debris and to deduct the cost of this operation from the Contract Price. OWNER/CONSULTANT accepts no responsibility for any materials and/or tools which may be removed during this operation.

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27.5 The Contractor must ensure that the following requirements are strictly enforced:

- Ample provision of refuse bins for all rubbish including organic waste such as food scraps, etc.
- Daily clearance of all such bins to the area designated for this discharge.
- No discharge of deleterious matter such as oils or other industrial waste.

27.6 All site offices, toilets, eating facilities, changing rooms, drying areas, stores, etc, which are the responsibility of the Contractor, shall be cleaned daily as a minimum by the Contractor. These facilities shall be checked for vermin on a two weekly rota.

## 28.0 FIRE PREVENTION

28.1 Before welding, flame or arc cutting of metals, or other processes involving heat or naked lights are permitted, a fire risk assessment shall be carried out by the contractor and arrangements agreed with OWNER/CONSULTANT who will issue a Permit to Work.

28.2 Contractors shall familiarize both themselves and their employees with the fire safety arrangements, fire alarms, means of escape and emergency evacuation procedures.

28.3 Before leaving the premises and site, contractors shall ensure that naked lights and other ignition sources have been extinguished and electrical apparatus, where practicable, switched off and/or disconnected.

28.4 Contractors shall store Highly Flammable Liquids and Liquefied Petroleum Gases in a manner approved by OWNER/CONSULTANT.

28.5 OWNER/CONSULTANT' fire protection equipment shall only be used in an Emergency. Fire extinguishers/fire blankets for use when carrying out hot work shall be provided by the Contractor.

## 29.0 REMOVAL OF WASTE FROM CONSTRUCTION SITES

29.1 The removal of waste shall only be undertaken by Licensed Waste Carriers.

29.2 Where there is any doubt of the composition of excavation spoil, it must be analyzed before it is removed from site.

29.3 Evidence of compliance shall be submitted to OWNER/CONSULTANT prior to the removal of any waste from site.

29.4 Controlled waste is any kind of household, industrial or commercial waste. This includes, for example:

- Scrap metal.
- Building, construction, demolition and excavation waste, including waste from any repair or renovation.
- Clinical waste.

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- Anything which is unwanted because it is surplus, broken, worn out, contaminated or spoiled in some other way.

Controlled waste disposal must be managed via a chain of transfer notes, maintained by the contractor and readily retrievable for OWNER/CONSULTANT' inspection.

### 30.0 EXCAVATIONS AND OPENINGS

- 30.1 No excavation work shall be commenced by the Contractor unless a valid excavation permit has been issued. The Contractor shall have on site at all times while excavation work is being carried out, detection equipment which meets the latest technology.
- 30.2 Prior to the start of any excavation, OWNER/CONSULTANT shall be consulted and the presence of overhead and buried service records shall be checked. Where "live" services are present, hand excavation must be carried out until the location of the service has been identified, recorded and made safe.
- 30.3 The Contractor must erect suitable solid edge protection (i.e., double handrails) around excavations or openings. During the hours of darkness any excavations, openings or obstructions near or on roadways and walkways must be indicated by a sufficient number of warning lamps.
- 30.4 The sides of all excavations should be properly shored, battered or stepped to prevent collapse. No excavation work shall commence unless there are adequate resources present to ensure the stability of the excavation. Excavations shall be inspected prior to, or re-commencement of the work to ensure the excavation is still in a safe condition.
- 30.5 All excavations shall have a proper ladder access point provided.
- 30.6 Spoil from excavations must be piled at least 1m from the edge of the hole.
- 30.7 Vehicular traffic shall be restricted from the edges of excavations, to prevent possible collapse.

### 31.0 ELECTRICITY

- 31.1 All Contractors must provide their own electrical power supplies or as per Technical ITB.
- 31.2 Contractors must not interfere with, or work on any of, the Client's electrical installations or equipment without written consent.
- 31.3 Where Contractors have to work in the vicinity of electrical equipment they must carry out a risk assessment prior to commencement of any works.

**ALL EQUIPMENT MUST BE TREATED AS "LIVE" UNLESS ISOLATED/LOCKED OFF AND TAGGED.**

- 31.4 Repair or installation of any electrical equipment must only be carried out by a competent qualified electrician.

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31.5 The electrical supply to powered hand tools must not exceed permissible volts, centre tapped giving appropriate volts to earth. Where this is not possible, due to the type of tool being used, the approval of OWNER/CONSULTANT must be sought in writing.

Electrical lighting for use in confined spaces must not exceed 24 volts (and be explosion proof where applicable). Powered hand tools used in confined spaces should, where possible, be air operated.

31.6 Contractors requiring to install temporary electrical supply equipment shall submit a temporary electrical supply procedure to OWNER/CONSULTANT for approval. The procedure shall, where necessary, cover installation of 380/440 volt system, installation of 110 volt system, lighting system, welding equipment installation, inspection testing operation and maintenance of temporary electrical systems.

**31.6.1 Distribution Boards - Semi-permanent or Long Term**

These should be accommodated in weatherproofed locations and be so arranged, if possible, that they will not need to be moved during the Contract. They should be proofed against interference or unauthorized operation and they should be large enough to accommodate all the necessary apparatus required. Each circuit should be clearly labeled and a circuit diagram should be located at each board.

**31.6.2 Distribution Boards – Temporary**

These are usually small portable panels or boards containing two or three socket outlets. They must be of robust construction, preferably all-insulated and should be supplied by heavy duty flexible cables, these cables shall not be spliced. Socket outlets, plug connectors and cable couplers should comply with High Standards or equivalent industry standard.

**31.6.3 Distribution Cables**

These cables run from the main distribution boards to the local distribution boards throughout the site.

The cables will normally be multi-strand multi-core armored PVC cables but, in certain cases, may take the form of Mineral Insulated Copper Clad (MICC) cables. The latter type should be sheathed with PVC.

The installation must be so arranged as to prevent the need for long trailing cables. Socket outlets should be located as near the working point as possible.

Power and lighting circuits should be kept separate.

A full record should be made of all parts of the installation and should be kept up to date when alterations or extensions are made.

**31.6.4 Underground Cables**

Cables may be provided by the Contractor and laid underground or overhead to connect the supply or metering point to the semi-permanent site distribution boards.

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The cables must be suitable for the duty and loading expected, e.g., armored PVC cables.

The cables should be buried at a safe depth or taken from a height so as not to obstruct the movement of persons and vehicles and their routes clearly marked both on the site and on the site plans.

The cables should be properly terminated and be provided with efficient circuit protection.

Cable routes should be so arranged that the minimum of obstruction is caused. The cables should be treated with care and given the same supervision and protection as other cables.

31.7 No temporary electrical supply shall be installed or modified without the agreement and approval of OWNER/CONSULTANT.

31.8 Any tool, plant or equipment exceeding 110 volts (55v to earth) shall be connected to an earth leakage circuit breaker (ELCB).

### 32.0 WORK IN CONFINED SPACES

32.1 All work in confined spaces must be covered by a safety method statement.

Safety method statements for work in confined spaces should include arrangements for the following as a minimum:

- Issue of a permit to work
- Work scope and method.
- Nominated Supervisor.
- Tally man.
- Rescue procedures and equipment.
- Training.
- Tools and equipment to be used, including low voltage or pneumatic.
- Lighting requirements, including standby/emergency.
- Explosion proof fittings.
- Low voltage or pneumatic tools.
- Ventilation.
- Access.
- Bonding to prevent both electrical shock and static discharge.
- Work cycles, to reduce risk of heat exhaustion.
- Fire safety and extinguisher requirements.

32.2 Contractors shall not enter or commence work in any excavation, tank, vessel, pipe or chamber or other enclosed space, until a valid permit to work has been issued. Where Contractor's operations result in a dangerous atmosphere arising during the monitoring of the work activity, the permit to work issuing authority must be informed and all personnel removed from the area.

No new activity shall be introduced into a confined space without the permission and signed approval of the permit to work issuing authority.

Whilst work is ongoing within a confined space, the Contractor will be required to provide a trained standby/tally man.

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32.4 All personnel who have to enter confined spaces must have undertaken the training appropriate to this task.

### 33.0 MOBILE CRANES

33.1 All cranes (including piling rigs, fork lift trucks, mobile elevated work platforms, hand lorries and similar equipment), whether owned by the Contractor or hired, must carry relevant test certificates and thorough examination reports, together with the manufacturer's handbook. Copies of this documentation must be submitted to Owner/Consultant prior to commencing work.

33.2 Only persons who are certificated as competent and authorized shall be allowed to operate cranes. The Contractor must be able to prove the competence of their employees to operate such equipment prior to its use.

33.3 Crane operators or other competent persons must carry out daily inspections and enter these in the crane register. Failure to maintain the register properly may lead to suspension of operations. This obligation is the responsibility of the crane hirer when he is supplying the crane and the operator. In addition, the Contractor will implement a regular inspection and maintenance programme to ensure that all components of the lifting device are in good condition.

33.4 Travel routes for cranes and crane standing must be agreed with OWNER/CONSULTANT in order to avoid such things as overhead lines and other structures, underground services, excavations, made up ground, etc. Load spreader pads of sufficient size and thickness area, and of suitable material, e.g., metal plates, timber, etc, are to be placed under each outrigger foot, before all crane lifting operations are allowed to commence.

33.5 Crane duty charts (Load Radius Tables) must be displayed on or be available in the crane for easy reference. In addition, crane manufacturers' rigging/de-rigging instructions must be available on site. During rigging/de-rigging of jibs/booms, provision must be made to support sections/either side of rigging points, from below, utilizing tightly packed blocks.

33.6 All cranes shall be fitted with:

- A reverse warning audible alarm.
- Load radius indicator.
- Automatic safe load indication.
- Crane hooks with safety catches.

All of which must be serviceable.

33.7 All lifting equipment accompanying the crane shall comply with the requirements of lifting regulations.

33.8 The assembly, rigging and de-rigging of any crane components, including fly jibs, shall only be done under the supervision of a competent lifting supervisor. An approved risk assessment, together with the manufacturers' rigging/de-rigging instructions must be in place covering rigging activities for the equipment.

33.9 Every Contractor involved in lifting operations with a crane (including a piling rig) or mobile crane shall appoint, in writing, a lifting supervisor to oversee all lifting operations.

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- 33.10 No crane shall travel with a suspended load.
- 33.11 Outriggers, when installed, must always be used.

#### **34.0 LIFTING OPERATIONS**

- 34.1 A Lifting Study and Safety Method Statement must be prepared for all heavy lifts exceeding 10 tons, or of a complex nature, e.g., tandem lifts or as specified by the Construction Manager (or the Rigging and Lifting Supervisor) and submitted to OWNER/CONSULTANT for review.
- 34.2 Every lifting operation must be properly planned by a nominated, competent person.
- 34.3 Every lifting operation shall be appropriately supervised.
- 34.4 All slinging and rigging of loads must be carried out by competent personnel.
- 34.5 Clear communications between the crane operator and the person responsible for controlling the lift must be established.

All statutory Inspection Reports/Certification/Documentation and proof of the driver's training shall be photocopied and handed to OWNER/CONSULTANT prior to the setting up of the crane. Certification for lifting equipment to be used in the lift shall be identified and cross checked with the item of plant

#### **35.0 STEEL ERECTION**

- 35.1 The weight of each component in excess of 500 kg shall be clearly marked upon it.
- 35.2 Erectors must be fully informed of the correct erection sequence, by their supervisor, prior to each stage of work commencing.
- 35.3 Vertical access provision should, whenever possible, be fixed to the steel before it is lifted into position. Where this is not possible permanent access, ie, stairways or permanent metal ladders, shall be installed as early as possible.
- 35.4 Where horizontal access along structural members is required, as much work as possible must be completed before the steel is lifted into position. This includes:

Fixing of handrails or posts for securing steel wire ropes to be used in conjunction with safety harnesses or inertia reels.

The fixing of scaffold tubes (needles) to the lower flange of an I-beam to allow a working platform to be erected.

Where scaffold tubes (needles) are used they shall not support a working platform wider than three boards, or one lightweight staging without being "picked up".



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Where no ladder access, permanent stairway, etc, leads onto working platforms, as described above, employees must use man riding baskets or mobile elevated work platforms as far as reasonably practicable to access working areas.

### 36.0 SCAFFOLDING

- 36.1 All scaffolding must be of good quality, be erected in compliance Good Practices for Access and Working Scaffolds, and special scaffold structures in steel. In addition to the main guard rail, an additional guardrail is required such that the gap between the toe-board and main guardrail does not exceed 470mm and all boards must be secured, without causing a tripping hazard.
- 36.2 All scaffolding shall be erected, modified and inspected by qualified competent scaffolders.
- 36.3 Where materials are to be positioned on scaffolding the Contractor's supervision must ensure that the scaffolding is not overloaded.
- 36.4 Before use, scaffolding shall be inspected by an authorized Scaffold Inspector who shall complete a "scaffold tag" and secure it in a prominent position at the base of all ladder access points. The scaffolding tag will clearly show the following information as a minimum:
- Location.
  - Reference number.
  - Requested by.
  - Access Scaffold Classification.
  - Maximum distributed load/working lift.
  - Maximum number of working lifts to be used simultaneously.
  - Date erected.
  - Erected by.
  - Inspected by.
- 36.5 Scaffolds shall be inspected at weekly intervals or after storms by the authorised Scaffold Inspector who shall sign and date the "Scaffold Tag" after each inspection. Scaffolding not considered safe shall have the Scaffold Tag withdrawn and a prominent "DO NOT USE" sign displayed.
- 36.6 A scaffold register shall be maintained by the authorized Scaffold Inspector. This shall contain:
- Date of first and subsequent weekly inspections.
  - Individual identifications of all scaffolds which shall be cross-referenced to the Scaffold Tag identity number.
  - Clear name and signature of the authorized Scaffold Inspector against each separate scaffold inspected.
- 36.7 No scaffold may be erected which impedes normal access or can be accidentally struck by moving plant without prior consultation with OWNER/CONSULTANT to ensure that a safe system of work is in place.

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- 36.8 Contractors are not permitted to erect or carry scaffolding near live overhead electrical cables, or equipment because of the danger of tubes making accidental contact with electrically charged apparatus.
- 36.9 If there is any doubt about the security of any anchorage, suspension points or ties for a scaffold, e.g., strength of existing buildings/structures, or those under construction, OWNER/CONSULTANT must be consulted before proceeding with erection.
- 36.10 All scaffolds must be provided with suitable access. Where ladders are used for this purpose they must be of adequate length and properly secured by lashing or fixing to prevent displacement.
- 36.11 Action shall be taken to warn personnel against using partly erected or dismantled scaffolds. A prominent "DO NOT USE" sign shall be clearly displayed.
- 36.12 OWNER/CONSULTANT shall approve the sitting of the scaffold material racks/compounds.
- 36.13 Mobile tower scaffolds shall not be constructed with a height greater than 3 times the minimum base width and shall only be used on level ground. Towers shall only be erected by trained personnel.
- 36.14 In addition to weekly inspections, wooden scaffold boards shall be subject to a monthly inspection to ensure wood has not rotted or been subject to insect damage
- 36.15 The Contractor shall ensure that the system of work employed for the erection and dismantling of scaffolding shall not expose the Scaffolders to any risk.
- 36.16 All scaffolding must be erected and dismantled to the requirements laid down in the current regulations and guidance notes and to the requirements of OWNER/CONSULTANT.

### **37.0 LADDERS/STEPS**

- 37.1 Ladders must be in good condition and free from defects, i.e., broken rungs, split stiles.
- 37.2 Ladders must not be painted.
- 37.3 Ladders must:
- Be securely fastened at the top.
  - Be properly positioned at the base.
  - Extend at least 1m (5 rungs) above the working platform.
  - Be at an angle of 300mm out for every 1.2m vertical drop.
- 37.4 **All steps used on the project Site.**
- 37.5 Only one person must be allowed on a set of steps at any one time.
- 37.6 Persons must work with a set of steps of the appropriate height for the task.
- 37.7 The top rung of the steps must be kept at waist height, no work to be carried out above this height on steps.

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37.8 Ladders are to be used as a means of access not as a working platform except for light, minor or one off activities. Then the person must wear a harness and tie-off to a suitable anchorage whilst carrying out the minor task.

### **38.0 FALL PROTECTION**

38.1 Depending on the task and the risks, harnesses and appropriate anchorages/running lines will be used for activities carried out above a height of 2 meters.

38.2 Fall protection equipment shall be subject to regular inspection by a competent person, and a register maintained for OWNER/CONSULTANT' inspection.

38.3 During the execution of work at height, where it is not practicable to work from within a standard working platform with double handrail and toe boards (for example erection of structural steelwork, installation of roof components, etc), safety netting capable of catching a falling person must be installed as far as reasonably practicable.

38.4 The provision of safety netting does not relieve individuals from utilizing fall protection devices during the execution of the works.

38.5 The safety nets should be manufactured to Indian Standard and erected in accordance with good practices by a competent person.

38.6 The safety nets must bear a label stating the normal size of the net; the date of manufacture, the deflection at the centre of the net during the prescribed test and the maximum distance below the working height for which the net is designed to be used.

38.7 Test certificates must be provided for all safety nets, which will state the breaking strength of the net and provide details of the drop test carried out.

38.8 All safety nets must be periodically tested at intervals not exceeding three months – and records of these tests must be retained.

38.9 A formal inspection of safety nets must be carried out weekly to check for damage, loose ties, changes in anchorage points, etc. Records of these inspections must also be retained.

### **39.0 MOBILE ELEVATED WORK PLATFORMS**

39.1 The term Mobile Elevated Work Platform (MEWP) covers the following types of equipment:

- Scissor lifts.
- Telescopic booms or jibs.
- Articulating and telescopic booms.

39.2 Anyone who is to operate a MEWP must be competent and have received formal training accredited by manufacturer.

39.3 Prior to any MEWP being used on site, a formal risk assessment must be carried out to identify any potential hazards which may exist as a consequence.

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- 39.4 Whilst working within the platform of a MEWP, all personnel must wear a safety harness which is attached to a secure anchorage point within the platform.
- 39.5 Before commencing work from a MEWP, the surrounding area should be cordoned-off to prevent personnel straying into a potentially hazardous area.
- 39.6 The Safe Working Load specified on the MEWP must not be exceeded.
- 39.7 If the MEWP has been manufactured with outriggers or stabilizers, they must always be deployed.
- 39.8 Prior to commencing work, ground conditions must be checked to ensure that the ground bearing capacity will not be exceeded by the loading from the MEWP. Where required, spreader plates shall be used to distribute the loading.
- 39.9 The MEWP shall only be permitted to travel with the platform occupied and/or the boom extended if it is within the machine's specified operational capabilities.
- 39.10 MEWP shall not be used as a jack, prop or support.
- 39.11 MEWP shall not be used as a crane or lifting device.
- 39.12 MEWP shall not be used primarily for the transport of goods or materials.
- 39.13 MEWP shall not be used in wind speed exceeding 30 mph (12.5 m/s).
- 39.14 All MEWPs must be subjected to a regular maintenance and inspection regime, which as a minimum will require weekly inspections by a competent person and a thorough examination every six months.

#### **40.0 CONTRACTORS' TOOLS AND EQUIPMENT**

- 40.1 All Contractors' tools and equipment must be fit for purpose. Tools should be CE marked.
- 40.2 Guards and electrical trip switches must work effectively and must not be removed or by-passed.
- 40.3 All tools shall be of good quality and maintained in a safe working condition. Home made tools are not permitted.
- 40.4 The Contractor shall provide suitable storage with suitable racks and bins for storing tools and equipment.
- 40.5 All temporary construction leads, lighting and portable electric tools shall be of appropriate volts.
- 40.6 The Contractor shall nominate or employ the services of a competent qualified person to inspect and tag electrical power hand tools, transformers, distribution boards, extension cables, etc, on an at least a three monthly basis (PAT testing). The tag shall display name, signature of the individual inspecting the tool and date of inspection.

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40.7 The Contractor shall keep, on site, a register of all electrical power hand tools in use. The register shall detail:

- Individual identity number of the tool.
- Name, signature and company of the qualified electrician carrying out the inspection.
- Date of inspection.
- Maintenance and Inspection schedule.
- Remarks on condition of tool and whether repaired or withdrawn from use.

40.8 No electrical powered hand tool shall be used unless it is tagged with a current "INSPECTION" tag.

40.9 All electrical leads must be connected to the power source through standard industrial waterproofed plugs and sockets, which shall be in good condition.

#### **41.0 MECHANICAL PLANT AND EQUIPMENT**

41.1 Mechanical plant and equipment is defined as:

- Earthmoving plant.
- Road making plant and equipment.
- Concrete batching plant and mixers.
- Forklift trucks.
- Miscellaneous plant, including generators and compressors.
- Mobile elevating work platforms (e.g., star- lift, cherry picker, etc).

41.2 All items of mechanical plant transported to the project shall be in a safe and sound condition and shall be properly maintained. Emissions shall be to acceptable limits and no smoke shall be discharged.

41.3 A programme of regular, preventative maintenance shall be established by the Contractor, as per the manufacturer's handbook, to ensure that all plant equipment is systematically inspected, maintained and repaired as necessary.

41.4 The preventative maintenance programme and the Contractor's employee responsible for taking the action shall be clearly detailed, identified and given to OWNER/CONSULTANT.

41.5 A safe system of work must exist during all maintenance and repair operations to ensure that no part of the machinery is set in motion while work is being carried out.

41.6 Plant maintenance must not be carried out within the main construction site.

41.7 Where refueling is required, facilities provided shall be adequately covered by fire extinguishers, earthing, warning signs, bonding and proper fuel dispensers. Refueling areas shall be curbed to avoid spills.

41.8 Waste oil removed from vehicles after servicing shall be sent to the appropriate off-site waste disposal facility and this is the responsibility of the Contractor.

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41.9 The OWNER/CONSULTANT'S tools, plant and equipment may not be used by Contractors without their express permission.

#### 42.0 COMPETENCY/PLANT EQUIPMENT

42.1 All drivers and operators of mobile plant (mechanically propelled vehicles) shall be in possession of the appropriate license for the class of vehicle.

42.2 It is the responsibility of the contractor to ensure that all drivers, operators and banks men of mobile plant (mechanically propelled vehicles) are certificated as competent.

#### 42.3 General

42.3.1 Every dangerous part of machinery shall be securely guarded.

42.3.2 Any guards removed for maintenance or repair purposes must be replaced before the machine is set in motion.

42.3.3 No mobile plant (mechanically propelled vehicles) shall carry passengers unless a proper fixed seat is provided, except when the equipment is specifically designed for standing personnel.

42.3.4 Mobile plant (mechanically propelled vehicles) must be parked on firm level ground when unattended, the engine stopped, brakes on and any load or attachment lowered to the ground and the keys left in the ignition.

42.3.5 No mechanical plant or equipment shall be sited on or operated on any area of the project without express the permission of OWNER/CONSULTANT.

42.3.6 All items of mobile plant (mechanically propelled vehicles) shall be fitted with a reverse warning audible alarm.

42.3.7 All drivers/operators of mobile plant (mechanically propelled vehicles) shall strictly obey the instructions of the site security, traffic regulations and speed limits. A banks man shall be in attendance during all reversing procedures.

#### 42.4 Inspection

All mobile equipment (mechanically propelled vehicles) shall be inspected by a competent person appointed by the Contractor prior to use on site. Equipment considered to be unsafe, by OWNER/CONSULTANT, shall not be allowed access to the site.

#### 42.5 Flame Arrestors

42.6 All mobile plant for use in Petro Chemical Live Plant Areas, or during the Start-up and Commissioning Phase of the project, must be fitted with Exhaust Flame Arrestors and Chalwyn Valves where there is a risk of flammable gas releases.

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### 43.0 MACHINERY GUARDING

- 43.1 Unauthorized personnel must not operate, interfere or tamper with plant or equipment.
- 43.2 Persons authorized to use machines must first check that guards are in position and that any other safety devices, e.g., emergency stops, are in working order.
- 43.3 All plant or equipment brought onto the site must be properly guarded to prevent injury and be CE marked.

**NO GUARD OR FENCE MAY BE REMOVED FROM MACHINERY.**

### 44.0 WELDING

- 44.1 Welding sets shall be in good condition, properly maintained and earthed.
- 44.2 Isolation switches on welding sets shall be readily accessible.
- 44.3 Terminals and live components shall be adequately protected.
- 44.4 Cables shall be frequently inspected to ensure the insulation is intact.
- 44.5 Damaged cables or electrical holders shall be properly repaired or replaced.
- 44.6 The welding return cable shall be secured onto the work piece. If this is not practical it shall be as near as possible.
- 44.7 Proper cable connectors shall be used when connecting runs of cables.
- 44.8 Welders shall wear:
- Face and eye protection with correct grade of filter.
  - Welder's gauntlets.
  - Long sleeved flame retardant overalls.

Welders shall wear safety helmets at all times, except whilst welding, when it is agreed as impractical and written permission is granted by OWNER/CONSULTANT, subject to mitigation of hazard, i.e., no work overhead, or shielded from falling objects.

- 44.9 Welding areas should whenever possible be screened off using flame retardant blanket or other suitable material. All combustible materials must be cleared from the vicinity of all welding operations.
- 44.10 Asbestos material shall not be used on the project.
- 44.11 Electric Arc Welding equipment and accessories shall conform to Latest Engineering Standards.
- 44.12 Fire extinguishers must be provided and kept adjacent to any welding or cutting activity.

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#### 45.0 ABRASIVE WHEELS

- 45.1 Contractors must ensure that any of their employees authorized to change Abrasive Wheels have attended an approved course of training and have been appointed in writing.
- 45.2 Details of each employee trained must be entered in the training register kept on site. Contractors must produce certificates and registers on request.
- 45.3 Machines used to drive Abrasive Wheels must be in good condition and properly guarded.
- 45.4 Pedestal or bench mounted grinders must have an emergency stop button and be fitted with a properly adjusted tool rest and guard.
- 45.5 All hand held grinders shall have a “Dead Man” switch and appropriate guards fitted.
- 45.6 The use of hand held angle grinders over 115mm shall only be permitted for specific tasks, subject to Owner’s / Consultant’s approval.

#### 46.0 USE OF GAS AND OXYGEN EQUIPMENT

- 46.1 Compressed gas cylinders shall:
- Be in good condition and not suffering from corrosion.
  - Be properly colour coded (reference should be made to National Standards).
  - Be individually identified.

Hoses shall be properly colour coded to the internationally recognized standard for the gas being used, in good condition and fitted with hose connectors attached by permanent clips.

Check valves and flashback arrestors must be used on both hoses at all times.

- 46.2 Users shall check the equipment for perished, damaged hoses, regulators, and pressure gauges, etc. Defects must be reported to their supervisors and faulty equipment must be replaced.
- 46.3 When on site, cylinders must be in trolleys or secured in an upright position at all times. A bottle key shall be kept with cylinders in use.
- 46.4 Stored oxygen and fuel gas cylinders shall be kept separate with minimum separation distance of 5m. Cylinders must never be stored or used in a horizontal position cylinders must be secured in an upright position. Empty cylinders must also be separated from full cylinders. Cylinders shall be stored in lockable open mesh bottle cages.
- 46.5 All gas cylinders must be handled with care and they must not be misused or abused. They must be properly shut off when not in use and safety caps must be fitted when being moved.
- 46.6 Great care must be taken to ensure that gas equipment, including hoses, are not allowed to cause obstruction of roadways, walkways, manholes, ladders or other means of access where they can cause hazards or be damaged. Hoses not in use should be coiled up and put in a safe place. Hoses should whenever possible be supported off the ground.



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- 46.7 Where any operation involves the use of gas and oxygen equipment in enclosed or semi-enclosed spaces, Contractors' supervision must carry out frequent checks to ensure these procedures are complied with.
- 46.8 During meal breaks and at stopping times, hoses and equipment must be removed from confined spaces or excavations. Oxygen or gas cylinders must not be taken into confined spaces for use or storage.
- 46.9 No modification to tanks or drums which have contained flammable liquid shall be undertaken at the site.

#### **47.0 ABRASIVE AIR BLAST CLEANIN**

- 47.1 Blast cleaning shall be carried out in an enclosed designated area.
- Provision shall be made to prevent the spread of grit and dust out of the blast area and to collect and dispose of the spoil to an approved location.
- 47.2 The blast cleaning area shall be indicated by prominent warning signs.
- 47.3 Only approved abrasives having no free silica shall be used.
- 47.4 Personnel involved in the actual blasting of material shall be protected by a positive pressure, blast hood, meeting approved standards and providing both respiratory and eye protection, with breathing air supplied via a suitable filter.
- 47.5 The nozzle shall be fitted with a properly functioning dead man's handle, and anti-static abrasive blast hoses. It is required that all equipment be grounded and checked for ground potential
- 47.6 A standby man shall stay by the blast pot.

#### **48.0 COMPRESSED AIR**

- 48.1 All air receivers and compressors shall be in good condition and properly maintained.
- 48.2 Air receivers shall be individually identified and marked with their safe working pressure.
- 48.3 Air receivers shall be accompanied by a valid test certificate which shall be kept on site by the Contractor and shown to OWNER/CONSULTANT before bringing the vessel onto site.
- 48.4 All air receivers must be fitted with a properly set pressure relief valve.
- 48.5 Air receivers shall be examined and the pressure relief valve tested by an independent examiner at yearly intervals.
- 48.6 There shall be a register of all air receivers containing:
- Individual identification numbers.
  - Dates of independent inspections.
  - Name and signature of independent examiner.

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- Rates safe working pressure.
- Pressure at which pressure relief valve lifted shall be kept on site by the Contractor along with all current certification.

