

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

NOTICE INVITING TENDER / INVITATION FOR BIDS FOR "**Comprehensive Operation & Maintenance Contract for Coal Handling Plant & Railway Siding**" at NTPC- Jhabua, Seoni, MP."

(Domestic Competitive Bidding)

NIT/ Enquiry No.: **JPL/C&M/Contracts/NIT/23-24/120007553 dated 10/05/2023**

Employer invites Bids on SINGLE STAGE-THREE ENVELOPE (Hard copy) bidding basis

Envelope-I: Techno-Commercial Bid

Envelope-II: Price Bid as per the Scope of Work

Envelope-III: E-transfer towards EMD & Tender Fees of bid document.

1. Bidders are required to bid as per tender, without exclusions.
2. Date & time for price bid opening shall be intimated to technically qualified bidder only after QR evaluation.

1. BRIEF SCOPE OF WORK:

The brief scope of work under this package shall include the following: "**Comprehensive Operation & Maintenance Contract for Coal Handling Plant & Railway Siding**" at NTPC- Jhabua, Seoni, MP:

Tender Ref No / Tender ID	JPL/C&M/Contracts/NIT/23-24/120007553 dated 10/05/2023
Form of Contract/Tender Category	Services
Type Of Bidding	SINGLE STAGE-THREE ENVELOPE
Document Download / Sale Start Date	11/05/2023
Source of IFB/NIT	Not Applicable
Clarification Start Date	14/05/2023
Clarification End Date	25/05/2023
Bid Submission Start Date	Not Applicable
Bid Submission End Date & Time	29/05/2023 5:30PM
Bid Opening Date	Shall be informed
Cost of Bidding Documents in INR(Non-Refundable)	Rs 7,875/- + GST
EMD amount	Rs.50,00,000 (Rs Fifty Lakhs only)
Benefit of MSME	Not applicable
Joint Venture / Consortium	Allowed

2. Technical Qualifying requirement: Document to be given along with Bid.

The bidder must have successfully executed Operation & Maintenance work for minimum **500MW Thermal Power Plant / Station (having unit size of minimum 200MW and above)**.

1. Operation of DCS/PLC based coal handling plant, field equipment / systems & auxiliaries.
2. Maintenance (including mechanical, electrical and control & instrumentation equipment / systems (Coal Handling Plant , Side Arm charger , Stacker Re-claimer, VGF (Vibrating Gizzly Feeder & crusher , Dust separation System and EOTs, Locomotive) of Coal Handling Plant and Railways siding
3. O&M of Wagon tippler,
4. Railway siding operation,
5. Railway track maintenance,
6. Operation & Maintenance of LOCO (preventive & running maintenance of LOCO) and O&M of Coal handling plant with minimum coal handling capacity of 1500 MT/Hr/Stream in a **Thermal Power Station of 500MW** and above

for a minimum continuous period of two year during last seven years reckoned from the date of techno-commercial bid opening.

3. Commercial Qualifying requirements:

- A. Bidder should have executed the similar work(s) during last seven (7) years as on the date of techno commercial bid opening for either of the following values:
- Single work costing not less than **₹11.65 crores** excluding GST.
OR
 - Two works each costing not less than **₹7.2 Crores** excluding GST.
OR
 - Three works each costing not less than **₹5.82 crores** excluding GST.

The average annual turnover of the bidder in the preceding three (03) financial years reckoned from the date of Techno-Commercial bid opening, should not be less than Rs.14.57 Crores excluding GST

1. Net Worth : Net worth of the Bidder **should not be less than 100% (hundred percent) of its paid up share capital** as on the last day of the preceding Financial year on the due date of Techno commercial bid opening.
2. Net worth means the sum total of the paid up share capital and free reserves. Free reserve means all reserves credited out of the profits and share premium account, but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus
3. Other income shall not be considered for arriving at annual turnover figures.

Note:

- i. Similar work(s) shall comprise of the work of as described above.
- ii. The word 'executed' means the bidder should have achieved the criteria specified in the above QR as below:

Case I: The work is started earlier (prior to the period stipulated in QR) but completed within the stipulated period, in such cases, entire value of the relevant work vide that work order shall be considered for evaluation.

S. No.	Attachment	Description	Applicable / Not Applicable
1	Attachment-1	Bid Form	Applicable
2	Attachment-1A	Bid Security	Applicable
3	Attachment-1B	Bid Security Declaration	Applicable
4	Attachment-2	Authority to Sign Bid	Applicable
5	Attachment-3	Bidders Qualification Documents, in line with attached Performa-3A & 3B	Applicable
6	Attachment-4	Sub-Contractor proposed by Bidder	Not Applicable
7	Attachment-5	Equipment / Machinery Deployment Schedule	As informed by EIC
8	Attachment-6	General Declaration	Applicable
9	Attachment-7	Electronic Fund Transfer (EFT) Form	Applicable
10	Attachment-8	Details along with copy of PF and ESI Registration, PAN and GST Reg.	Applicable
11	Attachment-9	Declaration Regarding GST	Applicable
12	Attachment-10	Technical Compliance i.e. Scope of Work, (Section-V)	Applicable
13	Attachment-11	Integrity Pact	Not Applicable
14	Attachement-12	Declaration of No Deviation Certificate	Applicable
15	Attachement-13	Declaration of Compliance of Qualifying Requirement	Applicable
16	Attachement-14	Acceptance of Banning Policy	Applicable
17	Attachement-15	Acceptance of Fraud Prevention Policy	Applicable
18	Attachement-16	Acceptance of NTPC Safety Rules and Standard Safety Rules as per Tender Documents	Applicable
19	Attachement-17	Declaration of Local Content	Not Applicable

4.0 All bids must be accompanied by Bid Security for an amount equivalent to INR 50,00,000/- (Indian Rupees Fifty Lakh Only) and cost of Tender document as Rs. 7,875/- (Indian Rupees Seven Thousand Eight Seventy Five only) +GST

"ANY BID NOT ACCOMPANIED BY AN ACCEPTABLE BID SECURITY AND COST OF TENDER

DOCUMENT IN A SEPARATE SEALED ENVELOPE SHALL BE REJECTED BY THE EMPLOYER AS BEING NON-RESPONSIVE AND SHALL NOT BE OPENED. IN CASE, THE BID SECURITY AND COST OF TENDER DOCUMENT IS SUBMITTED THROUGH ELECTRONIC FUND TRANSFER (EFT), BIDDER TO SUBMIT THE PROOF OF E-PAYMENT OF BID SECURITY AND COST OF TENDER DOCUMENT EITHER IN SEPARATE SEALED ENVELOPE.”

4.1 The bid security can also be submitted through wire transfer. Bank details are as follows:

Details for remittance of EMD/Cost of bid document by Bidder:

Account Name	Jhabua Power Ltd.
Bank Account No	910020006342241
Location	Sector-14, Near Huda Office, Gurgaon
Bank	Axis Bank
Branch	Sector-14, Branch Code-0056
ISFC Code	UTIB0000056
MICR Code	
Type of A/c	O&M Exp. Payment A/C

Bank charges to be borne by remitter.

While carrying out online transfer, Bidders shall ensure to enter “EMD & COST OF TENDER DOCUMENT - Tender No.-Vendor Name” in the Text / Remarks / Reason Field. Bidder shall intimate the details of same through email to concerned C&M department along with Payment Receipt in the following format:

Declaration for EMD/Cost of Bid document

Tender No. :

Vendor Name :

UTR Reference:

Amount:

Date of Transfer:

Transferor Bank:

(Signature of Vendor with Seal)

2. Bidders are required to submit (i) EMD Declaration copy sent to JPL(ii) Authority to Sign Bid (iii) Legal Status of Bidder (iv) Integrity Pact under the technical cover.

3. Clarification on bidding documents:

Bidder shall put the query by email prior to the clarification end date. EMPLOYER will respond to any request for clarification or modification of the bidding documents that it receives within the time line specified.

EMPLOYER will post the Clarifications under Clarification/Corrigendum by email. Bidders can view these clarifications.

No Queries from Bidders, whatsoever, shall be entertained by the Employer beyond the last date of receipt of Queries as specified above.

4. Issuance of Bidding Documents to any Bidder shall not construe that such Bidder is considered qualified.
5. Transfer of Bidding Documents by one intending Bidder to another is not permissible.

6. Address for Communication and submission of Bid:

C&M Department
Jhabua Power Ltd.
(A Joint Venture of NTPC Ltd.)
Village - Barela,
Tehsil - Ghansore,
District - Seoni (Madhya Pradesh)
Pin - 480997
e-mail : sameer.kher1@jhabuapower.co.in



Jhabua Power Ltd
(A Joint Venture of NTPC Ltd)

SECTION – II INSTRUCTION TO BIDDERS (ITB)

INSTRUCTIONS TO BIDDERS
(ITB) TABLE OF CLAUSES (ITB)

S.NO.	DESCRIPTION	PAGE NO.
PART A-GENERAL		3
1.0	INTRODUCTION	3
2.0	SOURCE OF FUNDS.....	3
3.0	CONFLICT OF INTEREST	3
4.0	BIDDER'S SITE VISIT	3
PART B -BIDDINGDOCUMENTS		3
5.0	CONTENT OF BIDDING DOCUMENTS	3
6.0	CLARIFICATION OFBIDDING DOCUMENTS.....	5
7.0	PRE-BID CONFERENCE (<i>If specified in the NIT/Tender Enquiry</i>).....	5
8.0	ADDENDA/ CORRIGENDA/ AMENDMENTS TO BIDDING DOCUMENTS	6
PART C – PREPARATION OF BID		6
9.0	COST OF BIDDING	6
10.0	LANGUAGE OF BID AND UNITS OF MEASURE.....	6
11.0	DOCUMENTS COMPRISING THE BID	6
12.0	BID PRICES AND PRICE BASIS	12
13.0	BID VALIDITY	13
14.0	BID SECURITY / GUARANTEE /EARNESTMONEY.....	13
15.0	WORK SCHEDULE	14

PART D – SUBMISSION OF BID.....	14
18.0 DEADLINE FOR SUBMISSION OF BID	17
20.0 MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF BID	17
PART E - BID OPENING AND EVALUATION	18
21.0 BID OPENING.....	18
23.0 EVALUATION AND COMPARISON OF BIDS.....	18
23.1 BID EVALUATION	18
PART F – AWARD OF CONTRACT	20
24.0 AWARD CRITERIA	20
25.0 EMPLOYER’S RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS	20
26.0 LETTER OF AWARD	20
27.0 SIGNING OF CONTRACT AGREEMENT.....	20
28.0 INELIGIBILITY FOR FUTURE TENDERS	21
29.0 ADHERENCE TO FRAUD PREVENTION POLICY.....	21
30.0 DECLARATION ON BANNING POLICY	22

INSTRUCTIONS TO BIDDERS (ITB)

NOTE:

A. SUBMISSION OF DOCUMENTS

S. No.	Content	Folder / Cover
1	Instrument of Tender Fee / Bid Security (EMD)	EMD Cover
2	All Documents regarding Qualifying Requirement, All Forms & Formats, Technical Documents(scope of works, Terms & Conditions), and other all documents in line with Tender Enquiry except Price Bid.	Technical Cover
3	Price Bid	Financial Cover

B. PHYSICAL SUBMISSION OF ORIGINAL DOCUMENTS:

- (i) Instrument of Tender Fee (As specified in NIT / Tender Enquiry)
- (ii) Instrument of Bid Security / EMD (As specified in NIT / Tender Enquiry)
- (iii) Authority to Sign / Power of Attorney

Note: Detail procedure for Physical Submission (in Sealed Envelope) of above documents is mentioned at Part-D of ITB.

PART A - GENERAL

1.0 INTRODUCTION

- 1.1** NTPC-Jhabua Power Ltd., (here in after called “NTPC-JPL” or “Employer”), wishes to receive bids for the Package named in NIT/IFB/Tender Enquiry.
- 1.2** Throughout these Bidding Documents, the term “Bid” and “Tender” and their derivatives (Bidder/Tenderer, Bidding/Tendering, Bidding Document/Tender Document, etc.); Bill of Quantity / Schedule of Quantity / Schedule of Quantities/ Bill of Quantities; Employer / JPL; Bid Security / Earnest Money Deposit; Security Deposit / Performance Security/ Performance Guarantee; Engineer-in-Charge / Engineer, appearing anywhere in the Bidding Documents shall have the same meaning and are synonymous to each other.

2.0 SOURCE OF FUNDS

Expenditure under this package is intended to be funded from internal resources.

3.0 CONFLICT OF INTEREST

- 3.1** Each Bidder shall submit only one bid either by himself, or as a partner in a joint venture or consortium, if so permitted in the Bidding Documents. A Bidder who submits or participates in more than one bid in this bidding will be disqualified from the bidding.
- 3.2** Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates that has been engaged by the Employer to provide consultancy services for the preparation of the design, specifications, and other documents to be used for the execution of Works under this Invitation for Bids.

4.0 BIDDER’S SITE VISIT: The Bidders are advised to visit the Site to familiarize themselves with the nature and quantum of work and site condition and obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his tender. No extra charges consequent on any misunderstanding or otherwise shall be allowed.

PART B - BIDDING DOCUMENTS

5.0 CONTENT OF BIDDING DOCUMENTS

The set of Bidding Documents issued for the purpose of bidding includes one set of the following, which should be read in conjunction with amendments, if any, issued in accordance with **ITB Clause 8.0** below.

Section	
I	Invitation for Bids (IFB)/Tender Enquiry/Notice Inviting Tender (NIT)
II	Instructions to Bidders(ITB)
III	Special Conditions of Contract (SCC)

IV General Conditions of Contract

(GCC)

V Scope of Works and Terms & Conditions

VI Schedule of Quantities (SOQ) / Bill of Quantities

(BOQ)

VII Forms and Procedures

VIII Quality plan

Transfer of Bidding documents purchased by one intending bidder to another is not permissible.

5.1 The Bidder is expected to examine all instructions, forms, terms, conditions and specifications in the Bidding Documents, before submission of his bid. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of such bid.

5.2 Qualifying Requirements:

The qualifying requirements for the tender are specified in the NIT / Tender Enquiry.

5.3 Documents in support of meeting Qualifying Requirements

Bidders are required to submit documents to satisfactorily establish their meeting the Qualifying Requirements stipulated in the tender.

5.4 Bid Drawings: (Refer Technical Specification for details).

The Bidder is requested to refer the Technical Specifications for the provisions in this regard.

6.0 CLARIFICATION OF BIDDING DOCUMENTS

A prospective Bidder requiring any clarification of the Bidding Document shall put the query under "Clarification" within 7 days from date of collection of Tender. EMPLOYER will respond to any request for clarification or modification of the bidding documents that it receives within the time line specified. Expected time lines for Employer to respond within 5 days.

Bidders must check the Clarifications issued before submission of Bid. Should the Employer deem it necessary to amend the Bidding Document as a result of a clarification.

7.0 PRE-BID CONFERENCE: Not Applicable

7.1 The Bidders are required to submit their questions/ clarifications/queries etc. in writing including by way of email from the registered email Id so as to reach the Employer at least 3 days before the due date.

8.0 ADDENDA/ CORRIGENDA/ AMENDMENTS TO BIDDINGDOCUMENTS

At any time prior to the deadline for submission of bids, EMPLOYER may, for any reason,

whether at its own initiative, or in response to a clarification requested by a prospective Bidder, amend the bidding documents.

To give prospective Bidders reasonable time to take the amendment into account in preparing their bid, EMPLOYER may, at its discretion, extend the deadline for the submission of bids.

PART C - PREPARATION OF BID

9.0 COST OF BIDDING

9.1 The Bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

10.0 LANGUAGE OF BID AND UNITS OF MEASURE

10.1 The bid and all correspondence and documents relating thereto exchanged by the Bidder and the Employer shall be written in English. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an appropriate translation of pertinent passages into English, in which case, for the purpose of interpretation of the bid such translations shall govern.

10.2 The units of measurement shall be metric system of measures, unless otherwise specified elsewhere.

11.0 DOCUMENTS COMPRISING THE BID

11.1 The bid submitted by the Bidder shall interalia comprise of the following documents:

- (a) Bid Form duly completed and signed by the Bidder, together with all Attachments identified in **ITB Sub-Clause 11.2** below.
- (b) Schedule of Quantities

11.2 Bidding procedure shall be as specified in the NIT // Enquiry Documents.

11.3 Each Bidder shall submit with his bid the following attachments:

11.3.1 **TECHNO-COMMERCIAL BID**

(a) **Attachment 1: Bid Security (Envelop 1)**

Bid Security shall be furnished in accordance with ITB Clause 14 in a separate sealed envelope. Bid not accompanied by the requisite Bid Security in a separate sealed envelope, or bid accompanied by Bid Security of insufficient value, shall not be entertained and in such case, the bid shall not be opened and rejected pursuant to ITB Sub-Clause 14.4.

(b) **Attachment 2: Authority to Sign the Bid.**

The Bidder shall furnish the following to check that the person(s) signing the bid has/have the authority to sign the bid and thus establish that the bid is binding upon the Bidder during the full period of its validity in accordance with **ITB Clause No.13**.

- i) In case of Sole Proprietorship Concern/Partnership Firm, Specimen signature of the Proprietor/all the partners duly attested by a scheduled Bank or First Class Magistrate.

- ii) In case of Private Limited Companies, Copy of Power of Attorney issued by Competent Officer under the common seal of the Company, authorizing the person to sign the bid/ execute contracts/agreements etc duly notarized
- iii) In case of Public Limited Companies and Statutory Corporations, Board resolution authorizing the Executive to sign the bid/ contracts/agreements and affix common seal thereon in accordance with the provisions of Article of Association of the Company OR Power of Attorney issued by Competent Officer under the common seal of the Company authorizing the person to sign the bid/ execute contracts/agreements etc.
- iv) In case of Joint Venture/Consortium, Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the bid.

(c) Attachment 3: Bidder's Qualifications Technical Cover

Documentary evidence establishing that the Bidder meets the Qualifying Requirements stipulated in the NIT/IFB including the following shall be furnished in **Attachment-3** to the bid:

(A) Legal Status of the Company

1. In case of Sole Proprietorship Concern
 - i) The full name of an individual proprietor, his/her parentage, documentary proof of his/her age, permanent address and present postal address/ contact details.
 - ii) A deed of declaration by the Proprietor, that no other individual or company has any share in the concern.
2. In case of Partnership Firm
 - i) Certified photocopy of the Partnership Deed, with up to date amendments (if any).
 - ii) Registration certificate issued by the Registrar of Companies concerned, if any.
 - iii) In case of change in the constitution of the firm due to retirement or death or addition of an incoming partner, photocopy of Deed of Dissolution, fresh registration Certificate and the fresh / extant Partnership Deed, as applicable.
3. In case of Private Limited Companies
 - i) Certified to be true and up to date amended copy of Memorandum and Articles of Association of the Company.
 - ii) Certificate of incorporation of the Company.
4. In case of Public Limited Companies and Statutory Corporations.
 - i) Certified to be true copy of Memorandum and Articles of Association of the Company and/or the relevant Statute/Act.
 - ii) Certificate of Incorporation of the company - In case of public limited Co. only.
 - iii) Certificate of Commencement of Business - In case of public limited Co. only.
5. In case of Consortium/ Joint Venture bid

- i) The information listed in Qualifying Requirements in NIT/IFB/Tender Enquiry shall be submitted for each Joint Venture or Consortium partner.
- ii) The bid, shall be signed so as to be legally binding on all partners;
- iii) One of the partners shall be nominated as being in charge and shall be designated as leader; this authorisation shall be evidenced by submitting with bid, a power of attorney signed by legally authorised signatories of all the partners;
- iv) An authorization authorizing the leader to incur liabilities and receive instructions for and on behalf of any and all partners of the Joint Venture or Consortium and the entire execution of the Contract including payment to be done exclusively with the leader;
- v) All partners of the Joint Venture shall be liable jointly and severally for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorisation mentioned under (iii) above as well as in the Bid Form and in the Agreement (in the case of a successful bid);
- vi) Joint Venture / Consortium Agreement entered into by the Joint Venture or Consortium partners shall be submitted with the bid. The Joint Venture or consortium Agreement shall clearly specify the work and responsibility of each partner or a notarised copy.
- vii) A copy of the Partnership Deed/Memorandum & Articles of Association/Certificate of incorporation as the case may be of the prime bidder and all the Partners of Joint Venture / Consortium shall also be enclosed.

(B) Financial Status

In support of meeting the Financial criteria specified in the Qualifying Requirements stipulated in the NIT/IFB/Tender Enquiry, the following documents shall be furnished with the bid:

1. Audited Financial results of preceding 3 financial years or Balance Sheet and Profit & Loss account statement of preceding 3 financial years duly certified by a Chartered Accountant.
2. Solvency Certificate from Bankers, issued not earlier than fifteen (15) days prior to the scheduled date of bid opening of the Package, if asked for in the NIT / Tender Enquiry.

(C) Proof of Execution of Works

In support of meeting the work execution requirements specified in the Qualifying Requirements stipulated in the NIT/IFB/Tender enquiry, the following documents shall be furnished with the bid

- i). Copies of the Letter of Award/Purchase orders/Contracts

ii). Certificate (s) from the Client(s) for successful execution of the assignment with value and period of execution.

(D) Other requirements specified in the Qualifying Requirements.

In support of meeting the other requirements specified in the Qualifying Requirements stipulated in the NIT/IFB/Tender enquiry, the documents specified in the SCC shall be furnished with the bid.

The documentary evidence of the proposed sub-contractor's qualifications against the sub qualifying requirements if so specified in the bidding documents shall also be furnished in **Attachment - 4.**- See Sub-Clause (d)below.

Notwithstanding anything stated above, the Employer reserves the right to undertake a physical assessment of the capacity and capabilities including financial capacity and capability of the Bidder / his Collaborator(s) / Associate(s) / Subsidiary(ies) / Group Company(ies) to perform the Contract, should the circumstances warrant such assessment in the overall interest of the Employer.

The physical assessment shall include but not be limited to the assessment of the office/facilities/banker's/reference works by the Employer. A negative determination of such assessment of capacity and capabilities may result in the rejection of the Bid.

The above right to undertake the physical assessment shall be applicable for the qualifying requirements stipulated in the bidding documents.

d) **Attachment 4: Subcontractors Proposed by the Bidder: NOT APPLICABLE**

e) **Attachment 5: Equipment/ Machinery deployment Schedule: As applicable**

The Bidder shall indicate the quantum and schedule of the equipment/ machinery/ lab equipment etc. he proposes to deploy for the Work under this bid.

f) **Attachment 6: General Declaration of Bidder**

Declaration that the Bidder has carefully examined the Bidding Documents in totality and his authorized personnel have visited the site for assessment of all factors for the purposes of bidding.

g) **Attachment 7: Electronic Fund Transfer (EFT) Authorization Form**

Authorization Form for release of payments through Electronic Fund Transfer System.

h) **Attachment 8: Details of PF, ESI, PAN and GST Regn.**

The details of registration for PF, ESI, PAN and GST Regn. to be furnished.

(i) **Attachment 9: Declaration Regarding GST**

The bidder shall necessarily declare as part of his bid, the scheme which the bidder has adopted for calculation of GST in Attachment 9 of Forms & Procedures Section VII).

(j) **Attachment 10: Technical Compliance** The bidder shall essentially confirm compliance to the scope of work **(Section V)**

(k) **'NIL' Deviations Certificate**

No deviation, whatsoever, is permitted by the Employer to any provisions of Bidding Documents.

The acceptance of above is an attribute of the physical Bid Invitation and the Bidders are required to confirm acceptance of the same by accepting the following attribute:

“Do you certify full compliance to all provisions of Bid Documents”

Acceptance of above attribute shall be considered as bidder's confirmation to the following:

- (a) The provisions of Bidding Documents read in Conjunction with Amendment(s)/ Clarification(s)/ Addenda/ Errata (if any) are acceptable and no deviation has been taken in this regard.
- (b) Any deviation to Bidding Documents and its subsequent Amendment(s)/ Clarifications(s)/ Addenda/ Errata/ Minutes of Clarification Meeting (if any) as mentioned at (a) above found anywhere in Price Bid Proposal, implicit or explicit, shall stand unconditionally withdrawn, without any cost implication whatsoever to Employer, failing which the bid security shall be forfeited.