48.7 The requirements inclusive also apply to compressor mounted air receivers.

48.8 All compressed air fittings shall be wired and/or restrained to prevent them from whipping should the coupling separate.

48.9 Only hose clamps designed for compressed air service shall be used. Worm drive (Jubilee) clips are not acceptable.

**COMPRESSED AIR MUST NEVER BE USED FOR CLEANING CLOTHES.**

48.10 Nozzles used for air blowing must be fitted with a “Dead Man” valve.

**49.0 MOBILE PHONES AND PAGERS**

49.1 Radios, personal CD and tape players are not allowed in the construction areas.

49.2 Mobile phones and pagers are prohibited in the designated construction areas by any hands-on personnel. External to the designated construction areas, providing it does not detract the user from any safety requirements and the user is stationary, then mobile phones and pagers may be used. **Other uses of this equipment will be at the discretion of OWNER/CONSULTANT.**

**50.0 RADIOGRAPHY/NDT**

50.1 Contractors who carry out radiography/NDT on the site must comply with safe systems of work. In particular, they MUST ensure that:

- Radiography areas are clearly marked using barrier tapes, notices and flashing lights.
- Audible warning (horns) must be sounded before a source is exposed.
- Only Classified Workers are engaged in radiography work.
- All other personnel are clear of the area before radiography takes place.
- Radiography work is supervised by a Qualified Radiological Protection Supervisor. Such supervisors must be nominated in writing and notified to OWNER/CONSULTANT.
- Any incident which may have resulted in over-exposure of any personnel is brought to the attention of OWNER/CONSULTANT for investigation.
- They have a written emergency procedure to be followed in the event of loss of an isotope or damage or malfunction of associated equipment. This procedure must be submitted to OWNER/CONSULTANT for approval before commencement.
- A certified meter is available on site.
- Radiography is carried out at the times agreed with OWNER/CONSULTANT normally this will only be during silent hours. OWNER/CONSULTANT requires twenty-four hours notice of such planned work.

50.2 Contractors who are not involved in radiography work must ensure that their employees observe warning notices, alarms and barriers in use where such work is being carried out.

50.3 Contractors must ensure that statutory notification is made to the authorities of radiography works.

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50.4 Disposal of spent radioactive sources shall be agreed with OWNER/CONSULTANT.

**51.0 WORKING OVER WATER/DIVING OPERATIONS**

51.1 The Contractor shall provide a buoyancy aid to any employee working over (or near) water where there is a likelihood of falling in.

The Contractor shall also supply a sufficient number of life buoys to be permanently located at the point(s) of danger. The life buoys shall be attached to a throwing line.

Where rescue of a person falling into the water may be difficult, OWNER/CONSULTANT may require the Contractor to supply a standby boat, crewed by a competent boatman trained in rescue and resuscitation techniques.

51.2 Diving operations may only be carried out using approved specialist diving contractors, employing certified commercial divers, and upon acceptance by OWNER/CONSULTANT of their Health, Safety and Environment plan and method statements (Diving Rules).

**52.0 ASBESTOS**

52.1 Only certified Contractors are allowed to handle asbestos.

**53.0 IMPROVEMENT AND PROHIBITION NOTICES**

53.1 In the event of an Improvement or Prohibition Notice being served by an Inspector, the OWNER/CONSULTANT Senior Representative must be notified immediately and the Contractor shall comply with the terms of such Notice immediately.

**54.0 CARTRIDGE OPERATED FIXING TOOLS**

The use of Cartridge Operated tools shall only be permitted with the express permission of OWNER/CONSULTANT, subject to an approved method statement and risk assessment, and use only by competent, trained operators).

**55.0 SITE ESTABLISHMENT AND AMENITIES**

55.1 Details of temporary services to be provided by Contractor or as Per Technical portion of ITB.

**56.0 ACCOMMODATION**

56.1 An area will be allocated for temporary site establishment facilities/services.

56.2 When required by the Contract, the Contractor shall provide and maintain (including de-watering when necessary) a suitable level and hardcore surface in the area allocated for temporary buildings such as offices, stores, workshops, mess huts and a stores compound.

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56.3 When required by the Contract, the Contractor shall provide all site offices, stores facilities, workshops and mess huts for the accommodation of staff/site personnel. Proposals for the Contractor's temporary buildings shall be submitted to OWNER/CONSULTANT for approval with their tender.

**56.4 Storage in Permanent Buildings**

No Plant, Contractor's Equipment or Construction Aids shall be stored in any permanent building without first obtaining the written permission of OWNER/CONSULTANT. Such permission will not relieve the Contractor of the obligation to protect the building from damage whilst used as a store. If permission to use the building is refused by OWNER/CONSULTANT, the Contractor shall provide alternative storage facilities at no additional cost to OWNER/CONSULTANT.

**56.5 Sanitary Facilities**

All toilets and washing facilities shall be provided by the Contractor. The supply and installation of necessary water sewage/drainage pipe work, pits, etc, for the facilities and the regular emptying and servicing are the responsibility of the Contractor.

**56.6 Canteen**

The Contractor must provide mess-huts for his employees and arrange any canteen facilities required for his employees and those of any others employed by him in connection with the Work.

**57.0 TEMPORARY SERVICES**

**57.1 Telephone, Facsimile, etc**

Arrangements for the provision of telephones, computer modems and/or facsimile facilities shall be made directly with providers of such facilities by the Contractor.

**57.2 Electricity**

If under the contract the Contractor is responsible for providing electricity for the site establishment amenities and working area(s), the Contractor shall ascertain the type, location and available spare capacity of the electrical point(s) of supply and provide cable, connections, isolating switches and earth leakage protection of approved specification.

If the Contractor's requirements for temporary electrical supplies exceed those agreed and render the available service inadequate, the Contractor shall provide the additional requirements at no extra cost to OWNER/CONSULTANT.

Electrical installations including all cables, temporary connections, wandering leads and all electrical facilities and/or equipment required for the execution of the Works shall be properly installed and maintained by the Contractor.

Temporary electrical installations must comply with all appropriate statutory requirements, the latest edition of the Institution of Electrical Engineers Regulations, COP for Distribution of Electricity on Construction and Building Sites and Electrical Safety on Construction Sites.

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Electrical equipment and installation shall at all times be subject to inspection and approval by OWNER/CONSULTANT but this shall not relieve the Installer/User of their responsibilities for the safety of the system.

Electrical equipment or cables forming part of the permanent installation shall not be used by the Contractor for temporary services.

Temporary buildings shall have an external isolating switch.

The Contractor shall supply, install and maintain any temporary workface lighting.

### 57.3 **Water**

Supply of potable water for drinking and raw water for washing/toilet facilities, mixing concrete, hydrostatic testing and other construction purposes shall be in Contractor's scope. The Contractor shall ascertain the location of the supply point and shall provide and install any temporary pipe work necessary for the provision, use and disposal of such water.

### 58.0 **DISCHARGES INTO THE INTERNAL AND EXTERNAL DRAINAGE SYSTEMS, LAND AND CONSTRUCTION AREAS**

58.1 All proposed controlled discharges into the site drainage systems shall be agreed with OWNER/CONSULTANT.

58.2 Any water discharged on existing roads, hard shoulders or drainage systems shall first pass through a filtering interceptor (which must be regularly cleaned) to prevent the discharge of sludge or solids.

58.3 Any damage to the Works caused by prolonged or excessive pumping and any damage or nuisance arising out of pumping operations shall be the liability of the Contractor.

58.4 Subsequent to filling with water and testing of any part of the Works for hydraulic testing, the Contractor shall be responsible for safe disposal of the water, and shall ensure that the rate of discharge is controlled and kept within the capabilities of any drainage system utilized.

58.5 The Contractor shall provide all requisite equipment and materials to ensure that all drains, rivers, streams or waterways are safeguarded against pollution.

### 59.0 **MAINTENANCE OF ROADS AND DRAINS**

59.1 Existing roads, road gullies and drains shall be inspected by OWNER/CONSULTANT and the Contractor prior to work commencing. A record of this inspection shall be compiled and on the completion of the Works, a further inspection will be carried out and any necessary repairs to road surfaces or cleaning of drains shall be to the Contractor's cost.

59.2 The Contractor shall provide temporary protection to any existing roads to prevent all possibility of damage whatsoever arising from the Works.

59.3 The Contractor shall at all times in the execution of the work maintain all public and site roads in a clean condition to the satisfaction of OWNER/CONSULTANT.

59.4 The Contractor shall immediately remove all mud, earth and debris from road surfaces.

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59.5 Track-laying cranes and similar vehicles must not travel on finished roads without written authority from OWNER/CONSULTANT and then only with the use of timber mats or approved precautions to prevent damage to the roads. Timber mats or other approved precautions shall be supplied by the Contractor.

#### 60.0 MATERIALS – STORAGE AND CONTROL

60.1 The Contractor must give a minimum of twenty-four hours notice of the intention to uplift and transport materials/equipment supplied free-issue from OWNER/CONSULTANT/Client's storage facilities to the point of erection or Contractor's storage facility.

60.2 Free-issue materials/equipment furnished by OWNER/CONSULTANT shall be accepted by the Contractor and become the responsibility of the Contractor until acceptance of the Works. Any damage caused to free-issue materials after acceptance shall be repaired or replaced by the Contractor to OWNER/CONSULTANT's satisfaction.

#### 60.3 Storage of Petrol, Fuels, Lubricants etc

All fuel and construction materials which may contaminate the site drains, land or watercourses shall be stored in bounded areas. Refueling of plant shall be via bounded bowers. All construction plant in static locations shall have drip trays which shall be cleared daily.

#### 60.4 Environmental Impacts

The Contractor shall, prior to commencement of the work, present to OWNER/CONSULTANT for their approval a register of environmental impacts that necessarily arise from their works.

Each identified environmental impact shall be accompanied by an individual Risk Assessment, clearly showing the reduction measures put in place to ensure mitigation of residual risk.

#### 61.0 PENALTY

The Contractor shall adhere consistently to all provisions of HSE requirements. In case of noncompliances and also for repeated failure in implementation of any of the HSE provisions, Consultant/Owner may impose stoppage of work without any cost & time implication to the Owner and/or impose a suitable penalty.

The amount of penalty shall be limited to 0.5 % (Zero decimal five percent) of the contract value.

The amount of penalty applicable for the Contractor on different types of HSE violations is as below.

1. For not using personal protective equipment (Helmet, Shoes, Goggles, Gloves, Full body harness, Face shield, Boiler suit, etc.) **Rs 500/- per day/ Item / Person.**
2. Working without Work Permit/Clearance **Rs 20000/- per occasion.**

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- 3 Execution of work without deployment of requisite field engineer / supervisor at work spot **Rs. 5000/- per violation per day.**
4. 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 10000/- per item per day.**
5. Working at height without full body harness, using non-standard/ rejected scaffolding and not arranging fall protection arrangement as required, like handrails, life-lines, Safety Nets etc. **Rs. 10000/- per case per day.**
6. Unsafe handling of compressed gas cylinders (No trolley, jubilee clips double gauge regulator, and not keeping cylinders vertical during storage/handling, not using safety cap of cylinder). **Rs 500/- per item per day.**
7. Use of domestic LPG for cutting purpose / not using flash back arresters on both the hoses/tubes on both ends. **Rs. 3000/- per occasion.**
8. No fencing/barricading of excavated areas /trenches. **Rs. 3000/- per occasion.**
9. Not providing shoring/strutting/proper slope and not keeping the excavated earth at least 1.5M away from excavated area. **Rs. 5,000/- per occasion.**
10. Non display of scaffold tags, caution boards, list of hospitals, emergency services available at work locations. **Rs. 1000/- per occasion per day**
11. Traffic rules violations like over speeding of vehicles, rash driving, talking on mobile phones during vehicle driving, wrong parking, not using seat belts, vehicles not fitted with reverse horn / warning alarms / flicker lamps during foggy weather. **Rs. 2000/- per occasion per day**
12. Absence of Contractor's RCM/SIC or his nominated representative (prior approval must be taken for each meeting for nomination) from site HSE meetings whenever called by Consultant/Owner & failure to nominate his immediate deputy (in the site organ gram) for such HSE meetings. **Rs 10000/- per meeting.**
13. Failure to maintain HSE records by Contractor Safety personnel, in line with approved HSE Plan/Procedures/Contract specifications. **Rs 10000/- per month.**
14. Failure to conduct daily site safety inspection (by Contractor's safety engineers/safety officers), internal HSE meeting, internal HSE Awareness/Motivation Program, Site HSE Training and HSE audit at predefined frequencies (as approved in HSE Plan). **Rs. 10000/- per occasion.**
15. Failure to submit the monthly HSE report by 5th of subsequent month to Project's Engineer-in-Charge /Owner **Rs. 10000/- per occasion and Rs. 1000/- per day of further delay.**
16. Poor House Keeping **Rs. 5000/- per occasion per subject**
17. Failure to report & follow up accident (including Near Miss) reporting system within specific timeframe. **Rs. 20000/- per occasion**

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18. Degradation of environment (not confining toxic spills, spilling oil/lubricants onto ground).Rs10000/- per occasion
19. Not medically examining the workers before allowing them to work at height / to work in confined space / to work in shot-blasting / to work for painting / to work in bitumen or asphalt works, 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 5000/- per occasion per worker.
20. Violation of any other safety condition as per job HSE plan / work permit and HSE conditions of contract (e.g. 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 at site, not using hood with respiratory devices by blaster for shot/grit blasting, etc.) Rs. 5000/- per occasion.
21. Failure to carry-out Safety audit in time (internal & external), close-out of identified shortfalls of Observations of Safety Aspects(OSA),etc. Rs. 20,000/- per occasion.
22. Carrying out sand blasting instead of grit/shot blasting Rs. 50,000/- per day.
23. Failure to deploy adequately qualified and competent Safety Officer Rs. 10000/- per day per Officer.
24. Utilization of hydra/ back-hoe loader for material shifting or any other unauthorized /unsafe lifting works Rs 25,000/- per occasion.
25. Any violation not covered above to be decided by Consultant/Owner.
26. Any physical injury - maximum of Rs.2,00,000 per injury
27. Fatal accident - Rs. 25,00,000 per fatality

**62.0 FOLLOWING SHALL BE APPLICABLE FOR MANDATORY MEDICAL EXAMINATION OF CONTRACTOR WORKERS BEFORE DEPLOYMENT AT WORK SITE:**

Medical examination will be in the scope of the contractors.

Medical examination to be conducted by a doctor with minimum MBBS qualification, having registration number for practicing.

Certificate issued should have endorsement on the photo & clearly mention general health/fitness of the candidate to carryout work inside plant, including eye sight, Vertigo, BP,Heart, convulsion problem etc.

Certificate of fitness is to be issued on letter head of doctor and to be produced with application for photo Gate pass to the E-I-C for the job.

Validity of medical certificate will be for one year from the date of issuance.

Gate pass issued by CISF will bear “Medically Fit” stamp based on the E-I-C’s recommendation.

Accordingly, this shall be treated as part of the tender.



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### MEDICAL CERTIFICATE

**Affix latest PHOTO  
impression of the  
workmen half  
covering the  
photo.**

#### Form for Medical Check Up for the Workman engaged by the Contractor

Certified that I, \_\_\_\_\_ have examined Shri \_\_\_\_\_ Age \_\_\_\_\_

who has signed / thumb impression above on the photo in my presence. The details of his examination as required are given in the enclosed medical examination report. I certify that all clinical and pathological tests were done in my hospital/dispensary under my instructions. General and physical examinations of Shri \_\_\_\_\_ do not reveal any abnormality. He does not suffer from any acute / chronic disease or any contagious or infectious disease. He is medically fit to work inside plant. He is free from Vertigo, Epilepsy or Fits, general giddiness and height related disease. His B.P.Pulse, Eyesight etc. are normal.

In my opinion, Shri \_\_\_\_\_ is physically and mentally fit for undertaking physical labour inside the plant.

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

#### Signature and Rubber stamp of medical practitioner with name

Note: This certificate is to be given on the letterhead of the registered medical practitioner who is possessing MBBS qualification as recognized by the Indian medical council. Below the signature, the rubber stamp of the medical practitioner should be affixed. The letterhead normally should contain the following:

- 1) Name of the Medical practitioner:
- 2) Qualifications:
- 3) Registration Number:
- 4) Designation:
- 5) Address:

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### 63.0 ADDITIONAL SAFETY REQUIREMENT

#### A. Strict implementation of IS marked safety helmets & IS/CE marked safety shoes for contract personnel

All the contractors working inside the plant shall ensure that their supervisors/labourers compulsorily wear IS marked safety helmets & IS/CE marked safety shoes while entering plant premises. No contract personnel shall be allowed inside battery area without wearing IS marked safety helmets & IS/CE marked safety shoes. All EIC's/site engineers and F&S department shall sensitize and spread awareness among the contract personnel.

**Name of Tenderer:** .....

**Signature & Seal of Tenderer:** .....

OISD - GDN - 192  
July, 2000

**FOR RESTRICTED  
CIRCULATION**

## **SAFETY PRACTICES DURING CONSTRUCTION**

**OISD-GDN-192**



### **Oil Industry Safety Directorate**

Government of India  
Ministry of Petroleum & Natural Gas  
8<sup>th</sup> Floor, OIDB Bhavan, Plot No. 2, Sector – 73, Noida – 201301 (U.P.)

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Tele: 0120-2593800, Fax: 0120-2593802

OISD - GDN - 192  
July, 2000

**FOR RESTRICTED  
CIRCULATION**

## **SAFETY PRACTICES DURING CONSTRUCTION**

Prepared by

**COMMITTEE ON  
SAFETY PRACTICES DURING CONSTRUCTION**

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## Preamble

Indian petroleum industry is the energy lifeline of the nation and its continuous performance is essential for sovereignty and prosperity of the country. As the industry essentially deals with inherently inflammable substances throughout its value chain – upstream, midstream and downstream – Safety is of paramount importance to this industry as only safe performance at all times can ensure optimum ROI of these national assets and resources including sustainability.

While statutory organizations were in place all along to oversee safety aspects of Indian petroleum industry, Oil Industry Safety Directorate (OISD) was set up in 1986 Ministry of Petroleum and Natural Gas, Government of India as a knowledge centre for formulation of constantly updated world-scale standards for design, layout and operation of various equipment, facility and activities involved in this industry. Moreover, OISD was also given responsibility of monitoring implementation status of these standards through safety audits.

In more than 25 years of its existence, OISD has developed a rigorous, multi-layer, iterative and participative process of development of standards – starting with research by in-house experts and iterating through seeking & validating inputs from all stake-holders – operators, designers, national level knowledge authorities and public at large – with a feedback loop of constant updation based on ground level experience obtained through audits, incident analysis and environment scanning.

The participative process followed in standard formulation has resulted in excellent level of compliance by the industry culminating in a safer environment in the industry. OISD – except in the Upstream Petroleum Sector – is still a regulatory (and not a statutory) body but that has not affected implementation of the OISD standards. It also goes to prove the old adage that self-regulation is the best regulation. The quality and relevance of OISD standards had been further endorsed by their adoption in various statutory rules of the land.

Petroleum industry in India is significantly globalized at present in terms of technology content requiring its operation to keep pace with the relevant world scale standards & practices. This matches the OISD philosophy of continuous improvement keeping pace with the global developments in its target environment. To this end, OISD keeps track of changes through participation as member in large number of International and national level Knowledge Organizations – both in the field of standard development and implementation & monitoring in addition to updation of internal knowledge base through continuous research and application surveillance, thereby ensuring that this OISD Standard, along with all other extant ones, remains relevant, updated and effective on a real time basis in the applicable areas.

Together we strive to achieve NIL incidents in the entire Hydrocarbon Value Chain. This, besides other issues, calls for total engagement from all levels of the stake holder organizations, which we, at OISD, fervently look forward to.

Jai Hind!!!

**Executive Director**  
**Oil Industry Safety Directorate**

## FOREWORD

The Oil Industry in India is nearly 100 years old. Due to various collaboration agreements a variety of international codes, standards and practices are in vogue. Standardisation in design philosophies, operating and maintenance practices at a national level was hardly in existence. This lack of uniformity coupled with feedback from some serious accidents that occurred in the recent past in India and abroad, emphasised the need for the industry to review the existing state of art in designing, operating and maintaining oil and gas installations.

With this in view, the Ministry of Petroleum and Natural Gas in 1986 constituted a Safety Council assisted by the Oil Industry Safety Directorate (OISD) staffed from within the industry in formulating and implementing a series of self-regulatory measures aimed at removing obsolescence, standardising and upgrading the existing standards to ensure safer operations. Accordingly OISD constituted a number of functional committees comprising of experts nominated from the industry to draw up standards and guidelines on various subjects.

The present document on "Safety Practices during Construction" was prepared by the Functional Committee on "Safety Practices during Construction". This document is based on the accumulated knowledge and experience of industry members and the various national and international codes and practices.

It is hoped that provisions of this document if implemented objectively, may go a long way to improve the safety to reduce accidents in Oil and Gas Industry. Users are cautioned that no document can be substitute for the judgment of responsible and experienced engineer.

Suggestions are invited from the users after it is put into practice to improve the document further. Suggestions for amendments, if any, to this standard should be addressed to:

The Co-ordinator  
Committee on "Safety Practices during Construction"  
**Oil Industry Safety Directorate**

Government of India  
Ministry of Petroleum & Natural Gas  
8<sup>th</sup> Floor, OIDB Bhavan, Plot No. 2, Sector – 73, Noida – 201301 (U.P.)

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This document in no way supersedes the statutory regulations of Chief Controller of Explosives (CCE), Factory Inspectorate or any other statutory body, which must be followed as applicable.

## **NOTE**

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Though every effort has been made to assure the accuracy and reliability of the data contained in these documents. OISD hereby expressly disclaims any liability or responsibility for loss or damage resulting from their use.

These documents are intended to supplement rather than replace the prevailing statutory requirements.

**FUNCTIONAL COMMITTEE ON  
SAFETY PRACTICES DURING CONSTRUCTION**

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NAME	ORGANISATION
<b>LEADER</b>	
Shri A.K. Tandon	EIL, New Delhi.
<b>MEMBERS</b>	
1. Shri U.M. Rao	GAIL, Noida.
2. Shri K.N. Ravindran	CRL, Cochin
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## SAFETY PRACTICES DURING CONSTRUCTION

### 1.0 INTRODUCTION

Safety in Construction Management deserves utmost attention especially in the hydrocarbon industry, such as Exploration, Refineries, Pipelines and Marketing installations, Gas Processing units etc. Construction is widely recognised as one of the accident prone activities. Most of the accidents are caused by inadequate planning, failure during the construction process and/or because of design deficiencies. Besides property loss, accidents also result in injuries and fatalities to the personnel; same needs to be prevented.

The reasons for accidents during construction activities are related to unique nature of the industry, human behaviour, difficult work-site conditions, extended odd duty hours, lack of training & awareness and inadequate safety management. Unsafe working methods, equipment failure and improper housekeeping also tend to increase the accident rate in construction.

Ensuring good quality of materials, equipment and competent supervision along with compliance of standard engineering practices shall go a long way to in built safety into the system.

The objective of this standard is to provide practical guidance on technical and educational framework for safety and health in construction with a view to:

- (a) prevent accidents and harmful effects on the health of workers arising from employment in construction;
- (b) ensure appropriate safety during implementation of construction;
- (c) provide safety practice guidelines for appropriate measures of planning, control and enforcement.

### 2.0 SCOPE

This document specifies broad guidelines on safe practices to be adhered to during construction activities in oil industry. However, before commencing any job, specific hazards and its effects should be assessed and necessary corrective/preventive actions should be taken by all concerned. The document is intended only to supplement and not to replace or supersede the prevailing statutory requirements, which shall also be followed as applicable. For Personal Protective Equipment, OISD-STD-155 (Part I&II) shall be referred to. The scope of this document does not include the design aspects and quality checks during construction.

### 3.0 DEFINITIONS

Definitions of various terminology are given below:

- *Adequate, appropriate or suitable* are used to describe qualitatively or quantitatively the means or method used to protect the worker.
- *Brace*: A structural member that holds one point in a fixed position with respect to another point; bracing is a system of structural members designed to prevent distortion of a structure.
- *By hand*: The work is done without the help of a mechanised tool.
- *Competent Authority*: A statutory agency having the power to issue regulations, orders or other instructions having the force of law.
- *Competent person*: A person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill for the safe performance of the specific work. The competent authorities may define appropriate criteria for the designation of such persons and may determine the duties to be assigned to them.

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- **Execution agency:**  
Any physical or legal person, having contractual obligation with the owner, and who employs one or more workers on a construction site
- **Owner:**  
Any physical or legal person for whom construction job is carried out.  
It shall also include owner's designated representative/consultant/nominee/agent, authorised from time to time to act for and on its behalf, for supervising/ coordinating the activities of the execution agency.
- **Hazard:** Danger or potential danger.
- **Guard-rail:** An adequately secured rail erected along an exposed edge to prevent persons from falling.
- **Hoist:** A machine, which lifts materials or persons by means of a platform, which runs on guides.
- **Lifting gear:** Any gear or tackle by means of which a load can be attached to a lifting appliance but which does not form an integral part of the appliance or load.
- **Lifting appliance:** Any stationary or mobile appliance used for raising or lowering persons or loads.
- **Means of access or egress:** Passageways, corridors, stairs, platforms, ladders and any other means for entering or leaving the workplace or for escaping in case of danger.
- **Scaffold:** Any fixed, suspended or mobile temporary structure supporting workers and material or to gain access to any such structure and which is not a lifting appliance as defined above.
- **Toe-board:** A barrier placed along the edge of a scaffold platform, runway, etc., and secured there to guard against the slipping of persons or the falling of material.
- **Worker:** Any person engaged in construction activity.
- **Workplace:** All places where workers need to be or to go by reason of their work.

#### **4.0 GENERAL DUTIES**

##### **4.1 GENERAL DUTIES OF EXECUTION AGENCIES**

###### **4.1.1 Execution agency should:**

- i) provide means and organisation to comply with the safety and health measures required at the workplace.
- ii) provide and maintain workplaces, plant, equipment, tools and machinery and organise construction work so that, there is no risk of accident or injury to health of workers. In particular, construction work should be planned, prepared and undertaken so that:
  - (a) dangers, liable to arise at the workplace, are prevented;
  - (b) excessively or unnecessarily strenuous work positions and movements are avoided;
  - (c) organisation of work takes into account the safety and health of workers;
  - (d) materials and products used are suitable from a safety and health point of view;
  - (e) working methods are adopted to safeguard workers against the harmful effects of chemical, physical and biological agents.

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- iii) establish committees with representatives of workers and management or make other arrangement for the participation of workers in ensuring safe working conditions.
- iv) arrange for periodic safety inspections by competent persons of all buildings, plant, equipment, tools, machinery, workplaces and review of systems of work, regulations, standards or codes of practice. The competent person should examine and ascertain the safety of construction machinery and equipment.
- v) provide such supervision to ensure that workers perform their work with due regard to safety and health of theirs as well as that of others.
- vi) Employ only those workers who are qualified, trained and suited by their age, physique, state of health and skill.
- vii) satisfy themselves that all workers are informed and instructed in the hazards connected with their work and environment and trained in the precautions necessary to avoid accidents and injury to health.
- viii) Ensure that buildings, plant, equipment, tools, machinery or workplaces in which a dangerous defect has been found should not be used until the defect has been rectified.
- ix) Organise for and remain always prepared to take immediate steps to stop the operation and evacuate workers as appropriate, where there is an imminent danger to the safety of workers.
- x) establish a checking system by which it can be ascertained that all the members of a shift, including operators of mobile equipment, have returned to the camp or base at the close of work on dispersed sites and where small groups of workers operate in isolation.
- xi) provide appropriate first aid, training and welfare facilities to workers as per various statutes like the Factories Act, 1948 etc. and, whenever collective measures are not feasible or are insufficient, provide and maintain personal protective equipment and clothing in line with the requirement as per OISD-STD-155 (Vol. I & II) on Personnel Protective Equipment. They should also provide access to workers to occupational health services.
- xii) Educate workers about their right and the duty at any workplace to participate in ensuring safe working conditions to the extent of their control over the equipment and methods of work and to express views on working procedures adopted as may affect safety and health.
- xiii) Ensure that except in an emergency, workers, unless duly authorised, should not interfere with, remove, alter or displace any safety device or other appliance furnished for their protection or the protection of others, or interfere with any method or process adopted with a view to avoiding accidents and injury to health.
- xiv) Ensure that workers do not operate or interfere with plant and equipment that they have not been duly authorised to operate, maintain or use.
- xv) Ensure that workers do not sleep, rest or cook etc in dangerous places such as scaffolds, railway tracks, garages, confined spaces or in the vicinity of fires, dangerous or toxic substances, running machines or vehicles and heavy equipment etc.
- xvii) Obtain the necessary clearance/permits as required and specified by owner
- xviii) As per the Govt. circular as amended from time to time all contractors who employ more than 50 workers or where the contract value exceeds Rs. 50 crores, the following facilities are to be provided by contractor at site :
  - Arrangement for drinking water
  - Toilet facilities
  - A creche where 10 or more women workers are having children below the age of 6 years
  - Transport arrangement for attending to emergencies

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xix) should deploy a safety officer at site

## **4.2 GENERAL DUTIES OF OWNERS**

4.2.1 Owners should:

- i) co-ordinate or nominate a competent person to co-ordinate all activities relating to safety and health on their construction projects;
- ii) inform all contractors on the project of special risks to health and safety;
- iii) Ensure that executing agency is aware of the owner's requirements and the executing agency's responsibilities with respect to safety practices before starting the job.