(l) **Declaration on Qualifying Requirements** Declaration by the Bidder towards compliance on "Qualifying Requirements" by accepting the attribute in the physical Bid.

“Do you certify full compliance on Qualifying Requirements”

Acceptance of above attribute shall be considered as bidder's confirmation to the following conditions:

- (a) The number of reference Plants/Orders quoted by Bidder in **Attachment- 3** of the bid, for establishing compliance to the specified Qualifying Requirement (QR), are in accordance with the provision specified above.
- (b) The reference Plants/ Orders/ declared, shall only be considered for evaluation/ establishing compliance to Qualifying Requirement (QR). Any reference Orders declared more than as specified above shall not be considered for evaluation/establishing compliance to Qualifying Requirements.
- (c) No change or substitution in respect of reference Plants/Orders for meeting the specified Qualifying Requirement (QR) shall be offered by the bidder.

(m) **Declaration on Banning Policy** Declaration to the effect that the Bidder shall abide by Banning Policy of the Employer displayed on NTPC's website <http://www.ntpctender.ntpc.co.in> indicating his compliance to the provisions of **ITB Sub-Clause 32** to be furnished by accepting the following GTE condition:

“Do you accept Withholding and Banning of Business Dealing Policy of NTPC”

(n) **Declaration on Fraud Prevention Policy**

(o)

Declaration to the effect that the Bidder shall abide by Fraud Prevention Policy of the Employer displayed on NTPC's website <http://www.ntpctender.ntpc.co.in> indicating his compliance to the provisions of ITB Sub-Clause 29 to be furnished by accepting the following condition:

“Do you accept the Fraud Prevention Policy of NTPC”.

Note:

- l) **Techno-Commercial Bid should not contain any price content entry. In case, the Techno-Commercial Bid is found to contain any price content, such bid shall be liable for rejection.**

PRICE BID**(a) Prices**

Prices should be quoted as per the format enclosed. Applicable GST percentage % rate shall be mentioned by vendor under respective category.

- 11.4** Filling the information in the attachments with answers like “shall be given later” “or” “shall be mutually discussed and finalized” or “information already submitted at the time of enlistment” etc. shall not be accepted. Even if the information required in the attachments has been given in response to any other recent invitation for bids of the Employer or in some other reference, it is mandatory for the Bidder to give the information along with his bid as asked for. Non-compliance with the above or leaving the attachment(s) blank may lead to the rejection of the bid. The information furnished by the Bidder should be consistent, correct and true. The Employer reserves the right to verify the information given and if found incorrect, the bid may be rejected.

- 11.5** **A conditional Price Bid shall run the risk of rejection.**

- 11.6** Price Bid should not contain any matter in respect of Technical and / or Commercial aspects other than the details specifically sought in the Price Bid.

12.0 BID PRICES AND PRICE BASIS

- 12.1** Unless otherwise specified in the Technical Specifications, Bidders shall quote for the entire facilities on a “single responsibility” basis such that the total bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the bidding. Bidders shall give a breakdown of the prices in the manner and detail called for in the physical Price Schedules.

- 12.2** The currency of the bid and currency of payment shall be in Indian Rupees until unless specified otherwise in the SCC.

- 12.3** The Bidder shall fill in unit rates/prices for all items of Works described in the Bill of Quantity (BOQ). The rates/prices quoted in the Bill of Quantity shall also be deemed to include any incidentals not shown or specified but reasonably implied or necessary for the proper completion and functioning of the specified Works in accordance with the Bidding Documents. Items of the work described in the Bill of Quantity (BOQ) for which no rate or price has been entered therein by the Bidder, shall also be considered as an Abnormally Quoted item and shall be governed by the relevant provisions of ITB Sub-Clause 23.4.

The successful bidder if awarded the contract shall take sufficient care in moving the plants equipment and materials from one place to another so that they do not cause any damage to any person or the property of employer or 3rd party including overhead and underground cables/pipelines. In the event of such damage including eventual loss of operation and operation of the plant or services in any plant or establishment as estimated by the employer or adjusted by third party shall be borne by the Contractor.

- 12.4** The rates/amount quoted in the Bill of Quantity (BOQ) shall be exclusive of all GST and all

other taxes & duties as per GCC Clause 26.0. However, levies, royalty, fees, labor cess etc., if any, shall be included in the price as per GCC Clause 26.0. In case bidder does not mention GST in GST column provision, other relevant Charges in this regard provision in tender document shall be applicable.

In the Bill of Quantity (BOQ) provided, the bidder shall quote the prices, taxes etc. as asked for in the BOQ.

12.5 The Bidder shall be responsible for payment of any tax levied on the transfer of property and goods involved in the **'Composite / Works Contract'** in accordance with the applicable GST Law or applicable Act or Notification(s) by the State or Central Government or other authorities and rules made there under including amendments, if any. The liability on account of such tax as per the rates of tax prevailing as on seven (7) days prior to the date of bid opening is to the account of the Contractor. In case of any variation in the rates of the tax after the date seven (7) days prior to date of bid opening, the same shall be paid/ reimbursed to the Contractor subject to submission of documentary evidence and proof of having made the payment at the revised rate.

12.6 The bidder shall necessarily declare as part of his bid, the scheme which the bidder has adopted for calculation of Goods & Service Tax in Attachment 9 of Forms & Procedures (Section VII). In case the bidder has opted for Works Contract/Composite Scheme for payment of Goods & Service Tax, the estimated value of Owner Issue Materials, if any, to be considered for working out GST liability as part of the Bid Price as indicated in SCC. The bidder shall not be allowed to change the declared method of calculation GST subsequently. In case of any variation between the estimated value and actual value of Owner Issue Material during the execution of the contract, an equitable adjustment of the contract price shall be made by addition/deletion of the contract price in case of Works Contract /Composite Scheme of Goods & Service Tax.

13.0 BID VALIDITY

13.1 The Bidder shall keep his bid valid for a period of 120 **days from the date of opening of the techno-commercial bid, unless otherwise specified in the SCC / ITB**, during which period the Bidder agrees not to vary, alter or revoke his bid either in whole or in part.

13.2 In exceptional circumstances, prior to the expiry of the original bid validity period, the Employer may request the Bidders to extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing. A Bidder agreeing to the request will not be permitted to modify his bid, but will be required to extend the validity of his bid security for the period of the extension.

14.0 BID SECURITY

14.1 The Bidder shall furnish, as part of its Bid, a Bid Security in a separate sealed envelope for the amount and currency as stipulated in the Bid Data Sheet (BDS). In case bid security amount is deposited as EFT, Proof of e-payment of Bid Security, shall be submitted in a separate sealed envelope

***“ORIGINAL BID SECURITY FOR (NAME OF PACKAGE)
SPECIFICATION NO. DUE ON (DATE OF BID OPENING) FROM
..... (NAME OF THE BIDDER).”***

14.2 The Bid Security shall, at the Bidder's option, be in the form of Electronic Fund Transfer (EFT)/

DD from any of the banks specified in the forms and format section-VII payable at location as specified in the SCC / NIT.

Upon successful e-payment of the Bid Security, e-receipt shall be generated by the system, a copy of which is to be submitted by the bidder as a part of its bid,

- 14.3** Wherever Bids under Joint Venture route are permitted as per the Qualifying Requirements in the Bidding Documents, the Bid Security by the Joint Venture must be on behalf of all the partners of the Joint Venture.
- 14.4** Any bid not accompanied by an acceptable bid security in a separate sealed envelope shall be rejected by the employer as being non-responsive and shall not be opened. In case, the bid security is submitted as EFT, bidder to submit the proof of e-payment of bid security in separate sealed envelope. Further Stage-II (Price Bid) (in case of Two Stage bidding) not accompanied by requisite bid security extension (in case Bid Security is submitted in the form of BG) in a separate sealed envelope shall be rejected by the Employer as being non- responsive and shall not be opened.
- 14.5** Subject to clause 14.7 below, the Bid Security of the Bidder whose Techno-Commercial Bid has not been found acceptable, shall be returned along with letter communicating rejection of Techno-Commercial Bid. The Bid Security of the bidders who are unsuccessful after opening of Price Bids shall be returned expeditiously.
- 14.6** The Bid Security of the successful Bidder to whom the contract is awarded will be returned when the said Bidder has signed the Contract Agreement and has furnished the required Performance Securities pursuant to relevant clauses of ITB.
- 14.7** The Bid Security may be forfeited
- a) If the Bidder withdraws or varies its Bid during the period of Bid validity;
 - b) If the Bidder does not accept the correction of its Bid Price pursuant to ITB Sub- Clause for Arithmetical Correction.
 - c) If the Bidder refuses to withdraw, without any cost to the Employer, any deviation, variation, additional condition or any other mention anywhere in the bid (Price bid in case of Two Stage Bid), contrary to the provisions of bidding documents;
 - d) In the case of a successful Bidder, if the Bidder fails within the specified time limit to furnish the required Contract Performance Guarantee/Security Deposit in accordance with relevant clause of ITB.
 - e) If the bidder/his representatives commit any fraud while competing for this contract pursuant to Fraud Prevention Policy of NTPC.
 - f) In case the Bidder/Contractor is disqualified from bidding process in terms of Section 3 and 4 of Integrity Pact (IF APPLICABLE).
- 14.8** No interest will be payable by the Employer on the said amount covered under Bid Security.

15.0 WORK SCHEDULE

The entire Work covered under the contract of this bid shall be completed within the time

specified in the **SCC and further elaborated in the Technical Specifications**. The Work shall be performed in time and to achieve the targets, the Contractor shall have to plan adequate mobilization of all resources.

PART D - SUBMISSION OF BID

16.0 SEALING AND MARKING OF BID

Bid shall be submitted through physical mode in the manner specified elsewhere in bidding document.

16.1 Documents to be submitted in Physical Form (as brought out at ITB clause 11.3.1) shall be sealed and marked in the following manner:

- (i) The **Tender Fee and Bid Security / Earnest Money Deposit** furnished in accordance with ITB Clause 14 shall be sealed in a separate envelope duly marking the envelope as **"ATTACHMENT-1: BID SECURITY"**. In case if Tender Fee is applicable; same shall also be mentioned on Envelope.
- (ii) The **Power of Attorney** furnished in accordance with ITB Clause 11.3.1(b) shall be sealed in a separate envelope duly marking the envelope as **"ATTACHMENT-2: POWER OF ATTORNEY"**.
- (iii) The **Deed of Joint Undertaking (if applicable)** as per relevant attachment shall be sealed in a separate envelope duly marking the envelope as **"DEED OF JOINT UNDERTAKING"**
- (iv) The **Joint Venture/ Consortium Agreement (if applicable)** as per relevant attachment shall be sealed in a separate envelope duly marking the envelope as **"JOINT VENTURE / CONSORTIUM AGREEMENT"**
- (v) The **'Integrity Pact' (if applicable)** as per **ATTACHMENT-11** duly signed by the signatory authorized to sign the bid, shall be sealed in a separate envelope entitled **"ATTACHMENT- 11: INTEGRITYPACT"**.

The envelopes shall then be sealed in **an Outer Envelope**.

16.2 The inner and outer envelopes shall:

- (a) Be addressed to the Employer at the address given in the NIT/Tender Enquiry/SCC, and
- (b) bear the Package name indicated in the NIT/Tender Enquiry, the Invitation for Bids number indicated in the NIT/Tender Enquiry, and the statement "DO NOT OPEN BEFORE [date]," to be completed with the time and date specified in the NIT/Tender Enquiry, pursuant to **ITB clause 16**.

16.3 The inner envelopes shall also indicate the name and address of the Bidder.

16.4 If the outer envelope is not sealed and marked as required by ITB Sub-Clause 16.2 above, the Employer will assume no responsibility for its misplacement.

17.0 BID SUBMISSION - Bidders are requested to submit offer / proposal at

C&M Department
 Jhabua Power Ltd.
 (A Joint Venture of NTPC Ltd.)

Village - Barela,
Tehsil - Ghansore,
District - Seoni (Madhya Pradesh)
Pin - 480997

(A) TECHNO-COMMERCIALBID

(I) Sealed Envelope 1 : Bid Security EMD and Tender Fee

(II) Sealed Envelope 2 : Technical Bid - UNPRICED

- a) Attachment1: Bid Form
- b) Attachment 1A: BID Security (EMD)
- c) Attachment2: Authority to sign the bid
- d) Attachment3: Bidders Qualification Documents
- e) Attachment 4 : Equipment / Machinery deployment schedule
- f) Attachment5: General Declaration
- g) Attachment6: Electronic Fund Transfer (EFT) Form
- h) Attachment7: Details along with Copy of PF and ESI registration, PAN and GST number
- i) Attachment8: Declaration Regarding GST
- j) Attachment9: compliance to scope of work etc.(Technical details & data sheet)
- k) Attachment10: Integrity Pact
- l) Attachment 11 : Documents as asked in the SBD/SCC/Technical Specifications. Complete Technical Document duly signed and Stamped.
- m) No deviation Statement

(III) Sealed Envelope: PRICE BID: In the Bill of Quantity (BOQ) provided, the bidder shall quote the prices; taxes etc. as asked for.

18.0 DEADLINE FOR SUBMISSION OF BID

18.1 Bid (Documents mentioned for Offline Physical Submission must be received by the Employer at the address referred in the NIT/Tender Enquiry/SCC, no later than the time and date stated in the NIT/Tender Enquiry.

18.2 The Employer may, in exceptional circumstances and at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with **ITB Clause 8.0** above, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline shall thereafter be subject to the deadline as extended.

19.0 LATE BID SECURITY AND INTEGRITYPACT

Any Bid Security (or extension thereof) and/or Integrity Pact (If applicable); bid received by the Employer after the bid submission deadline prescribed by the Employer, pursuant to **ITB Clause 18**, will be rejected and returned unopened to the Bidder.

20.0 MODIFICATION, SUBSTITUTION AND WITHDRAWAL OF BID

20.0 Bid Modification and Withdrawal: The Bidder may modify or withdraw its bid after submission prior to the deadline prescribed for bid submission. In case of withdrawal a letter giving the reason for withdrawal. Once a bid is withdrawn, the bid cannot be re-submitted.

No bid may be withdrawn / modified in the interval between the bid submission deadline and the expiration of the bid validity period. Withdrawal/Modification of a bid during this interval may result in the Bidder's forfeiture of its Earnest Money Deposit, pursuant to ITB Clause 14.7(a) above.

20.1 No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period specified in Clause 13.0 of ITB.

Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its Earnest Money Deposit, pursuant to ITB Sub-Clause 14.7(a).

PART E - BID OPENING AND EVALUATION

21.0 BID OPENING

The bids will be opened at the time, date and location notified in the NIT/IFB/Tender Enquiry in the presence of the Bidder's authorized representatives (not exceeding two per Bidder) who choose to attend. All-important information's and any such other detail, as may be considered appropriate by the Employer will be read out during the bid opening.

22.0 CLARIFICATION OF BIDS

Bidder's attention is drawn that during the period, the bids are under consideration, the Bidder is advised to refrain from contacting by any means, the Employer and/or his employees/representatives on matters related to the bids under consideration and that if necessary, the Employer will obtain clarifications from the Bidder in writing. Any effort by a Bidder to influence the Employer's processing of bids or award decisions will result in the rejection of the Bidder's bid.

During the bid evaluation the Employer may, at its discretion, ask the Bidder for a clarification of its bid including documentary evidence pertaining to only the Work Orders/Purchase Orders/Letter of Awards/Contract Agreements declared in the bid for the purpose of meeting Qualifying Requirement specified in NIT/Bidding Documents. The request for clarification and the response shall be in writing and no change in the price or substance of the bid including substitution of reference Work Orders/Purchase Orders/Letter of Awards/Contract Agreements in the bid by new/additional Work Orders/Purchase Orders/Letter of Awards/Contract Agreements for conforming to Qualifying Requirement shall be sought, offered or permitted.

23.0 EVALUATION AND COMPARISON OF BIDS

23.1 BID EVALUATION

23.1.1 The Employer will initially determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the Bidding Documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations,

objections, conditionalities or reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality or performance of the contract; or (ii) that limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the contract; or (iii) whose rectification would unfairly affect the competitive position of other Bidders who are presenting substantially responsive bids.

- 23.1.2 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

23.2 **Arithmetical Correction**

Arithmetical errors in the bid will be rectified on the following basis:

If on check there are found to be differences between the rates/prices given by the Bidder in words and figures or in the amount worked out by him in the Schedule of Quantities and General Summary, the same shall be adjusted in accordance with the following rules:

- (a) In the event of a discrepancy between description in words and figures in respect of item rates quoted by a Bidder, the description in words shall prevail.
- (b) In the event of an error occurring in the amount column of Schedule of Quantities as a result of wrong extension of the quantity and the unit rate, the units shall be regarded as firm and extension shall be amended on the basis of the unit rate.
- (c) All errors in totaling in the amount column and in carrying forward totals shall be corrected.
- (d) The totals of various sections of Schedule of Quantities amended shall be carried over to the General Summary and the bid sum amended accordingly. The bid sum so altered shall, for the purpose of bid, be substituted for the sum originally bid and considered for evaluation and comparison of the bids and also for acceptance of the bid, instead of the original sum quoted by the Bidder.

- 23.3 The evaluation shall be based on the evaluated cost of fulfilling the contract in compliance with all commercial, contractual and technical obligations under this Bidding Document.

23.4 **Abnormally High or Low Rated Items**

If the rates/prices quoted by the successful Bidder for certain items of the Schedule of quantities are found to be abnormally high or low in relation to the Employer's estimate of the cost of work to be performed under the Contract, then Employer may require the Bidder to produce detailed rate/price analysis for such items of the Schedule of Quantities, to demonstrate the internal consistency of these rates/prices with the construction methods and schedule proposed. After evaluation of the rate/price analysis, Employer may require that the amount of the Security Deposit be increased at the expense of the successful Bidder to a level sufficient to protect Employer against financial loss in the event of default by the Contractor under the Contract, to carry out such low rated items of work, subject to the provisions of **GCC Sub-Clause 45.2** titled 'Permissible deviation limit for variation in Contract items'. Further, the Employer will require the Contractor to provide a suitable undertaking to execute the item(s) of Work to the extent of quantities up to the variation limits.

23.5 **Post-Qualification**

- 23.5.1 The Employer will determine to its satisfaction whether the Bidder is qualified to satisfactorily perform the contract, in terms of the Qualifying Requirements (QR) stipulated

in NIT/IFB/Tender Enquiry and other criteria detailed elsewhere in the bidding documents.

- 23.5.2 The determination will take into account the Bidder's capabilities, based upon examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder in the **Attachments – 3 and 4** as well as such other information as the Employer deems necessary and appropriate. The Employer reserves the right to assess the capabilities and capacity of the Bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of the Employer.
- 23.5.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid.
- 23.5.4 The capabilities of the vendors and subcontractors, proposed in **Attachment - 4**, to be used by the lowest evaluated Bidder, will also be evaluated for acceptability. Their participation should be confirmed with a letter of intent between the parties, as needed. Should a vendor or subcontractor be determined to be unacceptable, the bid will not be rejected, but the Bidder will be required to substitute an acceptable vendor or subcontractor without any change in the bid price, prior to award.

PART F - AWARD OF CONTRACT

24.0 AWARD CRITERIA

Subject to **ITB Clause 26.0**, the Employer will award the Contract to the Bidder whose bid has been determined to be substantially responsive to the Bidding Documents and whose bid has been adjudged as the lowest evaluated bid, provided that such Bidder has been determined to be qualified to perform the contract satisfactorily.

25.0 EMPLOYER'S RIGHT TO ACCEPT OR REJECT ANY OR ALLBIDS

Notwithstanding **ITB Clause 24.0**, the Employer reserves the right to accept, (whole or in part) and the Bidder shall be bound to perform the same at his quoted rate, or reject any bid for any reasons including national defense and security consideration and to annul the bidding process and to reject all bids at any time prior to award of contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Employer's action. Decision of Employer shall be final and binding in this regard.

26.0 LETTER OF AWARD

- 26.1 Prior to the expiration of the bid validity prescribed by the Employer, the Employer will issue a Letter of Award (LOA) / Service / Purchase Order to the successful Bidder containing reference of the documents which form the Contract, Scope of Work, Contract Price, period of completion of the Works, terms of payment, price adjustment, and other important aspects in consideration of the execution and completion of the Works and the remedying of any defects therein by the Contractor as prescribed by the Contract.
- 26.2 This Letter of Award / Purchase Order will constitute the formation of the Contract.
- 26.3 Prior to the expiration of the bid validity prescribed by the Employer, the Employer can issue a Brief Letter of Award (LOA) to the successful Bidder containing reference of the tender, offer and Contract Price. This brief letter of award shall constitute the formation of the Contract.

27.0 SIGNING OF CONTRACT AGREEMENT

- 27.1 The Successful Bidder / Contractor shall enter into a Contract Agreement with the Employer within thirty (30) days from the date of Letter of Award or within such other time,

as may be desired by the Employer. The Contract Agreement shall be executed on a non-judicial Stamp Paper of appropriate value.

27.2 Manner of Execution of Contract Agreement

- i) Unless and until a formal contract is prepared and executed, the Letter of Award / Purchase Order read in conjunction with the Bidding Documents will constitute a binding contract.
- ii) The Contract Agreement shall be prepared by the Employer and signed at the office of the Employer. The Contract Agreement will be signed in three originals and the Contractor shall be provided with one signed original and the other two originals will be retained by the Employer.
- iii) The Contractor shall provide free of cost to the Employer all the engineering data, drawings and descriptive materials submitted as a part of his bid, in at least three (3) copies to form an integral part of the Contract Agreement within twenty-eight (28) days after issuing of Letter of Award / Purchase Order. The Contractor shall further provide for signing of the Contract Agreement as per prescribed proforma enclosed in the Bidding Documents, appropriate Power of Attorney and the requisite stamp papers. All the other documents required for the preparation of the Contract Agreement shall be provided by the Employer.
- iv) Unless and until the Contract Agreement is signed as above, no payments under the Contract as per GCC Clauses entitled 'Payment On Account / Progressive Interim Payments' and 'Time Limit for Submission & Payment of Final Bill' shall be released to the Contractor by the Employer nor any materials shall be issued to the Contractor as stipulated in the Special Conditions of Contract or otherwise agreed to be issued by the Employer.
- v) **Subsequent to signing of the Contract Agreement, the Contractor at his own cost shall provide to the Employer with at least three (3) true copies of Contract Agreement within twenty-eight (28) days of its signing. The Contractor will also provide one (1) electronic version of the Contract Agreement to the Employer within thirty (30) days of its signing.**

28.0 INELIGIBILITY FOR FUTURE TENDERS

Notwithstanding the provisions regarding forfeiture of Bid Security specified in **ITB Sub-Clause 14.7**, if a Bidder after having been issued the Letter of Award/ Purchase Order, either does not accept the same or does not sign the Contract Agreement or does not submit an acceptable Initial Security Deposit/Entire Security in line with the provisions of the Contract and which results in tender being annulled then such bidder shall be treated ineligible for participation in re-tendering of this particular package.

29.0 ADHERENCE TO FRAUD PREVENTION POLICY

The Bidder/Contractor along with its associate / collaborators / sub-contractors / sub-vendors / consultants / service

providers shall strictly adhere to the Fraud Prevention Policy of Employer displayed on website <http://www.ntpctender.ntpc.co.in> The Bidder/Contractor shall immediately apprise the Employer about any fraud or suspected fraud as soon as it comes to their notice.

A certificate to this effect shall be furnished by the bidder along with his bid by accepting the Attribute "Acceptance of Fraud Prevention Policy of NTPC".

If in terms of above policy, it is established that the bidder/his representatives have committed any fraud while competing for this contract then the Employer shall be entitled to disqualify the Bidder(s)/ Contractor(s) from the bidding process and forfeit the bid security. In addition to the

above, if the Bidder has committed a fraud such as to put his reliability or credibility into question, the Employer shall be entitled to exclude including blacklist and put the Bidder on holiday for any future e-tenders /contracts award process. The exclusion will be imposed for a minimum of 3years.