## **5.0 SAFETY PRACTICES AT WORK PLACES**

### **5.1. GENERAL PROVISIONS**

- 5.1.1 All openings and other areas likely to pose danger to workers should be clearly indicated.
- 5.1.2 Workers & Supervisors should use the safety helmet and other requisite Personal Protective Equipment according to job & site requirement. They should be trained to use personal protective equipment.
- 5.1.3 Never use solvents, alkalis and other oils to clean the skin.
- 5.1.4 Lift the load with back straight and knees bent as far as possible. Seek the help in case of heavy load.
- 5.1.5 Ensure the usage of correct and tested tools and tackles. Don't allow the make shift tools and tackles.
- 5.1.6 No loose clothing should be allowed while working near rotating equipment or working at heights.

### **5.2 MEANS OF ACCESS AND EGRESS**

Adequate and safe means of access (atleast two, differently located) to and egress from all workplaces should be provided. Same should be displayed and maintained.

### **5.3 HOUSEKEEPING**

- 5.3.1 Ensure:
  - i) proper storage of materials and equipment;
  - ii) removal of scrap, inflammable material, waste and debris at appropriate intervals.
- 5.3.2 Removal of loose materials, which are not required for use, to be ensured. Accumulation of these at the site can obstruct means of access to and egress from workplaces and passageways.
- 5.3.3 Workplaces and passageways, that are slippery owing to oil, grease or other causes, should be cleaned up or strewn with sand, sawdust, ash etc.

### **5.4 PRECAUTIONS AGAINST THE FALL OF MATERIALS & PERSONS AND COLLAPSE OF STRUCTURES**

- 5.4.1 Precautions should be taken such as the provision of fencing, look-out men or barriers to protect any person against injury by the fall of materials, or tools or equipment being raised or lowered.
- 5.4.2 Where necessary to prevent danger, guys, stays or supports should be used or other effective precautions should be taken to prevent the collapse of structures or parts of structures that are being erected, maintained, repaired, dismantled or demolished.
- 5.4.3 All openings through which workers are liable to fall should be kept effectively covered or fenced and displayed prominently.

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5.4.4 As far as practicable, guardrails and toe-boards should be provided to protect workers from falling from elevated workplaces.

## **5.5 PREVENTION OF UNAUTHORISED ENTRY**

5.5.1 Construction sites located in built-up areas and alongside vehicular and pedestrian traffic routes should be fenced to prevent the entry of unauthorised persons.

5.5.2 Visitors should not be allowed access to construction sites unless accompanied by or authorised by a competent person and provided with the appropriate protective equipment.

## **5.6 FIRE PREVENTION AND FIRE FIGHTING**

5.6.1 All necessary measures should be taken by the executing agency and owner to:

- i) avoid the risk of fire;
- ii) control quickly and efficiently any outbreak of fire;
- iii) bring out a quick and safe evacuation of persons.
- iv) Inform unit/fire station control room, where construction work is carried out within existing operating area.

5.6.2 Combustible materials such as packing materials, sawdust, greasy/oily waste and scrap wood or plastics should not be allowed to accumulate in workplaces but should be kept in closed metal containers in a safe place.

5.6.3 Places where workers are employed should, if necessary to prevent the danger of fire, be provided with:

- i) suitable and sufficient fire-extinguishing equipment, which should be easily visible and accessible;
- ii) an adequate water supply at sufficient pressure meeting the requirements of various OISD standards.

5.6.4 To guard against danger at places having combustible material, workers should be trained in the action to be taken in the event of fire, including the use of means of escape.

5.6.5 At sites having combustible material, suitable visual signs should be provided to indicate clearly the direction of escape in case of fire.

5.6.6 Means of escape should be kept clear at all times. Escape routes should be frequently inspected particularly in high structures and where access is restricted.

## **5.7 LIGHTING**

5.7.1 Where natural lighting is not adequate, working light fittings or portable hand-lamps should be provided at workplace on the construction site where a worker will do a job.

5.7.2 Emergency lighting should be provided for personnel safety during night time to facilitate standby lighting source, if normal system fails.

5.7.2 Artificial lighting should not produce glare or disturbing shadows.

5.7.3 Lamps should be protected by guards against accidental breakage.

5.7.4 The cables of portable electrical lighting equipment should be of adequate size & characteristics for the power requirements and of adequate mechanical strength to withstand severe conditions in construction operations.

## **5.8 PLANT, MACHINERY, EQUIPMENT AND HAND TOOLS**

### **5.8.1 General Provisions**

- i) Plant, machinery and equipment including hand tools, both manual and power driven, should:

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- a) be of proper design and construction, taking into account health, Safety and ergonomic principles.
  - b) be maintained in good working order;
  - c) be used only for work for which they have been designed.
  - d) be operated only by workers who have been authorised and given appropriate training.
  - e) be provided with protective guards, shields or other devices as required.
- ii) Adequate instructions for safe use should be provided.
  - iii) Safe operating procedures should be established and used for all plant, machinery and equipment.
  - iv) Operators of plant, machinery and equipment should not be distracted while work is in progress.
  - v) Plant, machinery and equipment should be switched off when not in use and isolated before any adjustment, clearing or maintenance is done.
  - vi) Where trailing cables or hose pipes are used they should be kept as short as practicable and not allowed to create a hazard.
  - vii) All moving parts of machinery and equipment should be enclosed or adequately guarded.
  - viii) Every power-driven machine and equipment should be provided with adequate means, immediately accessible and readily identifiable to the operator, of stopping it quickly and preventing it from being started again inadvertently.
  - ix) Operators of plant, machinery, equipment and tools should be provided with PPEs, including where necessary, suitable ear protection.

#### 5.8.2 Hand tools

- i) Hand tools should be repaired by competent persons.
- ii) Heads of hammers and other shock tools should be dressed or ground to a suitable radius on the edge as soon as they begin to mushroom or crack.
- iii) When not in use and while being carried or transported sharp tools should be kept in sheaths, shields, chests or other suitable containers.
- iv) Only insulated or nonconducting tools should be used on or near live electrical installations.
- v) Only non-sparking tools should be used near or in the presence of flammable or explosive dusts or vapours.

#### 5.8.3 Pneumatic Tools

- i) Operating triggers on portable pneumatic tools should be:
  - a) so placed as to minimise the risk of accidental starting of the machine.
  - b) so arranged as to close the air inlet valve automatically when the pressure of the operator's hand is removed.
- ii) Hose and hose connections for compressed air supply to portable pneumatic tools should be:
  - a) designed and tested for the pressure and service for which they are intended;
  - b) fastened securely on the pipe outlet and equipped with the safety chain, as appropriate.
- iii) Pneumatic shock tools should be equipped with safety clips or retainers to prevent dies and tools from being accidentally expelled from the barrel.
- iv) Pneumatic tools should be disconnected from power and the pressure in hose lines released before any adjustment or repair is made.

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#### 5.8.4 Electrical Tools

- i) Low voltage portable electrical tools should generally be used.
- ii) All electrical tools should be earthed, unless they are "all insulated" or "double insulated" tools which do not require earthing.
- iii) All electrical tools should get inspected and maintained on a regular basis by a competent electrician and complete records kept.

#### 5.8.5 Engines

- i) Engines should:
  - a) be installed so that they can be started safely and the maximum safe speed cannot be exceeded.
  - b) have controls for limiting speed.
  - c) have devices to stop them from a safe place in an emergency.
- ii) IC engines should not be run in confined spaces unless adequate exhaust ventilation is provided.
- iii) When IC engines are being fuelled:
  - a) the engine should be shut off.
  - b) care should be taken to avoid spilling fuel;
  - c) no person should smoke or have an naked light in the vicinity.
  - d) a fire extinguisher should be kept readily available.
- iv) Secondary fuel reservoir should be placed outside the engine room.

### 6.0 CONSTRUCTION ACTIVITIES

The various common activities in construction are as under:

- Excavation
- Scaffolding, Platforms & Ladders
- Structural Work, Laying of Reinforcement & Concreting
- Road Work (Laying of roads)
- Cutting /Welding
- Working in Confined Space
- Proof/Pressure Testing
- Working at Heights
- Handling & Lifting Equipments
- Vehicle Movement
- Electrical
- Offshore
- Demolition
- Radiography
- Sand/shot blasting/ spray painting
- Work above water

The safe practices to be followed during the implementation of above construction activities are given below:


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## 6.1 EXCAVATION

- 6.1.1 All excavation work should be planned and the method of excavation and the type of support work required should be decided considering the following:
- i) the stability of the ground;
  - ii) the excavation will not affect adjoining buildings, structures or roadways;
  - iii) to prevent hazard, the gas, water, electrical and other public utilities should be shut off or disconnected, if necessary;
  - iv) presence of underground pipes, cable conductors, etc.,
  - v) the position of culvert/bridges, temporary roads and spoil heaps should be determined;
- 6.1.2 Before digging begins on site, all excavation work should be planned and the method of excavation and the type of support work required decided.
- 6.1.3 All excavation work should be supervised.
- 6.1.4 Sites of excavations should be thoroughly inspected:
- i) daily, prior to each shift and after interruption in work of more than one day;
  - ii) after every blasting operation;
  - iii) after an unexpected fall of ground;
  - iv) after substantial damage to supports;
  - v) after a heavy rain, frost or snow;
  - vi) when boulder formations are encountered.
- 6.1.5 Safe angle of repose while excavating trenches exceeding 1.5m depth upto 3.0m should be maintained. Based on site conditions, provide proper slope, usually  $45^{\circ}$ , and suitable bench of 0.5m width at every 1.5m depth of excavation in all soils except hard rock or provide proper shoring and strutting to prevent cave-in or slides.
- 6.1.6 As far as possible, excavated earth should not be placed within one meter of the edge of the trench or depth of trench whichever is greater.
- 6.1.7 Don't allow vehicles to operate too close to excavated area. Maintain atleast 2m distance from edge of excavation. No load, plant or equipment should be placed or moved near the edge of any excavation where it is likely to cause its collapse and thereby endanger any person unless precautions such as the provision of shoring or piling are taken to prevent the sides from collapsing.
- 6.1.8 Adequately anchored stop blocks and barriers should be provided to prevent vehicles being driven into the excavation. Heavy vehicles should not be allowed near the excavation unless the support work has been specially designed to permit it.
- 6.1.9 If an excavation is likely to affect the security of a structure on which persons are working, precautions should be taken to protect the structure from collapse.
- 6.1.10 Barricade at 1m height (with red & white band/self glowing caution board) should be provided for excavations beyond 1.5m depth. Provide two entries/exits for such excavation.
- 6.1.11 Necessary precautions should be taken for underground utility lines like cables, sewers etc. and necessary approvals/clearances from the concerned authorities shall be obtained before commencement of the excavation job.
- 6.1.12 Water shall be pumped/bailed out, if any accumulates in the trench. Necessary precautions should be taken to prevent entry of surface water in trenches.
- 6.1.13 During rains, the soil becomes loose. Take additional precaution against collapse of side wall.
- 6.1.14 In hazardous areas, air should be tested to ascertain its quality. No one should be allowed entry till it is suitable for breathing.

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6.1.15 In case of mechanised excavation, precaution shall be taken to not to allow anybody to come within one meter of extreme reach of the mechanical shovel. The mechanised excavator shall be operated by a well-trained experienced operator. When not in operation, the machine shall be kept on firm leveled ground with mechanical shovel resting on ground. Wheel or belt shall be suitably jammed to prevent any accidental movement of the machine. Suitable precautions as per manufacturer guidelines should be taken for dozers, graders and other heavy machines.

6.1.16 In case of blasting, follow strictly IS:4081-1986 & Indian Explosive Act and rules for storage, handling and carrying of explosive materials and execution of blasting operation.

## **6.2 SCAFFOLDING, PLATFORMS & LADDERS**

### **6.2.1 Metal as material of construction**

- i) A scaffold should be provided and maintained or other equally safe and suitable provision should be made where work cannot safely be done on or from the ground or from part of a building or other permanent structure.
- ii) Scaffolds should be provided with safe means of access, such as stairs, ladders or ramps. Ladders should be secured against inadvertent movement.
- iii) Every scaffold should be constructed, erected and maintained so as to prevent collapse or accidental displacement when in use.
- iv) Every scaffold and part thereof should be constructed :
  - (a) in such a way so as not to cause hazards for workers during erection and dismantling;
  - (b) in such a way so as guard rails and other protective devices, platforms, ladders, stairs or ramps can be easily put together;
  - (c) with sound material and of requisite size and strength for the purpose for which it is to be used and maintained in a proper condition.
- v) Boards and planks used for scaffolds should be protected against splitting.
- vi) Materials used in the construction of scaffolds should be stored under good conditions and apart from any material unsuitable for scaffolds.
- vii) Couplers should not cause deformation in tubes. Couplers should be made of drop forged steel or equivalent material.
- viii) Tubes should be free from cracks, splits and excessive corrosion and be straight to the eye, and tube ends cut cleanly square with the tube axis.
- ix) Scaffolds should be designed for their maximum load as per relevant code.
- x) Scaffolds should be adequately braced.
- xi) Scaffolds which are not designed to be independent should be rigidly connected to the building at designated vertical and horizontal places.
- xii) A scaffold should never extend above the highest anchorage to an extent which might endanger its stability and strength.
- xiii) Loose bricks, drainpipes, chimney-pots or other unsuitable material should not be used for the construction or support of any part of a scaffold.
- xiv) Scaffolds should be inspected and certified:
  - (a) before being taken into use;
  - (b) at periodic intervals thereafter as prescribed for different types of scaffolds;
  - (c) after any alteration, interruption in use, exposure to weather or seismic conditions or any other occurrence likely to have affected their strength or stability.
- xv) Inspection should more particularly ascertain that:
  - (a) the scaffold is of suitable type and adequate for the job;

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- (b) materials used in its construction are sound and of sufficient strength;
  - (c) it is of sound construction and stable;
  - (d) that the required safeguards are in position.
- xvi) A scaffold should not be erected, substantially altered or dismantled except by or under the supervision.
- xvii) Every scaffold should be maintained in good and proper condition, and every part should be kept fixed or secured so that no part can be displaced in consequence of normal use.
- xviii) If out-rigger scaffolding is to be used, it should be specifically designed and inspected before putting in use.

### 6.2.2 Lifting appliances on scaffolds

- i) When a lifting appliance is to be used on a scaffold:
  - (a) the parts of the scaffold should be carefully inspected to determine the additional strengthening and other safety measures required;
  - (b) any movement of the scaffold members should be prevented;
  - (c) if practicable, the uprights should be rigidly connected to a solid part of the building at the place where the lifting appliance is erected.

### 6.2.3 Prefabricated scaffolds

- i) In the case of prefabricated scaffold systems, the instructions provided by the manufacturers or suppliers should be strictly adhered to. Prefabricated scaffolds should have adequate arrangements for fixing bracing.
- ii) Frames of different types should not be intermingled in a single scaffold.
- iii) Scaffolding shall be erected on firm and level ground.
- iv) All members of metal scaffolding shall be checked periodically to screen out defective / rusted members. All joints should be properly lubricated for easy tightening.
- v) Entry to scaffolding should be restricted.
- vi) Erection, alteration and removal shall be done under supervision of experienced personnel.
- vii) Use of barrels, boxes, loose bricks etc., for supporting platform shall not be permitted.
- viii) Each supporting member of platform shall be securely fastened and braced
- ix) Where planks are butt-joined, two parallel putlogs shall be used, not more than 100mm apart, to give support to each plank.
- x) Platform plank shall not project beyond its end support to a distance exceeding 4 times the thickness of plank, unless it is effectively secured to prevent tipping. Cantilever planks should be avoided.
- xi) The platform edges shall be provided with 150mm high toe board to eliminate hazards of tools or other objects falling from platform.
- xii) Erect ladders in the “four up-one out position”
- xiii) Lash ladder securely with the structure.
- xiv) Using non-slip devices, such as, rubber shoes or pointed steel ferules at the ladder foot, rubber wheels at ladder top, fixing wooden battens, cleats etc.
- xv) When ladder is used for climbing over a platform, the ladder must be of sufficient length, to extend at least one meter above the platform, when erected against the platform in “four up-one out position.”
- xvi) Portable ladders shall be used for heights not more than 4mt. Above 4mt flights, fixed ladders shall be provided with at least 600 mm landings at every 6mt or less.

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- xvii) The width of ladder shall not be less than 300mm and rungs shall be spaced not more than 300mm.
- xviii) Every platform and means of access shall be kept free from obstruction.
- xix) If grease, mud, gravel, mortar etc., fall on platform or scaffolds, these shall be removed immediately to avoid slippage.
- xx) Workers shall not be allowed to work on scaffolds during storms or high wind. After heavy rain or storms, scaffolds shall be inspected before reuse.
- xxi) Don't overload the scaffolding. Remove excess material and scrap immediately.
- xxii) Dismantling of scaffolds shall be done in a pre-planned sequential manner.

#### **6.2.4 Suspended scaffolds/boatwain's chair**

- i) In addition to the requirements for scaffolds in general as regards soundness, stability and protection against the risk of falls, suspended scaffolds should meet the following specific requirements.
  - (a) platforms should be designed and built with dimensions that are compatible with the stability of the structure as a whole, especially the length;
  - (b) the number or anchorage should be compatible with the dimensions of the platform;
  - (c) the safety of workers should be safeguarded by an extra rope having a point of attachment independent of the anchorage arrangements of the scaffold;
  - (d) the anchorage and other elements of support of the scaffold should be designed and built in such a way as to ensure sufficient strength;
  - (e) the ropes, winches, pulleys or pulley blocks should be designed, assembled, used and maintained according to the requirements established for lifting gear adapted to the lifting of persons according to national laws and regulations;
  - (f) Before use, the whole structure should be checked by a competent person.

#### **6.2.5 Bamboo Scaffolding**

- i) In general, it should be avoided as far as possible. It should not be used in the unit/off-site areas and where hot work is to be done.
- ii) For construction and maintenance of residential and office buildings, situated outside explosive licensed area, bamboo scaffold, if used, should conform to provisions given in IS-3696 (Part 1)-1987.

### **6.3 STRUCTURAL WORK, LAYING OF REINFORCEMENT & CONCRETING**

#### **6.3.1 General provisions**

- i) The erection or dismantling of buildings, structures, civil engineering works, formwork, falsework and shoring should be carried out by trained workers only under the supervision of a competent person.
- ii) Precautions should be taken to guard against danger to workers arising from any temporary state of weakness or instability of a structure.
- iii) Formwork, falsework and shoring should be so designed, constructed and maintained that it will safely support all loads that may be imposed on it.
- iv) Formwork should be so designed and erected that working platforms, means of access, bracing and means of handling and stabilising are easily fixed to the formwork structure.

#### **6.3.2. Erection and dismantling of steel and prefabricated structures**

- i) The safety of workers employed on the erection and dismantling of steel and prefabricated structures should be ensured by appropriate means, such as provision and use of:

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- (a) ladders, gangways or fixed platforms;
  - (b) platforms, buckets, boatswain's chairs or other appropriate means suspended from lifting appliances;
  - (c) safety harnesses and lifelines, catch nets or catch platforms;
  - (d) Power-operated mobile working platforms.
- ii) Steel and prefabricated structures should be so designed and made that they can be safely transported and erected.
- iii) In addition to the need for the stability of the part when erected, the design should explicitly take following into account:
- (a) the conditions and methods of attachment in the operations of transport, storing and temporary support during erection or dismantling as applicable;
  - (b) Methods for the provision of safeguards such as railings and working platforms, and, when necessary, for mounting them easily on the structural steel or prefabricated parts.
- iv) The hooks and other devices built in or provided on the structural steel or prefabricated parts that are required for lifting and transporting them should be so shaped, dimensioned and positioned as:
- (a) to withstand with a sufficient margin the stresses to which they are subjected;
  - (b) Not to set up stresses in the part that could cause failures, or stresses in the structure itself not provided for in the plans, and be designed to permit easy release from the lifting appliance. Lifting points for floor and staircase units should be located (recessed if necessary) so that they do not protrude above the surface;
  - (c) To avoid imbalance or distortion of the lifted load.
- v) Storeplaces should be so constructed that:
- (a) there is no risk of structural steel or prefabricated parts falling or overturning;
  - (b) storage conditions generally ensure stability and avoid damage having regard to the method of storage and atmospheric conditions;
  - (c) racks are set on firm ground and designed so that units cannot move accidentally.
- vi) While they are being stored, transported, raised or set down, structural steel or prefabricated parts should not be subjected to stresses prejudicial to their stability.
- vii) Every lifting appliance should:
- (a) be suitable for the operations and not be capable of accidental disconnection;
  - (b) be approved or tested as per statutory requirement.
- viii) Lifting hooks should be of the self-closing type or of a safety type and should have the maximum permissible load marked on them.
- ix) Tongs, clamps and other appliances for lifting structural steel and prefabricated parts should:
- (a) be of such shape and dimensions as to ensure a secure grip without damaging the part;
  - (b) be marked with the maximum permissible load in the most unfavourable lifting conditions.
- x) Structural steel or prefabricated parts should be lifted by methods or appliances that prevent them from spinning accidentally.
- xi) When necessary to prevent danger, before they are raised from the ground, structural steel or prefabricated parts should be provided with safety devices such as railings and working platforms to prevent falls of persons.
- xii) While structural steel or prefabricated parts are being erected, the workers should be provided with appliances for guiding them as they are being lifted and set down, so as to avoid crushing of hands and to facilitate the operations. Use of such appliances should be ensured.

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- xiii) A raised structural steel or prefabricated part should be so secured and wall units so propped that their stability cannot be imperiled, even by external agencies such as wind and passing loads before its release from the lifting appliance.
- xiv) At work places, instruction should be given to the workers on the methods, arrangements and means required for the storage, transport, lifting and erection of structural steel or prefabricated parts, and, before erection starts, a meeting of all those responsible should be held to discuss and confirm the requirements for safe erection.
- xv) During transportation within the construction area, attachments such as slings and stirrups mounted on structural steel or prefabricated parts should be securely fastened to the parts.
- xvi) Structural steel or prefabricated parts should be so transported that the conditions do not affect the stability of the parts or the means of transport result in jolting, vibration or stresses due to blows, or loads of material or persons.
- xvii) When the method of erection does not permit the provision of other means of protection against fall of persons, the workplaces should be protected by guardrails, and if appropriate by toe-boards.
- xviii) When adverse weather conditions such as snow, ice and wind or reduced visibility entail risks of accidents, the work should be carried on with particular care, or, if necessary, interrupted.
- xix) Structures should not be worked on during violent storms or high winds, or when they are covered with ice or snow, or are slippery from other causes.
- xx) If necessary, to prevent danger, structural steel parts should be equipped with attachments for suspended scaffolds, lifelines or safety harnesses and other means of protection.
- xxi) The risks of falling, to which workers moving on high or sloping girders are exposed, should be limited by all means of adequate collective protection or, where this is impossible, by the use of a safety harness that is well secured to a strong support.
- xxii) Structural steel parts that are to be erected at a great height should as far as practicable be assembled on the ground.
- xxiii) When structural steel or prefabricated parts are being erected, a sufficiently extended area underneath the workplace should be barricaded or guarded
- xxiv) Steel trusses that are being erected should be adequately shored, braced or guyed until they are permanently secured in position.
- xxv) Load-bearing structural member should not be dangerously weakened by cutting, holing or other means.
- xxvi) Structural members should not be forced into place by the hoisting machine while any worker is in such a position that he could be injured by the operation.
- xxvii) Open-web steel joists that are hoisted singly should be directly placed in position and secured against dislodgment.

### 6.3.3 Reinforcement

- i) Ensure that workers use Personnel Protective equipment like safety helmet, safety shoes, gloves etc.
- ii) Don't place the hand below the rods for checking clear distance. Use measuring devices.
- iii) Don't wear loose clothes while checking the rods.
- iv) Don't stand unnecessarily on cantilever rods.
- v) To carry out welding/cutting of rods, safety procedures/precautions as mentioned in Item No. 6.5 to be followed.

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- vi) For supplying of rods at heights, proper staging and/or bundling to be provided.
- vii) Ensure barricading and staging for supplying and fixing of rods at height.
- viii) For short distance carrying of materials on shoulders, suitable pads to be provided.
- ix) While transporting material by trucks/trailers, the rods shall not protrude in front of or by the sides of driver's cabin. In case such protrusion cannot be avoided behind the deck, then it should not extend 1/3<sup>rd</sup> of deck length or 1.5M which ever is less and tied with red flags/lights.

#### **6.3.4 Concreting**

- i) Ensure stability of shuttering work before allowing concreting.
- ii) Barricade the concreting area while pouring at height/depths.
- iii) Keep vibrator hoses, pumping concrete accessories in healthy conditions and mechanically locked.
- iv) Pipelines in concrete pumping system shall not be attached to temporary structures such as scaffolds and formwork support as the forces and movements may effect their integrity.
- v) Check safety cages & guards around moving motors/parts etc. provided in concreting mixers.
- vi) Use Personal Protective Equipment like gloves, safety shoes etc. while dealing with concrete and wear respirators for dealing with cement.
- vii) Earthing of electrical mixers, vibrators, etc. should be done and verified.
- viii) Cleaning of rotating drums of concrete mixers shall be done from outside. Lockout devices shall be provided where workers need to enter.
- ix) Where concrete mixers are driven by internal combustion engine, exhaust points shall be located away from the worker's workstation so as to eliminate their exposure to obnoxious fumes.
- x) Don't allow unauthorised person to stand under the concreting area.
- xi) Ensure adequate lighting arrangements for carrying out concrete work during night.
- xii) Don't allow the same workers to pour concrete round the clock. Insist on shift pattern.
- xiii) During pouring, shuttering and its supports should be continuously watched for defects.

#### **6.4 ROAD WORK**

- 6.4.1 Site shall be barricaded and provided with warning signs, including night warning lamps at appropriate locations for traffic diversion.
- 6.4.2 Filled and empty bitumen drums shall be stacked separately at designated places.
- 6.4.3 Mixing aggregate with bitumen shall preferably be done with the help of bitumen batch mixing plant, unless operationally non-feasible.
- 6.4.4 Road rollers, Bitumen sprayers, Pavement finishers shall be driven by experienced drivers with valid driving license.
- 6.4.5 Workers handling hot bitumen sprayers or spreading bitumen aggregate mix or mixing bitumen with aggregate, shall be provided with PVC hand gloves and rubber shoes with legging up to knee joints.
- 6.4.6 At the end of day's work, surplus hot bitumen in tar boiler shall be properly covered by a metal sheet, to prevent anything falling in it,
- 6.4.7 If bitumen accidentally falls on ground, it shall be immediately covered by sprinkling sand, to prevent anybody stepping on it. Then it shall be removed with the help of spade.

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6.4.8 For cement concrete roads, besides site barricading and installation of warning signs for traffic diversion, safe practices mentioned in the chapter on "Concreting", shall also be applicable.

## 6.5 CUTTING/WELDING

6.5.1 Common hazards involved in welding/cutting are sparks, molten metal, flying particles, harmful light rays, electric shocks etc. Following precautions should be taken: -

- i) A dry chemical type fire extinguisher shall be made available in the work area.
- ii) Adequate ventilation shall be ensured by opening manholes and fixing a shield or forced circulation of air etc, while doing a job in confined space.
- iii) Ensure that only approved and well-maintained apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.
- iv) All covers and panels shall be kept in place, when operating an electric Arc welding machine.
- v) The work piece should be connected directly to Power supply, and not indirectly through pipelines/structures/equipments etc.
- vi) The welding receptacles shall be rated for 63 A suitable for 415V, 3-Phase system with a scraping earth. Receptacles shall have necessary mechanical interlocks and earthing facilities.
- vii) All cables, including welding and ground cables, shall be checked for any worn out or cracked insulation before starting the job. Ground cable should be separate without any loose joints.
- viii) Cable coiling shall be maintained at minimum level, if not avoidable.
- ix) An energised electrode shall not be left unattended.
- x) The power source shall be turned off at the end of job.
- xi) All gas cylinders shall be properly secured in upright position.
- xii) Acetylene cylinder shall be turned and kept in such a way that the valve outlet points away from oxygen cylinder.
- xiii) Acetylene cylinder key for opening valve shall be kept on valve stem, while cylinder is in use, so that the acetylene cylinder could be quickly turned off in case of emergency. Use flash back arrestors to prevent back-fire in acetylene/oxygen cylinder.
- xiv) When not in use, valves of all cylinders shall be kept closed.
- xv) All types of cylinders, whether full or empty, shall be stored at cool, dry place under shed.
- xvi) Forced opening of any cylinder valve should not be attempted.
- xvii) Lighted gas torch shall never be left unattended.
- xviii) Store acetylene and oxygen cylinders separately.
- xix) Store full and empty cylinders separately.
- xx) Avoid cylinders coming into contact with heat.
- xxi) Cylinders that are heavy or difficult to carry by hand may be rolled on their bottom edge but never dragged.
- xxii) If cylinders have to be moved, be sure that the cylinder valves are shut off.
- xxiii) Before changing torches, shut off the gas at the pressure reducing regulators and not by crimping the hose.
- xxiv) Do not use matches to light torches, use a friction lighter.



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- xxv) Move out any leaking cylinder immediately.
- xxvi) Use trolleys for oxygen & acetylene cylinder and chain them.
- xxvii) Always use Red hose for acetylene and other fuel gases and Black for oxygen, and ensure that both are in equal length.
- xxviii) Ensure that hoses are free from burns, cuts and cracks and properly clamped.
- xxix) Avoid dragging hoses over sharp edges and objects
- xxx) Do not wrap hoses around cylinders when in use or stored.
- xxxi) Protect hoses from flying sparks, hot slag, and other hot objects.
- xxxii) Lubricants shall not be used on Ox-fuel gas equipment.
- xxxiii) During cutting/welding, use proper type goggles/face shields.