Jhabua Power Limited
(A Joint Venture of NTPC Ltd)

SECTION – III

SPECIAL CONDITIONS OF CONTRACT(SCC)

SECTION - III

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract (SCC), Section-III, shall supplement/amend the General Conditions of Contract (GCC), Section-IV. Wherever there is a conflict, the provisions in SCC shall prevail over those in the GCC. The corresponding clause number of the GCC is indicated in parentheses.

NIT / TENDER ENQUIRY NO. -

NAME OF PACKAGE: "Comprehensive Operation & Maintenance Contract for Coal Handling Plant & Railway Siding " at NTPC- Jhabua, Seoni, MP"

S. No.	Clause Ref, in any	Special Conditions
1.	Currency (ITB Sub-Clause 12.2)	Indian Rupees
2.	Bid Validity (ITB Sub-Clause 13.1)	120 days
3.	Bid Security (ITB Sub-Clause 14.2)	As per ITB
4.	Employer	Name and address of Employer from where the bid has been invited: C&M Department Jhabua Power Ltd. (A Joint Venture of NTPC Ltd.) Village - Barela, Tehsil - Ghansore, District - Seoni (Madhya Pradesh) Pin - 480997 e-mail : sameer.kher1@jhabuapower.co.in
5.	Pre-Bid Conference (ITB Sub-Clause 7.0)	Not Applicable.
6.	Engineer-in-Charge (GCC Clause 21)	For the purpose of the sub-clause entitled Engineer-In-Charge/ Officer-In- Charge under clause " Settlement of Disputes" appearing in the GCC, the Head of Project/Station/Region shall act as Engineer-In-Charge/ Officer-In-Charge.

7.	Settlement of Disputes (GCC Clause 7) GCC Sub-clause 7.3	As per GCC
8.	Price Basis	All rates shall remain FIRM & FIXED throughout the tenure of the contract. No price variation shall be considered for any change in rates of manpower, raw material, machinery, fuel prices, royalty etc.
8.1	Price Variation pertaining to Revision in Minimum Wage Notification (As per Minimum Wages Act)	Not Applicable
9.	Time for Completion (GCC Clause 29.2)	2 year with provision of extension for additional 12 months , if required.
10.	Methodology of Execution & (GCC Clause 32)	As per SOW (Section – V) Mobilization – 30 days from Date of LOI / Date of intimation.
11.	Materials for the performance of the Contract (GCC Clause 34)	As per SOW (Section – V)
12.	Total value of owner issue material	Diesel will be free issued. Refer SoW for details.
13.	Security Deposit Mode	Not Applicable
14.	Power & Water Supply and boarding and lodging of employees/ labour / staff (GCC Clause 41 & SOW)	Electricity and water supply shall be provided on FoC basis by JPL at a single point source. Contractor shall arrange for distribution of the same at their own cost. Boarding and lodging of employees/labor / staff etc. of contractor shall be arranged by them at their own cost.

15.	Safety (GCC Clause 10.4.9)	Contractor shall ensure and adhere to safety compliances as per JPL's safety guidelines, equipment/ machinery checklist. Non compliances will either attract the penalty or cancellation of contract.
16.	Defects Liability / Warranty Period (GCC Clause 45)	Defects Liability Period shall be as per GCC
17.	Employer's and Contractor's Risks and Insurance (GCC Clause 46)	As per GCC
18.	Mobilization Advance (GCC Clause 23)	Not applicable
19.	Contract Performance Security (GCC Clause 22)	Successful Bidder shall submit a Contract Performance Bank Guarantee (CPBG) in JPL approved format within 20 days of award of contract for a value equal to 10% of total basic contract value of 2 years which shall remain valid till completion of Contract period (24 months + additional 3 months claim period against the specific contract.
20.	Liquidated Damages / Penalty (GCC Clause 29.6)	Refer SoW for details.
21.	Payment Schedule (GCC Clause 24)	100% Progressive monthly payment along with taxes shall be done within 30 days from the date submission of certified monthly RA bills, tax invoice along with all mandatory/ statutory documents at JPL. Monthly RA Bills shall be accompanied by all Log Sheets , Diesel & Machine efficiency consumption Log sheet , HR, IR, Safety etc. related documents as per the Technical Specification.
21.1	Retention	5% against total basic billed value of each certified RA bill shall be retained by the employer till the completion of all works covered under this package and shall be duly released upon successful closure of the contract with all required documentation.
22.	Contract Category	Services
23.	Integrity Pact	Not applicable
24.	Address for Correspondence (ITB Sub-Clause 17)	C&M Department Jhabua Power Ltd. (A Joint Venture of NTPC Ltd.) Village - Barela, Tehsil - Ghansore, District - Seoni (Madhya Pradesh) Pin - 480997 e-mail : sameer.kher1@jhabuapower.co.in

26	Laws Governing the Contract (Jurisdiction)	Courts of Jabalpur
27.	Evaluation Criteria	As per NIT
28.	<p>Preference to Make In India and granting of purchase preference to local suppliers</p>	<p>Not Applicable</p> <p>Minimum Local Content (Item wise/ Lump sum details as per BOQ) (As per Annexure-I to SCC)</p> <p>Procedure For order preference, MSE guidelines mentioned at Clause 31.0 of ITB read in conjunction with clause 32.0 of ITB “Preference to Make in India and granting of purchase preference to local suppliers” as mentioned in Annexure-I to SCC shall be applicable.</p> <p>Note: The local supplier shall be required to provide, in the relevant Attachment of Price Bid, self-certification / declaration that the Item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made. Format of Attachment <u>to be added with Price Bid</u> Form for Local Content Declaration to be submitted with price bid and at Attachment 11 of the standard forms.</p> <p>In cases the total bid price of the supplier / bidder is in excess of INR 10 crore, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case or companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.</p> <p>False declarations will be dealt in line with the Fraud Prevention Policy of NTPC. In case a bidder does not submit the aforesaid declaration or no value is indicated by the bidder or statement/any declaration like ‘later’, ‘to be furnished later’, ‘NA’ etc. are indicated by the bidder, then the bidder shall not be considered as a local supplier and shall not be eligible for any purchase preference. No further claim in this regard shall be entertained by the Employer.</p> <p>The bidders may apprise themselves of the relevant provisions of bidding documents in this regard before submission of their bids.</p>

SECTION – IV

GENERAL CONDITIONS OF CONTRACT (GCC)

	Sec-IV-GCC	Page 1 of 66
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GENERAL CONDITIONS OF CONTRACT (GCC)

TABLE OF CLAUSES (GCC)

Sl.	Description
A.	Contract and Interpretation.....
1.	Definitions
2.	Heading and Marginal Notes to Conditions
3.	Singular & Plural
4.	Order of the precedence of the Documents
5.	Instructions and Notices under the Contract:
6.	Laws governing the Contract
7.	Settlement of Disputes
B.	Subject Matter of Contract
8.	Scope of Contract
9.	Notices to Local Bodies
10.	Human Resources
11.	Shift Work
12.	Cooperation with other Contractors/ Agencies
13.	Materials obtained from Excavation
14.	Treasure, Trove, Fossils, etc
15.	Protection of Trees
16.	Security Watch and Lighting
17.	Prevention of Pollution
18.	Explosives
19.	Training of Apprentices
20.	Handing over of Site

21.	Duties and Powers of Engineer-in-Charge and his representatives.....
C. Payment.....	
22.	Contract Performance Security.....
23.	Advance
24.	Payment on Account/Progressive Interim Payments.....
25.	Contract Price Adjustment
26.	Taxes, Duties, Levies etc.....
27.	Overpayments and Underpayments
28.	Time Limit for submission & payment of Final Bill and waiver of rights of all claims
D. Execution of Facilities	
29.	Work Commencement, Execution & Delays.....
30.	Sub Contracts
31.	Setting out the Works.....
32.	Methodology of Construction & Equipment Mobilisation
33.	Patent Indemnity
34.	Materials for the performance of the Contract
35.	Quality Assurance Programme
36.	Inspection and Approval
37.	Records and Measurement
38.	Methods of Measurement.....
39.	Temporary / Enabling Works
40.	Urgent Works
41.	Construction Power and Construction Water Supply and Staff / Labour Colony
42.	Site Laboratory
43.	Completion Certificate.....

E. Defects Liability

44. Liability for Damage, Defects or Imperfections and Rectification thereof

45. Defects Liability Period

F. Risk Distribution

46. Employer’s and Contractor’s Risks and Insurance

47. Force Majeure

G. Changes in Contract Element.....

48. Changes in Constitution:.....

49. Powers of Engineer-in-Charge for alterations/ omissions/ additions /substitutions

50. Suspension of Works

51. Termination.....

52. Adherence to Fraud Prevention Policy

53. Withholding/Banning.....

GENERAL CONDITIONS OF CONTRACT

A. Contract and Interpretation

1. Definitions

- (a) "Employer" / "Owner" as specified in BDS and shall include their legal representatives, successors and permitted assigns.
- (b) "Contract" means the Contract Agreement entered into between the Employer and Contractor, together with contract documents referred therein. The term "Contract" shall in all such documents be construed accordingly and includes special conditions, specifications, designs, drawings, "Schedule of Quantities" with rates and amount. These documents taken together shall be deemed to form the Contract and shall be complimentary to one another.
- (c) "Contract Documents" mean the following documents that constitute the Contract between the Employer and the Contractor:
 - (i) The Contract Agreement along with its appendices
 - (ii) Letter of Award along with its appendices,
 - (iii) Special Conditions of Contract
 - (iv) Technical Specifications and Bid Drawings
 - (v) General Conditions of Contract
 - (vi) The Bid and Schedule of Quantities submitted by the Contractor.
- (d) "GCC" means the General Conditions of Contract
- (e) "SCC" means the Special Conditions of Contract.
- (f) "Day" means calendar day of the Gregorian Calendar.
- (g) "Week" means a continuous period of seven (7) calendar days.
- (h) "Month" means calendar month of the Gregorian Calendar.
- (i) The "Contractor" means the individual or firm or company whether incorporated or not, undertaking the Works and shall include its legal representatives, or successors, or permitted assigns.
- (j) "Sub-Contractor" shall mean a person or a corporate body approved by Engineer-in-Charge who has entered into a contract with the Contractor to complete a part of the Works.

- (k) The “Contract Sum” / “Contract Price” means:
- (i) In the case of Lump Sum Contracts, the sum for which the bid is accepted.
 - (ii) In the case of item Rate Contracts, the cost of the Works arrived at after extension of the quantities shown in Schedule of Quantities by the item rates for the various items and summing them to arrive at the total price.
- (l) “Engineer-in-Charge” shall mean the person appointed by the Employer or his duly authorized representative who shall direct, supervise and be in charge of the Works for purposes of the Contract.
- (m) “Market rate” means the rate for an item of Work, determined on the basis of the cost of labour, and material brought to Site and incorporated in the Works and for use of plant and equipment for the Work executed plus 10% (ten percent) of the rate to cover all overheads and profits of the Contractor.
- (n) “Schedule(s) of Quantities” shall mean the priced and completed Schedule of Quantities forming the part of the bid or such Schedule of Quantities forming the part of the Contract, as the case may be, with amendments, if any, thereto.
- (o) The “Site” means the land and / or other places on, under, in or through which the Works is to be executed under the Contract including any other land or places which may be allotted by the Employer or used for the purposes of the Contract.
- (p) “Temporary/ Enabling Works” means all temporary works of every kind required in or about the execution, completion or maintenance of the Works.
- (q) “Urgent Works” shall mean any urgent measures which, in the opinion of the Engineer-in-Charge, become necessary during the progress of the Works to obviate any risk of accident or failure or which become necessary for reasons of security and safety.
- (r) “The Works” shall mean the Works to be executed in accordance with the Contract or part(s) thereof as the case may be and shall include all extra or additional, altered or substituted works or temporary/ enabling Works and urgent works as required for performance of the Contract.
- (s) “Cost” shall mean all expenditure reasonably incurred or to be incurred by the Contractor or Employer, as the case may be, whether on or off the Site, including overhead and other charges, but excluding profit.
- (t) Throughout these Bidding Documents, the term “Bid” and “Tender” and their derivatives (Bidder/Tenderer, Bidding/Tendering, Bidding Document/Tender Document, etc.); Bill of Quantity / Schedule of Quantity / Schedule of Items/Schedule of Quantities/ Bill of Quantities; Employer / NTPC ; Bid

Security / Earnest Money Deposit; Security Deposit / Performance Security/ Performance Guarantee; Engineer-in-Charge / Engineer, appearing anywhere in the Bidding Documents shall have the same meaning and are synonymous to each other.

- (u) Goods and Services Tax" or "GST" means taxes levied under the Central Goods and Services Tax Act, Integrated Goods and Services Tax Act, Goods and Services Tax (Compensation to States) Act and various State/Union Territory Goods and Services Tax Laws and applicable cesses, if any under the laws in force (hereinafter referred to as relevant GST Laws).

2. Heading and Marginal Notes to Conditions

Heading and marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.

3. Singular & Plural

Where the context so requires, words importing the singular only will also include the plural and vice versa.

4. Order of the precedence of the Documents

4.1 The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings, figured dimensions in preference to scale and Special Conditions in preference to General Conditions.

4.2 In the case of discrepancy between Schedule of Quantities, the Specifications and/or the Drawings, the following order of precedence shall govern:

- (a) Description in Schedule of Quantities
- (b) SCC
- (c) Technical Specifications
- (d) Drawings

4.3 If there are varying or conflicting provisions made within any document forming part of the Contract, the Engineer-in-Charge shall be the deciding authority with regard to the intention of the document.

4.4 Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the Works comprised therein according to drawings and specifications or from any of his obligations under the Contract.

5. Instructions and Notices under the Contract:

	Sec-IV-GCC	Page 7 of 66
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5.1 Subject as otherwise provided in the Contract, all notices to be given on behalf of the Employer and all other actions to be taken on its behalf may be given or taken by the Engineer-in-Charge or any officer for the time being entrusted with the functions, duties and powers of the Engineer-in-Charge by the Employer. All instructions, notices and communications, etc., under the Contract shall be given in writing.

5.2 Contractor's Representative

5.2.1 The Contractor shall appoint its Representative within fourteen (14) days of the date of issuance of Letter of Award or before start of work whichever is earlier and shall request the Employer in writing to approve the person so appointed.

5.2.1.1 The Contractor's representative shall be a regular Employee/ Partner/ Director only and the Contractor shall be required to submit a Power of Attorney in original in favour of its representative. Notarized photocopy of the Power of Attorney shall be acceptable only if the Power of Attorney has been registered by the Contractor. The Employer may verify the photocopy of the Power of Attorney with the Original and the Contractor shall be required to produce the original Power of Attorney for verification, if required by the Employer. The relation of the Contractor's representative with the contractor such as Partner/ Employee/Director etc. should be clearly brought out in the Power of Attorney. The Contractor would be required to submit a documentary proof of the relation of the Contractor's representative with the contractor in the form of self attested copy of any of the following documents:

- a) Previous financial year's Form 16 as available at TRACES site of Income tax department, if the POA holder is an employee of contractor. In case, the Contractor is not able to submit Form 16 (only in case of recent appointment or where Form 16 details are not uploaded at TRACES), the contractor would be required to submit an Appointment Letter/Salary Slip/other documentary evidence of the POA holder along with an affidavit stating the relationship between the POA holder and the Contractor along with. Further, the Contractor shall be required to submit the copy of Form 16 as available through TRACES site for every subsequent year also in respect of the POA holder till the period of authorization.
- b) Articles of Association / Registered Partnership Deed if the POA holder is a partner or stake holder in Company.

5.2.1.2 In case, the Contractor's representative is also doing some other Contract(s)/Work(s) as nominee of the same contractor, the Contractor shall give a declaration citing list of all works where the Contractor's representative is the nominee.

5.2.1.3 If the Employer objects to the appointment giving the reason therefore, then the Contractor shall appoint a replacement within fourteen (14) days of such objection, and the foregoing provisions of this GCC Sub-Clause 5.2.1 shall apply thereto.

5.2.2 The Contractor's Representative shall represent and act for the Contractor at all times during the currency of the Contract and shall communicate and provide to the Engineer-in-charge all the Contractor's notices, instructions, information and all other communications under the Contract.

All notices, instructions, information and all other communications given by the Employer or the Engineer-in-charge to the Contractor under the Contract shall be given to the Contractor's Representative or, in its absence, its deputy, except as herein otherwise provided. The Contractor or its authorised representative shall be in attendance at the Site(s) during all working hours and

shall superintend the execution of the Works with such additional assistance in each trade as the Engineer-in-Charge may consider necessary. Orders given to the Contractor's representative shall be considered to have the same force as if they had been given to the Contractor.

The Contractor shall not revoke the appointment of the Contractor's Representative without the Employer's prior written consent, which shall not be unreasonably withheld. If the Employer consents thereto, the Contractor shall appoint some other person as the Contractor's Representative, pursuant to the procedure set out in GCC Sub-Clause 5.2.1.

5.2.3 The Contractor's Representative may, subject to the approval of the Employer (which shall not be unreasonably withheld), at any time delegate to any person any of the powers, functions and authorities vested in him or her. Any such delegation may be revoked at any time. Any such delegation or revocation shall be subject to a prior notice signed by the Contractor's Representative, and shall specify the powers, functions and authorities thereby delegated or revoked. No such delegation or revocation shall take effect unless and until a copy thereof has been delivered to the Employer and the Engineer-in-charge.

Any act or exercise by any person of powers, functions and authorities so delegated to him or her in accordance with this GCC Sub-Clause 5.2.3 shall be deemed to be an act or exercise by the Contractor's Representative.

5.2.4 The Employer may by notice to the Contractor object to any representative or person employed by the Contractor in the execution of the Contract who, in the reasonable opinion of the Employer, may behave inappropriately, may be incompetent or negligent, or may commit a serious breach of the Safety regulations provided under GCC Sub-Clause 10.4.9. The Employer shall provide evidence of the same, whereupon the Contractor shall remove such person from the Facilities.

5.2.5 If any representative or person employed by the Contractor is removed in accordance with GCC Sub-Clause 5.2.4, the Contractor shall, where required, appoint a replacement as per clause 5.2.1.

5.2.6 In case any of the information/declaration/undertaking provided by Contractor/Contractor's representative is found to be false and/or the contractor/Contractor's representative suppresses any relevant information at any stage, the Contractor will be liable for actions in terms of Employer's Banning policy.

5.3 The Engineer-in-Charge shall communicate or confirm the instructions to the Contractor in respect of the execution of Work in a 'Works Site Order Book' maintained in the office of the Engineer-in-Charge and the Contractor or his authorised representative shall confirm receipt of such instructions by signing the relevant entries in this Book. If required by the Contractor, he shall be furnished a certified true copy of such instruction(s).

6. **Laws governing the Contract**

6.1 This Contract shall be governed by the Indian laws for the time being in force. The Courts at New Delhi shall have jurisdiction, in all matters unless otherwise stated in the SCC.

7. **Settlement of Disputes**

7.1 **Mutual Consultation**

If any dispute of any kind whatsoever shall arise between the Employer and the Contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the

Works, whether during the progress of the Works or after their completion and whether before or after the termination, abandonment or breach of the Contract, the parties shall seek to resolve any such dispute or difference by mutual consultation.

If the parties fail to resolve such a dispute or difference by mutual consultation, then the dispute may be settled through Expert Settlement Council / Arbitration / other remedies available under the applicable laws.

7.2. Resolution of Dispute through Expert Settlement Council

If the parties fail to resolve such a dispute or difference by mutual consultation, the dispute if the parties agree, may be referred to Conciliation in cases involving disputed amount up to Rs 250 crores, which is to be arrived at considering the claim and counter claim of the parties to the dispute.

7.2.1 Invitation for Conciliation:

7.2.1.1 A party shall notify the other party in writing about such a dispute it wishes to refer for Conciliation within a period of 30 days from the date of raising of the dispute in case of failure to resolve the same through mutual consultation. Such Invitation for Conciliation shall contain sufficient information as to the dispute to enable the other party to be fully informed as to the nature of the dispute, amount of the monetary claim, if any, and apparent cause of action.

7.2.1.2 Upon acceptance of the invitation to conciliate, the other party shall submit its counter claim, if any, within a period of 30 days from the date of the invitation to conciliate. If the other party rejects the invitation or disputed amount exceeds Rs 250 crores, there will be no Conciliation proceedings. There shall be no Conciliation where claim amount is only up to Rs 5 lakhs.

7.2.1.3 If the party initiating Conciliation does not receive a reply within thirty days from the date on which it sends the invitation, or within such other period of time as specified in the invitation, it shall treat this as a rejection of the invitation to conciliate from the other party.

7.2.2 Conciliation:

7.2.2.1 Where Invitation for Conciliation has been furnished under GCC sub clause 7.2.1, the parties shall attempt to settle such dispute through Expert Settlement Council (ESC) which shall be constituted by CMD, NTPC.

7.2.2.2 ESC will be formed from experts comprising of three members from the panel of conciliators maintained by NTPC. However, there will be single member ESC for disputes involving claim and counter claim (if any) up to Rs. 1 crore. CMD will have authority to reconstitute an ESC to fill any vacancy.

7.2.2.3 The eligible persons for consideration for empanelment in the panel of conciliators shall be amongst Retired Civil Servants of Govt. of India not below the rank of Joint Secretary, Retired Judges, Retired Executive directors/Directors/ Chairman of any Maharatna / Navratna company in India other than NTPC Ltd, Retired Independent Directors who have served on the Board of any Maharatna / Navratna company in India other than NTPC Ltd and Independent experts in their respective fields preferably registered with the Indian Council of Arbitration or Delhi International Arbitration Centre or Federation of Indian Chambers of Commerce and Industry or SCOPE Arbitration Forum.

7.2.3 Proceedings before ESC:

	Sec-IV-GCC	Page 10 of 66
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7.2.3.1 The claimant shall submit its statement of claims along with relevant documents to ESC members, and to the party(s) indicated in the appointment letter within 30 days of the issue of the appointment letter. The respondent shall file its reply and counter claim (if any) within 30 days of the receipt of the statement of claims. Parties may file their rejoinder/additional documents, if any in support of their claim/counterclaim within next 15 days. No documents shall be allowed thereafter, except with the permission of ESC.

7.2.3.2 The parties shall file their claim and counterclaim in the following format

- a. Chronology of the dispute
- b. Brief of the contract
- c. Brief history of the dispute
- d. Issues

Sl. No.	Description of Claims/ Counter claims	Amount (in foreign currency/INR)	Relevant Contract Clause

- e. Details of Claim(s)/Counter Claim(s)
- f. Basis/Ground of claim(s)/counter claim(s) (along with relevant clause of contract)

Note: Statement of claims shall be restricted to maximum limit of 20 pages.

7.2.3.3 In case of 3 members ESC, 2 members will constitute a valid quorum and the meeting can take place to proceed in the matter after seeking consent from the member who is not available. However, ESC recommendations will be signed by all the members.

7.2.3.4 The parties shall be represented by their in house employees. No party shall be allowed to bring any advocate or outside consultant/advisor/agent to contest on their behalf. Ex-officers of NTPC who have handled the subject matter in any capacity shall not be allowed to attend and present the case before ESC on behalf of contractor. However, ex-employees of parties may represent their respective organizations. Parties shall not claim any interest on claims/counter-claims from the date of notice invoking Conciliation till execution of settlement agreement, if so arrived. In case, parties are unable to reach a settlement, no interest shall be claimed by either party for the period from the date of notice invoking Conciliation till the date of ESC recommendations and 30 days thereafter in any further proceeding.

7.2.3.5 ESC will conclude its proceedings in maximum 10 meetings, and give its recommendations within 90 days of its first meeting. ESC will give its recommendations to both the parties recommending possible terms of settlement. CMD, NTPC may extend the time/number of meetings, in exceptional cases, if ESC requests for the same with sufficient reasons.

7.2.3.6 Depending upon the location of ESC members and the parties, the venue of the ESC meeting shall be either Delhi/Mumbai/Kolkata/Chennai or any other city whichever is most economical from the point of view of travel and stay etc. All the expenditure incurred in ESC proceedings shall be shared by the parties in equal proportion.