## **6.6 WORKING IN CONFINED SPACES**

6.6.1 Following safety practices for working in confined space like towers, columns, tanks and other vessels should be followed in addition to the safety guidelines for specific jobs like scaffolding, cutting/welding etc.

- i) Shut down, isolate, depressurise and purge the vessel as per laid down procedures.
- ii) Entry inside the vessel and to carry out any job should be done after issuance of valid permit only in line with the requirement of OISD-STD-105.
- iii) Ensure proper and accessible means of exit before entry inside a confined space.
- iv) The number of persons allowed inside the vessel should be limited to avoid overcrowding.
- v) When the work is going on in the confined space, there should always be one man standby at the nearby manway.
- vi) Before entering inside the vessels underground or located at lower elevation, probability of dense vapours accumulating nearby should also be considered in addition to inside the vessel.
- vii) Ensure requisite O<sub>2</sub> level before entry in the confined space and monitor level periodically or other wise use respiratory devices.
- viii) Check for no Hydrocarbon or toxic substances before entry and monitor level periodically or use requisite Personal Protective Equipment.
- ix) Ensure adequate ventilation or use respiratory devices.
- x) Depending upon need, necessary respirator system, gas masks and suit shall be worn by everyone entering confined space. In case of sewer, OWS or in the confined area where there is a possibility of toxic or inert gas, gas masks shall be used by everyone while entering.
- xi) Barricade the confined spaces during hoisting, radiography, blasting, pressure testing etc.
- xii) Use 24V flameproof lamp fittings only for illumination.
- xiii) Use tools with air motors or electric tools with maximum voltage of 24V.
- xiv) House keeping shall be well maintained.
- xv) Safety helmet, safety shoes and safety belt shall be worn by everyone entering the confined space.
- xvi) Don't wear loose clothing while working in a confined space.
- xvii) In case of the vessels which are likely to contain pyrophoric substances (like Iron Sulphide), special care need to be taken before opening the vessel. Attempt should be

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made to remove the pyrophoric substances. Otherwise, these should be always kept wet by suitable means.

- xviii) The cutting torches should also be kept outside the vessel immediately after the cutting.
- xix) The gas cylinders used for cutting/welding shall be kept outside.
- xx) All cables, hoses, welding equipment etc., shall be removed from confined space at end of each work day, even if the work is to be resumed in the same space the next day.
- xxi) To the extent possible sludge shall be cleared and removed from outside before entering.
- xxii) No naked light or flame or hot work such as welding, cutting and soldering should be permitted inside a confined space or area unless it has been made completely free of the flammable atmosphere, tested and found safe by a competent person. Only non-sparking tools and flameproof hand lamps protected with guard and safety torches should be used inside such confined space or area for initial inspection, cleaning or other work required to be done for making the area safe.
- xxiii) Communication should be always maintained between the worker and the attendant.

## **6.7 PROOF/PRESSURE TESTING**

- 6.7.1 Review test procedure before allowing testing with water or air or any other fluid.
- 6.7.2 Provide relief valves of adequate size while testing with air or other gases.
- 6.7.3 Ensure compliance of necessary precautions, step wise loading, tightening of fasteners, grouting etc. before and during testing.
- 6.7.4 Inform all concerned in advance of the testing.
- 6.7.5 Keep the vents open before opening any valve for filling/draining of liquid used for hydrotesting. The filling/draining should not exceed the designed rate for pressure testing.
- 6.7.6 Provide separate gauges of suitable range for pressurising pump and the equipment to be tested.
- 6.7.7 Provide gauges at designated locations for monitoring of pressures.
- 6.7.8 Check the calibration of all pressurising equipment and accessories and maintain records.
- 6.7.9 Take readings at pre-defined intervals.

## **6.8 WORKING AT HEIGHTS**

### **6.8.1 General Provision**

- i) While working at a height of more than 3 meters, ISI approved safety belt shall be used.
- ii) While working at a height of more than 3 meters, permit should be issued by competent person before commencement of the job.
- iii) Worker should be well trained on usage of safety belt including its proper usage at the time of ascending/descending.
- iv) All tools should be carried in tool kits to avoid their falling.
- v) If the job is on fragile/sloping roof, roof walk ladders shall be used.
- vi) Provide lifeline wherever required.
- vii) Additional safety measures like providing Fall Arrestor type Safety belt, safety net should be provided depending upon site conditions, job requirements.
- viii) Keep working area neat and clean. Remove scrap material immediately.
- ix) Don't throw or drop material/equipment from height.
- x) Avoid jumping from one member to another. Use proper passageway.

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- xi) Keep both hands free while climbing. Don't try to bypass the steps of the ladder.
- xii) Try to maintain calm at height. Avoid over exertion.
- xiii) Avoid movements on beam.
- xiv) Elevated workplaces including roofs should be provided with safe means of access and egress such as stairs, ramps or ladders.

### 6.8.2 Roof Work

- i) All roof-work operations should be pre-planned and properly supervised.
- ii) Roof work should only be undertaken by workers who are physically and psychologically fit and have the necessary knowledge and experience for such work.
- iii) Work on roofs shouldn't be carried on in weather conditions that threaten the safety of workers.
- iv) Crawling boards, walkways and roof ladders should be securely fastened to a firm structure.
- v) Roofing brackets should fit the slope of the roof and be securely supported.
- vi) Where it is necessary for a person to kneel or crouch near the edge of the roof, necessary precautions should be taken.
- vii) On a large roof where work have to be carried out at or near the edge, a simple barrier consisting of crossed scaffold tubes supporting a tubing guardrail may be provided.
- viii) All covers for openings in roofs should be of substantial construction and be secured in position.
- ix) Roofs with a pitch of more than 10 should be treated as sloping.
- x) When work is being carried out on sloping roofs, sufficient and suitable crawling boards or roof ladders should be provided and firmly secured in position.
- xi) During extensive work on the roof, strong barriers or guardrails and toe-boards should be provided to stop a person from falling off the roof.
- xii) Where workers are required to work on or near roofs or other places covered with fragile material, through which they are liable to fall, they should be provided with suitable roof ladders or crawling boards strong enough and when spanning across the supports for the roof covering to support those workers.
- xiii) A minimum of two boards should be provided so that it is not necessary for a person to stand on a fragile roof to move a board or a ladder, or for any other reason.

### 6.8.3 Work on tall chimneys

- i) For the erection and repair of tall chimneys, scaffolding should be provided. A safety net should be maintained at a suitable distance below the scaffold.
- ii) The scaffold floor should always be at least 65 cm below the top of the chimney.
- iii) Under the working floor of the scaffolding the next lower floor should be left in position as a catch platform.
- iv) The distance between the inside edge of the scaffold and the wall of the chimney should not exceed 20 cm at any point.
- v) Catch platforms should be erected over:
  - (a) the entrance to the chimney;
  - (b) Passageways and working places where workers could be endangered by falling objects.

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- vi) For climbing tall chimneys, access should be provided by:
  - (a) stairs or ladders;
  - (b) a column of iron rungs securely embedded in the chimney wall;
  - (c) Other appropriate means.
- vii) When workers use the outside rungs to climb the chimney, a securely fastened steel core rope looped at the free end and hanging down at least 3 m should be provided at the top to help the workers to climb on to the chimney.
- viii) While work is being done on independent chimneys the area surrounding the chimney should be enclosed by fencing at a safe distance.
- ix) Workers employed on the construction, alteration, maintenance or repair of tall chimneys should not:
  - a) work on the outside without a safety harness attached by a lifeline to a rung, ring or other secure anchorage;
  - b) put tools between the safety harness and the body or in pockets not intended for the purpose;
  - c) haul heavy materials or equipment up and down by hand to or from the workplace on the chimney;
  - d) fasten pulleys or scaffolding to reinforcing rings without first verifying their stability;
  - e) work alone;
  - f) climb a chimney that is not provided with securely anchored ladders or rungs;
  - g) Work on chimneys in use unless the necessary precautions to avoid danger from smoke and gases have been taken.
- x) Work on independent chimneys should not be carried on in high winds, icy conditions, fog or during electrical storms.

## **6.9 HANDLING AND LIFTING EQUIPMENT:**

### **6.9.1 General Provisions**

Following are the general guidelines to be followed with regard to all types of handling and lifting equipment in addition to the guidelines for specific type of equipments dealt later on.

- i) There should be a well-planned safety programme to ensure that all the lifting appliances and lifting gear are selected, installed, examined, tested, maintained, operated and dismantled with a view to preventing the occurrence of any accident;
- ii) All lifting appliances shall be examined by competent persons at frequencies as specified in "The Factories act".
- iii) Check thoroughly quality, size and condition of all lifting tools like chain pulley blocks, slings, U-clamps, D-shackles etc. before putting them in use.
- iv) Safe lifting capacity of all lifting & handling equipment, tools and shackles should be got verified and certificates obtained from competent authorities before its use. The safe working load shall be marked on them.
- v) Check periodically the oil, brakes, gears, horns and tyre pressure of all moving equipments like cranes, forklifts, trailers etc as per manufacturer's recommendations.
- vi) Check the weights to be lifted and accordingly decide about the crane capacity, boom length and angle of erection.
- vii) Allow lifting slings as short as possible and check packing at the friction points.
- viii) While lifting/placing of the load, no unauthorised person shall remain within the radius of the boom and underneath the load.

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- ix) While loading, unloading and stacking of pipes, proper wedges shall be placed to prevent rolling down of the pipes.
- x) Control longer jobs being lifted up from both ends.
- xi) Only trained operators and riggers should carry out the job. While the crane is moving or lifting the load, the trained rigger should be there for keeping a vigil against hitting any other object.
- xii) During high wind conditions and nights, lifting of heavy equipments should be avoided. If unavoidable to do erection in night, operator and rigger should be fully trained for night signaling. Also proper illumination should be there.
- xiii) Allow crane to move on hard, firm and leveled ground.
- xiv) When crane is in idle condition for long periods or unattended, crane boom should either be lowered or locked as per manufacturer's guidelines.
- xv) Hook and load being lifted shall remain in full visibility of crane operators, while lifting, to the extent possible.
- xvi) Don't allow booms or other parts of crane to come within 3 meters reach of overhead electrical cables.
- xvii) No structural alterations or repairs should be made to any part of a lifting appliance, which may affect the safety of the appliance without the permission and supervision of the competent person.

#### **6.9.2 Hoists**

- i) Hoist shafts should be enclosed with rigid panels or other adequate fencing at:
  - (a) ground level on all sides;
  - (b) all other levels at all points at which access is provided;
  - (c) all points at which persons are liable to be struck by any moving part.
- ii) The enclosure of hoist shafts, except at approaches should extend where practicable at least 2mt above the floor, platform or other place to which access is provided except where a lesser height is sufficient to prevent any person falling down the hoistway and there is no risk of any person coming into contact with any moving part of the hoist, but in no case should the enclosure be less than 1mt in height.
- iii) The guides of hoist platforms should offer sufficient resistance to bending and, in the case of jamming by a safety catch, to buckling.
- iv) Where necessary to prevent danger, adequate covering should be provided above the top of hoist shafts to prevent material falling down them.
- v) Outdoor hoist towers should be erected on firm foundations, and securely braced, guyed and anchored.
- vi) A ladderway should extend from the bottom to the top of outdoor hoist towers, if no other ladderway exists within easy reach.
- vii) Hoisting engines should be of ample capacity to control the heaviest load that they will have to move.
- viii) Hoists should be provided with devices that stop the hoisting engine as soon as the platform reaches its highest stopping place.
- ix) Winches should be so constructed that the brake is applied when the control handle is not held in the operating position.
- x) It should not be possible to set in motion from the platform a hoist, which is not designed for the conveyance of persons.

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- xi) Winches should not be fitted with pawl and ratchet gears on which the pawl must be disengaged before the platform is lowered.
- xii) Hoist platforms should be capable of supporting the maximum load that they will have to carry with a safety factor.
- xiii) Hoist platforms should be equipped with safety gear that will hold the platform with the maximum load if the hoisting rope breaks.
- xiv) If workers have to enter the cage or go on the platform at landings there should be a locking arrangement preventing the cage or platform from moving while any worker is in or on it.
- xv) On sides not used for loading and unloading, hoist platforms should be provided with toe-boards and enclosures of wire mesh or other suitable material to prevent the fall of parts of loads.
- xvi) Where necessary to prevent danger from falling objects, hoist platforms should be provided with adequate covering.
- xvii) Counterweights consisting of an assemblage of several parts should be made of specially constructed parts rigidly connected together.
- xviii) Counterweights should run in guides.
- xix) Platforms should be provided at all landings used by workers.
- xx) Following notices should be posted up conspicuously and in very legible characters:
  - (a) on all hoists:
    - on the platform: the carrying capacity in kilograms or other appropriate standard unit of weight;
    - on the hoisting engine: the lifting capacity in kilograms or other appropriate standard unit of weight;
  - (b) on hoists authorised or certified for the conveyance of persons:
    - on the platform or cage: the maximum number of persons to be carried at one time;
  - (c) on hoists for goods only:
    - on every approach to the hoist and on the platform: prohibition of use by persons.
- xxi) Hoists intended for the carriage of persons should be provided with a cage so constructed as to prevent any person from falling out or being trapped between the cage and any fixed part of the structure when the cage gate is shut, or from being struck by the counterbalance weight or by articles or materials falling down the hoistway.
- xxii) On each side in which access is provided, the cage should have a gate fitted with devices which ensure that the gate cannot be opened except when the cage is at a landing and that the gate must be closed before the cage can move away from the landing.
- xxiii) Every gate in the enclosure of the hoist shaft which gives access from a landing place to the cage should be fitted with devices to ensure that the gate cannot be opened except when the cage is at that landing place, and that the cage cannot be moved away from that landing place until the gate is closed.

### 6.9.3 Derricks

#### Stiff-leg derricks

- i) Derricks should be erected on a firm base capable of taking the combined weight of the crane structure and maximum rated load.
- ii) Devices should be used to prevent masts from lifting out of their seating.

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- iii) Electrically operated derricks should be effectively earthed from the sole plate or framework.
- iv) Counterweights should be so arranged that they do not subject the backstays, sleepers or pivots to excessive strain.
- v) When derricks are mounted on wheels:
  - a) a rigid member should be used to maintain the correct distance between the wheels;
  - b) they should be equipped with struts to prevent them from dropping if a wheel breaks or the derrick is derailed.
- vi) The length of a derrick jib should not be altered without consulting the manufacturer.
- vii) The jib of a scotch derrick crane should not be erected within the backstays of the crane.

#### **Guy derricks**

- i) The restraint of the guy ropes should be ensured by fitting stirrups or anchor plates in concrete foundations.
- ii) The mast of guy derricks should be supported by six top guys spaced approximately equally.
- iii) The spread of the guys of a guy derrick crane from the mast should not be more than 45<sup>0</sup> from the horizontal.
- iv) Guy ropes of derricks should be equipped with a stretching screw or turnbuckle or other device to regulate the tension.
- v) Gudgeon pins, sheave pins and fool bearings should be lubricated frequently.
- vi) When a derrick is not in use, the boom should be anchored to prevent it from swinging.

#### **6.9.4 Gin poles**

- i) Gin poles should:
  - (a) be straight;
  - (b) consist of steel or other suitable metal;
  - (c) be adequately guyed and anchored;
  - (d) be vertical or raked slightly towards the load;
  - (e) be of adequate strength for the loads that they will be required to lift/move.
- ii) Gin poles should not be spliced and if a gin pole is composed of different elements, they should be assembled in conformity with their intrinsic material strength.
- iii) Gin poles should be fastened at their feet to prevent displacement in operation.
- iv) Gin poles, which are moved from place to place and re-erected, should not be taken into use again before the pole, lifting ropes, guys, blocks and other parts have been inspected, and the whole appliance has been tested under load.
- v) When platforms or skips are hoisted by gin poles, precautions should be taken to prevent them from spinning and to provide for proper landing.

#### **6.9.5 Tower cranes**

- i) Where tower cranes have cabs at high level, persons, capable and trained to work at heights, should only be employed as crane operators.
- ii) The characteristics of the various machines available should be considered against the operating requirements and the surroundings in which the crane will operate before a particular type of crane is selected.

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- iii) Care should be taken in the assessment of wind loads both during operations and out of service. Account should also be taken of the effects of high structures on wind forces in the vicinity of the crane.
- iv) The ground on which the tower crane stands should have the requisite bearing capacity. Account should be taken of seasonal variations in ground conditions.
- v) Bases for tower cranes and tracks for rail-mounted tower cranes should be firm and level. Tower cranes should only operate on gradients within limits specified by the manufacturer. Tower cranes should only be erected at a safe distance from excavations and ditches.
- vi) Tower cranes should be sited where there is clear space available for erection, operation and dismantling. As far as possible, cranes should be sited so that loads do not have to be handled over occupied premises, over public thoroughfares, other construction works and railways or near power cables.
- vii) Where two or more tower cranes are sited in positions where their jibs could touch any part of the other crane, there should be direct means of communication between them and a distinct warning system operated from the cab so that one driver may alert the other of impending danger.
- viii) The manufacturers' instructions on the methods and sequence of erection and dismantling should be followed. The crane should be tested before being taken into use.
- ix) The climbing operation of climbing tower cranes should be carried out in accordance with manufacturers' instructions. The free-standing height of the tower crane should not extend beyond what is safe and permissible in the manufacturers' instructions.
- x) When the tower crane is left unattended, loads should be removed from the hook, the hook raised, the power switched off and the boom brought to the horizontal. For longer periods or at times when adverse weather conditions are expected, out of service procedures should be followed. The main jib should be slewed to the side of the tower away from the wind, put into free slew and the crane immobilised.
- xi) A windspeed measuring device should be provided at an elevated position on the tower crane with the indicator fitted in the drivers' cab.
- xii) Devices should be provided to prevent loads being moved to a point where the corresponding safe working load of the crane would be exceeded. Name boards or other items liable to catch the wind should not be mounted on a tower crane other than in accordance with the manufacturers' instructions.
- xiii) Tower cranes should not be used for magnet, or demolition ball service, piling operations or other duties, which could impose excessive loading on the crane structure.

#### **6.9.6 Lifting ropes**

- i) Only ropes with a known safe working capacity should be used as lifting ropes.
- ii) Lifting ropes should be installed, maintained and inspected in accordance with manufacturers' instructions.
- iii) Repaired steel ropes should not be used on hoists.
- iv) Where multiple independent ropes are used, for the purpose of stability, to lift a work platform, each rope should be capable of carrying the load independently.

#### **6.10 VEHICLE MOVEMENT**

- 6.10.1 Park vehicles only at designated places. Don't block roads to create hindrance for other vehicles.
- 6.10.2 Don't overload the vehicle.
- 6.10.3 Obey speed limits and traffic rules.



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- 6.10.4 Always expect the unexpected and be a defensive driver.
- 6.10.5 Drive carefully during adverse weather and road conditions.
- 6.10.6 Read the road ahead and ride to the left.
- 6.10.7 Be extra cautious at nights. Keep wind screens clean and lights in working condition.
- 6.10.8 All vehicles used for carrying workers and construction materials must undergo predictive/preventive maintenance and daily checks
- 6.10.9 Driver with proper valid driving license shall only be allowed to drive the vehicle
- 6.10.10 Routes shall be leveled, marked and planned in such a way so as to avoid potential hazards such as overhead power lines and sloping ground etc.
- 6.10.11 While reversing the vehicles, help of another worker should be ensured at all times
- 6.10.12 An unattended vehicle should have the engine switched off
- 6.10.13 Wherever possible one-way system shall be followed
- 6.10.14 Barriers/fixed stops should be provided for excavation/openings to prevent fall of vehicle
- 6.10.15 Load should be properly secured
- 6.10.16 The body of the tipper lorry should always be lowered before driving the vehicle off.
- 6.10.17 Signs/signals/caution boards etc. should be provided on routes .

## **6.11 ELECTRICAL**

### **6.11.1 General Provisions**

- i) Only persons having valid licenses should be allowed to work on electrical facilities.
- ii) No person should be allowed to work on live circuit. The same, if unavoidable, special care and authorisation need to be taken.
- iii) Treat all circuits as "LIVE" unless ensured otherwise.
- iv) Electrical "Tag Out" procedure "MUST" be followed for carrying out maintenance jobs.
- v) Display voltage ratings prominently with "Danger" signs.
- vi) Put caution/notice signs before starting the repair works.
- vii) All electrical equipment operating above 250V shall have separate and distinct connections to earth grid.
- viii) Proper grounding to be ensured for all switch boards and equipment including Portable ones prior to taking into service.
- ix) Make sure that electrical switch boards, portable tools, equipments (like grinding machine etc.) don't get wet during their usage. If it happens, stop the main supply, make the tools dry and then only use them. Check proper earthing.  
All temporary switch boards/ KIOSKS put up at work site should be suitably protected from rain and the level of same should be high enough to avoid contact with water due to water logging.
- x) Don't work wet on electrical system.
- xi) Don't overload the electrical system.
- xii) Use only proper rated HRC fuses.
- xiii) Industrial type extension boards and Plug sockets are only to be used.
- xiv) ELCB for all temporary connections must be provided. Use insulated 3-pin plug tops.

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- xv) All power supply cables should be laid properly and neatly so that they don't cause hindrance to persons working and no physical damage also takes place to the cables during various construction activities.
- xvi) All Power cables to be properly terminated using glands and lugs of proper size and adequately crimped.
- xvii) Use spark-proof/flame proof type electrical fittings in Fire Hazard zones as per area classification under OISD-STD-113.
- xviii) Check installations of steel plates/pipes to protect underground cables at crossings.
- xix) Don't lay unarmored cable directly on ground, wall, roof or trees. All temporary cables should be laid at least 750 mm below ground and cable markers should be provided. Proper sleeves should be provided at road crossings. In case temporary cables are to be laid on wooden poles/steel poles, the minimum cable heights should be 4.5 M.
- xx) Maintain safe overhead distance of HT cables as per Indian Electricity Rules and relevant acts.
- xxi) Don't connect any earthing wire to the pipelines/structures.
- xxii) Don't make any unsafe temporary connections, naked joints/wiring etc.
- xxiii) Ensure that temporary cables are free from cuts, damaged insulation, kinks or improper insulated joints.
- xxiv) Check at periodic intervals that pins of sockets and joints are not loose.
- xxv) Protect electrical wires/equipments from water and naked flames.
- xxvi) Illuminate suitably all the work areas.
- xxvii) All switchboards should be of MS structure only and incoming source should be marked.
- xxviii) Hand lamps should not be of more than 24V rating.
- xxix) Fire extinguishers (DCP/CO<sub>2</sub>/Sand buckets) should be kept near temporary switch boards being used for construction purposes. Don't use water for fighting electrical fires.
- xxx) Insulating mats shall be provided in the front and back end of switch boards.
- xxxi) All parts of electrical installations should be so constructed, installed and maintained as to prevent danger of electric shock, fire and external explosion.  
Periodic checking/certification of electrical safety appliances such as gloves, insulating mats, hoods etc. to be done/witnessed along with maintaining a register at site signed by competent authority.
- xxxii) A notice displaying following, should be kept exhibited at suitable places:
  - a) prohibiting unauthorised persons from entering electrical equipment rooms or from handling or interfering with electrical apparatus;
  - b) containing directions as to procedures in case of fire, rescue of persons in contact with live conductors and the restoration of persons suffering from electric shock;
  - c) specifying the person to be notified in case of electrical accident or dangerous occurrence, and indicating how to communicate with him.
- xxxiii) No other cables/pipes to be laid in trench used for electrical cables.
- xxxiv) Utmost care should be taken while excavating Earth from cable trench to avoid damage or any accident.
- xxxv) Sub-station floor cut-outs meant for switch board installations to be covered wherever installation is incomplete.

**NOTE:** A Residual Current Operated Circuit Breaker (RCCB) or Earth Leakage Circuit Breaker (ELCB), when installed, protects a human being to the widest extent. RCCB or ELCB should be provided as per Indian Electricity Rules.

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### 6.11.2 Inspection and maintenance

- i) All electrical equipment should be inspected before taking into use to ensure suitability for its proposed use.
- ii) At the beginning of every shift, the person using the electrical equipment should make a careful external examination of the equipment and conductors, especially the flexible cables.
- iii) Apart from some exceptional cases, work on or near live parts of electrical equipment should be forbidden.
- iv) Before any work is begun on conductors or equipment that do not have to remain live:
  - a) the current should be switched off by a responsible authorised person;
  - b) precautions should be taken to prevent the current from being switched on again;
  - c) the conductors or the equipment should be tested to ascertain that they are dead;
  - d) the conductors and equipment should be earthed and short-circuited;
  - e) neighbouring live parts should be adequately protected against accidental contact.
- v) After work has been done on conductors and equipment, the current should only be switched on again on the orders of a competent person after the earthing and short-circuiting have been removed and the workplace reported safe.
- vi) Electricians should be provided with approved and tested tools, and personal protective equipment such as rubber gloves, mats etc.
- vii) All conductors and equipment should be considered to be live unless there is a proof of the contrary.
- viii) When work has to be done in dangerous proximity to live parts the current should be cut off. If for operational reasons this is not possible, the live parts should be fenced off or enclosed by qualified staff from the sub-station concerned.

### 6.11.3. Testing

- i) Electrical installations should be inspected and tested and the results recorded.
- ii) Periodic testing of the efficiency of the earth leakage protective devices should be carried out.
- iii) Particular attention should be paid to the earthing of apparatus, the continuity of protective conductors, polarity and insulation resistance, protection against mechanical damage and condition of connections at points of entry.

## 6.12 OFFSHORE

### 6.12.1 General

The isolated nature of offshore installations are hazardous. They call for greater need for safety and survival at offshore. Safety at offshore is safety of installations and safety of personnel. Safety problems and accidents at offshore have high risks due to limited space, helicopter operation, sea transport etc. Following are the general safety guidelines to be followed in addition to the safety guidelines stipulated for specific jobs dealt later on:

- i) Workers should be well trained to do their job independently with high degree of self-control and self-discipline.
- ii) On arrival at offshore, everyone should be briefed about the safety rules to be followed at offshore, evacuation system etc. All personnel should wear overall (dangri), helmet and shoes for personnel protection.

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- iii) In case of emergency, workers should follow instruction of Field Production Superintendent (F.P.S.) In certain cases instructions may be given to abandon the offshore installation and evacuate the persons to safe location.
- iv) To overcome above problems, offshore personnel must receive training for using life saving appliances and other personal survival techniques.
- v) Any person working at offshore should have one person as standby for any eventuality.

#### 6.12.2 Drilling Rigs

- i) Location of jack up rigs should not be less than 5 Kms from shipping route. Orientation of the rig, wind direction etc are required for safe landing of helicopter. Information w.r.t. sea currents, wind speed, Hi-lo tide etc are required for mooring of supply vessels.
- ii) Sea bed condition at every location should be ensured for safety of rig.
- iii) Radio and other communication facilities should be such to maintain contact with base all times.
- iv) During toeing of rig, the rig deck should be clear of load, toeing lines should be in good condition and tensions in various toeing lines should be constantly monitored.
- v) Few steps during toeing are:
  - a) crane booms should be secured to their vesta,
  - b) all hatches and water tight doors should be closed,
  - c) number of personnel on board should be restricted,
  - d) evacuate in case of emergency and operation should be completed preferably in day light.

#### 6.12.3 Drilling

- i) In view of CO<sub>2</sub> and H<sub>2</sub>S gas cut from well, effective ventilation should be provided where drilling is in progress.
- ii) Safety alarm shall be checked in advance in view of failure of ventilation system.
- iii) Suitable sensors for H<sub>2</sub>S and Methane should be function tested time to time and suitable colour code should be given.
- iv) Working areas of the crane should be illuminated during night to avoid accident.
- v) Clear space should be available for despatch and receipt of load and, in particular, basket transfer of passengers. Persons engaged in loading/unloading of materials should be protected from falling into the sea.
- vi) Signal light should be fitted at the top of the jib.
- vii) Crane hook should be fitted with safety latches.
- viii) Experienced person should be engaged in operation of specific equipment like winches, cranes etc.
- ix) At least three cable turns shall always be there on the winch drum.
- x) Adequate communication like walkie talkie, round robin phone should be available between the crane operator, supervisor and helper.
- xi) Crane operation should be completely stopped during helicopter landing/taking off.
- xii) Except for helicopter landing deck, all decks, platforms, bridges, ladders should have rigid and fixed guard rails atleast one meter high and should have one intermediate rail midway between the handrail and 100 mm toe board.
- xiii) Wooden ladders shall not be used at offshore.
- xiv) Flow sensor in the flow line should be ensured for safe working and to avoid blow out.

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- xv) Hydrogen sulphide gas In offshore is of great risk and at 10 ppm (0.001%) concentration in air, a person should not be exposed for more than 8 hours, If concentration is more, then breathing apparatus should be used. Corrosion of equipment is also caused by H<sub>2</sub>S.
- xvi) Portable H<sub>2</sub>S gas detector should be continuously used.

#### 6.12.4 Production Platforms

- i) In case hydrocarbon Is released due to overpressure, leak, overflow, gas blow etc., shut down process to stop flow of hydrocarbon. Prevent ignition of released hydrocarbon and in case of fire shut in the process complex and follow emergency contingency plan.
- ii) Sub surface safety valve (SSSV) below the well head should be actuated during uncontrolled well -flow and they should be regularly checked.
- iii) Surface safety valve or SDV should be checked for no gas leakage from bleed port / flange etc., in the well head area. It should not be in "mechanical override" or bypassed from panel.
- iv) High pressure gas lift lines - blowdown system should be O.K.
- v) Auto actuation of SDVs in the inlet of pressure vessels should be O.K. and in "normal position" from shutdown panels. A record of status of switches normal/bypassed in auto-con\* panels (PSH, PSL, LSL, ILSL) should be maintained.


#### \* Shut Down Panels

- vi) Welders rectifier set and electrical connections to it should be checked and approved by electrical-in- charge for proper electrical safety.
- vii) "SCADA" telemetry system if available should be operational for remote opening and closing of wells at unmanned platforms (through RPMC).
- viii) Local ESD/FSD (near the work site) should be provided for jobs of very critical nature, so that the persons working can access it immediately in emergency for safety. Safety officer should judge the requirement & inform FPS for the same.
- ix) Railings and Gratings etc. in and around work area should be O.K. and inspected to avoid slippage of man into sea.
- x) Emergency shut down (ESD) system is initiated when an abnormal condition is detected. ESD should be checked once in six months.
- xi) Platform should be manned round the clock.
- xii) Welding and cutting work should be regulated by hot work permit.
- xiii) All detectors should be calibrated as per recommendation of the manufacturer.
- xiv) No system should be by-passed which affects the system of platform.
- xv) In H<sub>2</sub>S field platforms, due care shall be taken as per recommendations.
- xvi) Follow the instructions of F.P.S. during stay at platform

#### 6.12.5 Fire Prevention And Control

- i) Provision be made for safe handling and storage of dirty rags, trash, and waste oil. Flammable liquids and chemicals applied on platform should be immediately cleaned.
- ii) Paint containers and hydrocarbon samples, gas cylinders for welding and cutting should be stored properly. Cylinders should be transported in hand-cart.
- iii) Smoking should be restricted and no smoking area should be identified.
- iv) Special attention should be given to crude oil pump seals, diesel and gas engines which are potential source of ignition in the event of failure.

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- v) Fire and smoke detectors i.e. ultraviolet heat, thermal and smoke detector should be function tested once in three months.
- vi) Fire is controlled in offshore by water spraying, Halon, CO<sub>2</sub> flooding, DCP and sprinkler system.
- vii) Foaming agent is applied for controlling fire in liquid hydrocarbon. The system is not effective in gas fire.
- viii) Light weight breathing system should be used.
- ix) The fire control plan at offshore should reveal control station, fire alarms and fire detectors, deluge valves and sprinkler, fire extinguishing appliances, fireman outfit and ventilation system.
- x) Fire fighting equipment should be maintained in ready to use condition.

#### **6.12.6 Life Saving Appliances**

- i) Life boats with a speed of 6 knots and carrying capacity upto 50 persons are used in offshore.
- ii) No. of life boats on one installation should have a capacity to accommodate twice the number of persons onboard installation.
- iii) Launching appliances and life boat equipment should be checked every week.
- iv) Boat landing areas should be adequately illuminated.
- v) Life raft has no power and they rely on drift.
- vi) Life jacket lifts the wearer after entering water.
- vii) Life buoys are used to rescue persons if any person accidentally falls in the sea.
- viii) All life saving appliances should be inspected by the MMD surveyor /sr. officials once a year.
- ix) Every life boat shall be inspected once a week.
- x) Every life boat and life raft should be serviced once a year by a competent authority,

#### **6.12.7 Safety Precautions during Helicopter Transportation**

- i) Passenger briefing regarding safety rules while travelling in helicopter should be carried out before boarding the helicopter.
- ii) Emergency procedure should be briefed to all the passenger In case helicopter is to ditch into the sea.
- iii) Heli-pad should have a non-skid surface. Nylon rope net should be stretched on the deck.
- iv) Proper drainage should be available on helideck.
- v) There should be no obstruction on the helideck itself and within 3 meters of its parameter. Closest super structure above the helideck should have red obstruction light.
- vi) While landing fire crew of two persons should be standby adjacent to helideck.
- vii) Heli-deck should be properly illuminated for night landing.
- viii) During switching off helicopter, persons should not be allowed to go out/ towards helicopter

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## 6.13 DEMOLITION

### 6.13.1. General provisions

- i) When the demolition of any building or structure might present danger to workers or to the public:
  - (a) necessary precautions, methods and procedures should be adopted, including those for the disposal of waste or residues;
  - (b) the work should be planned and undertaken only under the supervision of a competent person.
- ii) Before demolition operations begin:
  - (a) structural details and builders' drawings should be obtained wherever possible;
  - (b) details of the previous use should be obtained to identify any possible contamination and hazards from chemicals, flammables, etc.;
  - (c) an initial survey should be carried out to identify any structural problems and risks associated with flammable substances and substances hazardous to health. The survey should note the type of ground on which the structure is erected, the condition of the roof trusses, the type of framing used in framed structures and the load-bearing walls;
  - (d) a method of demolition should be formulated after the survey and recorded in a method statement having taken all the various considerations into account and identifying the problems and their solutions;
- iii) All electric, gas, water and steam service lines should be shut off and, as necessary, capped or otherwise controlled at or outside the construction site before work commences.
- iv) If it is necessary to maintain any electric power, water or other services during demolition operations, they should be adequately protected against damage.
- v) As far as practicable, the danger zone round the building should be adequately fenced off and sign posted. To protect the public a fence 2m high should be erected enclosing the demolition operations and the access gates should be secured outside working hours.
- vi) The fabric of buildings contaminated with substances hazardous to health should be decontaminated. Protective clothing and respiratory devices should be provided and worn.
- vii) Where plant has contained flammable materials, special precautions should be taken to avoid fire and explosion.
- viii) The plant to be demolished should be isolated from all other plant that may contain flammable materials. Any residual flammable material in the plant should be rendered safe by cleaning, purging or the application of an inert atmosphere as appropriate.
- ix) Care should be taken not to demolish any parts, which would destroy the stability of other parts.
- x) Demolition activities should not be continued under adverse climatic conditions such as high winds, which could cause the collapse of already weakened structures.
- xi) To prevent hazards parts of structures should be adequately shored, braced or otherwise supported.
- xii) Structures should not be left in a condition in which they could be brought down by wind pressure or vibration.
- xiii) Where a deliberate controlled collapse technique is to be used, expert engineering advice should be obtained, and:
  - (a) it should only be used where the whole structure is to come down because it relies on the removal of key structural members to effect a total collapse;

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- (b) it should only be used on sites that are fairly level and where there is enough surrounding space for all operatives and equipment to be withdrawn to a safe distance.
- xiv) When equipment such as power shovels and bulldozers are used for demolition, due consideration should be given to the nature of the building or structure, its dimensions, as well as to the power of the equipment being used.
- xv) If a swinging weight is used for demolition, a safety zone having a width of at least one-and-a-half times the height of the building or structure should be maintained around the points of impact.

#### **6.13.2. Demolition of structural steelwork**

- i) All precautions should be taken to prevent danger from any sudden twist, spring or collapse of steelwork, ironwork or reinforced concrete when it is cut or released.
- ii) Steel construction should be demolished tier by tier.
- iii) Structural steel parts should be lowered and not dropped from a height.

#### **6.14 RADIOGRAPHY**

- 6.14.1 All radiography jobs shall be carried out as per BARC Safety Regulations
- 6.14.2 During field radiography, nearby area around the radiation source should be cordoned off.
- 6.14.3 If the field radiography is to be done at the same location repeatedly, it is advisable to provide either a wire fencing around or a temporary brick enclosure.
- 6.14.4 Special permission/permit should be taken for radiography from area-in-charge.
- 6.14.5 As far as possible, field radiography should be done only during night time when there is little or no occupancy there.
- 6.14.6 Radiation warning signals should be pasted all along the cordoned off area.
- 6.14.7 Entry into the restricted area by unauthorised persons should be strictly prohibited during exposure.
- 6.14.8 The radiation level alongwith the cordon should be monitored by a suitable and well-calibrated radiation survey meter.
- 6.14.9 All personnel working with radiography sources should wear appropriate protective equipment and film badges issued by BARC.
- 6.14.10 Protection facilities such as manipulator rod, remote handling tongs, lead pots, radiation hazard placards and means of cordon off shall be available at each site.
- 6.14.11 The radiography source shall never be touched or handled directly with hands.
- 6.14.12 The package containing radiography cameras and sources should never be carried by public transport like bus, train etc.
- 6.14.13 Radiography sources and cameras, when not in use, should be stored inside a source pit with lock and key arrangement as approved by BARC. The storage room should preferably be located in an isolated area of minimum occupancy and radiation level outside the storage room should not exceed 0.25 mR/hr as per BARC Regulations.
- 6.14.14 In case of an accident (due to loss or of damage to radiography source), action should be taken in line with BARC Safety Rules/Guidelines.

#### **6.15 SAND/SHOT BLASTING/ SPRAY PAINTING**

- 6.15.1 Sand blasting should be used only after approval from competent person.



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- 6.15.2 Air Compressor used for sand/shot blasting/painting should have guard and positioned away from the work place.
- 6.15.3 Exhaust of the prime mover, if IC engine is used, should be directed away from the work place.
- 6.15.4 In case of motor driven compressor, the body of the motor as well as the compressor to be properly earthed.
- 6.15.5 The hoses used for compressed air should be of proper quality, and health of the same to be ensured through regular check/ test.
- 6.15.6 The operator of sand/shot blasting/painting should wear suitable PPE's including mask.
- 6.15.7 Adequate measures to be taken to suppress dust/spray particle.
- 6.15.8 Sand used for sand blasting should be suitably covered & protected from rain/moisture.
- 6.15.9 When these activities are done in confined places, adequate measure to be taken for proper ventilation.


## **6.16 WORK ABOVE WATER**

### **6.16.1 General Provisions**

- i) Where work is done over or in close proximity to water & where possibility of drowning exists, provision should be made for:
  - a) Preventing workers from falling into water;
  - b) The rescue of workers in danger of drowning;
  - c) Safe and sufficient transport.
- ii) Provisions for the safe performance of work over or in close proximity to water should include, where appropriate, the provision and use of suitable and adequate:
  - a) fencing, safety nets and safety harnesses;
  - b) lifebuoys, life jackets and manned boats;
  - c) protection against such hazards as reptiles and other animals.
- iii) Gangways, pontoons, bridges, footbridges and other walkways or work places over water should:
  - a) possess adequate strength and stability;
  - b) be sufficiently wide to allow safe movement of workers;
  - c) have level surfaces free from tripping hazards;
  - d) be adequately lit when natural light is insufficient;
  - e) where practicable and necessary, to prevent danger, be provided with toe-boards, guard rails, hand ropes etc.
  - f) be secured to prevent dislodgment by rising water or high winds;
  - g) if necessary, be equipped with ladders which should be sound, of sufficient strength and length and be securely lashed to prevent slipping.
- iv) All deck openings including those for buckets should be fenced.

### **6.16.2 Rescue & Emergency procedures**


- i) Persons who work over water should be provided with some form of buoyancy aid. Life jackets should provided sufficient freedom of movement, have sufficient buoyancy to bring persons to the surface and keep them afloat face upwards, be easily secured to the body, be readily visible by way of self luminous paint/strip.
- ii) Nobody should work alone on or above water.
- iii) Each worker should be trained in the procedure to be followed in the event of an emergency.

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## 7.0 ADDITIONAL SAFETY PRECAUTION FOR UNITS WITH HYDROCARBONS

In addition to general safety precautions as outlined above for the activities in Clause 6.0, following additional safety precautions need to be taken for the sites within the operating area or nearby, where presence of Hydrocarbons cannot be ruled out.

- i) No job shall be carried out without a valid permit. Permit should be in line with OISD-STD-105 "Work Permit System".
- ii) Smoking should be prohibited in all places containing readily combustible or flammable materials and "No Smoking" notices be prominently displayed.
- iii) In confined spaces and other places where flammable gases, vapours or dusts can cause danger, following measures should be taken:
  - (a) only approved type electrical installations and equipment, including portable lamps, should be used;
  - (b) there should be no naked flames or source of ignition;
  - (c) oily rags, waste and clothes or other substances liable to spontaneous ignition should be removed without delay to a safe place;
  - (d) ventilation should be provided.
- iv) Regular inspections should be made of places where there are fire risks. These include the vicinity of heating appliances, electrical installations and conductors, stores of flammable and combustible materials, welding and cutting operations.
- v) Welding, flame cutting and other hot work should only be done after issuance of work permit in line with the requirement of OISD-STD-105 after appropriate precautions, as required, are taken to reduce the risk of fire. For carrying out other jobs also, OISD-STD-105 should be followed strictly.
- vi) Fire-extinguishing equipment should be well maintained and inspected at suitable intervals by a competent person. Access to fire-extinguishing equipment such as hydrants, portable extinguishers and connections for hoses should be kept clear at all times.
- vii) All supervisors and a sufficient number of workers should be trained in the use of fire-extinguishing equipment, so that adequate trained personnel are readily available during all working periods.
- viii) Audio means to give warning in case of fire should be provided where this is necessary to prevent danger. Such warning should be clearly audible in all parts of the site where persons are liable to work. There should be an effective evacuation plan so that all persons are evacuated speedily without panic and accounted for and all plant and processes shut down.
- ix) Notices should be posted at conspicuous places indicating:
  - (a) the nearest fire alarm;
  - (b) the telephone number and address of the nearest emergency services.
- x) The work site shall be cleared of all combustible materials, as Sparks and molten metal coming from the welding job can easily ignite combustible materials near or below the welding site. If the combustible materials cannot be removed from the area, the same shall be properly shielded.
- xi) A dry chemical type fire extinguisher shall be made available in the work area. Also fire protection facilities like running hoses etc. as per permit should be complied with.
- xii) Wherever required, welding screens shall be put up to protect other equipment in adjoining areas against flying sparks. Material used should be metal/asbestos/water curtain.
- xiii) Welding or cutting of vessels/ equipments used in Hydrocarbon/ hazardous chemicals shall be done after proper gas freeing and verifying the same with the explosive-meter.

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- xiv) The confined space/equipment shall be gas freed and cleaned.
- xv) Absence of any toxic gas and any flammable gas above explosion limit shall be ensured with the help of gas detection instrument and explosive meter respectively.
- xvi) Used and hot electrode stubs shall be discarded in a metal bucket.
- xvii) Use approved and certified flame arrestors for vehicles.
- xviii) Work permit to be obtained, if construction work is carried out within existing operating area.

## 8.0 FIRST AID

First aid facilities should be provided in line with various statutory regulations like factory act etc. However following care should be taken:

- i) First aid, including the provision of trained personnel should be ensured at work sites. Arrangement should be made for ensuring the medical attention of the injured workers. First aid box should be as per the Factory rules.
- ii) Suitable rescue equipment, like stretchers should be kept readily available at the construction site.
- iii) First-aid kits or boxes, as appropriate and as per statutory requirements, should be provided at workplaces and be protected against contamination by dust, moisture etc.
- iv) First-aid kit or boxes should not keep anything besides material for first aid in emergencies.
- v) First-aid kits and boxes should contain simple and clear instructions to be followed, be kept under the charge of a responsible person qualified to render the first aid and be regularly inspected and stocked.
- vi) Where the work involves risk of drowning, asphyxiation or electric shock, first-aid personnel should be proficient in the use of resuscitation and other life saving techniques and in rescue procedures.
- vii) Emergency telephone numbers of nearby Hospitals, Police, Fire Station and Administration should be prominently displayed.

## 9.0 DOCUMENTATION

The intention of keeping documentation of all types of accident(s) is to prevent recurrence of similar accident(s). All accidents should be reported as per OISD Guidelines (OISD-GDN-107) and Factories act, 1948.

All accidents (major, minor or near miss) should be investigated, analysed and recommendations should be documented along with implementation status.

All related data should be well-documented and further analysis highlighting the major cause(s) of accidents be done. This will help in identifying thrust areas and training needs for prevention of accidents.

## 10.0 SAFETY AWARENESS & TRAINING

Safety awareness to all section of personnel ranging from site-in-charge to workmen helps not only preventing the risk but also build up the confidence. Time and expenditures also get saved as a result.

Safety awareness basically seeks to persuade/inform people on safety besides supplementing skill also. Awareness programme may include followings:

- i) **Poster:** Posters with safety slogan in humorous, gruesome demonstrating manner may be used to discourage bad habits attributable to accidents by appealing to the workers'


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pride, self-love, affection curiosity or human aspects. These should be displayed in prominent location(s).

- ii) **Safety Sign Boards:** Different type of message of cautioning, attention, notice etc. should be displayed at the appropriate places for learning/ awareness of the workmen while working at site.
- iii) **Films & Slides:** Film(s) narrating the accident including the causes and possible remedial ways of preventing the recurrence of a similar accident should be displayed at regular intervals. Slides consisting main points of the film show may also be shown to workers.
- iv) **Talks, lectures & conferences:** The success of these events would depend much on audience's understandings of the speaker (s). The speakers are to be knowledgeable and good presenter. Speakers should know to hold the attention and to influence the audiences.
- v) **Competitions:** Organise competition(s) between the different deptts/categories of workers. The sense of reward/recognition also will improve safety awareness and result in enhancing safety levels.
- vi) **Exhibitions:** Exhibitions also make the workers acquainted with hazards and means of preventive measures.
- vii) **Safety Publication:** Safety publications including pocket books dealing with ways of investigation and prevention in the field of safety and so on, may be distributed to workers to promote the safety awareness.
- viii) **Safety Drives:** From time to time, an intensive safety drive by organising a safety day or a safety week etc. should be launched.
- ix) **Training:** Training for covering the hazards for different trade should be imparted. Training should also include the specific hazards related to a job in addition to the general safety training as has been dealt in various chapters and should include all workers. Reference may be drawn from OISD-STD-154.


## 11.0 REFERENCES

- i) *Factory Act, 1948*
- ii) *Indian Electricity Rules*
- iii) *Safety & Health in Construction by ILO*
- iv) *The Building & Other Construction Workers (Regulation, Employment and Conditions of Service) Act 1996*

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**ANNEXURE I****LIST OF SAFETY CODES FOR CIVIL WORKS PUBLISHED BY BUREAU OF INDIAN STANDARDS**

Sr.no	Code No.	Title
01.	IS : 818	Code of Practice for Safety and Health Requirements in Electric and Gas Welding and Cutting Operations – First Revision.
02.	IS : 875	Code of practice for Structural safety of buildings: Masonry walls
03.	IS : 933	Specification for Portable Chemical Fire Extinguisher, Foam Type – Second Revision.
04.	IS : 1179	Specification for Equipment for Eye and Face Protection during Welding – First Revision.
05.	IS : 1904	Code of practice for Structural safety of buildings: Shallow foundations
06.	IS : 1905	Code of practice for Structural safety of buildings: Masonry walls
07.	IS : 2171	Specification for Portable Fire Extinguishers, Dry Powder Type – Second Revision.
08.	IS : 2361	Specification for Building Grips – First Revision.
09.	IS : 2750	Specification for Steel Scaffoldings.
10.	IS : 2925	Specification for Industrial Safety Helmets – First Revision.
11.	IS : 3016	Code of Practice for Fires Precautions in Welding and Cutting Operations – First Revision.
12.	IS : 3521	Industrial safety belts and harnesses
13.	IS : 3696 – Part I	Safety Code for Scaffolds and Ladders : Part I – Scaffolds.
14.	IS : 3696 – Part II	Safety Code for Scaffolds and Ladders : Part II – Ladders.
15.	IS : 3764	Safety Code for Excavation Work.
16.	IS : 4014 -Part I & II	Code of practice for Steel tubular scaffolding
17.	IS : 4081	Safety Code for Blasting and Related Drilling Operations.
18.	IS : 4082	Recommendations on staking and storage of construction materials at site
19.	IS : 4130	Safety Code for Demolition of Buildings – First Revision.
20.	IS : 4138	Safety Code Working in Compressed Air-First Revision
21.	IS : 4756	Safety code for Tunneling works
22.	IS : 4912	Safety requirements for Floor and Wall Openings, Railings and toe Boards –First Revision.
23.	IS : 5121	Safety Code for Piling and other Deep Foundations.
24.	IS : 5916	Safety Code for Construction involving use of Hot Bituminous Materials.
25.	IS : 5983	Specification for Eye Protectors – First Revision.
26.	IS : 6922	Structures subject to underground blasts, criteria for safety and design of

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27. IS : 7155 Code of recommended practices for conveyor safety  
 28. IS : 7205 Safety Code for Erection on Structural Steel Works.

Sr.no	Code No.	Title
29.	IS : 7069	Safety Code for Handling and Storage of Building Materials.
30.	IS : 7293	Safety Code for Working with Construction Machinery.
31.	IS : 7323	Guidelines for operation of Reservoirs
32.	IS : 7969	Safety code for handling and storage of building material
33.	IS : 8758	Recommendation for Fire Precautionary Measures in construction of Temporary Structures and Pandals.
34.	IS : 8989	Safety Code for Erection of Concrete Framed Structures.
35.	IS : 9706	Code of Practices for construction of Arial ropeways for transportation of material
36.	IS : 9759	Guidelines for de-watering during construction
37.	IS : 9944	Recommendations on safe working load for natural and man-made fibre roap slings
38.	IS : 10291	Safety code for dress divers in civil engineering works
39.	IS :10386 – Part I	Safety Code for Construction, Operation and Maintenance for River Valley Projects.
40.	IS :10386 – Part II	Safety Code for Construction, Operation and Maintenance of River Valley Projects.
41.	IS : 11057	Code of practice for Industrial safety nets
42.	IS : 13415	Code of Practice on safety for Protective barriers in and around building
43.	IS : 13416	Recommendations for preventive measures against hazards at working places

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## **CONTRACTOR SAFETY**

**OISD – GUIDELINES – 207**



**Oil Industry Safety Directorate  
Government of India**

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## **CONTRACTOR SAFETY**

**Prepared by  
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## Preamble

Indian petroleum industry is the energy lifeline of the nation and its continuous performance is essential for sovereignty and prosperity of the country. As the industry essentially deals with inherently inflammable substances throughout its value chain – upstream, midstream and downstream – Safety is of paramount importance to this industry as only safe performance at all times can ensure optimum ROI of these national assets and resources including sustainability.

While statutory organizations were in place all along to oversee safety aspects of Indian petroleum industry, Oil Industry Safety Directorate (OISD) was set up in 1986 Ministry of Petroleum and Natural Gas, Government of India as a knowledge centre for formulation of constantly updated world-scale standards for design, layout and operation of various equipment, facility and activities involved in this industry. Moreover, OISD was also given responsibility of monitoring implementation status of these standards through safety audits.

In more than 25 years of its existence, OISD has developed a rigorous, multi-layer, iterative and participative process of development of standards – starting with research by in-house experts and iterating through seeking & validating inputs from all stake-holders – operators, designers, national level knowledge authorities and public at large – with a feedback loop of constant updation based on ground level experience obtained through audits, incident analysis and environment scanning.

The participative process followed in standard formulation has resulted in excellent level of compliance by the industry culminating in a safer environment in the industry. OISD – except in the Upstream Petroleum Sector – is still a regulatory (and not a statutory) body but that has not affected implementation of the OISD standards. It also goes to prove the old adage that self-regulation is the best regulation. The quality and relevance of OISD standards had been further endorsed by their adoption in various statutory rules of the land.

Petroleum industry in India is significantly globalized at present in terms of technology content requiring its operation to keep pace with the relevant world scale standards & practices. This matches the OISD philosophy of continuous improvement keeping pace with the global developments in its target environment. To this end, OISD keeps track of changes through participation as member in large number of International and national level Knowledge Organizations – both in the field of standard development and implementation & monitoring in addition to updation of internal knowledge base through continuous research and application surveillance, thereby ensuring that this OISD Standard, along with all other extant ones, remains relevant, updated and effective on a real time basis in the applicable areas.

Together we strive to achieve NIL incidents in the entire Hydrocarbon Value Chain. This, besides other issues, calls for total engagement from all levels of the stake holder organizations, which we, at OISD, fervently look forward to.

Jai Hind!!!

**Executive Director  
Oil Industry Safety Directorate**

## FOREWORD

The Oil Industry in India is nearly 100 years old. Due to various collaboration agreements, a variety of international codes, standards and practices are in vogue. Standardisation in design philosophies, operating and maintenance practices at a national level was hardly in existence. This lack of uniformity coupled with feedback from some serious accidents that occurred in the recent past in India and abroad, emphasized the need for the industry to review the existing state of art in designing, operating and maintaining oil and gas installations.

With this in view, the Ministry of Petroleum and Natural Gas in 1986 constituted a Safety Council assisted by the Oil Industry Safety Directorate (OISD) staffed from within the industry in formulating and implementing a series of self-regulatory measures aimed at removing obsolescence, standardizing and upgrading the existing standards to ensure safer operations. Accordingly, OISD constituted a number of functional committees comprising of experts nominated from the industry to draw up standards and guidelines on various subjects.

The present guideline on "Contractor Safety" was prepared by the Functional Committee on "Contractor Safety". This guideline is based on the accumulated knowledge and experience of industry members and various national and international codes and practices.

It is hoped that provisions of this document, if implemented objectively, may go a long way to improve the safety to reduce accidents in Oil and Gas industry. Users are cautioned that no document can be substitute for the judgement or responsible and experienced engineer.

Suggestions are invited from the users after it is put into practice to improve the document further. Suggestions for amendments, if any, to this standard should be addressed to:

The Coordinator  
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This guideline in no way supercedes the statutory regulations of Chief Controller of Explosives (CCE), Factory Inspectorate or any other statutory body, which shall be followed as applicable.

## **NOTE**

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These documents are intended to supplement rather than replace the prevailing statutory requirements.

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In addition to the above, several other experts from Industry contributed in the preparation, review and finalisation of this Guideline.

## CONTRACTOR SAFETY

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## CONTRACTOR SAFETY

### 1.0 INTRODUCTION

Oil and Gas operations like Drilling, Production, Refining, Transportation and Distribution are inherently hazardous. A large number of contractor workforce is deployed to carry out construction, maintenance and other jobs. The analysis of the incidents in the Petroleum Sector indicates that a large number of incidents involved contractor workforce and have resulted in either casualty or injury besides leading to property damage and operational interruptions and environmental degradation.

In order to improve the safety levels of oil installations, the contractor safety is of utmost importance and there is a need to institute a good contractor safety system.

### 2.0 SCOPE

This standard covers broadly the guidelines on the management system for enhancing the safety levels of the contractor workforce deployed in construction, maintenance and operation activities in the hydrocarbon industry.

The safety precautions to be taken while carrying out different activities during construction / maintenance have separately been covered in OISD-GDN-192 on "Safety Practices during Construction".

### 3.0 DEFINITIONS

#### **Work station/Work site**

A place/unit where the job is carried out by contractor/executing agency in specified manner with safety, during construction phase or in operation phase.

#### **Owner**

Any physical or legal person/entity for whom prescribed job is carried out.

It shall also include owner's designated representative / consultant /nominee / agent, authorised from time to time to act for and on its behalf, for supervising / co-ordinating the activities of the contractor/execution agency.

#### **Contractor / Executing Agency**

A physical or legal person/entity having contractual obligation with the owner, and who deploys one or more worker on the site.

#### **Contractor Worker**

It covers all workmen who are either self-employed or employed through contractor, the casual workers and includes contractor's supervisor, working at a location / site employed directly by Owner or through their contractor.

#### **Incident**

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An incident is an unplanned, uncontrolled, unintended or unforeseen event, caused by unsafe acts and / or unsafe conditions, resulting in or having the potential to result in personal injury and/or property damage.

### **Consultant**

Consultant is a physical or legal person/entity engaged by owner to provide the consultancy services to owner for management of the contract on their behalf or as specified.

### **Designer**

Designer is a physical or legal person / entity engaged by owner to provide design services of a work site.

### **Owner's Representative / Engineer In Charge**

The Owner's representative/Engineer-in-charge is the one, who has been designated by the owner to manage the contract.

### **Owner's Safety Officer**

A properly trained person designated by owner who ensures safety at work site.

## **4.0 DUTIES/ RESPONSIBILITIES**

### **4.1 OWNER**

#### **4.1.1 Owner's Management**

The commitment to safety has to be emphasised by the owner by practice by its own management and employees at all levels. The duties and responsibilities of owner should include:

- i) To institute a mechanism for identification and compliance of all applicable statutory rules & regulations (Refer Annexure I for a list of few important Bureau of Indian Standards & statutory regulations).
- ii) To provide specific information to contractors and make workers aware on the hazards associated with job assigned.
- iii) To provide information about Risk Mitigation measures available at the place of work.
- iv) To provide the contractor with information on Owners Safety Plan & Regulations, Emergency Management Plan, lockout/ tag out procedure, confined space entry, work permit system, excavation/trench permit system etc.
- v) To specify rules (e.g. for security including access arrangements) and safety rules such as fire protection, first aid arrangements, Work Permit systems etc.
- vi) To provide comprehensive list of statutory regulations / standards and specification, to be complied with during execution of contract, in the tender document itself.

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- vii) To ensure training of the contractor workforce, medical examination, and proper usage of safety equipment.
- viii) To specify the requirements of Health, Safety and Environment (HSE) (commensurate with the nature of job) in Pre- Qualification criteria.
- ix) To designate Engineer-in-charge and safety officer.
- x) To arrange for a multi-disciplinary safety audit team to conduct surprise / regular safety audits and monitor the implementation of the recommendations.
- xi) To introduce suitable schemes for motivation of the contractor worker to adhere to safety guidelines.
- xii) To review safety practices & their implementation through periodic surprise visit of the work sites and monthly review meeting.
- xiii) To develop the HSE plans and incorporate the same in the tender document.
- xiv) To liaise with external agencies like press, public etc and with law enforcement, regulatory, statutory agencies etc.
- xv) To report to statutory agencies on safety compliance and accidents, if any.