7.2.4 Fees & Facilities to the Members of the ESC

The cost of Conciliation proceedings including but not limited to fees for Conciliator, Airfare, Local transport, Accommodation, cost towards conference facility etc shall be as provided herein below:

S. No.	Fees/ Facility	Entitlement
1	Fees	As paid to NTPC Independent Directors [Presently Rs. 20,000 per meeting]. In addition, each conciliator to be paid Rs. 10,000 for attending meeting to authenticate the settlement agreement - max. of Rs. 2,10,000 per case per Conciliator.
2	Secretarial expenses	Rs. 10,000 lump sum (to 1 member only).
3	Transportation in the city of the meeting	Car as per entitlement or Rs. 2,000 per day
4	Venue for meeting	NTPC conference rooms
Facilities to be provided to the out-stationed member		
5	Travel from the city of residence to the city of meeting	As per entitlement of Independent Directors. Executive class air tickets / first class AC train tickets/ Luxury car/ reimbursement of actual fare. However, entitlement of air travel by Business class shall be subject to austerity measures, if any, ordered by Govt. of India.
6	Transport to and fro airport/ railway station in the city of residence	Car as per entitlement or Rs. 3,000
7	Stay for out stationed members	As per entitlement of Independent Directors.
8	Transport in the city of meeting	Car as per entitlement or Rs. 2000 per day

Aforesaid fees is subject to revision by NTPC from time to time and subject to government guidelines on austerity measures, if any. All the expenditure incurred in the ESC proceedings shall be shared by the parties in equal proportions. The Parties shall maintain the account of expenditure and present to the other for the purpose of sharing on conclusion of the ESC proceedings.

7.2.5 If decision of NTPC is acceptable to the contractor, a Settlement Agreement under section 73 of the Arbitration and Conciliation Act 1996 will be signed within 15 days of contractor's acceptance and same shall be authenticated by all the ESC members. Parties are free to terminate Conciliation proceedings at any stage as provided under the Arbitration and Conciliation Act 1996.

7.2.6 The parties shall keep confidential all matters relating to the Conciliation proceedings. Parties

shall not rely upon them as evidence in arbitration proceedings or court proceedings.

7.3 **Arbitration**

7.3.1 If the process of mutual consultation and/or ESC fails to arrive at a settlement between the parties as mentioned at GCC Sub-Clauses 7.1 & 7.2 above, Employer or the Contractor may, within Thirty (30) days of such failure, give notice to the other party, with a copy for information to the ESC (as applicable), of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. The mechanism of settling the disputes through arbitration shall be applicable only in cases where the disputed amount (i.e. total amount of Claims excluding claims of interest) does not exceed Rs. 25 crores. In case the disputed amount exceeds Rs. 25 Crores, the parties shall be within their rights to take recourse to remedies as may be available to them under the applicable laws other than Arbitration after prior intimation to the other party. There shall be no arbitration where the claim amount is only up to Rs. 5 lakhs.

The parties at the time of invocation of arbitration shall submit all the details of the claims and the counter-claims including the Heads/Sub-heads of the Claims/Counter-Claims and the documents relied upon by the parties for their respective claims and counter-claims. The parties shall not file any documents/details of the claims and counter-claims thereafter.

The claims and the counter claims raised by the parties at the time of invocation of the arbitration shall be final and binding on the parties and no further change shall be allowed in the same at any stage during arbitration under any circumstances whatsoever.

The parties to the contract shall invoke arbitration within Six months from the date of completion of the execution of work under the contract or the termination of the contract as the case may be and the parties shall not invoke arbitration later on after expiry of the said period of six months. The parties shall not invoke arbitration other than in the case of completion of execution of work or the termination of the contract as mentioned above.

Notwithstanding the above, in case of disputes with Indian Contractor who is a Central Government Department /Enterprise /organisation or a State Level Public Enterprise (SLPE), the aforesaid limit of Rs 25 crores shall not be applicable and arbitration proceeding may be commenced irrespective of the amount involved in dispute if the dispute could not be resolved through Conciliation as brought out at GCC Sub Clause 7.2 above.

7.3.2 Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with GCC Sub Clause 7.3.1, shall be finally settled by arbitration.

7.3.3 Any dispute raised by a party to arbitration shall be adjudicated by a Sole Arbitrator appointed by CMD, NTPC from the List of empanelled Arbitrators of NTPC in the following manner:

- (a) A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving 60 days notice to the other party.
- (b) If the Arbitrator so appointed dies, resigns, becomes incapacitated or withdraws for any reason from the proceedings, it shall be lawful for CMD, NTPC to appoint another person in his place in the same manner as aforesaid. Such person shall proceed with the reference from the stage where his predecessor had left.
- (c) It is agreed between the parties that the Arbitration proceedings shall be conducted as

per the provisions of Fast Track Procedure as provided under section 29B of the Arbitration and Conciliation Act, 1996 as amended.

(d) Arbitrator shall be paid fees at the following rates:

Amount of Claims and Counter Claims (excluding interest)	Lump sum fees (including fees for study of pleadings, case material, writing of the award, secretarial charges etc.) to be shared equally by the parties.
Upto Rs 50 lakhs	Rs. 10,000 per meeting subject to a ceiling of Rs. 1,00,000/-.
Above Rs 50 lakhs to Rs 1 crore	Rs. 1,35,000/- plus Rs. 1,800/- per lakh or a part there of subject to a ceiling of Rs. 2,25,000/-.
Above Rs. 1 crore and upto Rs. 5 Crores	Rs. 2,25,000/- plus Rs. 33,750 per crore or a part there of subject to a ceiling of Rs. 3,60,000/-.
Above Rs. 5 crores and upto Rs. 10 crores.	Rs. 3,60,000/- plus Rs. 22,500/- per crore or a part there of subject to a ceiling of Rs. 4,72,500/-.
Above Rs. 10 crores	Rs. 4,72,500 plus Rs. 18,000/- per crore or part thereof subject to a ceiling of Rs. 10,00,000/-.

If the claim is in foreign currency, the SBI Bills Selling Exchange rate prevailing on the date of claim shall be used for the purpose of converting the claim in Indian Rupee which may be used for determining the arbitration fee as brought out above.

- e) If after commencement of the Arbitration proceedings, the parties agree to settle the dispute mutually or refer the dispute to Conciliation, the arbitrator shall put the proceedings in abeyance until such period as requested by the parties. Where the proceedings are put in abeyance or terminated on account of mutual settlement of dispute by the parties, the fees payable to the arbitrator shall be determined as under:
- (i) 40% of the fees if the Pleadings are complete.
 - (ii) 60% of the fees if the Hearing has commenced.
 - (iii) 80% of the fees if the Hearing is concluded but the Award is yet to be passed.
- f) Each party shall pay its share of arbitrator's fees in stages as under:
- (i) 40 % of the fees on Completion of Pleadings.
 - (ii) 40% of the fees on Conclusion of the Final Hearing.
 - (iii) 20% at the time when arbitrator notifies the date of final award.
- g) The Claimant shall be responsible for making all necessary arrangements for the travel/ stay of the Arbitrator including venue of arbitration, hearings. The parties shall share the expenses for the same equally.
- h) The Arbitration shall be held at Delhi only.
- i) The Arbitrator shall give reasoned and speaking award and it shall be final and binding on the parties.

- j) Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof shall apply to the arbitration proceedings under this clause.

7.3.4 In case the Indian Contractor is a Central Government Department/Enterprise/organisation or a State Level Public Enterprise (SLPE), the dispute arising between the Employer and the Contractor shall be referred for resolution to the Permanent Machinery of Arbitrators (PMA) of the Department of Public Enterprises, Government of India as per Office Memorandum No. 4(1) 2011-DPE(PMA)-GL dated 12.06.2013 issued by Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Public Enterprises and its further modifications and amendments.

7.4 Notwithstanding any reference to the Conciliation or Arbitration herein,

- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree.
- (b) the Employer shall pay the Contractor any monies due to the Contractor.

B. Subject Matter of Contract

8. Scope of Contract

The Work to be carried out under the Contract shall be as delineated in Bidding Documents and shall, except as otherwise provided in these conditions, include all labour, materials, tools, plant, equipment, and transport which may be required in preparation of and for and in the full and entire execution and completion of the Works.

9. Notices to Local Bodies

9.1 The Contractor shall comply with and give all notices required under any Governmental authority, instrument, rule or order made under any Act of Parliament, State Laws or any regulation or bye-laws of any local authority relating to the Works. He shall before making any variation from the Contract drawings necessitated by such compliance give to the Engineer-in-Charge a written notice giving reasons for the proposed variation and obtain the Engineer-in-Charge's instructions thereon, in writing.

9.2 The Contractor shall pay and indemnify the Employer against any liability in respect of any fees or charges payable under any Act of Parliament, State laws or any Government instrument, rule or order and any regulations or bye-laws of any local authority in respect of the Works.

10. Human Resources

10.1 The Contractor for the purpose of the Contract shall engage / employ adequate number of key personnel in all areas such as design / engineering (wherever applicable), planning, scheduling and construction and carrying out of all maintenance of his plant and equipment (as detailed in the SCC) and competent

and skilled work force as directed by the Engineer-in-Charge. The Engineer-in-Charge will approve any proposed replacement of such key personnel including work force only if their qualifications, experience, competence and capabilities are substantially equal to or better than those personnel originally identified and approved by the Engineer-in-Charge.

10.2 The Engineer-in-Charge may require the Contractor to remove from Site of Works or from any other area of Work related to the Contract, any member of the Contractor personnel or work force who

- (i) Persists in any misconduct or lack of care
- (ii) Performs his duties incompetently or negligently or otherwise carelessly
- (iii) Fails to conform with any provisions of the Contract or
- (iv) Persists in any conduct which is prejudicial to the safety, health or protection of the Work and environment.

If appropriate, the Contractor shall appoint a suitable replacement within fourteen (14) days or within such period as may be agreed between the Engineer-in-Charge and Contractor.

10.3 The Contractor shall unless otherwise provided in the Contract, make his own arrangement for engagement of all staff and labour, local or otherwise and for their payment, housing, transport, lodging and welfare as may be required by law and or by industry practice. The Contractor shall provide the Engineer-in-Charge a return in detail in such form and at such intervals as he may reasonably prescribe showing the staff and number of the several classes of labour and other staff from time to time employed by the Contractor at Site or in connection with the Work along with such information as the Engineer-in-Charge may reasonably require.

10.4 **Labour laws and Regulations and compliance thereof**

10.4.1 During the entire period of Contract, the Contractor and his Sub-Contractors shall, at all times abide by all existing labour enactments, rules made therein, regulations, notifications and bye-laws by the appropriate government, local authority or any other labour laws or notification that may be issued under any labour law prevailing as on the date seven(7) days prior to the deadline set for submission of the bids, published by the State or Central Government or Local Authorities. An illustrative list of applicable acts, notifications, rules etc. in connection with the labour as applicable is provided in SCC. This list is not in any way exhaustive and shall not absolve the Contractor from any of his liabilities or responsibilities in compliance with any other laws, regulations, notifications that may be in force during the tenure of Contract.

10.4.1.1 During the entire period of Contract, the Contractor and his Sub-Contractors shall, at all times abide by the following Acts/Statutes related to Human Resources:

- 1. Factories Act, 1948; Contract Labour (Regulation & Abolition) Act, 1970;
- 2. EPF & MP Act, 1952;

3. Building & Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996;
4. ESI Act, 1948;
5. Minimum Wages Act, 1948;
6. Payment of Wages Act, 1936
7. Payment of Bonus Act, 1965;
8. Payment of Gratuity Act, 1972;
9. Workmen's Compensation Act, 1923;
10. ID Act, 1947;
11. Maternity Benefit Act, 1961;
12. Inter-State Migrant Workmen (Regulation of Employment & Conditions of Service) Act, 1979;
13. Fatal Accidents Act, 1855
14. Model Welfare Code

The above will deem to include all relevant/applicable rules made thereunder, regulations, notifications and bye laws of the State or Central Govt. or the local authority and any other labour law (including rules) regulations, bye laws as well as those that may be passed or notification that may be issued under any labour law present and in future either by State or Central Govt. or by local authority.

- 10.4.2 The Contractor and his Sub-Contractors shall indemnify the Employer, from any action taken against the Employer by any competent authority in connection with the enforcement of the applicable laws, regulations, notifications, on account of contravention of any of the provisions therein, including amendments thereto. If the Employer is caused to pay or otherwise made liable, such amounts as may be necessary for non-observance of the provisions stipulated in the laws, rules, notifications including amendments, if any on the part of the Contractor and/or his Sub-Contractors, the Engineer-in-Charge / Employer shall have the right to deduct any such money from any amount due to the Contractor including his performance security, under the Contract. The Employer shall also have the right to recover from the Contractor any sum required or estimated as required for making good any loss or damage suffered / likely to be suffered by the Employer, on this account.
- 10.4.3 If due to an enactment of any new Act or Statute and rules made thereunder or any modification to the Acts/Statute or rules made thereunder, all after seven (7) days prior to the deadline set for submission of the bids and as a consequence thereof, the Contractor has to incur additional cost or expenditure, the same will be reimbursed by the Employer to the Contractor, excepting those due to reasons attributable to the Contractor and those being already compensated by other provisions of the Contract, like Price Adjustment, Taxes and Duties etc.
- 10.4.4 It is specifically agreed that the Contractor and his Sub-Contractors shall obtain all the necessary registration, licenses, permits, authorisations etc. required under various enactments / Regulations enforced from time to time, specifically registration as employer under Provident Fund Act and Contract Labour Regulation & Abolition Act, and the Employer shall not be liable for any violation by the Contractor in this regard.
- 10.4.5 The employees of the Contractor or his Sub-Contractor(s) shall in no case be treated as the employees of the Employer at any point of time.
- 10.4.6 The Contractor and his Sub-Contractors shall be liable to make all due payments to

all their employees and ensure compliance with labour laws. If the Employer, is held liable as 'PRINCIPAL EMPLOYER' or otherwise to incur any expenditure or to make any contributions under any legislation of the Government or Court decision, in respect of the employees of the Contractor or his Sub-Contractors, then the Contractor would reimburse the amounts of such expenditure/contribution so made by the Employer.

10.4.7 In case the ESI act is not applicable to the area where the Work is executed, as evidenced by the Certificate/Letter submitted to this effect from the local authorities, the Contractor shall be liable to arrange and pay for the expenses towards the medical treatment in respect of all labour employed by him for the execution of the Contract.

10.4.8 Staff quarters & labour hutments at Site if available, may be provided to the Contractor on chargeable basis at the discretion of the Engineer-in-Charge on mutually agreed terms and conditions.

10.4.9 **Safety**

The Contractor, including his sub-contractors, while executing the Works, will strictly comply with the statutory requirements (including amendments thereof), as applicable, in respect of safety of his employees, equipment and materials. The contractor will also comply with the provisions of NTPC Safety Rules as issued from time to time and displayed on NTPC's tender website <http://www.ntpctender.com>. Within 30 days from the date of Letter of award, the Contractor, shall develop and submit for the Employer's approval, his own Safety, Health and Environment policy in line with the above-mentioned statutory requirements and NTPC rules. The detailed requirements to be complied by the Contractor with regard to the safety of his personnel, equipment and materials are enumerated in the Technical Specifications.

11. **Shift Work**

11.1 To achieve the required rate of progress in order to complete the Works within the Time for Completion, the Contractor may carry on the work, round the clock, in multiple shifts per day, as may be necessary. The Contractor shall however be responsible to comply with all applicable laws in this regard.

11.2 No additional payment will be made on account of round the clock working in multiple shifts.

11.3 Wherever the work is carried out at night adequate lighting of working areas and access routes for pedestrians or vehicles shall be provided by the Contractor at his cost. Sufficient notice should be given by the Contractor to the Engineer-in-Charge regarding the details of works in shifts so that necessary supervision could be provided.

12. **Cooperation with other Contractors/Agencies**

12.1 The Contractor shall extend all reasonable cooperation to other Contractors, agencies etc. of the Employer engaged in connection with the Work or any other

Work not in the scope of this Work as may be required by the Engineer-in-Charge.

12.2 The Contractor shall attend at his cost, all the meetings with the Engineer-in-Charge, other contractors and the Consultants of the Employer for the purposes of the Contract. The Contractor shall attend such meetings as and when required by the Engineer-in-Charge.

13. **Materials obtained from Excavation**

13.1 Materials of any kind obtained from excavation on the Site shall remain the property of the Employer and shall be disposed of as the Engineer-in-Charge may direct.

14. **Treasure, Trove, Fossils, etc**

14.1 All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site shall be the absolute property of the Employer and the Contractor shall take reasonable precautions to prevent his workmen or any other person from removing or damaging any such article or thing, shall immediately upon discovery thereof and before removal acquaint the Engineer-in-Charge with such discovery and carry out the Engineer-in-Charge's directions as to the disposition of the same, at the cost of the Employer.

15. **Protection of Trees**

15.1 Trees designated by the Engineer-in-Charge shall be protected from damage during the course of the Works and earth level within at least one (1) meter of each such tree shall not be disturbed. Where necessary, such trees shall be protected by providing temporary fencing at the cost of the Employer.

16. **Security Watch and Lighting**

16.1 The Contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or required by the Engineer-in-Charge for the protection of the Works or for the safety and convenience of those employed on the Works or the public.

17. **Prevention of Pollution**

17.1 The Contractor shall make necessary arrangement to prevent pollution of the water in any adjacent water bodies including stream, springs, nallah, river and lakes etc. The Contractor shall be solely responsible and liable for all damage caused by any pollution that may take place during the execution of the Work.

18. **Explosives**

18.1 Permission for the use of explosives shall be obtained from the Engineer-in-Charge or from any appropriate authority as directed by the Engineer-in-Charge and all

explosive materials shall be used only under close supervision. It shall be the responsibility of the Contractor to seek and obtain any necessary permits, and to ensure that the requirements of the authorities are complied with, in all respects. Failure to do so may result in the Engineer-in-Charge withdrawing permission to use explosives. The indemnification provided for, under the General Condition of Contract shall include indemnification against all claims in respect of any incident arising from the use of explosives.

19. Training of Apprentices:

19.1 The Contractor shall during the currency of the Contract when called upon by the Engineer-in-Charge engage and also ensure engagement by Sub-Contractors employed by the Contractor in connection with the Works, such number of Apprentices in the categories and for such periods as may be reasonably required by the Engineer-in-Charge. The Contractor shall train them as required under the Apprentices Act, 1961 and shall be responsible for all obligations of the Employer under the Act including the liability to make payment to apprentices as required under the Act.

20. Handing over of Site

20.1 The Employer shall make available the Site to the Contractor as soon as possible after the award of the Contract free of encumbrance. The Contractor shall not be permitted to enter on (other than for inspection purposes) or take possession of the Site until instructed to do so by the Engineer-in-Charge in writing.

20.2 The Employer reserves the right to hand over the Site in parts progressively to the Contractor. The Contractor will be required to take possession of the Site without any undue delay and do Work on the released fronts in parts without any reservation whatsoever.

20.3 However, in case of any delay in handing over of the Site to the Contractor, which delays the performance of the Work, commensurate to the resources mobilised by the Contractor, then the Contractor will be eligible for suitable extension in time for completion of the Works or any other compensation as per the provisions of GCC Sub-Clause 29.7.

20.4 The portion of the Site to be occupied by the Contractor shall be defined and/or marked on the Site plan, failing which these shall be indicated by the Engineer-in-Charge at Site and the Contractor shall on no account be allowed to extend his operations beyond these areas. Further, the Contractor shall not hinder in any way the working of other contractors on the Site.

20.5 The Contractor shall plan his work as per available roads at Site. Wherever, the access roads near to the Work Site are not available, the Contractor shall make his own arrangement for approach to the Work Site including borrow/disposal areas and for movement of men, machinery, other equipment etc. required for carrying out the Works included under this Contract. All drainage of Works area and all weather truckable/ haulage roads as required by the Contractor shall be

constructed and maintained during the construction period by the Contractor at his own cost.

20.6 The Contractor shall provide, if necessary, all temporary access to the Work Site and shall alter, adapt and maintain the same as required from time to time and shall take up and clear them away as and when no longer required and, as and when ordered by the Engineer-in-Charge and make good all damage done to the Site.

20.7 The Contractor shall be permitted the usage of all access roads built by the Employer for the purposes of the Contract. If any damage is done to such roads and associated areas like drains, culverts and the like, by the Contractor, the same shall be made good by the Contractor at his own cost, but as may be directed by the Engineer-in-Charge.

21. Duties and Powers of Engineer-in-Charge and his representatives

21.1 The Engineer-in-Charge shall have the full powers in respect of all the matters in connection with or arising out of this Contract, excepting those specifically reserved for the Employer. However, the Engineer-in-Charge shall not have any power to relieve the Contractor of any of his obligations and responsibilities under the Contract.

21.2 The duties of the representative of the Engineer-in-Charge are to watch and supervise the Works and to test and examine any materials to be used or workmanship employed in connection with the Works. He shall have no authority to order any work involving any extra payment by the Employer nor to make any variation in the Works, creating a financial liability to the Employer.

21.3 The Engineer-in-Charge may from time to time in writing delegate to his representative any of the powers and authorities vested in the Engineer-in-Charge and shall furnish to the Contractor a copy of all such written delegation of powers and authorities. Any written instruction or written approval given by the representative of the Engineer-in-Charge to the Contractor within the terms of such delegation shall bind the Contractor and the Engineer-in-Charge as though it has been given by the Engineer-in-Charge.

21.4 Failure of the Representative of the Engineer-in Charge to disapprove any work or materials shall not prejudice the power of the Engineer-in-Charge thereafter to disapprove such Work or materials and to order the pulling down, removal or breaking up thereof.

21.5 If the Contractor shall be dissatisfied with any decision of the representative of the Engineer-in-Charge he shall be entitled to refer the matter to the Engineer-in-Charge who shall there-upon confirm, reverse or vary such decision.

C. Payment

22. Contract Performance Security

22.1.1 The Contractor shall within twenty-one (21) days of the Letter of Award, provide a Contract Performance Guarantee (CPG) towards faithful performance of the Contract for ten percent (10%) of the Contract Price. Alternatively, the Contractor may furnish the Contract Performance Guarantee in two Stages viz. A Contract Performance Guarantee for an amount equivalent to 5% of the Contract Price within twenty-one (21) days from the date of Letter of Award to be followed up with another Contract Performance Guarantee for an amount equivalent to 5% of the Contract Price prior to the scheduled completion of 50% of total scope of work.

22.1.2 The Contractor also has the option to furnish an Initial Contract Performance Guarantee (ICPG) equivalent to a minimum of 2% of the Contract Price. In case of such a Contractor, who furnishes Initial Contract Performance Guarantee, the Employer shall at the time of making any payment to him for the work done under the Contract deduct towards the Contract Performance Security an amount equivalent to 10% of the gross bill amount accepted for payment until the Contract Performance Security so deducted including the amount of Initial Contract Performance Security becomes equal to 10% of the Contract Price, subject to the condition that whenever the Contract Performance Security so deducted reaches a limit of 2% of the Contract Price, the Contractor may convert the amount into a Bank Guarantee as aforesaid.

22.1.3 The Contract Performance Guarantee/Initial Contract Performance Guarantee shall be in the form of a Bank Guarantee issued by a Bank from the list enclosed in the Bidding Documents. The format of the said bank guarantee shall be in accordance with the format included in the Section VIII (Forms and Procedures). This bank guarantee shall have an initial validity upto ninety (90) days beyond the completion of Defect Liability Period of the Contract.

However, in case the date of completion of defects liability period gets extended, the validity of the Contract Performance Guarantee shall be extended by the period of extension of completion of defects liability.

22.2 One half (50%) of the Contract Performance Security amount shall be refunded/released to the Contractor on the issuance of Completion Certificate by the Engineer-in-Charge certifying the completion of entire Works under the Contract. The Engineer-in-Charge shall on demand from the Contractor, release/refund the remaining portion of the Contract Performance Guarantee on expiry of the Defects Liability Period or on payment of the amount of the Final Bill payable, whichever is later, provided the Engineer-in-Charge is satisfied that there is no demand outstanding against the Contractor, arising out of the Contract.

22.3 No interest shall be payable to the Contractor against the Contract Performance Guarantee furnished/recovered by way of deductions from running account payments from the Contractor, by the Employer.

23. Advance

23.1 Mobilisation Advance

- i) A lumpsum mobilisation advance not exceeding 4% of the Contract Value as awarded shall be paid to the Contractor at the rate of interest mentioned in SCC subject to the following conditions:
- a) On unconditional acceptance of Letter of Award by the Contractor.
 - b) Acceptance and finalisation of detailed Work Schedule and finalisation of equipment mobilization schedule.
 - c) Submission of an irrevocable bank guarantee for the amount equivalent to 110% of the advance plus GST as applicable on the advance payment to be paid to the contractor in the proforma of bank guarantee provided in Section-VIII (Forms and Procedures) - Proforma of Bank Guarantee for Lumpsum Advance from any bank from the list enclosed in Bidding Documents and acceptable to the Employer.
 - d) Finalisation of Quality Assurance Programme in accordance with GCC Clause entitled 'Quality Assurance programme'.
 - e) Submission of an unconditional, irrevocable bank guarantee for the amount of Initial Contract Performance Security Deposit/ Contract Performance Security Deposit from any bank from the list enclosed in Bidding Documents and acceptable to the Employer in the proforma of bank guarantee provided in Section VIII (Forms and Procedures)- Form of Bank Guarantee for Contract Performance Guarantee.
 - f) On completion of the requirement of Qualifying Requirements, the documentation in respect of associate(s), if applicable, in line with the provisions thereof in BDS, and on submission of an unconditional and irrevocable bank guarantee from any bank as per list enclosed in Bidding Documents and acceptable to Employer in the proforma provided in Section VIII (Forms and Procedures).
 - g) The advance payment shall be released only after the verification and confirmation of the above bank guarantees from the issuing bank.
- ii) A further lumpsum mobilisation advance not exceeding 4% of the Contract Value as awarded shall be paid to the Contractor from Project Site at the rate of interest mentioned in SCC subject to the following conditions:
- a) Fulfilment of conditions mentioned at GCC Sub-Clause 23.1 (i) a, b, d, e & f.
 - b) On certification of the Engineer-in-Charge that the Contractor has opened his office at Site and mobilised the plant and equipment specifically identified in Letter of Award of the Contract for releasing this advance.

- c) Submission of an irrevocable bank guarantee for the amount equivalent to 110% of the advance plus GST as applicable on the advance payment to be paid to the contractor in the proforma provided in Section-VIII (Forms and Procedures) - Proforma of Bank Guarantee for Lumpsum Advance from any bank from the list enclosed in Bidding Documents and acceptable to the Employer.
- d) The advance payment shall be released only after the verification and confirmation of the above bank guarantees from the issuing bank.
- e) Mobilisation advance shall be released after certification of Engineer-in-Charge that the Contractor has brought to site the Safety equipment & Safety Personal Protective Equipment as per minimum quantity specified in the Bidding Documents.

In case the Contractor decides not to take Mobilisation advance, the first progressive payment shall be released after certification of Engineer-in-Charge that the Contractor has brought to site the Safety equipment & safety Personal Protective Equipment as per minimum quantity specified in the Bidding Documents.

23.2 **Equipment Advance**

An amount not exceeding 75% of the purchase price of the new plant and equipment specifically acquired for the Work and brought to Site against production of documents in support thereof and subject to the condition that the Engineer-in-Charge considers the price reasonable and that such plant and equipment are necessary for the Works and not in excess of requirements and are hypothecated in favour of the Employer in the form required by the Employer shall be payable. "In case the Contractor is an entity other than a Sole Proprietorship Concern or a Partnership Firm, the Contractor shall get the Hypothecation Deed thus executed, registered with the Registrar of Companies in the manner and timeframe required as per the Companies Act, 2013 of India. "Interest on the advance outstanding, shall be levied at the percentage mentioned in SCC. Total advance amount against plant and equipment shall in no case exceed 6% of the total contract value as awarded. Provided that if a request for loan is made by the Contractor against both the aforementioned provisions of this condition, viz. GCC Sub-Clauses 23.1 and 23.2, the total sum to be given as loan shall not exceed 10% of the total contract value as awarded.

- 23.3 All the above advances mentioned at GCC Sub-Clause 23.1(i), 23.1 (ii) and 23.2 shall be interest bearing and the rate of interest for mobilization advance and equipment advance shall be as specified in SCC.
- 23.4 Any of the above advances may be claimed by the Contractor at his option in instalments.
- 23.5 The above advance shall be utilised by the Contractor for the purposes of this Contract only and for no other purpose.

23.6 All payments of advances may be released electronically, wherever technically feasible.

23.7 The recovery of the advances as above and interest thereon shall be made by deduction from the on account payments referred to in GCC Clause entitled 'Payment on Account/Progressive Interim Payments' in suitable percentages fixed by the Engineer-in-Charge in relation to the total cumulative advances released and the progress of the work, so that all the sums advanced with interest thereon shall be fully recovered starting from the time 10% and ending by the time 80% of the Work as awarded is completed. If the amount payable under any interim bill is not sufficient to cover all deductions to be made for sums advanced with interest and other sums deductible therefrom, the balance outstanding shall be deducted from subsequent interim bill/bills, as may be necessary, failing that, as otherwise provided for in the Contract.

23.8 If for any reason, except for reasons of default of the Contractor, the Work under the Contract is suspended continuously for more than fourteen(14) days, the Contractor shall be at liberty to remove the plant and equipment or any part thereof hypothecated to the Employer under GCC Sub-Clause 23.2 above, to any other work site of the Contractor for carrying on his other works, on his furnishing prior to such removal a bank guarantee acceptable to the Employer for the amount of the outstanding advance granted under GCC Sub-Clause 23.2 above with interest and upon the Contractor undertaking to bring back to the Site, before expiry of the period of suspension, such plant and equipment as may be necessary for completion of the Works. If any such Plant and Equipment are not brought back, the Contractor shall forthwith repay the amount for the advance outstanding with interest thereon against such plant and equipment.

23.9 The value of the bank guarantees towards any of the above advances shall be reduced every three (3) months after the date of commencement of recovery of corresponding advance and interest thereon under the Contract in accordance with GCC Sub-Clause 23.7. The quantum of reduction of the value of bank guarantee at any point of time shall be proportional to the quantum of work completed as certified by the Engineer-in-Charge **and applicable GST**. The Bank Guarantee value shall stand reduced to zero on completion of total work by the Contractor under the Contract as certified by the Engineer-in-Charge. It should be clearly understood that reduction in the value of bank guarantee towards advance shall not in any way dilute the Contractor's responsibility and liabilities under the Contract including in respect of the Works for which the reduction in the value of bank guarantee is allowed.

24. Payment on Account/Progressive Interim Payments

24.1 Bills for progressive payments shall be submitted by the Contractor on monthly basis, on or before the date fixed by the Engineer-in-Charge for the Work executed during the preceding period. The Engineer-in-Charge shall then arrange to have the bill verified for payment.

24.2 The progressive payment shall be released after certification by Employer's Field

Quality Assurance Department that the Works have been performed in accordance with the Technical Specifications and also upon authorisation for the payment by the Engineer-in-Charge. However, the release of first progressive interim payment shall also be subject to submission of documentary evidence by the Contractor towards having taken the insurance policy(ies) in terms of relevant provisions of GCC Clause entitled Contractor's Liability and Insurance' and acceptance of the same by Engineer-in-Charge.

24.3 (i) The Contractor shall maintain a separate account with a Scheduled Bank at Site for the purpose of receiving all the payments under the Contract(s) and for utilization of payments received from the Employer for disbursement to sub-contractors, sub-vendors, PRW's etc., of the Contractor. The Contractor shall maintain separate books of accounts for all payments under this Contract and the Engineer-in-Charge shall have access to these at all times.

(ii) Account Tracking Mechanism

In case the Contractor wants to withdraw funds from the above bank account for any purposes other than the Contract, he shall be required to submit an undertaking to the Engineer-in-Charge certifying that all due statutory payments, labour payments and payments to all his sub-contractors have been disbursed corresponding to the total payment received by him under the Contract.

For tracking of payments received from the Employer, the Contractor shall also submit a monthly statement by 7th of every month certifying the transactions pertaining to the above account along with the purpose of such transactions. In case the Contractors transfers funds for any purposes other than the Contract, without prior consent of the Employer, it will constitute a breach of Contract by the Contractor.

(iii) In case the Contractor violates the above provisions, NTPC will have the right to give suitable instructions to the Bank to regulate / freeze the account.

24.4 (i) In case of part acceptance of the Work, the Engineer-in-Charge shall have the right to release payment for that part of the Work.

(ii) Acceptance of the Work without fulfilling all the obligations mentioned under rates and measurement in Technical Specifications shall be considered as part acceptance of Work.

24.5 Payment on account for amount admissible shall be made on the Engineer-in-Charge certifying the sum to which the Contractor is considered entitled by way of interim payment for the following:

(a) all Work executed, after deducting therefrom the amounts already paid, the performance security deposit and such other amounts as may be deductible

or recoverable in terms of the Contract;

- (b) 75 per cent of the cost (as assessed by the Engineer-in-Charge) of any materials which are in the opinion of the Engineer-in-Charge reasonably required in accordance with the Contract with respect to the period of utilisation & quantum and have been brought to Site for incorporation in the Works and are safeguarded against loss due to any cause whatsoever to the satisfaction of the Engineer-in-Charge, but have not been so incorporated; provided the Contractor provides an insurance cover for the full cost of such materials.
- (c) Unless specifically certified/authorised by the Engineer-in-Charge, no such payment shall be made against the materials brought to Site which in the opinion of the Engineer-in-Charge are not likely to be used/incorporated in the Works in the ensuing period of four (4) months.

24.6 The payments against materials brought to Site under (b) above shall be adjusted as and when materials are utilised/ incorporated in the Works.

24.7 The Contractor shall submit his bill, by the date stipulated by the Engineer-in-Charge, in the prescribed proforma, supported with measurements, jointly acknowledged and accepted in the measurement books. Payments of the Contractor's bill shall be paid by the Employer within twenty-one (21) days from the date of submission of bill subject to the authorisation of the Engineer-in-Charge. Alternatively, if so desired by the Contractor, after preliminary scrutiny and certification by the Engineer-in-Charge, 75% of the certified net payable amount shall be made by the Employer within seven (7) days. The amount certified shall account for all deductions, including statutory deductions as for **GST (if applicable)**, income tax, etc., recoveries for advances and any other amounts due from the Contractor. The balance 25% shall be paid within twenty-one (21) days, from the date of submission of the said bill. Such payments made by the Employer shall not constitute any acceptance of the measurements of items of the Works by the Employer and the Engineer-in-Charge shall have the right to alter, modify, reduce or diminish the quantities or classification entered in the Measurement Books or Bills. The Employer shall have right to recover any amount paid in an earlier bill from any subsequent bill and should the amount to be recovered be more than the amount of the subsequent bill, the Contractor shall on demand from the Engineer-in-Charge or Employer immediately refund the extra amount to the Employer within seven(7) days. Wherever technically feasible, the payments shall be released electronically only as per details of bank account indicated in the Contract.

24.8 Any interim certificate given relating to Work done or materials delivered, may be modified or corrected by any subsequent interim certificate or by the final certificate. No certificate of the Engineer-in-Charge supporting an interim payment shall itself be conclusive evidence that any Work or materials to which it relates is/are in accordance with the Contract.

24.9 In case of the delayed Work beyond the scheduled completion period, pending consideration of extension of time of completion if it had been requested by the Contractor, interim payments shall continue to be made as herein above provided.

24.10 GST applicable upon on account payment shall be paid/reimbursed to the Contractor along with such payments, on production of satisfactory documentary evidence by the Contractor. However, GST as applicable on Advance payment shall be paid to the Contractor along with the Advance sanctioned. The GST paid along with advance shall be adjusted prorata against the tax due upon on account payment, based on the value of the advance recovered from such on account payment.

Notwithstanding anything to contrary contained in the Contract, the Contractor's right to payment under the Contract is subject to issuance of valid tax invoice, payment of applicable GST to the credit of appropriate Government and submission of valid particulars of tax invoice under GST returns in accordance with GST Law.

The Contractor shall issue tax invoices, file appropriate returns, and deposit the applicable GST to the account of appropriate government within the time limit prescribed under the GST Law. In the event of any default, Contractor shall be liable to pay any penalty/demand raised on NTPC due to default by Contractor, and the same shall be recovered/Contractor shall make good the loss.

The Contractor shall be responsible for the issuance of e-way bill and other compliances relating to e-way bill as per GST law.

25. **Contract Price Adjustment**

25.1 The "Contract Price" (for definition please refer to GCC Clause titled "Definition") as awarded shall be the Base Contract Price.

25.2 The rates quoted by the Bidder shall be the base price which will be subject to price adjustment in accordance with the conditions and formula prescribed herein and further subject to satisfying the requirements specified in this clause only.

25.3 A certain fixed percentage of the base price shall not be subject to any price adjustment. The balance percentage to be specified, shall be of identified components towards labour, material(s), steel, cement and Diesel oil/(POL) and shall be subject to Price Adjustment.

25.4.1 The actual amount of Price Adjustment shall be determined by satisfying the conditions specified herein and shall not exceed the maximum limit as specified in SCC.

25.4.2 The value of "F" as specified in these **Special** Conditions of Contract will remain unchanged and fixed component shall not be disputed.

25.5 No ceiling limit on Price Adjustment on the base contract price.

25.6 Price Adjustment(s) shall be calculated for the quantum of works executed for the month or the period of the bill as per agreed Work Schedule. For the purpose of payment/recovery of price variation provisions, the Contractor would be eligible for

such claims or shall be liable for refund on the quantum of work scheduled or the actual quantum of work done provided always that the quantum of work done is more than or equal the scheduled quantum of work as per the agreed Work Schedule. In other words, the Contractor shall not be eligible for these claims nor liable or payment/refund under these provisions if the work has been delayed beyond the scheduled date(s) for reasons attributable to Contractor. However, the Contractor would be eligible for claim or liable for refund for Price Adjustment(s) for quantities of work executed beyond the scheduled dates based on the value of the indices as applicable to the scheduled dates of execution, for such delayed work provided that if the indices during the extended periods are lower than the indices during scheduled dates of execution, then lower indices shall be applicable.

25.7.0 Additional, altered or substituted items of work, derived from the agreed schedule of rate (to be attached in the "Award Letter") will also attract price adjustment as per this clause. No price adjustment is payable for the rate/amount of the additional, altered or substituted items of works, when derived from or based on Market rates as per clause 49 of SectionIV, GCC. No price adjustment for the cost of Owner Issued materials (viz. steel & cement or any other item(s) issued from Owner's Store) shall be applicable, which are issued at free of cost to the Contractor.

25.8.0 Every month after the award of Contract, the Contractor shall submit to the Engineer-in-Charge, a written notice of the changes, if any, that have occurred in the specified indices of materials, labour, Gases or High Speed Diesel Price, during the previous reporting period containing the effective date of such change, the amount of change for the claim of the amount of Contract price adjustment with authenticated documentary evidence of the relevant published indices/diesel price to substantiate the price adjustment.

25.9.0 Provided further that such payment/refund shall not be operative and payable after the Schedule expiry of the Contract period or authorized extended Contract period or extended date of completion of works or items of works in question, whichever is earlier.

25.10.0 In cases, the work or items of work, or group of items of work, are delayed beyond the schedule dates for the work, for reasons attributable to the Contractor, the price adjustment provisions shall not be applicable for the period of time between the schedule date and the actual date, but for as provided above in sub-clause 25.6.0.

25.11.0 For this purpose, the schedule date of work shall be as identified in line with provisions of clause entitled "TIME AND EXTENSION FOR DELAY" and/ or "The Work Schedule/ Bar Chart" (which will be discussed and finalised before Award of work) wherein the separate period of completion has been specified/ agreed to for items, or groups of items, or works.

25.12.0 **TOTAL ADJUSTED CONTRACT PRICE**

The total adjusted Contract price shall be Sigma (ACP) + other elements of Contact price if any.

25.13.0 Except as provided therein, no other expenditure incurred by the Contractor, due to levy of additional/increase in royalty, insurance premium(s) benefits to workers/ Labourers or any other Clause(s)/ items(s) due to any reason whatsoever, shall be

payable to the Contractor.

25.14.0 **Tender specifying provisions other than those specified above run the risk of rejection.**

25.15.0 The Contractor shall be required to produce necessary "Price List" for High Speed Diesel at the Indian Oil Corpn. retail outlet nearest to the project and "Monthly Bulletins" issued by office of the Economic Adviser, Ministry of Commerce & Industry, Government of India/ Labour Bureau, Shimla (as published by RBI) or any other related bulletin for materials/ Labour for receiving payments from Employer/ Refund to be made to Employer as required in the Price Adjustment Formula mentioned above.

26. **Taxes, Duties, Levies etc.**

26.1 Except as other wise specifically provided in the Contract, the Contractor shall be liable and responsible for the payment of all taxes, duties, levies and charges imposed on the Contractor, its Sub-Contractors and those imposed on the Contractor's equipment, materials, supplies and services to be used in the performance of the Contract or furnished under the Contract.

26.2 The Award of the Contract is on 'Works Contract' basis. Notwithstanding GCC Sub-Clauses 26.1 above, the Employer shall bear and pay/reimburse to the Contractor, Goods and Services Tax (GST) applicable on the items of Works Contract described in the Schedule of Quantities. However, the taxes, duties & levies as may be applicable on the materials used for Works Contract shall be to the contractor's account and no separate claim in this regard will be entertained by the Employer. Further, in case of any variation in the rates of the GST after the date seven (7) days prior to deadline set for submission of the Techno-Commercial bids, the same shall be paid/ reimbursed to/ recovered from the Contractor subject to submission of documentary evidence.

26.3 It shall be incumbent upon the Contractor to obtain a registration certificate under the GST Law, and other law(s) relating to levy of tax, duty, cess etc. and necessary evidence to this effect shall be furnished by the Contractor to the Employer. If the Contractor intends to engage itself in quarrying or mining of soil/earth, sand, stone/aggregates, metals, minerals or minor minerals required for the Works, as the case may be, it shall obtain necessary permits under the applicable law for such mining or quarrying from the State/Central Government authorities and pay the fee or charges applicable thereto.

26.4 The Contract Price shall be inclusive of any Royalties or Seigniorage Fee or Cess or other charges payable on the quarried or mined metal, minerals, or minor minerals, as the case may be, at the rate(s) prevailing as on seven (7) days prior to the deadline set for submission of bids.

26.4.1 It shall be the responsibility of the Contractor to ensure that the Royalties or Seigniorage Fee or Cess or other charges on the quarried or mined metal, minerals or minor minerals are paid to the statutory authorities.

26.4.2 The component of Royalties or Seigniorage Fee or Cess or other charges, if applicable in a running account bill, shall only be released by the Employer to the Contractor on submission of the following documents in original:

- A) In case the Contractor is the primary license holder of the quarry / mines:
- i) Vehicle wise challan / transit permit and proof of payment of royalty, and
 - ii) Any other document required as per the relevant Acts/Rules of the concerned state.
- B) In case the Contractor is the purchaser of soil/earth, sand, stone/aggregates, metals, minerals or minor minerals:
- i) Purchase voucher and vehicle wise challan / transit permit and proof of payment of royalty, and
 - ii) Any other document required as per the relevant Acts/Rules of the concerned state.

26.4.3 Final bill payment shall be released to the Contractor on production of royalty clearance certificate issued by the concerned statutory authorities for total quantity of quarried or mined metal, minerals, or minor minerals required for the Works.

26.4.4 The Contractor shall pay and indemnify the Employer against any default in payment of Royalties or Seigniorage Fee or Cess or other charges by the Contractor or the agency from which the Contractor purchases soil/earth, sand, stone/aggregates, metals, minerals or minor minerals.

26.4.5 In the event of there being a statutory increase in the rates of royalty charges/fresh levy of royalty on materials, the same shall be reimbursed to the Contractor upon submission of original challan by him of having made the payments at revised rates. In the event of there being a decrease in such rates, the same shall be recovered from the Contractor. The base date for calculating the increase or decrease shall be the rate as on seven (7) days prior to the date of Techno-Commercial bid opening. The total reimbursement (positive or negative) as specified above, to be paid or recovered, shall however be calculated on the quantity of materials actually considered while making the royalty payments to the concerned authorities, or the theoretical consumption of these materials (calculated on the basis of the volume of concrete or fill accepted for payment), whichever is less, and on the basis of documentary evidence of Govt. Notification. However, the Contractor will settle claims, if any, on account of over charge by the State Authorities.

26.5 If a new tax, duty or levy is imposed under statute or law in India after the date seven (7) days prior to deadline set for submission of the bids and the Contractor becomes liable there under to pay and actually pays the said new tax, duty or levy for bonafide use on the Works contracted, the same shall be reimbursed to the Contractor against documentary evidence of proof of payment, provided that the amount thus claimed is not paid/payable under price variation provision of the Contract.

26.6 The payment/reimbursement of statutory variations in the rates of tax and/or of new tax, duty or levy imposed under statute or law in India as per GCC Sub-Clauses 26.2, 26.3, 26.4 and 26.5 above, would be restricted only to direct transactions between the Employer and the Contractor.

26.7 The Employer shall be entitled to make necessary tax deductions at source as per the prevalent laws. The Contractor shall be required to submit the PAN details to the Engineer-in-Charge before the submission of the first bill/ invoice under the Contract.

26.8 The Contractor shall himself be informed of all the applicable laws, notifications, rules, circulars and other communications of the State or Central or other authorities with regard to levy of any tax, duty, cess, levy or fee etc, which in any manner may impinge upon him in performance of any obligations/responsibilities under or arising out of the Contract.

27. Overpayments and Underpayments

27.1 Wherever any claim for the payment of a sum of money to the Employer arises out of or under this Contract against the Contractor, the Contractor upon demand by the Employer or by the Engineer-in-Charge on behalf of the Employer, with explanation of the reasons for such a sum/ claim becoming due, shall forthwith pay the same to the Employer. If the Contractor fails to do so within twenty-one (21) days of such a claim, then the same may be deducted by the Employer from any sum then due or which at any time thereafter may become due to the Contractor under this Contract or from any other sum due to the Contractor from the Employer which may be available with the Employer or from his security deposit.

27.2 The Employer reserves the right to carry out post payment audit and technical examination of the final bill including all supporting vouchers, abstracts, etc. The Employer further reserves the right to enforce and recover any overpayment when detected, notwithstanding the fact that the amount of the final bill may include any item which is under dispute between the parties and referred to for settlement under GCC Clause entitled 'Settlement of Disputes' and notwithstanding the fact that the amount of the final bill figures in the arbitration decision/award.

27.3 If as a result of such audit and technical examination, any overpayment is discovered in respect of any Work done by the Contractor or alleged to have been done by him under the Contract, it shall be recovered by the Employer from the Contractor by any or all of the methods prescribed above. Similarly, if any underpayment is discovered by the Employer, the amount shall be duly paid to the Contractor by the Employer forthwith.

27.4 Provided that the aforesaid right of the Employer to adjust overpayments against amounts due to the Contractor under any other Contract with the Employer shall not extend beyond the period of two years from the date of payment of the final bill or in case the final bill is a minus bill, from the date the amount payable by the Contractor under the minus final bill is communicated to the Contractor.

27.5 Any amount due to the Contractor under this Contract for underpayment may also be adjusted against any amount then due or which may at any time thereafter become due from the Employer to the Contractor under any other Contract or account whatsoever.

28. Time Limit for submission & payment of Final Bill and waiver of rights of all

claims

28.1 The final bill shall be submitted by the Contractor within three (3) months of physical completion of the Works unless otherwise a longer period is agreed to between the Engineer-in-Charge and the Contractor. No further claims shall be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of the final bill will be made within four (4) months of receipt of the same

D. Execution of Facilities

29. Work Commencement, Execution & Delays

29.1 Commencement of Works

The execution of the Works shall commence from the 14th day after the date on which the Engineer-in-Charge issues written orders to commence the Work, unless otherwise stated elsewhere in the Contract.

29.2 Time for Completion

The entire scope of Work covered under this Contract shall be completed within the time stated in SCC or within such extended time granted to the Contractor by the Employer under the provisions of GCC Sub-Clause 29.5. The time allowed for execution of the Works as specified in the SCC or the extended time in accordance with these Conditions shall be the essence of the Contract.