#### **4.1.2 Owner's Representative/Engineer-in-charge**

The duties & responsibilities of engineer-in-charge should include:

- i) To ensure that all Contract requirements including Health, Safety, Environment & Security are complied with.
- ii) To ensure that contractor workforce deployed is adequately qualified, trained and in state of health to commensurate with the requirements of the job.
- iii) To ensure that the Tools / Tackles and Machinery being used are properly tested and are in sound working conditions and necessary resources proposed for providing safe place of work and necessary PPE are being used.
- iv) To take the required necessary corrective action immediately upon noticing or receipt of a report on noncompliance or any such condition which poses a threat to health, safety or environment. If during the course of execution of the contract, any situation of non-compliance with the contractor's safety and health plan are noticed / reported, the same will be taken up with the contractor for correction. In the event of repeated non compliance, suitable action to be initiated as per the contract.
- v) To ensure that the incidents are reported to all concerned within stipulated timeframe.
- vi) To ensure submission of a plan for safe working (Method Statement) from contractor and approval of the same by competent person / department.
- vii) To ensure that Work Permit System in line with OISD-STD-105 is adhered to.

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- viii) To ensure availability of all the documentation needed for the execution of contract.
- ix) To ensure that the quality controls have been maintained during fabrication/erection and all jobs required for safe commissioning have been carried out.
- x) To ensure safe dismantling of all temporary facilities/connections put up by the contractor, after completion of work.
- xi) To compile a report on the safety performance (at the conclusion of each contract or periodically such as annually for renewable and long-term contracts), which is to be considered in future when selecting contractors.
- xii) To ensure that the Consultant, contractor and sub-contractor employ / designate qualified & trained Safety Engineer / Officer commensurate with requirement of the job.

#### **4.1.3 Owner's Safety Officer**

The duties & responsibilities of the Owner's Safety Officer should include:

- i) To assess the hazards associated with jobs in consultation with all concerned and establish safe working procedure including identification of the escape routes.
- ii) To establish a written record of factors which can cause injuries and illnesses.
- iii) To undertake routine/surprise inspections of all work sites and identify unsafe conditions & practices, if any. Check for compliance of the safety practices being followed with approved HSE Plan.
- iv) To investigate promptly the incidents (including near-miss) in order to advise corrective and/or preventive action.
- v) To maintain statistical information for use in analyzing all phases of incidents and events involving contract personnel.
- vi) To provide the means for complying with the reporting requirements for occupational injuries and illnesses.
- vii) To check whether the proposed working arrangements are safe and satisfactory, particularly at the interface between the contractor's planned work and owner's existing facilities.
- viii) To communicate to the Contractor the imposed restrictions which may affect the work/personnel such as the temporary closure of a corridor or electrical isolation of equipment.
- ix) To review and monitor the contractor's adherence to approved HSE plan and all applicable environmental, health, and safety requirements.
- x) To ensure that Consultant, Contractor's Managers, Supervisors and workmen at all levels (who will plan, monitor, oversee and carry out the work) undergo Health, Safety and Environmental training in their respective responsibilities with respect to conducting work safely and with due regard for the protection of the environment.
- xi) To identify areas of operations where specialized training is required to deal with potential dangers.

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- xii) To document and to bring to the attention of the Owner's Supervisor and Contractor any non-compliance/violation of the safety norms against approved safety and health plan or safety and health requirements and also raise these issues in the Safety Committee Meetings.
- xiii) To take part in Tool Box Meetings at random and to ensure maintenance of records.

## **4.2 CONTRACTOR**

### **4.2.1 Contractor's Management**

Duties & responsibilities of the contractor should include the following:

- i) To implement safe methods and practices, deploy appropriate machinery, tools & tackles, experienced supervisory personnel and skilled work force etc. required for execution.
- ii) To prepare a comprehensive and documented plan for implementation, monitoring and reporting of Health, Safety and Environment (HSE) and implement the same after its approval.
- iii) To nominate qualified & trained Safety Engineers / Officers reporting to the Site in charge, for supervision, co-ordination and, liaison for the implementation of the safety plan.

Similar HSE Plan should be implemented at the sub- contractor's or supplier's site /office. However the compliance with the HSE Plan is to be the sole responsibility of the Contractor.

- iv) To arrange suitable facilities in liaison with the owner for drinking water, toilets, lighting, canteen, crèche etc as applicable as per Laws/ Legislation at site and also arrange for workmen compensation insurance, third party liability insurance, registration under ESI / PF act etc as applicable.
- v) To arrange for fire protection equipment as per the advice of owner.
- vi) To ensure that its employees have completed appropriate health and safety training as required by the statute / regulation and also as per requirements of the Owner / Consultant. The documentation of such training imparted to all its employees should be maintained and produced for verification as required.
- vii) To comply with all the security arrangements of owner.
- viii) To ensure that the plant and equipment used on-site by him / his employees is correctly registered, controlled and maintained in sound working condition.
- ix) To ensure availability of First Aid boxes and First Aid trained attendant.
- x) To ensure that all incidents including near misses are reported to all concerned immediately.

In construction projects where sub-contractors are engaged, the contractor should set out the responsibilities, duties and safety measures that are expected of the sub-contractor's workforce.

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These measures should include the provision and use of specific safety equipment, methods of carrying out specific tasks on safety and the inspection and appropriate use of tools.

The responsibilities indicated separately under contractor's Supervisor, Safety Officer and contract worker are contractually that of the Contractor and legally binding on the Contractor only. However the specific detailing as above has been given separately for guidance and operational convenience.

The selection of sub contractors, if employed, should be approved by the owner. Sub-contractor should comply fully with all safety rules and conditions applicable to the main contractor.

#### **4.2.2 Contractor's Supervisor / Safety Officer**

Duties & responsibilities of the Contractor's supervisor/Safety Officer should include the following:

- i) To ensure strict compliance with work permit system by carrying out work only with appropriate work permits and after ensuring that all safety precautions / conditions in the permit are complied with and closing the same after job completion.
- ii) To ensure that required guards and protective equipment are provided, used, and properly maintained.
- iii) To ensure that tools and equipment are properly maintained and tested.
- iv) To plan the workload and assign workers to jobs in commensuration with their qualification, experience and state of health.
- v) To ensure that the workers understand the work to be done, the hazards that may be encountered, and the proper precautions/procedure for carrying out the work safely.
- vi) To take immediate action to correct any violation of safety rules observed or reported.
- vii) To ensure that the workers likely to be exposed to hazardous chemicals/materials have access to appropriate Material Safety Data Sheets (MSDS), wherever applicable, and provide necessary mitigation measures.
- viii) To ensure inspection and certification of all tools (hand operated as well as mechanically operated) being used. Defective tools shall be immediately removed.
- ix) To ensure that appropriate warning signboards or tags are displayed.
- x) To ensure that workers have proper training for their job assignments, including use of appropriate PPE and first aid fire fighting equipment.
- xi) To comply with all applicable safety and health standards, rules, regulations and orders issued by competent authority pertaining to the assigned activities.
- xii) To ensure that sick and/or injured workers receive appropriate first aid and/or medical attention.
- xiii) To report each incident and/or injury in accordance with established procedures and assist in investigation.

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- xiv) To take necessary action for correction of any unsafe act / condition at the workplace. However, in case the same is outside the limits of authority, it should be reported to Owner's Engineer-in-charge immediately.
- xv) To conduct daily inspections to ensure compliance with safety standards, codes, regulations, rules and orders applicable to the work concerned.
- xvi) To ensure that workers under their supervision are aware of their responsibilities.
- xvii) To arrange daily tool box meeting and regular site safety meetings and maintain records in the required formats. (Refer Clause 5.9.1)
- xviii) To arrange stand-by supervisor/ worker where situations so demand.
- xix) To develop methods and display banners/posters to inculcate safety consciousness.
- xx) To attend training and ensure participation of his workers for training as per schedule arranged by the Owner / Consultant and keeps himself updated.
- xxi) To keep records of number of persons working at the site.
- xxii) To keep a constant liaison with Engg-in-charge / owners' representative on safety issues.
- xxiii) To maintain accident & nearmiss record in a register.
- xxiv) To ensure that only PPE of the approved type by owner is used at site.

A separate Safety Officer should be assigned, where more than 100 workers are employed at site. For smaller jobs, the supervisor should assume the role of the safety officer also.

#### **4.2.3 Contract workers**

The duties & responsibilities of the contractor worker should include the following:

- i) To perform work safely as per the job requirement and instructions.
- ii) To inform all concerned regarding unsafe conditions/acts.
- iii) To wear PPE as stipulated and necessary for the job.
- iv) To inform promptly to their supervisor regarding all work related incidents resulting in personal injury, illness and/or property damage.
- v) To take all necessary and appropriate safety precautions to protect themselves, other personnel and the environment.

#### **4.3 CONSULTANT**

The activities and responsibilities covered under the scope of the Owner may be delegated to the consultant in those cases as applicable, based on the respective contract conditions. The primary

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responsibility of Consultant is to ensure compliance with agreed HSE plan for the contract by the Contractor. However those responsibilities conferred on Owner as Principal employer cannot be delegated to consultant.

Where the consultant's scope involves Engineering and Design, those factors under **Designer** should also be applicable.

In all cases, the Consultant's scope should include submission of latest HSE plans for work under his and Contractor's purview and implementing the same till job completion. It should conform to owner's overall HSE plan. This should include Guidelines and Implementation and Reporting Methodology to be followed with required report formats.

Adequate number of Safety Officers shall be provided by the Consultant with necessary skills required for the work to be performed.

The Consultant shall review the documents submitted by the contractor and advise owner on acceptance as well as advise suitability and number of Contractor's safety officers / supervisors.

#### **4.4 DESIGNER**

The Process Designer should identify all hazards and risks likely to be encountered during fabrication, erection including dismantling, Pre-commissioning, commissioning and Performance run to meet the Guarantees and advise the risk mitigation measures.

All the hazards and safety measures to be adopted while handling Dangerous chemicals and Catalysts should be detailed by the Process Licensor and the same should be again included in the scope of the suppliers. Specific write ups/MSDS should be obtained from Patented single source suppliers also.

Designs should recognize, include and apply safe practice during preparation, construction and subsequent operational use and maintenance after completion of the Project.

All documents including drawings and calculations are to be originated, checked and approved in accordance with latest international codes, standards, specifications and design basis philosophy.

**Preferred use of low risk materials, policy on hazardous substances, preferred use of low noise and dust-suppressed equipment etc. should be encouraged.**

#### **5.0 SAFETY MANAGEMENT**

##### **5.1 JOB SAFETY ANALYSIS (JSA)**

Job safety analysis (JSA) provides a mechanism by which the contractor, safety officer or supervisor take a detailed look at how an individual task is performed and its inherent hazards and preventive measures. This procedure helps in integrating accepted safety and health principles and practices into a particular operation. In a JSA, each step of the job is examined to identify potential hazards and to determine the safest way to do the job.

A job safety analysis includes five steps as below:

- Select a job
- Break the job down into a sequence of steps

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- Identify the hazards against each of these steps (based on knowledge of accident, causes of injuries and personal experience) and determine the preventive measures to overcome these hazards
- Apply the controls to the hazards
- Evaluate the controls

## 5.2 CRITERIA OF SELECTION OF A CONTRACTOR

“Contractor Safety” can be ensured to a large extent if competent agency for execution of assignment or job, based on HSE system agreed upon by owner, is selected. It is necessary to assess his capabilities and competencies to perform work safely.

A databank should be developed for all the contractors for their past performance on HSE aspects. An attempt should also be made to get similar data from other similar industries.

The data required will depend upon complexity involved in the job and type / size of resources required. Format needs to be suitably developed depending upon size, nature of the job & hazard associated therein. The format designed should also take care of the skill required to carry out the job.

Performance review is essential for all type of contractors. It helps in recording actual performance/experience with contractors while the contract is in progress. It is essential that resources agreed as per the contract are reviewed at mobilization stage for ensuring compliance from the day one and thorough effective supervision / monitoring system are at place.

This activity also helps in taking timely action in case of unsatisfactory performance to correct the situation and ensure safe work during execution period and deciding about suitability of the contractor for future jobs.

The periodicity of such performance review will depend upon size/type/complexity of contract. However, the performance should be reviewed at least at mobilisation stage and at the end of the contract.

## 5.3 SITE PLANNING AND LAYOUT

Before starting the construction/maintenance job at existing workplace in operation or green field locations, following should be ensured: -

- i) Details regarding location of workshop/ fabrication yard, site office, stores, laboratory, electrical installations, placement of construction machinery, medical and welfare facilities, lighting underground and above ground piping route, cable route etc. should be decided prior to commencement of the work in consultation with owner / Consultants and implementation should be ensured. Layout should be displayed at strategic locations.
- ii) The resources required to meet any emergency situations like fire fighting, first aid etc. should be planned and mobilized as per the job requirement.
- iii) The sequence or order in which work to be done and any hazardous operations or processes should be identified.
- iv) Free access to site shall be provided with clear roads, passage, gangways, staircases etc. Access to construction site should be leveled, open and free from any obstructions

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like construction material or scrap/waste, exposure to hazards such as falling materials, material handling equipment and vehicles. Any pit or ditch shall be covered or barricaded.

- v) Arrangements should be made to maintain good housekeeping at site. Scrap and debris generated out of construction work should be removed/disposed off at a regular interval as directed. Emergency exit should be provided in case of blockade of primary exit.
- vi) Suitable warning notices and also the routes to and from welfare facilities should be displayed prominently.
- vii) Pedestrian pathways and routes for vehicular traffic (light/heavy vehicles including material handling equipment) should be earmarked.
- viii) Artificial lighting to be provided at places where work continues or workers pass by after sunset or in case natural light is insufficient like confined spaces.
- ix) Keep all equipment /machines under cover to prevent them from dust, rain/flood water, heat etc. and follow storage instructions as applicable for each of them.

#### **5.4 GATE ENTRY PROCEDURE**

Gate entry at any site / workplace / unit is to be restricted to ensure entry of only authorised persons / vehicles.

##### **5.4.1 Entry procedure for all contractor worker should be as follows:**

###### **A. Issuance of Pass**

- i) The passes are to be issued after the owner's representative/engineer-in-charge forwards the application of the contractor providing complete details of the workers being engaged. The contractor may be asked to submit Character & Antecedents (C&A) verification of individual worker from concerned authorities.
- ii) With regard to issuance of passes for all vehicles including material handling equipment, owner's representative / engineer-in-charge should forward the application only after ensuring that all documents pertaining to the fitness of the vehicle/equipment and valid driving license of the driver etc. are available.
- iii) The passes should be serially numbered with address, contractor name, identification mark, signature of the worker etc.
- iv) Special colour code for passes should be used for persons entering different areas like Administrative Block, Unit area, Project Area (wherever applicable).
- v) Contractor workers engaged on routine basis for long periods should be provided with monthly photo pass.
- vi) Special permit is required separately for working beyond normal working hours and holidays.

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## B. Gate Entry

- i) Entry of the contractor's employees should be permitted with valid gate passes only.
- ii) Entry of contractor's workers should be allowed in presence of authorized representative of contractor.
- iii) Records of persons at the time of entry/exit should be maintained.
- iv) At the entry gate of the location, a physical checking for non-carrying of lighter, matchboxes, explosives etc. should be carried out.
- v) Gate passes/Identity Cards should be displayed on persons at all the times.
- vi) For Mega-projects at existing / operating installations, it is preferable to have a separate gate for entry of contractor workers and also the project areas should be segregated fencing from operational area by fencing / other physical means.
- vii) No vehicle should be allowed to enter in an operational area without proper flame arrestor.
- viii) Awareness on Safety through training / posters etc. highlighting Do's and Don'ts should be spread within entire contractor workforce. Video/Audio tapes on Safety Topics should be played preferably.
- ix) For occasionally engaged labourers such as for material handling etc., spot photograph may be preferably taken with two copies (one for preparing the pass and other for attachment with gate register). Specific advice and recommendation of User Department may be given due cognizance. Relevant details are to be written. The pass should be collected back at the gate after day's work.

### 5.4.2 Tank Truck Loading (TTL) Operation :

At the loading / unloading location, a large no. of Tank Trucks of petroleum products enter the installation. Crew members are generally not regular entrants. The procedure should be as follows:

- i) The gate pass should be issued to the individual crew members on written request of the transporter mentioning TT registration nos., License and certificate of training as per MV rule 9.
- ii) Character & Antecedent (C & A) verification of the TTL crew through local police is to be done preferably and record maintained.
- iii) For loading/unloading purpose, register entry at security gate is made before allowing entry into the premises with recording of names of crew members, time of entry, pass Sr. No., TT no. etc.
- iv) For loading/unloading, crew is allowed entry alongwith TT only, after checking of TT from explosive/security point of view.
- v) Out time, invoice no., Destination etc., are recorded while TTs go out of the security gate.

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## 5.5 TRAINING

Training is to educate contractor workforce on various hazards associated with the job/workplace and on the respective preventive / mitigation measures to avoid untoward incidents.

- i) Workers should be adequately and suitably:
  - (a) informed of potential safety and health hazards to which they may be exposed to at their workplace;
  - (b) instructed and trained in the measures available for the prevention, control and protection against those hazards.
- ii) No person should be employed in any work at a workplace unless that person has received the necessary information, instruction and training so as to be able to do the work competently and safely. The competent authority should, in collaboration with employers, promote training programs to enable all the workers to read and understand the information / instructions related to safety and health matters.
- iii) The information, instruction and training should be given in a language understood by the worker and written, Oral, visual and participative approaches should be used to ensure that the worker has assimilated the information.
- iv) Every worker should receive instruction and training regarding the general safety and health measures common to the workplace. This should include:
  - (a) general rights and duties of workers at the workplace;
  - (b) means of access and egress both during normal working and in an emergency;
  - (c) measures for good housekeeping;
  - (d) location and proper use of welfare amenities and first aid facilities provided;
  - (e) proper use and care of the items of personnel protective equipment and protective clothing provided to the worker;
  - (f) general measures for personal hygiene and health protection;
  - (g) fire precautions to be taken;
  - (h) action to be taken in case of an emergency;
  - (i) requirements of relevant safety and health rules and regulations.

Copies of the relevant safety and health rules, regulations and procedures should be available to workers upon the commencement of and upon any change of employment.

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### 5.5.1 Training Techniques

#### a) Lectures

This technique should be applied when it is required to transfer information in local language to a large contractor workforce with controlled content and time.

#### b) Case Study

This is an effective technique based on the presentation of case of real events by Trainer to highlight probable causes like Human Error, ignorance about the job etc.

#### c) Videos

Videos, an effective technique of communication, should be used to display the right techniques of performing a task in a safe manner and hazards associated with a job.

#### d) Demonstration at site

Right way to do a job should invariably be demonstrated to workers at the site itself. The right way is also a safe way. Hazards due to wrong procedures, short cuts and their adverse effects etc. should also be highlighted.

### 5.5.2 Training/Awareness Module and Frequency

**A.** General Safety Training to all categories of contractor employees should be imparted before induction and annually thereafter. No person should be allowed to enter the installation without undergoing this training. This training program may cover:

- i) Mandatory uses of PPE like Cotton clothes, Helmet, Safety Shoes, Safety Belts etc.
- ii) Probable Hazards
- iii) Important Telephone No / Escape route
- iv) First Aid
- v) Use of Fire extinguisher

The contractor workers, if engaged in operation of the plants/facilities, should be trained in line with Clause No. 4.6 of OISD-GDN-206 on "Safety Management System". For other categories of contractor workers, training modules for different category employees are as follows:

#### **B. Contractor Supervisor**

Contractor Supervisor should be trained in accordance with the provision of clause no. 5.1.1.2, 5.2.7, 5.3.10, 5.6.12 and 5.7.8 of OISD-STD-154 on 'Safety Aspects in Functional Training'

#### **C. Contractor Worker**

Yearly training programme should be carried out for contractor worker and the records should be maintained. The training programme should cover at least the following:

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- i) Worker responsibility for safety of himself and work area.
- ii) Associated hazards with the job and job area including electrical shock hazards.
- iii) Importance of First Aid fire fighting equipment, their use & operations
- iv) Communication system at the installation
- v) Fire / Accident Reporting procedure
- vi) General Safety rules
- vii) Safety Measures during execution of job such as:
  - Welding / Cutting / Grinding
  - Working at height
  - Confined space entry
  - X ray / radiation
  - Erection / Dismantling of scaffolding
  - Tank construction and repairs
  - Handling of chemicals etc.
- viii) Importance & use of PPE
- ix) Emergency Routes
- x) Assembly Points
- xi) Job Specific Training

#### **D. Consultant / Contractor**

Awareness program should be carried out for Consultant / Contractor at the time of induction. This program should cover at least the following:

- i) Responsibility of contractor for safety of their personnel and work area
- ii) Hazardous property of Petroleum products and chemical used
- iii) Communication system
- iv) Fire / Accident Reporting procedure
- v) Medical facility available
- vi) Statutory requirements
- vii) Importance of First Aid equipment and required at the site
- viii) Work Permit system

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- ix) Direct/ Indirect losses due to accident
- x) Safety Measures while executing the jobs such as:
  - Welding / Cutting / Grinding
  - Working at height
  - Confined space entry
  - X ray / radiation
  - Erection / Dismantling of scaffolding
  - Tank construction and repairs
  - Handling of chemicals etc.
  - electrical jobs
- xi) Safety training needs of their supervisors and workers
- xii) Importance & Use of PPE at the site
- xiii) General Safety rules at the installation

## **E Security Personnel**

Training program should be carried out for Security personnel at the time of induction and annually thereafter and the records should be maintained. The training program should cover at least the following:

- i) Layout of Plant and Facilities
- ii) Vulnerable locations
- iii) Safety regulations (Statutory and in company)
- iv) Fire Protection Facilities and Locations
- v) Role in case of Fire / Disaster
- vi) Emergency Procedure and Drills
- vii) Industrial First Aid
- viii) Use of Personnel Protective Equipment
- ix) Disaster Management Plan

## **5.6 INSPECTION / AUDIT**

Inspection / Audit is a tool to evaluate compliance of all safety requirements. Most of the information could be gathered through site inspection using ready-made check lists to ensure that contractors / agencies abide by the safety rules and norms while working at operating / construction sites.

A checklist, while carrying out different type of jobs, should be developed based on hazards associated with the job being performed and requirements as per OISD-GDN-192 on "Safety Practices during Construction". Typical format is enclosed at Annexure II, which should be modified to suit the requirement of the site / job to be done.

Before starting the work and at regular intervals thereafter, Contractor's Supervisor/safety Officer and Owner's representative / Engineer-in charge/safety Officer should inspect as per the checklist so prepared to ensure that contractor has prepared to start the work with all safety precaution required for safe execution of job.

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## 5.7 PENALTIES FOR NON-COMPLIANCE

Financial or other type of penalties like seizure of gate passes, stoppage of work for a limited period etc. may be levied on the contractors or their workers for non-compliance of safety rules. A provision of suitable accident severity based penalty clause for contractor may be incorporated to ensure adherence of systems and procedures. A few of the usual non-compliance are as follows:

- Non-usage of PPEs like Safety helmet / Safety shoes / Safety goggles / Respiratory protection etc. by the contractor personnel
- Non-usage of the safety belt and life line by the workers while working at height
- Non-provision of basic safety requirement such as 24 V lamp for working in confined space, uncertified / non standard lifting tools, earth leakage protection & earthing connections for electrical appliances as per Indian Electricity Rules, emergency isolation switches etc.
- Violation of Safety Permit conditions like Fire fighting equipment
- Non-barricading of area while rigging, digging etc.
- Working without valid work permit
- Unauthorised road closure/blockage

## 5.8 INCIDENT REPORTING AND INVESTIGATION SYSTEM

All the incidents including near-miss should be reported immediately by contractor's Supervisor to Contractor and owner's Supervisor/Engineer-in-charge, who should inform to Owner's Safety Officer and owner's Management. Owner's Safety Department will be required for onward reporting as per OISD, Statutory requirements.

All accidents regardless of the extent of injury or damage should be investigated in order to find probable causes, lessons learnt thereof and remedial measures required to prevent its recurrence.

The incident investigation should be done as per provision of clause no. 4.12 of OISD-GDN-206 on 'Safety Management System'.

All the recommendations of investigation / Enquiry Report need to be monitored closely for its implementation. A proper record needs to be maintained to ensure implementation of all the recommendations and same should be reviewed from time to time.

## 5.9 SAFETY COMMITTEE MEETINGS

Following three type of safety committee meetings should be held aiming at raising the level of safety consciousness at the site:

### 5.9.1 Toolbox meeting

To maintain awareness, update training and convey important safety and health information, contractor supervisors should conduct tool box meetings at least weekly and also prior to start of any work. All the contractor workers should attend this meeting. The owner's supervisor/Engineer-in-charge and safety officers should also attend these meetings on random

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basis. Tool box meeting should be conducted more frequently depending upon circumstances. Record of the same can be maintained in the following typical format.

### **TOOLBOX MEETING FORM**

SUBJECT :  
 PRESENTER :  
 DATE :  
 TIME : From..... To.....  
 CONTENT IN BRIEF :

Participant's Name	Signature
-----	-----
-----	-----
-----	-----

#### **5.9.2 Site Safety Committee Meeting**

Primary purpose of this safety committee is to enable owner, contractor and workers to work together to monitor the site safety and health plan so as to prevent accidents and improve working condition on site. Its size and membership will depend on the size and nature of job.

The safety committee should include representatives of owner, consultant, contractor identified as safety officer/supervisor. It should be headed by Engineer-in-charge.

The safety committee should have regular and frequent meetings, atleast fortnightly, to discuss the safety and health program on site and to make suggestions for improvement. The meetings should be documented with a time bound action plan. The functions carried out by safety committee should include:

- i) Review compliance of pending items of last Safety meetings.
- ii) Consideration of the reports of safety personnel.
- iii) Discussion of accident/near-miss and illness reports in order to make appropriate recommendation for prevention.
- iv) Examination/evaluation of suggestions made by workers.
- v) Dissemination of acquired knowledge through training programs and information sharing sessions.
- vi) Discussion & review of Fire Prevention & Disaster Management Plan.
- vii) To send recommendation to Apex Body for consideration/approvals.

#### **5.9.3 Safety Review Meeting by Location Head**

This meeting should be headed by the Location head and attended by Owner's Supervisor/Engineer-in-charge, owner's safety Officer and all concerned department heads. Prime purpose of this review is to ensure that all the recommendations of various committees are being complied with and to take decisions on critical points raised. This meeting should take

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place at least once in every quarter. All the investigation reports/ audit findings with status of implementation of recommendations should be discussed.

#### **5.10 SAFETY EQUIPMENT / PERSONNEL PROTECTIVE EQUIPMENT**

The type of safety equipment to be used is decided based on the job requirement. Selection should be made based on OISD-GDN-192, OISD-STD-155 (Part I & II) and the job requirement. Safety equipment / Personnel Protective Equipment (PPE) shall be of approved make. Contractor shall provide necessary training to each employee regarding proper usage and upkeep of PPE including its limitation.

A register showing stock and issue of PPE should be maintained by the contractor at site and must be available for inspection.