29.3 Work Progress

29.3.1 Unless already incorporated in the Letter of Award, as soon as possible after the Contract is awarded, the Engineer-in-Charge and the Contractor shall agree upon a Work Schedule which will become the Contract Work Schedule. The Work Schedule shall be prepared in direct relation to the time stated in the Contract documents for the completion of the Works. The Work Schedule shall indicate the forecast of the dates of commencement and completion of various trades or sections of work.

29.3.2 All the Contractor's activities shall be performed and completed strictly in accordance with the agreed Work Schedule and to achieve the targets, the Contractor shall have to plan adequate mobilisation of all resources. The Engineer-in-Charge, shall however, have the right to review the progress and modify the sequence of carrying out the Work suiting the Site conditions and the Contractor shall be required to comply with such modifications and complete his activities in accordance thereof without any extra cost to the Employer.

29.3.3 Maintenance of Records of Weekly Progress Review Meetings at Site

The Contractor shall be required to attend all weekly site progress review meetings

organized by the 'Project Manager' or his authorised representative. The deliberations in the meetings shall inter alia include the weekly program, progress of work (including details of manpower, tools and plants deployed by the contractor vis-a-vis agreed schedule), inputs to be provided by Employer, delays, if any and recovery program, specific hindrances to work and work instructions by Employer. The minutes of the weekly meetings shall be recorded in triplicate in a numbered register available with the 'Project Manager', or his authorized representative. These recordings shall be jointly signed by the Project Manager or his authorized representative and the Contractor and one copy of the signed records shall be handed over to the Contractor. The following documents shall form the principal basis for consideration of Time Extension Pursuant to GCC Clause 29.5 with or without LD, determining the compensation amount pursuant to GCC Clause 29.6 and settlement of extra claims during the execution of contract: 1. The joint recordings in the weekly review meetings register 2. Records of Technical Coordination Meetings 3. Records of Contract Review Meetings 4. Written notices issued by the "Engineer in Charge" or his authorized representative to contractor in the relevant period.

29.4 Contract Coordination Procedures, Coordination Meetings & Progress Reporting

29.4.1 The Contractor shall prepare and finalise in consultation with the Engineer-in-Charge, a detailed contract coordination procedure within twenty-eight (28) days from the date of issue of Letter of Award, for the purpose of execution of the Contract.

29.4.2 The Contractor shall have to attend all the meetings at his own cost with Engineer-in-Charge or any authorised representative of the Employer during the currency of the Contract, as and when required and fully cooperate with such persons and agencies involved during these discussions.

29.4.3 During the execution of the Work, the Contractor shall submit at his own cost a detailed monthly progress report to the Engineer-in-Charge in three copies, latest by 14th of every month.

29.5 Extension of Time for Completion

29.5.1 The Time for Completion specified shall be extended if the Contractor is delayed or impeded in the performance of any of the obligations under the Contract by reason of any of the following:

- a) any occurrence of Force majeure as provided in GCC Clause entitled 'Force Majeure', or
- b) Work Schedules for beyond deviation limits & Extra Items as provided in GCC Sub-Clause 49.5, or
- c) any default or breach of the Contract by the Employer, or delay on the part of other contractors engaged by the Employer in executing work not forming part of this Contract, or

- d) any suspension order given by the Employer under GCC Sub-Clauses 50.1 (ii) and 50.1 (iii), or
- e) Any other sufficient cause which, in the opinion of the Engineer-in-Charge, is beyond the Contractor's reasonable control;

by such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Contractor.

29.5.2 Except where otherwise specifically provided in the Contract, the Contractor shall submit to the Employer a notice in writing of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable, but no later than twenty-eight (28) days after the commencement of such event or circumstance. As soon as reasonably practicable, after the receipt of such notice and supporting particulars of the claim, the Employer shall give a fair and reasonable extension of time for completion of Work. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within fifty-six (56) days of the date of receipt of such request by the Engineer-in-Charge.

29.5.3 The Contractor shall at all times use his reasonable efforts to minimise any delay in the performance of his obligations under the Contract.

29.5.4 The compensations, if any, payable to the Contractor on account of any one or more of the above reasons of delay have been separately dealt with under relevant provisions of the Contract.

29.6 Liquidated Damages for Delay

29.6.1 If the Contractor fails to complete the Work on or before the scheduled or extended date of completion as per GCC Sub-Clauses 29.2 and 29.5, he shall, without prejudice to any other right or remedy of the Employer, arising out of the Contract on account of such delay, be liable for payment of liquidated damages, not as penalty, as per provisions of SCC Clause entitled 'Liquidated Damages for Delay'.

29.6.2 The following documents shall form the principal basis for consideration of Extension of Time for Completion pursuant to GCC Sub-Clause 29.5 with or without Liquidated Damages and determining the compensation amount pursuant to GCC Sub-Clause 29.6.

1. The joint recordings in the periodic meeting register,
2. Records of Technical Coordination meetings,
3. Records of Contract Review meetings,
4. Written notices issued by the Employer and/or the Engineer-in-Charge or his authorized representative to the Contractor in the relevant period.
5. Written requests/ notices by the Contractor to Employer/ Engineer-in-Charge in

the relevant period.

29.7 Delays by Employer or his Authorised Representative

29.7.1 In case the Contractor's performance is delayed due to any act of omission on the part of the Employer or his authorised representative, then the Contractor shall be given appropriate extension of time for the completion of the Works, to the extent such omission on the part of the Employer has caused delay in the Contractor's performance of his work. Regarding reasonableness or otherwise of the extension of time, the decision of the Engineer-in-Charge shall be final.

29.7.2 If such delays by the Employer have resulted in any increase in the cost to the Contractor, the Contractor shall be eligible to claim demonstrable and reasonable costs supported by full details of such increased costs incurred by him with all documentary evidence. The Employer shall examine the justification for such a request for claim and if satisfied, the extent of compensation shall be mutually agreed depending upon the circumstances at the time of such an occurrence.

30. Sub Contracts

30.1 After the award of the Contract, the Contractor shall not subcontract the Works/ any part of the Works without the prior written consent of the Engineer-in-Charge. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Sub-Contractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

Provided that the Contractor shall not be required to obtain such consent for:

- a) the provision of labour,
- b) the purchase of materials which are in accordance with the standards specified in the Contract, or
- c) the subcontracting of any part of the Works for which the sub-contractor is named in the Contract.

In the event of the Contractor proposing a sub-contractor for any part of the Works after the award of the Contract, he shall be required to take approval from the Engineer-in-Charge. If the Engineer-in-Charge approves of the same, he shall stipulate qualifying requirements for the sub-contractors to perform the specified part of Work. The Contractor will then submit the requisite credentials of the agency(ies) he proposes to engage. The details so furnished by the Contractor shall be reviewed by the Employer. In case the agency(ies) proposed by the Contractor for the subcontracting are not considered acceptable, the Contractor will be required to furnish credentials of alternate agency(ies) for approval of Engineer-

in-Charge. Based on the review and assessment, the agency(ies) shall be approved by the Engineer-in-Charge within twenty-one (21) days of furnishing of credentials by the Contractor.

30.2 Where a list of approved agencies for a sub-contracting work is provided in the Contract, the Contractor shall inform the name of the sub-contractor selected by him within a period as agreed with the Engineer-in-Charge, however not later than twenty-eight (28) days of the date of such selection.

31. **Setting out the Works**

31.1 The Engineer-in-Charge shall supply dimensioned drawings, levels and other information necessary to enable the Contractor to set out the Works and the Contractor shall set out the Works and be responsible for the accuracy of the same. He shall amend at his own cost and to the satisfaction of the Engineer-in-Charge any error found at any stage which may arise through inaccurate setting out unless such error is based on incorrect data furnished in writing by the Engineer-in-Charge, in which case the cost of rectification shall be borne by the Employer. The Contractor shall protect and preserve all bench marks used in setting out the Works till date of submission of final bill under the Contract, unless the Engineer-in-Charge directs otherwise.

32. **Methodology of Construction & Equipment Mobilisation**

32.1 Methodology of construction and the work plan adopted by Contractor shall match the construction methodology/requirements specified in Technical Specifications.

32.2 The suggested minimum plant & equipment and machinery to be deployed by the Contractor for the execution of Work shall be as given in Technical Specifications.

32.3 The Contractor shall arrange at his own expense all tools, plant and equipment including Crane(s) (hereinafter referred to as T&P) required for execution of the work.

32.3.1 If the Contractor requires any item of T & P on hire from the Employer, the Employer will, if such item is available, hire it to the Contractor at an hourly rate to be fixed by the Engineer-in-Charge.

32.3.2 The T&P shall be given to the Contractor on hire by the Employer for a period of one hour or its multiple thereof. In case the T&P is hired by the Contractor for a period of four hours or less, the hire charges applicable for a minimum period of four hours shall be recovered from the Contractor's bills. In case the T&P is hired by the Contractor for a period exceeding four hours, the hire charges shall be calculated based on the charges applicable as per hourly rate. The hire charges in respect of T&P given on hire to the Contractor by the Employer shall be recovered from the Contractor's bills.

32.3.3 For accounting purpose, total working hours shall be considered to be the period between time of placement of T&P to the Contractor at the requested location and time of release of the same. This shall be logged in Record Book on daily basis

and shall be signed between Contractor/ Subcontractor and the Engineer-in-charge or his authorised representative. In case the T&P issued to the Contractor is not owned by the Employer but hired from another agency, the authorised representative of the agency providing the T&P will also sign the said Record Book. In case the Contractor contests correctness of any entry and/or fails to sign the Record Book the decision of the Engineer-in-Charge shall be final and binding on him. Hire charges shall be calculated in accordance with the entries in the Record Book.

32.3.4 The Contractor will be exempted from levy of any charges for the number of days he is called upon in writing by the Engineer - in- Charge to suspend execution of the work, provided Employer's T & P/ T&P hired by the Employer in question has, in fact, remained idle with the Contractor because of the suspension, provided the Contractor, in case the period of suspension exceeds 11 days, returns Employer's T & P/ T&P hired by the Employer to the place from where it was issued.

32.3.5.1 **T&P owned by Employer**

The hire charges will cover financing cost, charges of crew, depreciation, stores for maintenance and cleaning purposes and fuel needed to start a machine at the time of issue. All other charges such as cost of fuel for running a machine, engine oil, kerosene oil, etc., for working Employer's T&P, and all unskilled labour and water required for servicing/wash out shall be borne by the Contractor. The Contractor shall permit the Engineer-in-Charge to carry out periodical maintenance of Employer's T&P in accordance with the provision there for in the aforesaid Schedule, and there will be no deduction in hire charges for the period spent on such maintenance.

However, the Contractor shall be allowed to return the tools and plants (issued by the Employer) for purposes of repairs and for the duration of such repairs no hire charges shall, be levied.

The Contractor shall be responsible for care and custody of Employer's T&P (including employment of chowkidars) during the period Employer's T&P remain with him and any damage (fair wear and tear excepted) to any of the equipment(except for Excepted Risks provided always the Contractor has taken precautions necessary to protect it from such risks) shall be made good at the Contractor's expense to the satisfaction of the Engineer-in-Charge unless such damage is caused because of negligence of crew provided by the Employer.

32.3.5.2 **T&P hired by the Employer**

The hourly hiring rate for T&P hired by the Employer from another agency and issued to Contractor shall be all inclusive rate including the cost of hiring, operation & maintenance charges, fuel charges and other charges.

32.3.6 The Employer gives no guarantee in respect of output of T & P hired to the Contractor and no reduction in rates or any compensation shall be allowed on the ground that out turn or performance of Employer's T & P/ T&P hired by the

Employer was not to the Contractor's expectation.

- 32.3.7 The T&P hired to the Contractor shall be returned at the place of issue by the Contractor to the Engineer-in-Charge (unless otherwise directed) on execution of the work or section of the work at the end of the day. In case the T&P is used by the Contractor in continuation of previous requisition and the crane has not moved out of his work area, then the movement of crane for fresh requisition(s) by the Contractor within his work area shall be to the Contractor's account.
- 32.3.8 The Employer shall be entitled to terminate the hire without assigning any reason whatsoever and the Contractor shall have no claim to any payment of compensation or otherwise whatsoever on account of termination of hire of T&P issued by the Employer. On termination of the hire by the Employer, the Contractor shall return the T&P at the place of issue unless otherwise directed by the Engineer-in-Charge.
- 32.4. The Contractor shall arrange at his own expense all tools, plant and equipment including Crane(s) (hereinafter referred to as T&P) required for execution of the work.
- 32.4.1 If the Contractor requires any item of T&P on hire from the Corporation, the corporation will, if such item is available, hire it to the Contractor at an hourly rate to be fixed by the Engineer-in-Charge.
- 32.4.2 The T&P shall be given to the Contractor on hire by the Corporation for a period of one hour or its multiple thereof. In case the T&P is hired by the Contractor for a period of four hours or less, the hire charges applicable for a minimum period of four hours shall be recovered from the Contractor's bills. In case the T&P is hired by the Contractor for a period exceeding four hours, the hire charges shall be calculated based on the charges applicable as per hourly rate. The hire charges in respect of T&P given on hire to the Contractor by the Corporation shall be recovered from the Contractor's bills.
- 32.4.3 For accounting purpose, total working hours shall be considered to be the period between time of placement of T&P to the Contractor at the requested location and time of release of the same. This shall be logged in Record Book on daily basis and shall be signed between Contractor/ Subcontractor and the Engineer-in-charge or his authorised representative. In case the T&P issued to the Contractor is not owned by the Corporation but hired from another agency, the authorised representative of the agency providing the T&P will also sign the said Record Book. In case the Contractor contests correctness of any entry and/or fails to sign the Record Book the decision of the Engineer-in-Charge shall be final and binding on him. Hire charges shall be calculated in accordance with the entries in the Record Book.
- 32.4.4 The Contractor will be exempted from levy of any charges for the number of days he is called upon in writing by the Engineer-in-Charge to suspend execution of the work, provided Corporation's T&P/T&P hired by the Corporation in question has, in fact, remained idle with the Contractor because of the suspension, provided the Contractor, in case the period of suspension exceeds 11 days, returns

Corporation's T&P/T&P hired by the Corporation to the place from where it was issued.

33. Patent Indemnity

33.1 The Contractor shall indemnify and hold harmless the Employer and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Employer may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract in the performance of the Contract.

33.2 In the event of any claim being made or action being brought against the Employer or its representatives or its employees, in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof. However, such indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by the Employer; but the Contractor shall pay any royalties or other charges payable in respect of any such use, the amount so paid being reimbursed to the Contractor only if the use was as a result of any drawings and/or specifications issued after the award of Contract by the Employer, provided further that the Contractor has brought to the notice of the Engineer-in-Charge, of such infringement immediately upon the instructions of the Engineer-in-Charge or upon the Contractor becoming aware of such infringement.

34. Materials for the performance of the Contract

(a) Materials to be provided by the Contractor

1. The Contractor shall at his own expense, provide all materials required for the Works other than those which are to be issued by the Employer.
2. All materials to be provided by the Contractor shall be in conformity with the specifications laid down in the Contract and the Contractor shall, if requested by the Engineer-in-Charge, furnish proof to the satisfaction of Engineer-in-Charge that the materials so comply.
3. Wherever required by the Engineer-in-Charge, the Contractor shall, at his own expense and without delay, provide samples of materials proposed to be used in the Works. The Engineer-in-Charge shall within seven (7) days thereafter or within such further period as he may require, intimate to the Contractor in writing, whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange for fresh samples complying with the Technical specifications laid down in the Contract, for approval.
4. The Engineer-in-Charge shall have full powers to require removal of any or all of the materials brought to site by the Contractor which are not in accordance with the Contract specifications or do not conform in character or quality to samples approved by him. In case of default on the part of the Contractor in

removing rejected materials, the Engineer-in-Charge shall be at liberty to have them removed by other means. The Engineer-in-Charge shall have full powers to order the Contractor to provide other proper materials to be substituted for rejected materials and in the event of the Contractor refusing to comply, he may cause the same to be supplied by other means. All costs, which may attend upon such removal and/or substitution, shall be borne by the Contractor.

5. The Engineer-in-Charge shall be entitled to have tests carried out as specified in the Contract for any materials supplied by the Contractor other than those for which, as stated above, satisfactory proof has already been furnished, at the cost of the Contractor and the Contractor shall provide at his expense all facilities which the Engineer-in-Charge may reasonably require for the purpose. If no tests are specified in the Contract, and such tests are required by the Engineer-in-Charge, the Contractor shall provide all facilities required for the purpose and the charges for these tests including the cost of materials consumed/used in such tests shall be to the account of Employer, except if the tests disclose that the said materials are not in accordance with the provision of the Contract, then the same shall be to the account of the Contractor.

6. The Contractor shall indemnify the Employer, its representatives or its employees against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties or other charges which may be payable in respect of any article or material or part thereof included in the Contract. In the event of any claim being made or action being brought against the Employer or its representatives or its employees, in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof. However, such indemnity shall not apply when
such infringement has taken place in complying with the specific directions issued by the Employer; but the Contractor shall pay any royalties or other charges payable in respect of any such use, the amount so paid being reimbursed to the Contractor only if the use was as a result of any drawings and/or specifications issued after the award of Contract by the Employer, provided further that the Contractor has brought to the notice of the Engineer-in-Charge, of such infringement immediately upon the instructions of the Engineer-in-Charge or upon the Contractor becoming aware of such infringement.

7. Subject as hereinafter provided in GCC Clause entitled 'Contract Price Adjustment' all charges on account of GST and other levies/octroi on materials obtained for the Works from any source (excluding materials issued by the Employer) shall be borne by the Contractor.

(b) **Materials to be issued by the Employer:**

(i) **Materials to be issued by the Employer free of cost**

The Employer, if so stipulated in SCC, may issue cement, reinforcement steel and structural steel to the Contractor free of cost for incorporation in the Works as per the terms and conditions specified in the SCC/Technical

Specifications.

(ii) **Materials to be issued by the Employer on chargeable basis**

If after the award of the Contract, the Contractor desires the Employer to issue/supply any other materials, for the purposes of the Contract such materials may be issued by the Employer, if available, at rates and terms and conditions to be fixed by the Engineer-in-Charge. The Employer reserves the right not to issue any such materials. The non-issue of such materials will not entitle the Contractor for any compensation whatsoever either in time or in cost.

(c) **General:**

1. Materials required for the Works, whether brought by the Contractor or issued by the Employer, shall be stored by the Contractor only at places approved by the Engineer-in-Charge. Storage and safe custody of material shall be the responsibility of the Contractor.
2. Engineer-in-Charge shall be entitled at any time to inspect and examine any materials intended to be used in or on the Works, either on the Site or at factory or workshop or other place(s) where such materials are assembled, fabricated, manufactured or at any place(s) where these are lying or from which these are being obtained and the Contractor shall give such facilities as may be reasonably required for such inspection and examination.
3. All materials brought to the Site shall not be removed off the Site without the prior written approval of the Engineer-in-Charge. But whenever the Works are finally completed and advance, if any, in respect of any such material is fully recovered, the Contractor shall at his own expense forthwith remove from the Site all surplus material originally supplied by him.
4. The Employer may issue all the materials agreed to be issued to the Contractor under the Contract, at its site stores, or nearest railhead. In case the materials are issued at the nearest rail head, the cost of transportation only, from such rail head to the Site will be borne by the Employer, subject to the reasonableness of such transportation cost being certified by the Engineer-in-Charge. All other costs such as loading, unloading, transportation to Contractor's godown, storage etc. till the materials are incorporated in the Works or returned to the Employer shall be to the account of the Contractor.
5. All materials issued to the Contractor, by the Employer for incorporation or fixing in the Works (including preparatory work) shall, on completion or on termination of the Contract, be returned by the Contractor at his expense, at the Employer's store, after making due allowance for actual consumption, reasonable wear and tear and/or waste. If the Contractor is required to deliver such materials at a place other than the Employer's

store, he shall do so and the transportation charges from the Site to such place, less the transportation charges which would have been incurred by the Contractor, had such materials been delivered at the Employer's store, shall be borne by the Employer.

35. Quality Assurance Programme

35.1 Sampling, testing and quality assurance requirements are given in Technical Specifications.

35.2 All costs associated with testing of materials required as per Technical Specifications shall be deemed to be included in Contract rates/prices in the Schedule of Quantities.

36. Inspection and Approval

36.1 All Works embracing more than one process shall be subject to examination and approval at each stage thereof and the Contractor shall give due notice to the Engineer-in-Charge or his authorised representative when each stage is ready. In default of such notice, the Engineer-in-Charge shall be entitled to appraise the quality and extent thereof.

36.2 No work shall be covered up or put out of view without the approval of the Engineer-in-Charge or his authorised representative and the Contractor shall provide full opportunity for examination and measurement of any work which is about to be covered up or put out of view and for examination of foundations before further work is placed thereon. The Contractor shall give due notice to the Engineer-in-Charge or his authorised representative whenever any such work or foundation is ready for examination and the Engineer-in-Charge or his representative shall without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly' attend for the purpose of examining and measuring such work or of examining such foundations. In the event of the failure of the Contractor to give such notice he shall, if required by the Engineer-in-Charge, uncover such work at his own expense.

36.3 The Engineer-in-Charge or his authorised representative shall have powers at any time to inspect and examine any part of the Works and the Contractor shall give such facilities as may be reasonably required for such inspection and examination.

36.4 The Contractor shall uncover any part of the Works and/or make openings in or through the same as the Engineer-in-Charge may from time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the Engineer-in-Charge. If any such part has been covered up or put out of view after being approved by the Engineer-in-Charge and is subsequently found on uncovering to have been executed in accordance with the Contract, the expenses of uncovering and/or making opening in or through, reinstating and making good the same shall be borne by the Employer. In any other case all such expenses shall be borne by the Contractor.

36.5 The additional & specific inspection and approval requirements in respect of the

Works are detailed further in the Technical Specifications.

37. Records and Measurement

37.1 The Engineer-in-Charge shall, except as otherwise stated, ascertain and determine by measurement the value of the Work done in accordance with the Contract.

37.2 All items having a financial value shall be entered in Measurement Book, level book, etc. prescribed by the Engineer-in-Charge so that a complete record is obtained of all Work performed under the Contract.

37.3 Measurements shall be taken jointly by the Engineer-in-Charge or his authorised representative and the Contractor or his authorised representative.

37.4 Before taking measurements of any Work the Engineer-in-Charge or his authorised representative for the purpose shall give a reasonable notice to the Contractor. If the Contractor fails to attend or send his authorised representative for taking the measurements after such a notice or fails to countersign or to record the objection, if any, within a week from the date of measurement, then in any such event measurements taken by the Engineer-in-Charge or his authorised representative shall be taken to be correct measurements of the Work.

37.5 The Contractor shall, without extra charge, provide assistance with every appliance, labour etc. necessary for taking measurements.

37.6 Measurements shall be signed and dated by both parties each day on the Site on completion of measurement. If the Contractor objects to any of the measurements recorded, a note to that effect shall be made in the Measurement Book against the item objected to and such note shall be signed and dated by both parties engaged in taking the measurement. The decision of the Engineer-in-Charge on any such dispute or difference or interpretation shall be final and binding on both the parties and shall be beyond the scope of the provisions of settlement of disputes under the Contract.

38. Methods of Measurement

38.1 Measurement of Contract items of Work shall be taken in accordance with method of Measurement stipulated in the Technical Specifications/Schedule of Quantities. In case of extra items, the Engineer-in-Charge shall also specify the method of measurement for such items at the time of his order for execution of such extra items.

38.2 In case no method of measurement is stipulated in Technical Specifications / Schedule of Quantities/ Order of the Engineer-in-Charge, then the Method of Measurement of such items shall be as per the relevant Standard Method of Measurement issued by Indian Standards Institution or general industry practice/ local custom.

39. Temporary / Enabling Works

39.1 The siting and nature of all offices, access road to the work areas, access tracks to work areas, sumps, and all other Temporary / Enabling Works as may be required for the proper execution of the Works shall be subject to the approval of the Engineer-in-Charge. These Works shall be executed by the Contractor at his own cost. Hard crusting for pre-assembly/fabrication yard shall be in line with Technical Specifications.

39.2 All equipment, labour, materials including cement, reinforcement and the structural steel required for the Enabling Works associated with the entire Contract shall have to be arranged by the Contractor only. Nothing extra shall be paid to the Contractor on this account and the unit rates quoted by the Contractor on this account and the unit rates quoted by the Contractor for various items in the Schedule of Quantities shall be deemed to include the cost of Enabling Works.

39.3 However, for fabrication yard or for fabrication of structural steel, if any, hard crusting made with compacted filling using broken hard stone aggregate with binding material shall be measured and paid under relevant item of stone aggregate filling with binding material as specified in Technical Specifications and Schedule of Quantities.

The maximum area of hard crusting that will be paid is limited to consecutive three (3) month peak fabrication quantity in M.T. indicated in the Work Schedule multiplied by 3.5 sq. m per M.T. The hard crusting area arrived as above shall be further subject to availability of appropriate area in the general layout plan and approval of the Engineer-in-Charge.

Further development of fabrication and assembly bed, power distribution points, cable laying, drains, additional area of hard crusting over and above area stipulated etc., shall be done by the Contractor, at his own cost.

39.4 The Contractor shall make his own arrangement for approach to the work Site, including borrow / disposal area and for movement of men, machinery, other requirement etc. required for carrying out the Work included under this Contract.

40. **Urgent Works**

40.1 If any Urgent Work becomes necessary and the Contractor is unable or unwilling at once to carry it out, the Engineer-in-Charge may by his own or other means, carry it out as he may consider necessary. If the Urgent Work shall be such as the Contractor is liable under the Contract to carry out at his expenses all expenses, incurred on it by the Employer shall be recoverable from the Contractor and be adjusted or set off against any sum payable to him.

41. **Construction Power and Construction Water Supply and Staff / Labour Colony**

Unless otherwise stated in SCC, the provisions for Construction Power and Construction Water Supply and Staff / Labour Colony shall be as under: 41.1.1 The Contractor shall advise the Engineer-in-Charge, within twenty-eight (28) days from the date of acceptance of the Letter of Award, about his exact requirement of space for his office, storage area, preassembly and fabrication areas, labour and

staff colony area (land if available), etc. The above requirement shall be reviewed by the Engineer-in-Charge and space as decided by him will be allotted for his use as well as his Sub-Contractor's use.

41.1.2 On completion of Work, the Contractor shall handover the land duly cleaned to the Engineer-in-Charge. Until and unless the Contractor has handed over the vacant possession of land allotted to him for the above purpose, the payment of his final bill shall not be made. The Contractor shall be made liable to pay for the use and occupation at the rates to be determined by the Engineer-in-Charge if the Contractor overstays in the land after the Contract is completed.

41.1.3 The Contractor shall submit to the Engineer-in-Charge within twenty-eight (28) days from the date of acceptance of the Letter of Award, his electrical power requirements, if any, to allow the planning of the same by the Engineer-in-Charge. The Contractor shall be provided with free supply of electricity for the purposes of the Contract only, at two convenient locations in the Site. The Contractor shall make his own further distribution arrangement. All temporary wiring must comply with local regulations and will be subject to Engineer-in-Charge's inspection and approval before connection to supply. The free supply of power will not be provided for the use in the labour and staff colony. Power supply for labour and staff colony shall be provided at one point. It shall be the responsibility of the Contractor to take the power supply upto the point of his use. The Contractor shall be charged for power supply to labour and staff colony at rates prevalent as per the tariff of the electricity distribution entity at the Site.

The Engineer-in-Charge may consider additional points of power supply in deserving and exceptional cases.

41.1.4 The Employer does not guarantee uninterrupted power supply.

41.1.5 The Contractor shall arrange for drinking water to his workmen/staff at Work Site and other water supply for all purposes for his labour and other personnel at the worksite / colony on his own. The quality of water should meet the requirements for which it is proposed to be used. All Civil and Structural Work associated with the above including borings, pipe lines, valves, pumps, tube wells, pump house, underground storage tank, over ground storage tank, water tankers etc., whatsoever required for taking the water from the underground source or any other source to the place of use shall be provided / erected/ constructed / maintained by the Contractor at his own cost.

41.1.6 The Contractor shall not be entitled to any compensation on account of the expenditure incurred in arranging the construction water.

41.2 Supply of Unfiltered Water for Construction Purposes only

41.2.1 Unless otherwise stated in SCC, the Contractor shall draw water from the water supply mains provided in the project at suitable points to be indicated by the Engineer-in-Charge. All pipe lines, pumps and other accessories required for taking the water from the mains to the site of Work shall be provided by the Contractor at his own cost. He shall not be entitled to any payment on account of the expenditure

incurred in providing the pipe lines, pumps, etc. No charges will be levied on the Contractor for the water drawn by him for the purpose of the construction work. Should the water, however, be used for either the colony or for manufacture, always subject to prior written permission of the Engineer-in-Charge, the same shall be chargeable at a rate to be fixed by him whose decision in this regard shall be final. However, the water supply shall have to be taken through a metered connection.

41.2.2 The Employer does not guarantee the maintenance of uninterrupted supply of water and in case of any interruptions of such supply of water; the Contractor shall be responsible for making at his own cost alternative arrangements for water. The Engineer-in-Charge also reserves the right to limit the quantity of water to be allowed to be drawn by the Contractor.

41.2.3 No claim for damages will be entertained by the Employer on account of interruption of water supply or limitation of quantity of water as aforesaid or on account of the water so supplied being not fit for construction purposes or on any other account in connection with such water supply.

41.2.4 It will be the responsibility of the Contractor to adequately treat the water at his cost before use for the intended purpose.

41.2.5 Where the Contractor makes his own arrangements for water required for the Work, nothing extra shall be paid for the same. He should make arrangements for storage of sufficient quantity of water required for at least a day's work.

41.3 The contractor shall arrange for construction water from underground/local sources. All borings, pipe lines, pumps, water tankers, underground storage tank, over-ground storage tank, etc, whatsoever required for taking the water from the underground source to the site of work shall be provided / erected / constructed / maintained by the contractor at his own cost.

41.4 The Contractor shall not be entitled to any compensation on account of the expenditure incurred in arranging the construction water.

41.5 Contractor shall make the arrangement for construction power at his own cost. However, NTPC may provide construction power as per site availability on chargeable basis, but the Contractor shall not be entitled to any compensation on account of the quality and availability of power from NTPC.

41.6 The contractor shall make his own arrangement for construction/ rented premises for labour / staff colony.

42. **Site Laboratory**

42.1 As part of the Contract, the Contractor shall provide and maintain a site laboratory for the testing of construction materials under the direction and general supervision of the Engineer-in-Charge.

- 42.2 The laboratory building shall be constructed and installed with the appropriate facilities. Temperature and humidity controls shall be available wherever necessary during testing of samples.
- 42.3 All equipment shall be provided by the Contractor so as to be compatible with the testing requirements specified. The Contractor shall maintain the equipment in good working condition for the duration of the Contract.
- 42.4 The Contractor shall provide approved qualified personnel to operate and maintain the laboratory for the duration of the Contract. The number of staff and equipment available must at all times be sufficient to keep pace with the sampling and testing programme as required by the Engineer-in-Charge.
- 42.5 The Contractor shall fully service the site laboratory and shall supply everything necessary for its proper functioning, including all transport needed to move equipment and samples to and from sampling points on the site, etc.
- 42.6 The Contractor shall re-calibrate all measuring devices whenever so required by the Engineer-in-Charge and shall submit the results of such measurements without delay.

43. **Completion Certificate**

- 43.1 As soon as the Work is completed, the Contractor shall give notice of such completion to the Engineer-in-Charge and within eighty-four (84) days of receipt of such notice the Engineer-in-Charge shall inspect the Work and shall furnish the Contractor with a certificate of completion indicating (a) date of completion, (b) defects, if any, in the Work to be rectified by the Contractor and/or (c) items, if any, for which payment shall be made at reduced rates.

When separate periods of completion have been specified for items or groups of items, the Engineer-in-Charge shall issue separate completion certificates for such item or groups of items. No certificate of completion shall be issued nor shall the Work be considered to be complete till the Contractor shall have removed from the premises on which the Work has been executed all scaffolding, sheds and surplus materials (except such as are required for rectification of defects), and the like to the satisfaction of Engineer-in-Charge. If the Contractor shall fail to comply with any of the requirement of the conditions as aforesaid, on or before the date of completion of the Works, the Engineer-in-Charge may, at the expense of the Contractor fulfil such requirements and dispose of the scaffoldings, surplus materials and rubbish etc. as he thinks fit and recover the cost after giving due credit for the realised amount. The term 'completion' used herein means the physical completion of the Work and in no way means to connote the quality or time of performance of the Work.

- 43.2 If at any time before completion of the entire Work, items or groups of items for which separate periods of completion have been specified, have been completed, the Engineer-in-Charge can take possession of any part or parts of the same (any such part(s) being hereinafter in this Condition referred to as 'the relevant part') notwithstanding anything expressed or implied elsewhere in this Contract.

- 43.3 In case of such taking over of possession by Engineer-in Charge of the said item or group of items, the following shall govern:
- 43.3.1 Within twenty-eight (28) days of request by the Contractor, the Engineer-in-Charge shall issue completion certificate for the relevant part as in GCC Sub-Clause 43.1 above provided the Contractor fulfils his obligations under that Condition for the relevant part.
- 43.3.2 The Defects Liability Period in respect of such items and the relevant part shall be deemed to have commenced from the certified date of completion of such items or the relevant part as the case may be.
- 43.3.3 The Contractor may reduce the value insured under GCC Clause entitled 'Contractor's Liability and Insurance' to the extent of the value of the completed items or relevant part as estimated by the Engineer-in-Charge and notified for this purpose. This estimate shall be applicable for this purpose only and for no other.
- 43.3.4 For the purposes of ascertaining liquidated damages for delay under GCC Sub-Clause 29.6 in respect of any period during which the Works are not complete the relevant part will be deemed to form a separate item or group, with date of completion as given in the Contract or as extended under GCC Sub-Clause 29.2 and actual date of completion as certified by the Engineer-in-Charge under this Clause.

E. DEFECTS LIABILITY

44. Liability for Damage, Defects or Imperfections and Rectification thereof

- 44.1 If the Contractor or his workmen or employees shall injure or destroy any part of the building / structure in which they may be working or any building, road, fence etc. contiguous to the premises on which the Work or any part of it is being executed, or if any damage shall happen to the Work while in progress, the Contractor shall upon receipt of a notice in writing in that behalf make the same good at his own expense. If it shall appear to the Engineer-in-Charge or his representative at any time during construction or re-construction or prior to the expiration of the Defects Liability Period, that any work has been executed with unsound, imperfect or unskilled workmanship or that any materials or articles provided by the Contractor for execution of the Work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the Contract, or that any defect, shrinkage or other faults have appeared in the Work arising out of defective or improper materials or workmanship, the Contractor shall, upon receipt of a notice in writing in that behalf from the Engineer-in-Charge, forthwith rectify or remove and re-construct the work so specified in whole or in part, as the case may require or as the case may be, and/or remove the materials or articles so specified and provide other proper and suitable materials or articles at his own expense, notwithstanding that the same may have been inadvertently passed, certified and paid for and in the event of his failing to do so within the period to be specified by the Engineer-in-Charge in his notice aforesaid, the Engineer-in-Charge may rectify or remove and re-execute the work and/or remove and replace with others, the materials or

articles complained of, as the case may be, by other means at the risk and expense of the Contractor.

45. **Defects Liability Period**

45.1 Unless otherwise specified in the SCC, the Contractor shall be responsible to make good and remedy at his own expense within such period as may be stipulated by the Engineer-in-Charge, any defect which may develop or may be noticed before the expiry of twelve (12) months from the certified date of completion.

45.1.1 On expiry of the period mentioned as defect liability period (GCC Clause 45), contractor's liability ceases except for latent defects. The contractor's liability for latent defect shall be limited to a period of five (5) years from the end of Defect liability period for the subject package. For the purpose of this clause the latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the defect liability period but may surface later.

F. **RISK DISTRIBUTION**

46. Employer's and Contractor's Risks and Insurance

46.1 The Employer carries the risks which this Contract states as Employer's risks, and the Contractor carries risks which this Contract states as Contractor's risks, under this clause.

46.2 Irrespective of the Employer's Risks or Contractor's Risks the Contractor shall execute the Works as per Contract and as directed by Engineer-in-Charge.

46.3 **Employer's Risks**

46.3.1 The 'Excepted Risks' are

- (1) In so far as they occur in the Union of India and directly affect the execution of the Works:
 - (a) war and hostilities (whether war be declared or not), invasion, act of foreign enemies.
 - (b) rebellion, revolution, insurrection or military or usurped power or civil war.
 - (c) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his sub-contractors and arising from the conduct of the Works;
 - (d) ionizing radiations, or contamination by radio activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive, toxic, explosive, or other hazardous properties of any explosive, nuclear assembly or nuclear component;

- (e) pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speed;
- (f) any operation of the forces of nature, which is unforeseeable or against which an experienced contractor could not reasonably have been expected to have taken adequate precautions or

(2) a cause due to the design of the Works, other than the Contractor's design.

46.3.2 In the event of any loss or damage to the Works or any part thereof and/or to any materials or articles at the Site from out of any occurrence of Excepted Risks, the following provisions shall have effect:

- (a) The Contractor shall, as may be directed in writing by the Engineer-in-Charge, remove from the Site any debris and so much of the Works as shall have been damaged, take the same to the place identified by the Employer, at the Employer's cost.
- (b) The Contractor shall, as may be directed in writing by the Engineer-in-Charge, proceed to rectify, repair, reconstruct or replace the damaged articles, materials and the Works under and in accordance with the Conditions of the Contract, at the Employer's cost.

46.3.3 The Contractor shall not be entitled to payment under the above provisions in respect of so much loss or damage as has been occasioned by any failure on his part to perform his obligations under the Contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage.

46.4 **Contractor's Risks**

46.4.1 All risks of loss of or damage to the physical property and of personal injury and death, which arise during and in consequence of the performance of the Contract, other than those covered under the Excepted Risks, will be the liability of the Contractor, except as otherwise provided in the Contract.

46.4.2 From commencement to completion of the Works, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage and to minimize loss or damage to the greatest extent possible and shall be liable for any damage or loss that may happen to the Works or any part thereof from any cause whatsoever (save and except due to Excepted Risks) and shall at his own cost repair and make good the same so that at completion, the Works shall be in good order and condition and in conformity in every respect with the requirements of the Contract and instructions of the Engineer-in-Charge.

46.4.3 The Contractor shall indemnify and keep indemnified the Employer against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of the Works and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto; Provided always that

nothing herein contained shall be deemed to render the Contractor liable for or in respect of or to indemnify the Employer against any Compensation or damage caused by any occurrence of the Excepted Risks.

46.5 Insurance

46.5.1 Before commencing the execution of the Works, the Contractor shall, without in any way limiting his obligations and responsibilities under this clause, indemnify the Employer against any damage/ loss or injury which may occur to any property or to any person (including any employee of the Employer) by or arising out of carrying out of the Contract, except due to reasons of 'Excepted Risks'.

46.5.2 Towards this end, the Contractor shall arrange adequate insurance coverages, in the joint names of the Employer and the Contractor, from the date of commencement of the work to the end of the Defects Liability Period for at-least the following:

- (i) loss of or damage to the Works including Employer issued materials;
- (ii) loss of or damage to the Contractor's T&P;
- (iii) loss of or damage to the property other than Works including those of third parties;
- (iv) injury or death of personnel belonging to the Contractor, the Employer or any other party.
- (v) Worker's Compensation in accordance with the statutory requirements.

The Contractor shall be compulsorily required to take Contractor's All Risk Insurance Policy for all risks except those covered under the Excepted risks with minimal deductible for the re-execution value of the Works on completion and replacement cost of the Contractor's T&P/ Plant & Equipment/ Employer's free issue materials/ Third party Property, etc. as mentioned above. For this purpose the re-execution value of the Works on completion/ replacement cost of the Contractor's T&P/ Plant & Equipment/ Employer's free issue materials/ Third party Property shall include all such expenses, costs, taxes, duties, levies, royalties, etc. which in case of total loss, the Employer/ Contractor would be reasonably expected to incur to bring these to the same state as if no damage had occurred.

The Contractor and Employer shall mutually decide on the insured sum but in no case it shall be less than the 110% of the value of the Works on completion and Third party Property and 110% of the cost of Contractor's T&P/ Plant & Equipment/Employer's free issue materials delivered to site including all taxes, duties, levies and royalties etc. and escalation during the period of re-execution for the Works and delivery of replacement Contractor's T&P/ Plant & Equipment/ Employer's free issue materials to site. However, in case of any conflict, the Employer's decision regarding the insured sum shall be final and binding on the Contractor. The Employer shall be named coinsured in the policy and it shall include the extended cover at-least for the following:

- a) Third Party Liability
- b) Cross Liability
- c) Earthquake
- d) Cost of removal of debris
- e) Custom duty as applicable
- f) Escalation during re-execution
- g) Employer's surrounding property
- h) Storage risk at Fabricator's premises as applicable
- i) Cost of tools and tackles and material handling equipment used for construction purposes.
- j) War, SRCC & terrorism

46.5.3 Where Employer's building or a part thereof is rented by the Contractor, he shall insure the entire building if the building or any part thereof is used by him for the purpose of storing or using materials of combustible nature as to which the decision of the Engineer-in-Charge shall be final.

46.5.4 Contractor shall ensure that the insurance coverage of the above policies include any loss or damage to his Staff, Supervisors, Engineers and others who are not covered by Workmen Compensation Act. Alternatively, the Contractor will take suitable additional or separate insurance policies to cover the same.

46.5.5 All monies payable by the insurers under such policy or policies shall be first to be paid to the Employer who shall pay to the Contractor in instalments for the purpose of rebuilding or replacement or repair of the damaged Works, Contractor's T&P and/or materials destroyed or damaged as the case may be. Such payments of monies will be made in a manner that the payments are commensurate with the progress and cost of the repair, replacement and reconstruction, as may be and as determined by the Engineer-in-Charge in consultation with the Contractor.

46.5.6 Policies and certificate for insurance shall be delivered by the Contractor to the Project Engineer for the Project Engineer's approval before the date of commencement of the Works.

46.5.7 If the Contractor has a blanket insurance policy for all his works and the policy covers all or some of the items to be insured under this Clause, the said policy shall be assigned by the Contractor in favour of the Employer; provided however if any amount is payable under the policy by the insurers in respect of works other than the Work under this Contract, the same may be recovered by the Contractor directly from the insurers.

46.5.8 The aforesaid insurance policy/policies shall provide that they shall not be materially modified/ cancelled till the Engineer-in-Charge has agreed to such modification or cancellation in writing.

46.5.9 Upon grant of the time extension by the Engineer-in-Charge, it is understood that the Contractor's liability of indemnity will be extended suitably without any further action by the Employer and the Contractor shall promptly furnish documentary evidence to Engineer-in-Charge towards extension of insurance policies for the period of time extension.

- 46.5.10 The Contractor shall ensure that where applicable, his Sub-Contractor(s) shall take out and maintain in effect adequate insurance policies for their personnel and vehicles and for the part of the Works executed by them under the Contract, unless such Sub-Contractors are covered by the policies taken out by the Contractor.
- 46.5.11 If the Contractor and/or his Sub-Contractors (if any) shall fail to effect and keep in force the insurance coverage, referred to above or any other insurance which he/they may be required to effect under the terms of the Contract, then in any such case the Employer may, without being bound to, effect and keep in force any such insurance coverage and pay such premium or premiums, as may be necessary for that purpose from time to time and deduct the amount so paid by the Employer from any monies due or which may become due to the Contractor or recover the same as a debt due from the Contractor.
- 46.5.12 If the Contractor does not provide any of the policies and certificates required, the Employer, with due notice to the Contractor may effect the insurance which the Contractor should have provided and recover the premiums, the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due from the Contractor.

47. **Force Majeure**

47.1 **Definition of Force Majeure**

47.1.1 “Force Majeure” shall mean any event beyond the control of the Employer or of the Contractor, as the case may be, (but excluding ‘Excepted Risks’, which shall be dealt in accordance with GCC Clause entitled “Employer’s Risks”) and which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the Contract.

47.1.2 Notwithstanding the generality of the above, the following events shall be termed as Force Majeure events in respect of the Contract

- (i) terrorist acts,
- (ii) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act of failure to act of any local state or national government authority,
- (iii) national/sectoral/illegal strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, epidemics, quarantine and plague

47.2 **Notice of Force Majeure**

47.2.1 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof

within fourteen (14) days after the occurrence of such event.

47.2.2 The party who has given such notice shall be excused from the performance or punctual performance is prevented, hindered or delayed.

47.2.3 Notwithstanding any other provision of the Clause, Force Majeure shall not apply to any obligations of the Employer to make payments to the Contractor herein.

47.3 Duty to Minimize Delay

47.3.1 The party or parties affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect thereof upon its or their performance of the Contract and to fulfill its or their obligations under the Contract, but without prejudice to either party's right to terminate the Contract under GCC Sub-Clause 47.5.

47.4 Consequence of Force Majeure

47.4.1 If the Contractor is prevented from performing its obligations under the Contract by reason of Force Majeure of which notice has been given under Sub-Clause 47.2.1, and suffers delay by reason of such Force Majeure, the Contractor shall be entitled to an extension of time for any such delay, if the Completion is or will be delayed, in accordance with GCC Sub-Clause entitled "Extension of Time for Completion".

47.4.2 No delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall

- (a) constitute a default or breach of the Contract,
- (b) give rise to any claim for damages or additional cost or expense occasioned thereby

if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.

47.5 **Termination for reasons due to extended Force Majeure**

47.5.1 If the performance of the Contract is substantially prevented, hindered or delayed for a single period of more than seventy (70) days or an aggregate period of more than one hundred and forty (140) days or any such extended period as may be agreed to between the parties on account of one or more events of Force Majeure during the currency of the Contract, the parties will attempt to develop a mutually satisfactory solution, failing which either party may terminate the Contract by giving a notice to the other.

47.5.2 In the event of termination pursuant to GCC Sub-Clause 47.5.1, the rights and obligations of the Employer and the Contractor shall be as specified hereunder:

- (a) the Contractor shall be paid at contract rates for the work already executed by him
- (b) The Employer shall have an option to take over the Contractor's facilities/materials or any part thereof brought to site by the Contractor's facilities/materials or any part thereof brought to site by the Contractor, at

such rates as are determined reasonable by the Engineer-in-Charge.

47.5.3 In the event of any disagreement of the parties relating to matters at GCC 47.5.2, the dispute shall be settled in accordance with GCC Clause titled "Settlement of Disputes".

G. CHANGES IN CONTRACT ELEMENT

48. Changes in Constitution:

48.1 Where the Contractor is a partnership firm, prior approval in writing of the Employer shall be obtained before any change is made in the constitution of the firm. Where the Contractor is an individual or a Hindu Undivided Family business concern such approval as aforesaid shall likewise be obtained before the Contractor enters into any partnership firm which would have the right to carry out the Work hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained, the Contract shall be deemed to have been assigned in contravention of GCC Sub-Clause 51.3 hereof and the same action may be taken and the same consequences shall ensue as provided for in the said GCC Sub-Clause 51.3.

49. Powers of Engineer-in-Charge for alterations/omissions/additions/ substitutions

49.1 The Engineer-in-Charge shall have power (i) to make alterations in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the Works in case of non-availability of a portion of the Site or for any other reasons he may consider necessary and/or reasonable. Any such alterations, omissions, additions or substitutions shall be ordered by the Engineer-in-Charge as a deviation. The Contractor shall be bound to carry out the said deviation in accordance with instructions given to him in writing by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the Contract as if originally provided therein and shall be carried out by the Contractor on the same conditions in all respects on which he agreed to do the original Works, except as otherwise provided herein.

49.2 Permissible deviation limit for variations in Contract Items

49.2.1 In case of items of Work above ground surface, as it exists at the time of commencement of Work, quantities of which may change due to Site Conditions or any other reasons, the permissible limit of deviations over the original value of each item will be (+)20%.