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## 6.0 REFERENCES

- 1) OISD-GDN-206 on “Safety Management System”
- 2) OISD-GDN-192 on “Safety During Construction”
- 3) OISD-STD-155 Part(I&II) on “Personnel Protective Equipment”
- 4) Building & Other Construction workers (Regulation of Employment & Condition of Service) Act 1996



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**ANNEXURE I****LIST OF SAFETY CODES FOR CIVIL WORKS PUBLISHED BY BUREAU OF INDIAN STANDARDS**

Sl.no.	Code No.	Title
1	IS: 818	Code of Practice for Safety and Health Requirements in Electric and Gas Welding and Cutting Operations – First Revision.
2	IS: 875	Code of practice for Structural safety of buildings: Masonry walls
3	IS: 933	Specification for Portable Chemical Fire Extinguisher, Foam Type – Second Revision.
4	IS: 1179	Specification for Equipment for Eye and Face Protection during Welding – First Revision
5	IS: 1904	Code of practice for Structural safety of buildings: Shallow foundations
6	IS: 1905	Code of practice for Structural safety of buildings: Masonry walls
7	IS: 1989 – Part II	Leather Safety Boots and shoes for heavy metal industry
8	IS: 2171	Specification for Portable Fire Extinguishers, Dry Powder Type – Second Revision
9	IS: 2361	Specification of Building Grips – First Revision
10	IS: 2750	Specification for Steel Scaffoldings
11	IS: 2925	Specification for Industrial Safety Helmets – First Revision
12	IS: 3016	Code of Practice for Fires Precautions in Welding and Cutting Operations – First Revision
13	IS: 3521	Industrial Safety Belts and harnesses
14	IS: 3696 – Part I	Safety Code for Scaffolds and Ladders: Part I – Scaffolds
15	IS: 3696 – Part II	Safety Code for Scaffolds and Ladders: Part II – Ladders
16	IS: 3764	Safety Code for Excavation Work
17	IS: 4014 – Part I & II	Code of Practice for Steel Tubular Scaffolding
18	IS: 4081	Safety Code for Blasting and Related Drilling Operations
19	IS: 4082	Recommendations on stacking and storage of construction materials at site

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20	IS: 4130	Safety Code for Demolition of Buildings – First Revision
21	IS: 4138	Safety Code for working in compressed air – First Revision
22	IS: 4756	Safety Code for Tunneling works
23	IS: 4912	Safety requirements for Floor and Wall openings, Railings and toe boards – First Revision
24	IS: 5216 – Part I & II	Recommendations on safety procedures and practices in electrical work
25	IS: 5121	Safety code for piling and other deep foundations
26	IS: 5916	Safety Code for Construction involving use of Hot Bituminous materials
27	IS: 6994 – Part I	Specifications for safety gloves: Part I – Leather and Cotton gloves
28	IS: 5983	Specification for Eye Protectors – First Revision
29	IS: 6922	Criteria for safety and design of structures subject to underground blasts
30	IS: 7155	Code of recommended practices for conveyor safety
31	IS: 7205	Safety Code for Erection on Structural Steel Works
32	IS: 7069	Safety Code for Handling and Storage of Building Materials
33	IS: 7293	Safety Code for Working with Construction Machinery
34	IS: 7323	Guidelines for operation of Reservoirs
35	IS: 7969	Safety Code for handling and storage of building materials
36	IS: 8758	Recommendation for Fire Precautionary Measures in construction of Temporary Structures and Pandals
37	IS: 8989	Safety Code for Erection of Concrete Framed Structures
38	IS: 9706	Code of Practices for construction of Aerial ropeways for transportation of material
39	IS: 9759	Guidelines for de-watering during construction
40	IS: 9944	Recommendations on safe working load for natural and manmade fibre rope slings
41	IS: 10667	Guide for selection of industrial safety equipment for protection foot and leg

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42	IS: 10291	Safety Code for dress divers in civil engineering works
43	IS: 10386 – Part I	Safety Code for Construction, Operation and Maintenance for River Valley Projects
44	IS: 10386 – Part II	Safety Code for Construction, Operation and Maintenance for River Valley Projects
45	IS: 11057	Code of Practice for Industrial Safety Nets
46	IS: 13415	Code of Practice on safety for Protective barriers in and around building
47	IS: 13416	Recommendations for preventive measures against hazards at working places

### Statutory Regulations

Latest Statutory Acts and Rules, as given below, may be referred:-

1. The Petroleum Acts 1934 and Petroleum Rules 2002
2. The Factory Act, 1948 (As amended by Factory Amendment Act 1987) and concerned Factory Rules
3. The Water (Prevention and Control of Pollution) Act 1974 & Rules 1975
4. The Environment (Protection) Act 1986
5. The Manufacturing, Storage and Import of Hazardous Rules 1989
6. The Hazardous Wastes Management (Management & Handling) Rules 1989
7. The Indian Electricity Act 1901 and Rules 1956
8. The Indian Explosive Acts, 1884 & The Indian Explosive Rules 1983
9. The Gas Cylinder Rules 1981 and the static & Mobile Pressure Vessels (Unfired) Rules 1981
10. The Indian Boiler Act 1923 and Regulations 1950
11. The Public Liability Act 1991 as amended in 1992
12. The Motor Vehicle act 1988 and Central Motor Vehicle rules 1989
13. Building & Other Construction workers (Regulation of Employment & Condition of Service) Act 1996

In addition to above, various other statutory acts like EPF, ESIS, Minimum wage act and other local statutory requirements shall also be complied with.

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**ANNEXURE II****CHECK LIST FOR SAFETY INSPECTION / AUDIT**

Job \_\_\_\_\_ Location \_\_\_\_\_ Date of Audit \_\_\_\_\_ Frequency \_\_\_\_\_

Inspected by \_\_\_\_\_ Contractor (s) \_\_\_\_\_

Sl.no.	ITEM	YES	NO	NA	REMARKS / ACTION
<b>1.0</b>	<b>PERSONNEL PROTECTIVE EQUIPMENT (PPE):</b> Are following PPEs being used as per the job requirements?				
1.1	Safety Helmets				
1.2	Safety Shoes				
1.3	Gum Boots				
1.4	Safety Belts with life line				
1.5	Gloves				
1.6	Ear Plug				
1.7	Goggles				
1.8	Shield Glass				
1.9	Face Protection				
1.10	Breathing Apparatus				
1.11	Canister Mask				
1.12	Hand wash / Eye wash/ Respirating filter / cloth				
1.13	Boiler Suit				
1.14	Others				
<b>2.0</b>	<b>HOUSE KEEPING</b>				
2.1	Whether Waste Bins are provided / used				
2.2	Are Passageways / Walkways clear?				
2.3	Is General neatness O.K.?				

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2.4	Is the Ground free from oil, grease etc. and is not found to be slippery?				
2.5	Others				
<b>3.0</b>	<b>EXCAVATION</b>				
3.1	Whether soil stability is checked?				
3.2	Whether proper shoring for the excavation is provided to prevent cave-in for side of slope >45 Degree?				
3.3	Whether proper precautions have been taken if the excavation is adjoining to heavy structure like building, street and roadways?				
3.4	While excavating whether proper slope usually 45 <sup>o</sup> & suitable benches of 0.5 m width at each 1.5 m depth are provided?				
3.5	Whether barricading of 1m height with glowing caution board is provided for excavation beyond 1.5m depth?				
3.6	Whether excavating earth is placed beyond 1m of the edge of the trench?				
3.7	Whether heavy vehicle movement is restricted to come too close to the excavating area?				
3.8	Whether necessary precaution is taken for underground pipes, sewers, cables by contractors?				
3.9	Whether excavation hot work permit is taken?				
3.10	Whether extra precaution is taken for bailing out water properly while excavating?				
3.11	During rains whether the excavation is done with extra precaution to prevent caving in?				
3.12	Whether two separate entry/ exit points with necessary ladders / steps, as per				

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	requirement, have been provided?				
3.13	Whether one person is available at all the time to communicate any hazards noticed with workers working in deep trenches or excavation?				
3.14	Whether necessary precautions like regular gas testing are being taken in areas having hydrocarbons and LPG so that no gas accumulation takes place in the trenches.				
3.15	Whether IS: 4081-1986 & Indian Explosive act & rules for storage, handling & carrying of explosive material and execution of blasting operation is followed?				
3.16	Whether in case of mechanised excavation, caution board is provided for do's and don'ts like 'Nobody to enter' within one meter of the extreme reach?				
3.17	Whether the following are inspected during excavation work :- a) Boulder formation encountered b) Collapsing / development of cracks of sides c) Marked damage to support d) Unexpected fall of ground e) Inspection of site after each blast.				
3.18	Others				
<b>4.0</b>	<b>PERMITS</b>				
4.1	Whether valid work permit is issued to start any work?				
4.2	Whether all conditions of the permit are fulfilled before starting the job?				
4.3	As noted in the permit, whether compliance of all the recommendations are ensured?				
4.4	Whether permits are available at work site all the times?				

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4.5	Whether hot work permit registered in fire station?				
4.6	Whether permits are being closed after the completion of job?				
4.7	Others				
<b>5.0</b>	<b>SAFETY IN CUTTING / WELDING/GRINDING</b>				
5.1	Whether LPG / Oxygen / Acetylene/ Gas cylinders are kept outside only while working in confined space?				
5.2	Are Acetylene /LPG cylinders kept in upright position and secured at designated places under shed – wet gunny bags wrapped around it if the same is under sun at designated place?				
5.3	Check cylinder and cylinder valves for any kind of damage?				
5.4	Whether protective valves are kept on cylinder while not in use?				
5.5	Whether proper means and method for transportation of cylinders to avoid dropping and rolling are being adopted / followed?				
5.6	Whether gas cylinders, regulators are kept away/free from oil and grease?				
5.7	Whether all hoses were found to be free of any damage or crack?				
5.8	Whether oxygen and acetylene cylinders are stored separately?				
5.9	Whether color coding is being used for easy identification of different type of cylinders and hoses?				
5.10	Whether cylinder keys are available near the cylinder?				
5.11	Whether gas torches with NRV with flash back arrestor of approved make are only being used?				

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5.12	Whether pressure gauges are in working condition and checked from time to time?				
5.13	Whether welding shields are used while welding?				
5.14	Whether proper earthing for welding machines are provided?				
5.15	Whether power is taken from approved sources (welding receptacles)?				
5.16	Whether welding receptacles are properly grounded?				
5.17	Whether welding cables are maintained in good condition and without any joints/cuts?				
5.18	Whether to avoid short circuit, welding machines are protected against rain?				
5.19	Whether earth connectors are securely connected to the job and not to the adjoining pipeline or structure?				
5.20	Whether flame arrestor of DG set is of approved make and quality?				
5.21	Others				
<b>6.0</b>	<b>SAND / SHOT BLASTING</b>				
6.1	Whether sand blasting is used only after getting approval from competent authority?				
6.2	Whether air compressor used for sand / shot blasting are positioned away from work place?				
6.3	Whether exhaust of the prime mover is directed away from the work place?				
6.4	Whether in case of motor driven compressor, the body of the motor as well as the compressor is properly earthed?				
6.5	Whether line operator of sand/shot blasting wear suitable PPEs including				

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	mask?				
6.6	Whether adequate measures are adopted to confine dust/spray particles?				
6.7	Whether adequate measures are taken for proper ventilation while the work is done in confined space?				
6.8	Others				
<b>7.0</b>	<b>SAFETY WHILE WORKING AT HEIGHTS / SCAFFOLDING / LADDERS</b>				
7.1	Whether work permit is obtained to take up work at height above 3 mts?				
7.2	Whether steel pipes scaffoldings are used in unit/off site areas?				
7.3	Whether provision for suitable platform with all scaffoldings are made? Whether its construction is as per specification with toe board and railing?				
7.4	Whether the area below working at height is cordoned?				
7.5	Whether suitable platform is provided?				
7.6	Whether ISI approved quality and good condition safety belts are used while working at heights?				
7.7	Whether life line of safety belt is Anchored to an independent secured support capable of withstanding load of a falling person?				
7.8	Whether the area around the scaffold is cordoned off to prohibit the entry of unauthorized person?				
7.9	Whether ropes used are of good condition and adequate strength free of defects?				
7.10	Whether ladder is placed at secured and leveled surface?				
7.11	Whether it is extended 1.5 Mts. Above the landing point?				

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7.12	Whether ladder used are of adequate length and tying short ladder is avoided?				
7.13	Whether metallic ladders are placed away from electrical system?				
7.14	Whether tools or materials are removed after completion of the day's job at heights?				
7.15	Whether a valid permit is obtained before taking up work on asbestos or fragile roof?				
7.16	Whether sufficient precaution is taken while working on fragile roof?				
7.17	Whether provision is made to arrange duck ladder, crawling board for working at fragile roof?				
7.18	Whether scaffolding has been erected on rigid / firm / levelled surfaces only?				
7.19	Whether scaffold has been inspected by competent person prior to being put in use?				
7.20	Whether the scaffolding has been designed for the load to be borne?				
7.21	Whether the erection and dismantling of the scaffolding is being done only by trained persons and under supervision?				
7.22	Whether safety net with proper working arrangement and life line has been provided?				
7.23	Others				
<b>8.0</b>	<b>SAFETY IN CONFINED SPACE</b>				
8.1	Whether a permit is obtained to enter a confined space?				
8.2	Whether gas test for hydrocarbon, toxic gas, oxygen level is obtained before				

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	entering any confined space?				
8.3	Whether adequate oxygen level is ensured in confined space before entering? If not, whether all precaution like using of Breathing Apparatus set is ensured?				
8.4	Whether, in case of chance of ingress of hydrocarbon gases / toxic gases, Personnel Monitoring System (PMS) is used or not?				
8.5	Whether only in presence of a supervisor, worker enters in confined space?				
8.6	Whether provision of sufficient means of entry and exit is available?				
8.7	Whether provision of ventilation to remove welding fumes, dust, exhaust gases are made?				
8.8	Whether provision of 24V (Hand lamps with cage as per OISD-STD-155) light for working inside space is made?				
8.9	Is it strictly ensured that a stand-by trained person is standing outside before a person enters a confined space and communication is being maintained all the time with workers working inside?				
8.10	Whether life belt with one end under control of stand-by person outside is kept while working in confined space?				
8.11	Whether Personnel protective Equipment are in good condition as specified in the permit?				
8.12	Whether absence of Hydrogen Sulfide, CO or other toxic gas is ensured before entering into a confined space? If yes, whether proper required PPE like BA, Gas Mask are used.				
8.13	Whether boxing up is being done only as per the approved procedures and by competent persons?				
8.14	Whether all the safety precautions listed				

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	in OISD-GDN-192 are taken while working in sewers, OWS etc.?				
8.15	Whether proper house keeping is being maintained inside the confined space?				
8.16	Whether training has been provided to workers working in the confined space and the workers only of sound health are being asked to work in the confined space?				
8.17	Others				
<b>9.0</b>	<b>SAFETY IN MATERIAL HANDLING</b>				
9.1	Whether all lifting tools, tackles, machines, chains, ropes etc. are of sound construction, made of sound material and maintained in good condition?				
9.2	Whether safe working load, date of testing visibly marked/painted on the equipment?				
9.3	Whether lifting tools, tackles are of adequate strength for the load to be handled?				
9.4	Whether all parts including the working gears fixed or movable of every lifting machine, chain, rope, tackles specify the following condition:  a) Thoroughly examined by competent person at least once a year or such interval as required by statutory authority.  b) Document of such examination are maintained and produced to owner supervisor before use of particular equipment?				
9.5	Whether chain blocks and cables are inspected before each use to assure their sound condition?				
9.6	Whether hoist and lift if used are:  a) Properly maintained and thoroughly examined by competent authority at least once in every year.				

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	b) A register to be maintained to record particulars of such examination in prescribed forms and shall be produced to the owner supervisor before use.				
9.7	Whether area below the movement of boom of crane is cleared to avoid injury from falling objects?				
9.8	Whether it is ensured that crew of truck leave the truck in crane handling area before starting loading / unloading, if not involved in rigging operation?				
9.9	Whether transporting material from one place to another is done by suitable means?				
9.10	Whether carrier with sufficient capacity without projecting parts is used for transporting materials?				
9.11	Whether riggers engaged are well trained and conversant with signaling procedures including night signalling if required?				
9.12	Whether permission of authorized person is obtained before working on or near an overhead crane?				
9.13	Whether trained riggers are available all the time along with crane?				
9.14	Whether barricading has been done to ensure no unauthorised person enters in the working area of the crane?				
9.15	Whether lifting plan has been prepared and approved before start of the work?				
9.16	Whether route of crane movement has been planned before the crane moves out of the garage?				
9.17	Whether it has been ensured that no electrical cable come within 3 metres or safe distance from the boom of the crane?				
9.18	Whether boom is being kept in the horizontal position or locked while idling?				

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9.19	Whether material is being stacked / destacked in trucks with the help of wedges to ensure no slippage while loading / unloading takes place?				
9.20	Whether the forklift / crane is being operated only by trained person?				
9.21	Others				
<b>10.0</b>	<b>ELECTRICAL SAFETY</b>				
10.1	Has the Electrical Line Clearance procedure been followed involving electrical and other concerned Dept. and filling of formats?				
10.2	Have Danger Signs with Voltage rating/ Men at work signboards been displayed at both Sub Station as well as the work site?				
10.3	Has the contractor worker understood the electrical circuit on which he is going to work with probable electrical hazards and mitigation measures to be adopted?				
10.4	Whether contractor has engaged electrician (s) having valid electrical licence in line with provisions in Indian Electricity Rules?				
10.5	Have all checks prior to switching operation been carried out and authorisation of owner/ user section obtained subsequently?				
10.6	Have all earthing links on electrical conductors removed before charging the line/ apparatus?				
10.7	Have PPE as prescribed under Indian Electricity Rules been in place, kept healthy and used?				
10.8	Are earthing and bonding arrangement of non-current carrying metallic parts in line with provisions of Indian Electricity Rules				

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	– 1956 amended time to time as IS: 3043?				
10.9	Have electrical part of OISD-GDN-192 and Clause No. 9.0 for Temporary installations in OISD-173 been understood and followed wherever applicable?				
10.10	Are flexible wires having voltage of 240 volts above earth potential taken through PVC conduits?				
10.11	Whether portable hand lamps with a voltage rating of not more than 24 volts used with flameproof enclosures in confined spaces within columns, vessels etc?				
10.12	Have the Switches, MCBs, fuses etc. been inspected for proper ratings?				
10.13	Has Earth Leakage Circuit Breaker (ELCB) been used on the incoming side to protect against leakage of current? Is the device tested every time the work is started?				
10.14	Whether all portable appliances are provided with insulated Three pin Plugs and socket arrangement?				
10.15	Whether industrial type extension boards and plug sockets are used?				
10.16	Has the electrical equipment brought to site by contractor been inspected by owner's supervisor/ safety officer for damage/cuts/abrasion etc? Is record of Insulation Resistance, wherever required , being kept?				
10.17	Have standard practices for termination of conductors/ cables been followed (e.g. use of proper lugs, crimping tool, cable glands etc)? Is cable armour in continuity from feeding point to load?				
10.18	Are the Contractor supervisor and workmen well acquainted with first aid for electrical shock?				
10.19	Are the wires/ cables identifiable along				

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	their route towards the load by using colour coding and/or markers?				
10.20	Others				
<b>11.0</b>	<b>ROAD WORK</b>				
11.1	Whether site is barricaded and provided with warning signs including night warning lamps/ self glowing markers at appropriate location for diversion of traffic?				
11.2	Whether mixing aggregates with bitumen is done with the help of batch mixing plants? If no, whether adequate precautions have been taken?				
11.3	Whether road rollers, bitumen sprayers, pavement finishers are driven by experienced drivers with valid driving licenses?				
11.4	Whether the worker handling hot bitumen sprayers or spreading bitumen aggregate mix or mixing bitumen with aggregate are provided with PVC hand gloves rubber shoes with pegging upto knee joints?				
11.5	Others				
<b>12.0</b>	<b>FORM WORK, REINFORCEMENT</b>				
12.1	Whether form work, shuttering, shoring etc. are adequately designed and provided to erect the structure and to support the expected load?				
12.2	Whether staging (support) for shuttering is designed for loads like worker movement, impact load and other incidental loads during construction?				
12.3	Whether workers use PPEs at work site?				
12.4	Whether all safety procedures are adopted while cutting rod?				
12.5	Whether proper staging and bundling is provided for supplying rods at height?				



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12.6	Whether sufficient cross bracings are provided for high staging works at vulnerable points?				
12.7	Others				
<b>13.0</b>	<b>CONCRETING</b>				
13.1	Whether the concreting area is barricaded?				
13.2	Whether vibrator hoses, pumping concrete accessories are in healthy condition and mechanically strong?				
13.3	Whether it is ensured that no pipe line in concrete pumping system is attached to any temporary strut such as scaffolds etc.?				
13.4	Whether it is checked that safety guards around moving parts are provided in concrete mixer/ machines?				
13.5	Whether earthing of electrical mixers, vibrator etc. are checked?				
13.6	Whether entry of unauthorised person in the concreting area is restricted?				
13.7	Whether adequate lighting arrangement is made in the concreting area if working during night?				
13.8	Whether PPEs like gum boots, gloves and dust masks etc. are being used?				
13.9	For overhead or underground work, whether form work and shuttering have been checked so that the same do not collapse during concreting?				
13.10	Others				
<b>14.0</b>	<b>DEMOLISHING (DEMOLISHING BY BLAST NOT CONSIDERED)</b>				
14.1	Has the stability of structure been examined by competent person and found OK?				
14.2	Are non-sparking tools being used, if				

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	required?				
14.3	Is intermittent clearing operation being done to keep the area reasonably tidy and clean?				
14.4	Whether effective barricading has been provided?				
14.5	Whether Electrical and other facilities like water, oil, gas pipelines have been isolated/protected?				
14.6	Whether the plan of demolition (including sequence of activities) has been prepared and approved prior to start of the work?				
14.7	Others				
<b>15.0</b>	<b>RADIOGRAPHY</b>				
15.1	Are safety precautions for handling of source as per guidelines of BARC being followed?				
15.2	Is the potency of the source being used within acceptable limits as per the BARC regulations?				
15.3	Is the area being cordoned with proper signs during radiography?				
15.4	Does proper place exist as per BARC regulations for storage of source / Personnel safety equipment?				
15.5	Does the radiographer has valid certificate of radiography from competent authority (BARC)?				
15.6	Is radiographer using Exposure Meter / Dosi Meter?				
15.7	Whether minimum occupancy of the premises / workplace is being ensured while radiography is in progress?				
15.8	Is permit system being followed?				
15.9	Others				

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16.0	ADDITIONAL SAFETY PRECAUTION FOR UNITS WITH HYDROCARBONS				
16.1	Are jobs being carried out with a valid work permit only as per OISD-STD-105 "Work Permit System".				
16.2	Is smoking prohibited in all places containing combustible or flammable materials and "No Smoking" notices prominently displayed.				
16.3	Are only approved type electrical installations and equipment, including portable lamps, being used?				
16.4	Are oily rags, waste, wooden materials and clothes or other substances liable to spontaneous ignition being removed?				
16.5	Are the combustible materials properly shielded in case same cannot be removed from the area?				
16.6	Has welding screens (like metal/asbestos/ water curtain) been put up to protect other equipment / facilities/ OWS/ drains in adjoining areas against flying sparks, as may be required?				
16.7	Is Gas-testing being done with the means of a calibrated Gas detection Meter prior to start of Hot work and being done subsequently at regular intervals as per the requirement?				
16.8	Are regular inspections being done of places where there are fire risks like in the vicinity of heating appliances, electrical installations and conductors, stores of flammable and combustible materials, welding and cutting operations?				
16.9	Are fire-extinguishing equipment being placed at strategic locations and are kept well maintained and inspected at suitable intervals by a competent person.				
16.10	Are access to fire-extinguishing equipment such as hydrants, portable extinguishers and connections for hoses kept clear at all times?				

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16.11	Are all supervisors and a sufficient number of workers trained in the use of fire-extinguishing equipment?				
16.12	Are audio means, to give warning in case of fire provided, audible in all parts of the site where persons are liable to work?				
16.13	Is there an effective evacuation plan in place so that all persons are evacuated speedily without panic?				
16.14	Others				
<b>17.0</b>	<b>EMERGENCY PROCEDURES</b>				
17.1	Is signaling / siren system effective?				
17.2	Is arrangement for rescuing affected person adequate?				
17.3	Are signs showing emergency exit route installed?				
17.4	Is emergency exit route clear of obstacles?				
17.5	Is communication system adequate?				
17.6	Whether emergency vehicle with driver has been provided to meet any emergency situation?				
17.7	Does any tie-up with hospitals or local doctors exist?				
17.8	Has the assembly point for workers in case of emergency been identified and earmarked?				
17.9	Has training been provided to a few workers for First Aid?				
17.10	Others				
<b>18.0</b>	<b>WELFARE FACILITIES</b>				
18.1	Is hygienic conditions prevailing at labour camps?				

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18.2	Are First Aid facilities available?				
18.3	Does proper sanitation exist at site office and labour camps?				
18.4	Does any arrangement of medical facilities like tie ups with nearby hospital exist?				
18.5	Is proper drinking water facility available for workmen & staff?				
18.6	Are crèches provided for children (if applicable)?				
18.7	Is any proper place/canteen/restroom provided for eating food and taking rest?				
18.8	Is any place earmarked for storing / keeping clothing?				
18.9	Is Adequate washing facility available?				
18.10	Does proper ventilation at working place exist?				
18.11	Others				
<b>19.0</b>	<b>GENERAL</b>				
19.1	Are illumination levels at workplace and passages adequate?				
19.2	Is communication system adequate?				
19.3	Are display and caution boards provided at strategic locations?				
19.4	Are road barriers being used for blocking any roads/passage?				
19.5	Has the structure been adequately secured against storm/high winds during construction/ erection?				
19.6	Are the equipment properly earthed?				
19.7	Are vehicles being checked like brakes, oil, lights etc. on regular basis?				

*"OISD hereby expressly disclaims any liability or responsibility for loss or damage resulting from the use of OISD Standards/Guidelines."*

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19.8	Is compressed air being used only for its intended purpose and not for any other purpose?				
19.9	Are only proper clothes and not loose clothes being used while working around machinery?				
19.10	Are nails or other sharp objects being removed or bent?				
19.11	Are machine guards over moving parts of machinery such as coupling, pulley, wheel etc. installed?				
19.12	Whether after maintenance of machinery the guards are securely fitted before putting into operation?				
19.13	Are working platforms / gangways provided with hand rails & toe guards?				
19.14	Are swing platforms provided with chains & secured adequately when not in use?				
19.15	Are the approaches to work sites being maintained & kept clear of obstacles?				
19.16	Whether engines of equipment entering into the operating area have exhaust and muffler system with approved spark arrestor?				
19.17	Whether vehicles/engine driven equipment, electrical equipment and tools used are certified?				
19.18	Whether contractors inform his workers about hazards and safe procedures?				
19.19	Whether sufficient care is taken so that spark do not go outside working enclosure & falls below?				
19.20	Whether contractor's qualified / trained supervisor is present?				
19.21	Whether all exhausts of engines are provided with approved type of flame arrestors and exhaust is not facing toward the place where the workers are working?				

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19.22	Others				
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**Signature of the Auditor**

**STANDARD CONDITIONS OF SCC: PART II**

**Compliances under various Labour Laws**

The Contractor has to fully comply with all applicable Labour Laws and Regulations passed, modified and notified from time to time by the Central, State and Local Government agencies/authorities. Specific attention of the Contractor is drawn to the following obligations amongst others:

**1. The Minimum Wages Act, 1948, Payment of Wages Act, 1936 and Payment of Bonus Act 1965 or The Code on Wages, 2019 (after it comes into force)**

**1.1. Minimum Wages:**

- a. During the tenure of the contract, the Contractor must ensure the payment of minimum wages, as notified by the Central Government or State Government whichever is higher, as per the provisions of the Minimum Wages Act, 1948 / Code on Wages, 2019 (after it comes into force).
- b. **Wage period and monthly wages:** Wage period shall be monthly and wages for a month shall be calculated by multiplying daily rate of Minimum Wages by 26. The monthly wages include the wages of the weekly days of rest as applicable to the office/establishment of GAIL.

Deduction in case of any days of absence other than weekly days of rest shall be calculated using the following formula:

$$\text{Deduction for absence} = \text{days of absence} \times \text{applicable wage rate}$$

**1.2. Payment of Wages:**

- a. The Contractor shall disburse monthly wages **through e-banking / digital mode through cashless transaction only**, and avoid illegitimate deductions and maintain records /returns as prescribed. The Contractor shall be solely responsible for the payment of wages and other dues to the resources, if any, deployed by him latest by 7<sup>th</sup> day of the subsequent month as per the provisions of the Payment of Wages Act, 1936 / as applicable under Code on Wages, 2019 (after it comes into force) in the presence of Engineer In-charge (EIC) or authorized representative of GAIL. After disbursement of wages, the representative of the Contractor and EIC/ authorised representative of GAIL have to certify the payment of wages to the resources and sign the Wage Register - Form B (under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017) / FORM-I of Code on Wages, 2019 (after it comes into force) with specific seal detailing name/designation/Company.

**1.3. Payment of Bonus:**

Contractor shall ensure payment of bonus as per the provisions of the Payment of Bonus Act, 1965 / Code on Wages, 2019 (after it comes into force). Present minimum rate of payment of Bonus as per the Payment of Bonus Act, 1965 is 8.33% of minimum wages per month or 8.33% of Rs.7,000/- per month whichever is higher. The rate shall be subject to amendments made from time to time to the legislation.



Payment of Bonus / ex-gratia shall be made preferably before Deepawali festival falling after the end of relevant financial year(s) and the balance payment at the time of closure of contract.

For service contracts, the payment towards the bonus/ex-gratia (**made on yearly basis**) shall be released / reimbursed to the contractor, after submission of proof of payment. No reimbursement shall however be applicable in works contract.

## **2. Leaves/ Leave with wages/ Holiday:**

The Contractor shall comply with all the applicable leave Rules including leave with wages in terms of applicable labour legislations i.e. Factories Act, 1948 / Shops & Establishment Act/ Industrial Establishment (national & festival holidays, casual & sick leave) Act, 1965.

The Contractor shall extend the leave with wages and maintain the Register of Leave pertaining to the resource deployed. The payment towards un-availed leave, as per the Factories Act, 1948 / Shops & Establishment Act, shall be settled with the resource at the time of closure of the contract or separation of resource from the contract by the contractor.

- i. As per the **Factories Act, 1948 (if applicable)**:-Annual Leave with Wages @ 01 day for every 20 days of work performed by him in the previous calendar year becomes due.
- ii. As per the **Shops & Establishment Act (if applicable)** : Privilege Leave not less than 15 days and Sickness/Casual Leave not less than 12 days ( this provision may vary from state to state).
- iii. As per the **Industrial Establishment (National & Festival Holidays, Casual & Sick Leave) Act, 1965 / Negotiable Instrument Act 1881 / Shops & Establishment Act (as applicable)**: (a) three national holidays of one whole day each on the 26<sup>th</sup> January, 15<sup>th</sup> August and 2<sup>nd</sup> October (b) five other holidays on any of the festivals specified in the - Schedule appended to this Act. (c) Every worker shall in each calendar year, be allowed by the employer 07 casual leave and 14 sick leave in such manner and on such conditions as may be prescribed (This provision may vary from state to state).

## **3. The Employees' Provident Fund & Miscellaneous Provisions Act 1952**

- a) The Contractor shall have independent PF code no. with the RPFC as required under the Employees' PF & Misc. Provisions Act, 1952.
- b) The Contractor has to ensure compliance (as per prevailing rates) and extend benefits under the Employees' Provident Fund Scheme 1952, the Employees' Pension Scheme 1995 & the Employees' Deposit Linked Insurance Scheme, 1976 to the resources deployed by him.
- c) The Contractor is required to submit copies of ***separate e-Challans / ECR alongwith proof of payment/receipt*** in respect of resources engaged through this contract only, on monthly basis. **Common challans would not be acceptable in GAIL.** The Contractor should submit copies of previous months EPF e-Challans / ECR alongwith current month's bill. The TRRN. No. of the ECR would be verified online from EPFO portal by the Engineer-in-charge to confirm the status of payment and names of the resources deployed.
- d) **PF is mandatory irrespective of the number of resources deployed** by the Contractor under this contract. **PF membership and deposit of PF contribution is also mandatory even if the wage payment to the resource is exceeding the prescribed monthly wage ceiling ( i.e. Rs. 15,000/-) under the Employees' PF & Misc. Provisions Act, 1952 and in such case the liability of the**

Contractor towards PF contribution shall be limited to the prescribed monthly wage ceiling notified from time to time ( i.e. Rs. 15,000/- currently).

- e) In case, the Contractor deploys any “**International Worker**”, the Contractor should also make compliance under para 83 of EPF Scheme, 1952 i.r.o the “International Workers” and must register on the *International Worker Portal of EPFO*.

**4. The Employees’ State Insurance Act, 1948 (If applicable and as per prevailing rates)**

- a) The Contractor shall have his own ESI code No. allotted by Employees’ State Insurance Corporation (ESIC) as required under the Employees’ State Insurance Act, 1948.
- b) The Contractor has to arrange **Smart Cards (i.e. ESI Identity Card) /e-Pehchan Card** for the resource(s) engaged by him from the Corporation.

**5. The Employees’ Compensation Act 1923 (wherever applicable)**

In case, the work place is out of the notified coverage area under ESIC i.e. ESIC is not implemented in the area **or** in case of excluded employees under ESIC, the Contractor is required to take Employee Compensation / Workmen Compensation Policy from IRDAI approved Insurance Company taking into consideration the **maximum compensation liability** as per provisions of Employees’ Compensation Act, 1923. It must be ensured that the contractor/contracting firm should extend coverage to the contract workers through Employee Compensation Policy, to meet the **Compensation Liability under Employee’s Compensation Act, 1923** along with **Medi-claim Floater Policy with a coverage of Rs. 3 Lakhs per resource covering his/her spouse and two children.**

**6. Group Personal Accident Insurance Policy**

The Contractor is required to take a Group Personal Accident Insurance Policy with coverage of **Rs. 5 Lakhs** (covering death, permanent disability + partial disability) per resource for the entire period of contract covering all resources deployed under the contract.

**7. The Payment of Gratuity Act, 1972**

In case of Death or permanent disablement of a resource during execution of work under the contract, the Contractor has to pay the Gratuity as per the provision under the Payment of Gratuity Act, 1972 to the nominee(s) of the resource as per the details maintained in the duly signed Nomination Form maintained by the Contractor. The proof of disbursement may be submitted to the EIC for claiming reimbursement of amount paid towards death Gratuity from GAIL.

**8. The Contract Labour (R&A) Act, 1970**

- a) The Contractor is required to obtain Labour license under the provisions of the 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 the Contract Labour (R&A) Act, 1970 rules and regulations framed under the same and enforced from time to time.

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- c) The Contractor shall ensure regular and effective supervision and control over the resources deployed for which a supervisor / representative of the Contractor should be available at all the times for giving suitable direction for undertaking the Contractual Obligations.
  - d) The Contractor is solely responsible for payment of wages to each resource deployed by him and such wages shall be paid before the expiry of such period as may be prescribed.
  - e) It shall be the duty of the Contractor to ensure the disbursement of wages to resource(s) through e-banking/digital mode. In case the resource does not have a bank account, the disbursement of wages may be made in cash in the presence of the Engineer-in-charge / authorized representative of GAIL initially and Contractor shall simultaneously arrange for opening the bank account of each contract labour deployed by him.
  - f) In case, the Contractor fails to make payment of wages and deposit of PF contribution within the prescribed period or makes short payment of wages / short deposit of PF contribution, **it shall be treated as FAILURE and action as per the provisions of General Conditions of Contract shall be taken. Further**, GAIL as Principal Employer, will make payment of wages in full or the unpaid balance due, as the case may be, to the resource(s) deployed by the Contractor and deposit the PF contribution with PF authorities. Such amounts will be recovered from the Contractor either by deduction from any amount payable to the Contractor under any contract or as a debt payable by the Contractor.
9. The contractor is required to comply with all applicable labour laws and regulations including, but not limited to the following:
- a) The Factories Act, 1948 / The Shops & Establishment Act, 1948 (which ever applicable)
  - b) The Maternity Benefit Act, 1961
  - c) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1979 & Building and Other Construction Workers Welfare Cess Act, 1996
  - d) The Inter State Migrant Workmen (RECS) Act 1979 (if applicable)
  - e) Contract Labour (R&A) Act-1970
  - f) Employees' Provident Fund & Misc. Provisions Act- 1952
  - g) Employees' State Insurance Act-1948
  - h) Employees' Compensation Act, 1923
  - i) Payment of Gratuity Act, 1972
  - j) Minimum of Wages Act,1948
  - k) The Payment of Wages Act,1936
  - l) The Payment of Bonus Act,1965

**STANDARD CONDITIONS OF SCC: PART III**

**Responsibilities of the Contractor**

1. The Contractor shall be solely responsible and indemnify GAIL against all charges, dues, claim etc. arising out of the disputes relating to the dues and employment of resources, if any, deployed by him.
2. The Contractor shall indemnify GAIL against all losses or damages, if any, caused to it on account of acts of the resource(s) deployed by him.
3. The Contractor shall indemnify GAIL from all claims, demands, actions, cost and charges etc. brought by any court, competent authority / statutory authorities against GAIL.
4. The Contractor shall also indemnify GAIL for any action brought against him for violation, non-compliance of any act, rules & regulation of center / state / local statutory authorities.
5. All resources deployed by the Contractor are deemed to be on the rolls of the Contractor.
6. **Age:** No resource below the age of 18 years shall be deployed by the contractor for the execution of the contract. However, maximum age of resources deployed under the contract would be 60 years. (In case of Security and Fire & Safety Services, no resource below the age of 18 years shall be deployed by the contractor for the execution of the contract. However, in view of nature of business operation and nature of duty, for efficacy & efficiency purpose, resources will be deployed up to the age of 58 years. However, the age limit can be relaxed for a further period of two (02) years up to the age of 60 years if the contract worker is competent, efficient and medically fit i.e. physically fit with good health, good eye sight without any disease. The contractor has to produce Medical Fitness Certificate, to this effect, against such contract workers if deployed beyond 58 years.)
7. **Appointment/Nomination of supervisor:**  
As a part of the contract, the Contractor is required to appoint/nominate a supervisor (s) who will supervise, control and give directions to the resource(s) for discharging the contractual obligations. Accordingly, the Contractor has to give in writing the name and contact details of the supervisor (s) to the EIC. A copy of the same is also to be sent to HR In-charge and Security In-charge for records.
8. A copy of the Letter of Acceptance (LOA) should be submitted to the Security Department by the Contractor / his representative or supervisor for facilitating the movement of resource(s) including machine & materials involved in the contract.
9. The resources to be deputed/ deployed by the Contractor shall observe all security, fire and safety rules of GAIL while at the site/work. All existing and amended safety / fire rules of GAIL are to be followed at the work site by the Contractor and his deployed resource(s).
10. **Personal Protective Equipment / Safety Kit and Liveries:** Contractor shall ensure adequate supply of personal protective equipment / Safety Kit and Liveries as mentioned in the Scope of Work to all such resources deployed.
11. In case of accident, injury or death caused to the resource(s) while executing the Work under the contract, the Contractor shall be solely responsible for payment of adequate compensation,

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insurance money etc. to the next kith & kin of injured / diseased. Contractor shall indemnify GAIL from such liabilities.

12. The Contractor shall not deploy any resource suffering from any contagious or infectious disease. The Contractor shall get the deployed resource(s) examined from a civil Govt. Doctor / GAIL's Doctor.
13. No resource(s) or representatives of Contractor (including Contractor) be allowed to consume alcoholic drinks or any narcotics within the premises of GAIL (including Plant, Office and Residential etc.). If found under the influence of above, the Contractor shall immediately replace that resource(s) with intimation to the EIC.
14. While engaging / deploying the resources, the Contractor is required to make efforts to provide opportunity of employment to resources belonging to **Schedule Caste, Schedule Tribe and Other Backward Class** in order to have a fair representation of these sections of the society.
15. While engaging the resources, the Contractor is required to make efforts to provide an **opportunity** to candidates with experience of **apprentice training in GAIL** under the provisions of the Apprentices Act, 1961.
16. The Contractor is required to maintain all Registers and other records in an **office** within the premises of GAIL or at a place **within a radius of three kilometers**.
17. Contractor shall provide proper **Employment cards (FORM XII)** for the resource to be deployed by him, duly signed by the Contractor or authorized person on behalf of Contractor.
18. **Gate/ Entry Pass or Authorization:**  
Entry to the premises of GAIL is restricted and is subject to appropriate entry authorization in the prescribed format of a Gate Pass or any other entry authorization w.r.t police verification as per instruction of Security department from time to time. Similarly, entry for material/ equipment's/ tools/ tackles etc. is restricted & subject to entry authorization by security department.
19. The Contractor shall issue **Identity cards** in his firm's name to the resource deployed.
20. Discipline of the resource(s) during discharge of duties must be regulated by the Contractor himself or by his representative.
21. **Police verification**
  - a) The Contractor (including his sub-Contractors/Petty Contractors etc, if allowed) will undertake police verification in respect of the resource(s) engaged by him in GAIL's premises. Such verification will have to be carried out from concerned police station of their permanent place of residence/present place of residence.
  - b) Further, the Contractor is advised not to deploy any resource having past criminal record in the establishment/premises of GAIL under this contract awarded to him.
  - c) In the event of violation of above clauses at (a) and (b), the Contractor will be solely responsible for the same.
  - d) If any such resource(s) having criminal record is deployed by the Contractor in the premises of GAIL and has come to the notice of GAIL at any point of time, the Contractor shall immediately replace that resource(s), failing which that particular resource(s) of the Contractor will not be allowed to enter into the premises of GAIL.

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22. While confirming to any of these conditions, the Contractor must ensure that all applicable Laws of State regarding labour, their welfare, conduct etc. are complied.
23. *The contractor shall ensure the KYC of contract workers in EPFO portal at all time during the period of contract and submit a proof of the same to the Engineer-in-charge.*
24. *The contractor shall ensure that the nomination of contract workers deployed by him under the said contract is duly updated in the EPFO Portal.*

**STANDARD CONDITIONS OF SCC: PART IV****Compliance of Government of India Directives****1. Pradhan Mantri Suraksha Bima Yojna (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojna (PMJJBY)**

Contractor shall, ensure that all its resources deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of GAIL. The Contractor shall submit evidence / proof to GAIL in this respect. Both the schemes are to be regulated continuously on yearly basis and the same should be renewed on each successive relevant date in subsequent years during the period of the contract.

**2. Labour Identification Number (i.e. LIN) Registration (Mandatory)**

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, resources 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 GAIL.

**3. Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) / Aatmanirbhar Bharat Rozgar Yojana (ABRY)/ Pradhan Mantri Garib Kalyan Yojana– if applicable**

In order to support the Govt. of India's Initiative on Employment Generation, the Contractor must register for Pradhan Mantri Rojgar Protsahan Yojna (PMRPY) Scheme / Aatmanirbhar Bharat Rozgar Yojana (ABRY) /Pradhan Mantri Garib Kalyan Yojana (as applicable). In service contracts, the Contractor shall inform GAIL/Engineer in Charge about the benefit availed, if any, against the scheme for adjustment against the invoice(s) / bill(s).

**Records and Registers**

**1. Maintenance of records and registers**

The Contractor is required to maintain statutory records and registers for applicable labour laws as prescribed under the following rules:

- a) Ease of Compliance to Maintain Registers under the various Labour Laws, 2017
- b) Rationalization of Forms and Reports under Certain Labour Laws Rules, 2017
- c) Labour Codes (after they are made effective by Government of India)

**2. The Contractor has to maintain the following (but not limited to) Registers/ Forms/ Reports / Returns at all times:**

- a) Employee Register in FORM A ( to be replaced by FORM – IV of Code on Wages-2019 after it comes into force)
- b) Wage Register in FORM B ( to be replaced by Register of Wages, Overtime, Fine, Deduction for damage and Loss in FORM – I of Code on Wages-2019 after it comes into force)
- c) Register of Loan / Recoveries in FORM C
- d) Attendance Register in FORM D
- e) Register of rest/leave/leave wages in FORM E
- f) Copies of Wage Slips in FORM XIX ( to be replaced by FORM – V of Code on Wages-2019, after it comes into force)
- g) Copies of Employment Card in FORM XII

**3. Documents to be submitted by the Contractor to EIC at various stages during the currency of the contract**

**a) Immediately after issuance/receiving of Letter of Acceptance (LOA)**

- i. Details as required for issuance of **FORM - VII (Notice of Commencement of Work)**
- ii. Application for issuance of **FORM –III (Form of Certificate by Principal Employer )** for obtaining Labour License from Licensing Authority for engaging 20 or more resources.
- iii. Copy of **FORM - VI (License)** before commencement of work if 20 or more resources are engaged.
- iv. Copy of **Provident Fund Registration Certificate** issued by concerned Regional Provident Fund Commissioner.
- v. Copy of **ESI Registration Certificate** issued by concerned ESIC.
- vi. Copies **Insurance Policy(ies)** as mentioned at **Annexure-iv**
- vii. Copy of **Labour Identification Number (i.e. LIN) Registration** done in **Shram Suvidha Portal** of Govt. of India.
- viii. **Copy of registration under the Building and Other Construction Workers (RE&CS) Act, 1996 in case he employs ten or more building workers in any building or other construction work.**

**b) At the time of submission of monthly bills**

- i. Copy of **Employee Register in FORM – A** under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017 ( to be replaced by FORM – IV (of Code on Wages-2019, after it comes into force).
- ii. Copy of **Wage Register in FORM – B** under The Ease of Compliance to Maintain Registers under various Labour Laws Rules, 2017 ( to be replaced by Register of Wages, Overtime, Fine, Deduction for damage and Loss in FORM – I of Code on Wages-2019, after it comes



into force) duly certified by **authorized representative** of the Contractor and **authorised person** in GAIL certifying as “***Certified that the amount shown in the column No. ---- has been paid to the workman concerned in my presence on----- (date) at ----- (place)***” along with **copy of bank statement** duly certified by bank and *copy of online transaction statement against each resource with details of name, account number, amount paid & date of payment* as proof of **Cashless Transaction / Payment of wages through e-banking/digital mode.**

- iii. As a part of compliance and proof of depositing Provident Fund, EDLI and ESI contributions the Contractor shall submit copies of the **Separate eChallans / ECR**, bank receipts/bank statement in respect of resources deployed in GAIL in the previous month in this contract. The documents should also contain details of resources, PF account No., ESI No., contributions of resources and employer etc.
- iv. Dully filled in statement as per **Annexure- i.**
- v. Copy of Wage Slips in FORM XIX
- vi. ***Proof of deposit of Cess under The Building and Other Construction Workers’ Welfare Cess Act, 1996, (if applicable)***

**c) At the time of closure of contract**

- i. **Indemnity Bond** of Rs. 100/- duly notarized from Notary indemnifying GAIL from all liabilities w.r.t. the resource engaged by the Contractor regarding payment of wages, Provident Fund/ESI contributions, Insurance and other statutory payments. Format for Indemnity Bond is enclosed at **Annexure- ii.**
  - ii. Copy of the **Wage Register** in **FORM – B** ( to be replaced by FORM-I of Code on Wages-2019 after it comes into force) for the last month.
  - iii. Copies of **Service Certificates** issue to resource in **FORM VIII**
  - iv. Copy of the ECR related to EPF and ESIC Compliance in respect of Resource.
  - v. Details as required for issuance of **FORM - VII (Notice of Completion of Work)**
  - vi. Copies of FORM-C & FORM –D under the Payment of Bonus Act 1965 as proof of payment towards Bonus.
  - vii. Copy of proof towards release of Leave Encashment
  - viii. Copies of No Dues Certificate from contract workers stating they have received all statutory payments and social benefits.
  - ix. ***Proof towards PF KYC compliance of contract workers***
  - x. ***Proof of deposit of total Cess under The Building and Other Construction Workers’ Welfare Cess Act, 1996, (if applicable) with final assessment from respective Cess Collector(s).***
- 4. Verifications of bills and documents submitted by the Contractor**

Before certifying/verifying the running/ final bill/invoice of the Contractor, the designated EIC of the respective contract of GAIL, shall verify from the ECRs of PF/ESI, through respective web portals, the detail/status of the payment made by the Contractor. In case the information furnished by the Contractor is found to be incorrect, GAIL shall take appropriate action against the Contractor under relevant conditions as available in the tender document.

**Statement in support of RA Bill for the Month of \_\_\_\_\_, 20\_\_**

- (1) Name of the Firm/Agency/Contractor \_\_\_\_\_
- (2) Nature of Contract: Job/ Service \_\_\_\_\_
- (3) Period of Contract: From \_\_\_\_\_ to \_\_\_\_\_
- (a) Extension Period of Contract, if any from \_\_\_\_\_ to \_\_\_\_\_
- (b) Place where contract workmen are working \_\_\_\_\_
- (4) Postal address of the Contractor: \_\_\_\_\_
- (5) Phone No. of the Contractor: \_\_\_\_\_
- (6) Fax No. and Email of the Contractor: \_\_\_\_\_
- (7) Name and Address of PF office from where EPF Code No. has been allotted: \_\_\_\_\_
- (8) EPF Code No. allotted by PF office: \_\_\_\_\_
- (9) Name and Address of ESIC office from where ESI Code No. has been allotted: \_\_\_\_\_
- (10) ESI Code No. allotted by ESIC office: \_\_\_\_\_
- (11) Labour License No. \_\_\_\_\_ dated \_\_\_\_\_
- (12) Validity period of Labour License from \_\_\_\_\_ to \_\_\_\_\_
- (13) Detail of Resource engaged by the Contractor:

Category	No. of Resources		Prevailing Minimum Wages
	Male	Female	
Unskilled			
Semi-skilled			
Skilled			
Highly skilled			
Total			

- (14) Copy of Wage Register in FORM – B ( to be replaced by FORM-I as per Code on Wages-2019, after it comes into force)
- (15) Details of deposit of contribution towards EPF:  
a) EPF Challan No. \_\_\_\_\_ Amount \_\_\_\_\_ Date \_\_\_\_\_
- (16) Details of Deposition of contribution towards ESI  
a) ESI Challan No. \_\_\_\_\_ Amount \_\_\_\_\_ Date \_\_\_\_\_
- (17) Whether any arrangement / agreement has been entered with any resource for extending benefits under Inter-state Migrant Workmen (RE&CS) Act, 1979: \_\_\_\_ (Yes / No)  
If Yes, No. of such Inter-state Migrant Workers: \_\_\_\_\_

**SIGNATURE OF CONTRACTOR/AUTHORIZED REPRESENTATIVE**

Place:

Date:

**INDEMNITY BOND**

WHEREAS GAIL(India) Limited (hereinafter referred to as GAIL) which expression shall, unless repugnant to the context include their legal representatives, successors and assigns, having their Registered Office at 16, Bhikaiji, Cama Place, R.K. Puram, New Delhi has entered into a CONTRACT with *<name of the Contractor>* Incorporated (hereinafter referred to as the ('CONTRACTOR') which expression shall unless repugnant to the context include their legal representatives, successors and assigns, having their Registered Office ----- for Rs. -----for *<NAME OF THE CONTRACT>* ---- for a period of-----” and on the terms and conditions as set out, inter-alia in the Letter of Acceptance 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.

GAIL has also requested the CONTRACTOR to execute an Indemnity Bond in favour of GAIL indemnifying it from all consequences which may arise out of any Case filed by any Resources/ vendors/ sub- Contractors /partner etc. who may have been engaged by the CONTRACTOR directly or indirectly with or without consent of GAIL for above works , which may be pending before any court of Law including Quasi-Judicial Authority , Competent Authority, Labour Court , Arbitrator , Tribunal etc. and the Contractor has readily agreed for the same.

NOW, THEREFORE, in consideration of the promises aforesaid; the CONTRACTOR hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GAIL from any loss, which may arise out of any such contract/Case. The CONTRACTOR undertakes to compensate to GAIL forthwith, on demand, without protest the loss suffered by GAIL together direct / indirect expenses.

AND THE CONTRACTOR hereby agrees with GAIL that:

- (i) This Indemnity Bond shall remain valid and irrevocable for all claims of GAIL arising from any such contract/case for which GAIL has been made party until now or here-in- after.
- (ii) This Indemnity Bond shall not be discharged / revoked by any change / modification / amendment / deletion in the constitution of the firm / Contractor 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 claims for payment are settled by the Contractor.

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

SIGNATURE OF CONTRACTOR/AUTHORIZED REPRESENTATIVE

Place:

Date:

**UNDERTAKING**

**(To be submitted along with un-priced bid)**

I/We hereby undertake that I/We have completely understood the statutory & non-statutory components, minimum resources required to be deployed and the cost involved thereof in deployment of resources as per the tender conditions.

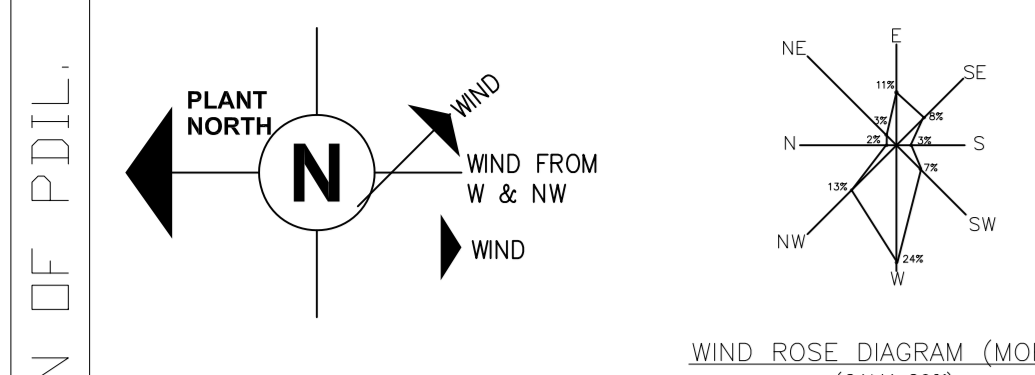
I/We further undertake to ensure all compliances of the tender conditions. Any non-compliance may be construed as deficiency in the performance of the contract. If such non-compliance is noticed GAIL/owner is at liberty to take action in line with the tender conditions including termination of the contract.

*Signature of Bidder.....*  
*Name of Bidder.....*

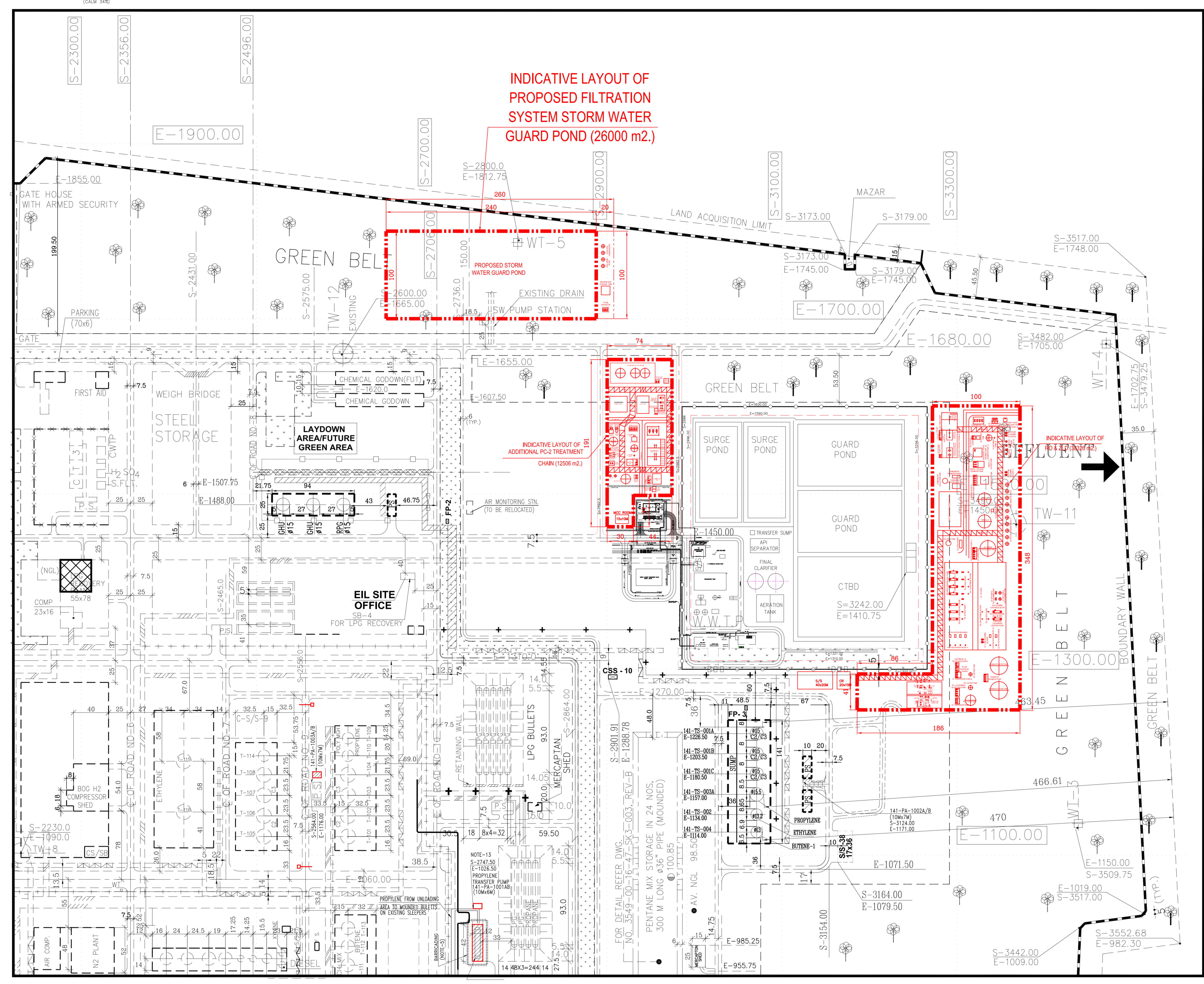
**Summary of Insurance Policies**

Contractor is required to cover all resources deployed by him with the following insurances / schemes:

Sl. No.	SCHEME	APPLICABILITY	PREMIUM/ CONTRIBUTION	SUM ASSURED/ BENEFITS	REMARKS
1	The Employees' State Insurance Act, 1948	Applicable to all resources of the Contractor (within ESI wage limit) working in notified area.	3.25% of wages by employer 0.75% of wages by employees	Benefits under the Employees' State Insurance Act, 1948.	
2	The Employees' Compensation Act, 1923 (in lieu of ESI – mentioned at Sl. 1)	Applicable to excluded employees under ESI and those who are working in non-notified area to extend similar benefits as available under ESI Act, 1948	Premium to be calculated considering wage limit under EC Act, 1923 (i.e. Rs. 15,000/- p.m. currently)	Maximum <b>Compensation Liability</b> under Employee's Compensation Act, 1923 along with a <b>Medi-claim Floater Policy with a coverage of Rs. 3 Lakhs per resource covering his/her spouse and two children</b>	Provides compensation and medical facility to resources.
3	Group personal Accident Insurance	Applicable to all resources of the Contractor	Based on the coverage	Insured value: <b>Rs. 5 Lakh</b> to cover expenses associated with any accident.	Death, permanent disablement, temporary total disability or any other medical expenses related to accident.
4	Pradhan Mantri Suraksha Bima Yojana (PMSBY)	Eligibility – age group 18 to 70 years	Rs. 12/- per annum	<b>Accidental</b> death and permanent disability: (i) Permanent total disability – Rs. 2 lakhs. (ii) Permanent partial disability – Rs. 1 Lakh.	
5	Pradhan Mantri Jeevan Jyoti Bima Yojana(PMJJB)	Eligibility – age group 18 to 50 years. (can continue upto 55 years)	Rs. 330/- per annum.	Risk coverage – Rs. 2 Lakhs- in case of <b>death due to any reason</b>	



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**NOTES :-**  
1. EQUIPMENT SIZE / LOCATION ARE TENTATIVE AND FOR PLANNING PURPOSE ONLY. AND TO BE FINALIZED DURING DETAIL ENGINEERING.

P	12.03.2024	ISSUED FOR TENDER	ANIL	NSY/AS	PK
REV.	DATE	DESCRIPTION	PPD.	CKD.	APPD.
CLIENT :			GAIL INDIA LIMITED, PATA		
PROJECT :			PMO SERVICES FOR AUGMENTATION OF WWTP AND SETTING UP ZLD PLANT AT GAIL, PATA		
TITLE :			PLOT PLAN OF WWTP, RO ZLD AND GAURD POND		
PROJECTS & DEVELOPMENT INDIA LTD. NOIDA			SCALE : -- DRG. No.: PC286-0000-0001 FILE : PC286-0000-0001_Rev. P		