49.2.2 In case of items of Work below ground surface, as it exists at the time of commencement of Work, quantities of which may change due to Site conditions or any other reasons, the permissible limit of deviations over the original value of each item will be (+)100% and (-30%).

49.2.3 For the purposes of GCC Sub-Clause 49.2.1 above, all the quantities of any item actually executed from 0-120% of the Contract quantity will be payable at Contract rates while the rates for the quantities above 120% will be subject to

review/revision. Similarly, for the purposes of GCC Sub-clause 49.2.2 above, all the quantities of any item actually executed from 70% to +200% of the Contract quantity will be payable at Contract Rates while the rates for the entire quantity executed from 0% to 69% (if the total quantity executed is in this range) and the entire quantity executed above 200% will be subject to review/revision as provisions herein.

49.2.4 In case the Schedule of Quantities contains sub-items of Work under a Main Item, then the above permissible limits of deviation shall be applicable on the value of each such sub-item and not on the entire value of the Main Item.

49.2.5 The deviations up to the above permissible limits shall be carried out by the Contractor at the same rates and terms as per the Contract.

49.3 Methodology for Determination of Rates for variations of Contract Items beyond the permissible deviation limits

49.3.1 For Contract Items which exceed the limits over the original value of that item as mentioned in GCC Sub-Clause 49.2.1 & 49.2.2 above, the Contractor may, within fourteen (14) days of the date of receipt of the order to carry out the said work, inform the Engineer-in-Charge under advice to the Employer of the rate which he proposes to claim for such item(s) of Work on Market Rate(s) basis, supported by analysis of the rate claimed and the relevant documents to substantiate the same. The Engineer-in-Charge shall, within seventy (70) days thereafter, after giving due consideration to the rate(s) claimed by the Contractor, determine the rate(s), in consultation with the Contractor, on Market Rate(s) basis. In the event of disagreement between the Engineer-in-Charge and Contractor, even after the said seventy (70) days from the date of submission of claims of the rate(s) by the Contractor, the Engineer-in-Charge within a further period of twenty-one (21) days thereafter, shall fix the rate(s)/price(s) as are, in his opinion appropriate. The rate(s)/price(s) so fixed shall be notified to the Contractor and shall be final and binding.

49.3.2 If the Engineer-in-Charge fails to determine and notify the rate(s)/price(s) even after expiry of the said twenty-one (21) days, then the Contractor will be at liberty to refer the matter for resolution to the Employer within a further period of fourteen (14) days after the above said twenty-one (21) days. If the Employer does not determine and cause the Engineer-in-Charge to notify the rate(s)/price(s), then the matter would be determined in accordance with the provisions of GCC Clause entitled "Settlement of Disputes". However, in the meanwhile, the Engineer-in-Charge will pay for the items of Work executed beyond the permissible deviation limits, at 75% (seventy-five percent) of the rate(s)/price(s) claimed by the Contractor with satisfactory supporting documents or at Contract Rate, purely on adhoc and provisional basis subject to adjustment.

49.3.3 In the event of the Contractor failing to inform the Engineer-in-Charge, within the stipulated period of fourteen (14) days time, the rate(s) which he proposes to claim, supported by relevant documents to substantiate the same, the rate(s) for such item(s) shall then be determined by the Engineer-in-Charge in consultation with the Contractor (if he so desires) on the basis of Market Rate(s) within seventy (70)

days thereafter. The rate(s) /price(s) so determined shall be notified to the Contractor and shall be final and binding.

49.3.4 The provisions of GCC Sub-Clauses 49.3.1, 49.3.2 and 49.3.3 above shall only be applicable to such individual Contract Item(s)/ sub-item(s) of Work whose original value is equal to or in excess of 1% of the total Contract Value (as awarded).

49.3.5 For individual Contracts Item(s)/ sub-item(s) of Work whose original value as per Letter of Award is less than 1% of the total Contract Value (as awarded) for each such item, there shall be no limit on the extent of deviations over the original value of the Item and shall be paid on the contracted rate(s)/price(s).

49.3.6 Rates of Items of Work derived on the basis as detailed in GCC Sub-Clause 49.3.1 or 49.3.2, or notified under GCC Sub-Clause 49.3.3 shall not be eligible for price adjustment, provided the period of execution of such items of Work beyond the permissible deviation limit as per the schedule to be finalised in line with GCC Sub-Clause 49.5, is less than or equal to six (6) months.

49.3.7 Further, in case the period of execution of such items of Work is more than six (6) months, such items shall be eligible for price adjustment as per clause entitled 'Contract Price Adjustment'. The base date in such a situation shall be the date as specified by the Engineer-in-Charge while determination of the Market Rate.

49.4 **Methodology for Determination of Rates for Extra Items (Additional, Altered or Substituted Items) of Work**

49.4.1 Rates for Extra Items of Work (comprising of Additional, Altered or Substituted items of Work), shall be determined by the Engineer-in-Charge in the following order:

- (i) If the rate(s)/price(s) for extra items occurring in a particular schedule of quantities are available in other schedule of quantities forming part of the Contract, the lowest of such rate(s)/price(s) will be used, subject to the nature of work being comparable.
- (ii) If the rate(s) cannot be derived as per (i) above, then
 - (a) In case of contracts with only one Schedule of Quantities forming the part of the Contract, the rate(s)/price(s) for the extra item(s) shall be derived from the lowest of any similar item(s) in that Schedule.
 - (b) In case of contracts with two or more Schedules of Quantities forming a part of the contract, the rates for the Extra Item(s) will be derived from the nearest similar item appearing in the Schedule in which the extra item is to be executed failing which from any other Schedule in which nearest similar item is available, the rate so derived being the lowest of such derived from nearest similar items in those other Schedules and used.

49.4.2 If the rate for any additional, altered or substituted item of work cannot be determined

in the manner specified in GCC Sub-Clause 49.4.1 (i) & (ii) above, the Contractor shall, within fourteen (14) days of the date of receipt of the order to carry out the said Work, inform the Engineer-in-Charge under advice to the Employer of the rate which he proposes to claim for such item(s) of Work on Market Rate(s) basis, supported by analysis of the rate claimed and relevant documents to substantiate the same. The Engineer-in-Charge shall, within seventy (70) days thereafter, after giving due consideration to the rate(s) claimed by the Contractor, determine the rate(s), in consultation with the Contractor, on Market Rate(s) basis. In the event of disagreement between the Engineer-in-Charge and Contractor, even after the said seventy (70) days from the date of submission of claims of the rate(s) by the Contractor, the Engineer-in-Charge within a further period of twenty-one (21) days thereafter shall fix the rate(s)/price(s) as are, in his opinion appropriate. The rate(s) /price(s) so fixed shall be notified to the Contractor and shall be final and binding.

49.4.3 If the Engineer-in-Charge fails to determine and notify the rate(s)/price(s) even after expiry of the said twenty-one (21) days, then the Contractor will be at liberty to refer the matter for resolution to the Employer within a further period of fourteen (14) days after the above said twenty-one (21) days. If the Employer does not determine and cause the Engineer-in-Charge to notify the rate(s)/price(s), then the matter would be determined in accordance with the provisions of GCC Clause entitled "Settlement of Disputes". However, in the meanwhile, the Engineer-in-Charge will pay for the extra items of Work, at 75% (seventy-five percent) of the rate(s)/price(s) claimed by the Contractor with supporting documents, purely on adhoc and provisional basis subject to adjustment.

49.4.4 In the event of the Contractor failing to inform the Engineer-in-Charge within the stipulated period of fourteen (14) days time the rate(s) which he proposes to claim, supported by relevant documents to substantiate the same, the rate(s) for such item(s) shall then be determined by the Engineer-in-Charge in consultation with the Contractor (if he so desires) on the basis of Market Rate(s) within seventy (70) days thereafter. The rate(s) /price(s) so determined shall be notified to the Contractor and shall be final and binding.

49.4.5 Rates of Extra Items of Work, derived from Schedule of Quantities as detailed in GCC Sub-Clause 49.4.1 (i) & (ii) above, shall be eligible for Price Adjustment as per GCC Clause entitled 'Contract Price Adjustment' including base date.

49.4.6 Rates for Extra Items of Work, derived on the basis as detailed in GCC Sub Clause 49.4.2 or 49.4.3, or notified under GCC Sub-Clause 49.4.4 above shall not be eligible for Price Adjustment, provided the period of execution of such Extra Items of Work beyond the permissible deviation limit as per the schedule to be finalised in line with GCC Sub-Clause 49.5, is less than or equal to six (6) months.

49.4.7 Further, in case the period of execution of such items of Work is more than six (6) months, such items shall be eligible for price adjustment as per clause entitled 'Contract Price Adjustment'. The base date in such a situation shall be the date as specified by the Engineer-in-Charge while determination of the market rate.

49.5 **Work Schedules for variation beyond deviation limits & Extra Items**

49.5.1 The Engineer-in-Charge shall finalise a Work Schedule in consultation with the Contractor for items of Work beyond deviation limits and the Extra Items of Work to be executed and the date(s) specified in this agreed Work Schedule shall be considered as the date for working out the Price adjustment amount. The primary consideration by the Engineer-in-Charge while determining the time required for execution of the altered or substituted item(s) of Work, would be quantities of the altered or substituted and not the value of altered or substituted item(s) of Work. The Contractor shall not be eligible for Price Adjustment Payment for quantities of items executed beyond the schedule date(s), if execution of the items of the Work has been delayed for the reasons attributable to the Contractor.

49.5.2 However, the Contractor would be eligible for claim or liable for refund for Price Adjustment(s) for quantities of items of the Work executed beyond the schedule dates based on the value of indices as applicable to the scheduled dates of execution, for such delayed work provided that if the indices during the extended period are lower than the indices during scheduled period of execution, then lower indices shall be applicable.

49.6 **Provisional payments**

49.6.1 Pending approval of the Rates for Contract Item(s) of Work beyond the permissible deviation limits as well as for Extra Items (Additional, Altered or Substituted item) of Work, provisional payment at an interim rate (not exceeding 80% of the rate/price determined by the Engineer-in-Charge), shall be made to the Contractor in the interest of progress of Work, which shall be regularized after approval of Competent Authority.

50. **Suspension of Works**

50.1 The Contractor shall, on receipt of the order in writing of the Engineer-in-Charge, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary for any of the following reasons:

- (i) On account of any default on part of the Contractor; or
- (ii) for proper execution of the Works or part thereof for reasons other than the default on the part of the Contractor; or
- (iii) for safety of the Works or part thereof, for reasons other than those attributable to the Contractor.

50.2 The Contractor shall, during such suspension, properly protect and secure the Works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

50.3 If the suspension is ordered for reasons (ii) & (iii) in Sub-Clause 50.1 above, in so far as it concerns suspension of part of the Works or whole of the balance, the Contractor shall be entitled to an extension of time equivalent to the period of suspension plus 25% thereof. The Contractor shall not be eligible for any other

compensation whatsoever for such suspension, except as otherwise provided herein under.

50.4 If the suspension is ordered for reasons (ii) & (iii) in Sub-Clause 50.1 above, as far as it concerns the entire balance of Works on the date of suspension and if such period of suspension cumulatively exceeds twenty-eight (28) days, then in addition to extension of time as in Sub-Clause 50.2 above, the Contractor shall be eligible for compensation, as the Employer may consider reasonable, in respect of salaries and/ or wages paid by the Contractor to his employees and labour at site, remaining idle during the cumulative period of suspension, adding to the total thereof, a reasonable percentage as determined appropriate by the Engineer-in-Charge, to cover indirect expenses and incidentals of the Contractor, provided the Contractor submits his claim supported by details to establish the reasonableness of his claim to the Engineer-in-Charge under advice to the Employer within fourteen (14) days of the expiry of the said twenty-eight (28) days period.

50.5 If for any reason other than for reasons of Contractor's default as per GCC Sub-Clause 50.1(i) above, if the Contract remains suspended for a continuous period exceeding ninety (90) days, then the Employer and the Contractor shall mutually discuss and agree for a suitable course of action regarding the recommencement/ reinstatement of the suspended work or alternatively treat the suspension as termination / abandonment of the Works by the Employer as per GCC Sub-Clause 51.1 herein. If out of above discussion it is determined that the Contract has to be treated as terminated under the provisions of GCC Sub-Clause 51.1, then the Contractor shall be eligible for compensation as envisaged in GCC Sub-Clause 51.1.1 herein.

51. Termination

51.1 Termination by the Employer

If at any time after award of Contract, the Employer shall decide to abandon or reduce the scope of the Works for any reason whatsoever and hence not require the whole or any part of the Works to be carried out by the Contractor, the Engineer-in-Charge shall give notice in writing to that effect to the Contractor and the Contractor except as herein under provided, shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the Works in full but which he did not derive in consequence of the said termination of the whole or part of the Works.

51.1.1 The Contractor shall be paid at Contract rates full amount for works executed at Site and, in addition, a reasonable amount as certified by the Engineer-in-Charge for the items hereunder mentioned which could not be utilised on the Work to the full extent because of the said termination:

- (a) Any cost incurred on preliminary site work, e.g. access roads, labour huts, staff quarters and site offices; storage accommodation and water storage tanks, etc.

- (b) (i) The Employer shall have the option to take over Contractor's facilities/ materials or any part thereof either brought to Site or of which the Contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the Work), provided, however, the Employer shall be bound to take over the materials or such portions thereof as the Contractor does not desire to retain. For materials taken over or to be taken over by the Employer, cost of such materials shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the Contractor.
- (ii) For Contractor's materials not retained by the Employer, reasonable cost of transporting such materials from Site to Contractor's permanent stores or to his other Works, whichever is less. If materials are not transported to either of the said places, no cost of transportation shall be payable.
- (c) If any materials issued by the Employer are rendered surplus, the same except normal wastage shall be returned by the Contractor to the Employer at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the Contractor. In addition, cost of transporting such materials from Site to the Employer's stores, if so required by the Employer.
- (d) Reasonable compensation for transfer of Contractor's T&P from Site to Contractor's permanent stores or to his other Works, whichever is less. If T&P are not transported to either of the said places, no cost of transportation shall be payable.

51.1.2 The Contractor shall, if required by the Engineer-in-Charge furnish to him wage books, time sheets and other relevant documents as may be reasonably necessary to enable him to certify the reasonableness of the amount payable under this Clause.

51.2 Termination on Contractor's Death

51.2.1 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies, then unless the Employer is satisfied that the legal representatives of the individual Contractor or of the proprietor of the proprietary concern and in the case of partnership, the surviving partners, are capable of carrying out and completing the Contract, the Employer shall be entitled to cancel the Contract as to its incomplete part without the Employer being liable in any way to payment of any compensation to the estate of the deceased Contractor and/or to the surviving partners of the Contractor's firm on account of the cancellation of the Contract. The decision of the Employer that the legal representatives of the deceased Contractor or the surviving partners of the Contractor's firm cannot carry out and complete the Contract shall be final and binding on the parties. In the event of such cancellation the Employer shall not hold the estate of the deceased Contractor and/or the

surviving partners of the Contractor's firm liable for damages for not completing the Contract.

51.3 **Termination for Contractor's Default**

51.3.1 If the Contractor:

- (a) at any time makes default in proceeding with the Works with due diligence and continues to do so after a notice of seven (7) days in writing from the Engineer-in-Charge; or
- (b) commits default in complying with any of the terms and conditions of Contract and does not remedy it or take effective steps to remedy it within seven (7) days after a notice in writing is given to him in that behalf by the Engineer-in-Charge; or
- (c) fails to complete the Works or items of Work with individual dates of completion, on or before the date(s) of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge; or
- (d) shall offer, or give or agree to give to any person in Employer's service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or having done or forborne to do any act in relation to the obtaining or execution of this or any other Contract for the Employer; or
- (e) shall enter into a contract with the Employer in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Employer/ Engineer-in-Charge; or
- (f) shall obtain a Contract with the Employer as a result of ring bidding or other non-bona fide methods of competitive bidding; or
- (g) being an individual, or if a firm, any partner thereof, shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his affective or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force, for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or
- (h) being a company, shall pass a resolution or the Court shall make an order for the liquidation of its affairs, or a receiver or manager on behalf of the debenture holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager; or

(i) assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) attempts to assign, transfer or sublet the entire Works or any portion thereof without the prior written approval of the Employer; the Employer may, without prejudice to any other right to remedy which shall have accrued or shall accrue thereafter to the Employer by written notice, cancel the Contract as a whole or only such items of work in default, from the Contract.

(j) **“Withholding/ Banning**

The Employer has in place a Policy for withholding and Banning of Business Dealings as enclosed at ANNEXURE-I to Special Conditions of Contract (SCC) of the Bidding documents. Business dealings may be withheld or banned with the Contractor on account of any Default by the Contractor under GCC Clause 51.3.1 or any of the grounds as detailed in the said Banning Policy.”

Encl.: Annexure-I to SCC

51.3.2 The Employer shall on such cancellation have rights to:

- (a) take possession of the Works and any materials, construction plant, implements, stores, etc., thereon; and/or
- (b) carry out the incomplete Work by any means at the risk and cost of the Contractor.

51.3.3 On cancellation of the Contract in full or in part, the Employer shall determine what amount, if any, is recoverable from the Contractor for completion of Works or part of the Works or in case the Works or part of the Works is not completed, the loss or damage suffered by the Employer. In determining the amount, credit shall be given to the Contractor for the value of the work executed by him up to the time of cancellation, the value of Contractor’s material taken over as well as incorporated in the work, and use of tools and plants belonging to the Contractor.

51.3.4 Any excess expenditure incurred or to be incurred by the Employer in completing the Works or part of the Works or the excess loss or damages suffered or may be suffered by the Employer as aforesaid after allowing such credit shall be recovered from any money due to the Contractor on any account, and if such money is not sufficient the Contractor shall be called upon in writing to pay the same within twenty-eight (28) days.

51.3.5 If the Contractor shall fail to pay the required sum within the aforesaid period of twenty-eight (28) days, the Engineer-in-Charge shall have the right to sell any or all of the Contractor’s unused materials, construction plant, implements, temporary buildings etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the Contractor under the Contract and if thereafter there be any balance outstanding from the Contractor, it shall be recovered from him.

51.3.6 Any sums in excess of the amounts due to the Employer and unsold materials, construction plant etc., shall be returned to the Contractor, provided always that if cost or anticipated cost of completion by the Employer of the Works or part of the

Works is less than the amount which the Contractor would have been paid had he completed the Works or part of the Works, such benefit shall not accrue to the Contractor.

52. **Contractor Performance and Feedback System**

The Employer has in place an established 'Contractor Performance and Feedback System' against which the Contractor's performance during the execution of Contract shall be evaluated on a continuous basis at regular intervals on the following seven parameters:

- Engineering & Quality Assurance Capability
- Finance • Supply
- Construction/ Installation
- Field Quality
- Safety
- Claims & Disputes

The score-based feedback formats based on which Contractor's performance shall be evaluated is enclosed at Annexure-A.

In case the performance of the Contractor is found unsatisfactory, the Contractor shall be considered ineligible for participating in future tenders for three years.

On completion of the above ineligibility period, the Contractor would be required to submit a request to NTPC for participating in future tenders specifying the measures taken to improve their performance. The Contractor may also request for early revocation of suspension after completion of at least two (2) year of the suspension period. On receipt of such request, the performance of the Contractor shall be assessed/evaluated by NTPC and if the performance is found to be satisfactory, the Contractor shall be considered eligible for participation in future tenders.

53. **Withholding / Banning**

The Employer has in place a Policy for withholding and banning of Business Dealings as enclosed at **Appendix-I** to this section. Business dealings may be withheld or banned with the Contractor on account of any Default by the Contractor under Clause 51.3.1 or any of the grounds as detailed in the said Banning Policy.

54. **CONTRACTOR'S LABOUR INFORMATION MANAGEMENT SYSTEM (CLIMS):**

- (a) The Contractor has to necessarily get itself registered in the Contractor's Labour Information Management System (CLIMS), which will be installed by the Employer.
- (b) The entry and exit of all contract labour to the plant premises will be through Gate Access Control System of above 'Contractor's Labour Information Management System'.
- (c) It will be the responsibility of the Contractor to ensure timely exit of all labours from the plant premises after completion of job of that day.

- (d) The contractor has to abide with all the statutory compliance applicable to its workers and employees and update the details of the same in the above System.

CHP & Railway siding (MGR) Operation & maintenance contract document

1.0 Introduction

The scope involves operations and maintenance of complete Railway siding and Coal handling plant of NTPC-JPL Thermal Power Plant (NTPC - JPL) including rake receiving from railway, unloading of coal in Wagon Tippler, releasing of empty rake to railway, conveying, stacking, reclaiming and feeding the requisite coal to the bunkers to ensure uninterrupted power generation.

The boundary limit for the scope of work will start from railway siding take up point to coal bunker outlet gate for rake receiving from railway, unloading through Wagon tipplers to coal bunkers which includes unloading of coal in, Wagon Tippler, conveying of unloaded coal in Wagon Tippler, crushing, stacking, reclaiming and releasing empty rake to railway. The coal has to be fed either to the coal bunkers or the stock yard.

The work is to be done in all shifts, round the clock (24 hours of the day) and all days of the year (including Sundays and Holidays).

NTPC- Jhabua Power will award the contact to bidder by virtue of the expertise & experience in execution of such works and therefore no part of the contract or any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the contractor directly or indirectly to any person, firm or company.

2.0 Scope of work

2.1 Operation of Coal Handling Plant

- 2.1.1 Operation of all CHP equipments like, Apron feeder, vibrating grizzly feeder, crushers, magnetic separators, metal detectors, sampling systems, belt scales, calibration equipment, stacker cum reclaimed, conveyor belts & dust suppression system (DFDS), dust extraction system, ventilation system, sump pumps, cooling water pump, Service water pump, Potable water pump, DFDS Water Pump, , Wagon Tippler/Stock Yard/Dust Suppression Pump, Air compressor, Air conditioning system, Firefighting system of CHP area and other auxiliary system of coal handling plant, coal slurry settling pit which are required to run for smooth and safe running of CHP system.
- 2.1.2 Unloading of coal at Wagon tippler.
- 2.1.3 Operation of transfer point equipment's like flap gates, switch gear rooms, EOT/HOIST Crane, Hoists, PA system shall be in the scope of the Contractor.
- 2.1.4 Stacking of coal in coal yard in heap separately material type wise, as per instruction of NTPC - JPL's EIC.
- 2.1.5 Coal handling plant waste water is discharged to coal slurry settling pits. The waste water from coal settling pits is to be pumped to location or at location as decided by NTPC - JPL EIC for treatment. The operation of coal settling pit pump, transfer of collected coal in pit to stockyard and pit cleaning is in the scope of contractor.
- 2.1.6 Coal Stacking & compacting, pushing of coal, making of piles etc. Separate grade/source coals should be stacked in separate heaps / places. The preparation

of heaps, avoiding coal catching fire, sprinkling of water on coal heaps, firefighting, drainage system of the area etc. The coal yard maintenance in totality.

- 2.1.7 Feeding of coal from coal yard or/and from Wagon tippler hopper or emergency hopper to Boiler Bunkers as per the mix instructed by NTPC - JPL EIC.
- 2.1.8 O&M of Biomass pallets handling system including unloading of pallets at designated unloading point by means of WT hopper manual, etc.; its storage and re-claiming as per the requirement. O&M of associated equipment i.e. weigh-bridge, WT, feeding equipment, blending arrangement, etc. Operation & maintenance of any additional equipment/up-gradation of existing system added by NTPC - JPL during the term of the contract.
- 2.1.9. Operation of dust suppression, DFDS, dust extraction system, firefighting and sprinkler system. The contractor has to follow all standards as per ISO systems (like checklists & SOPs etc.)
- 2.1.10 SOP & LMI must be followed for all equipment operation.
- 2.1.11 Contractor should not bypass any protection, interlock without intimation to NTPC - JPL's EIC.
- 2.1.12 Dust extraction and dust spray system should operate effectively to avoid dust pollution.
- 2.1.13 System /equipment healthiness should be maintained such as it runs within its operating limits with its optimum efficiency.
- 2.1.14 Coal feeding schedule given by NTPC - JPL's EIC shall be followed strictly without any deviation/information.
- 2.1.15 Coal stacking and reclaiming from yard to be done based on FIFO principle.
- 2.1.16 Stones, coal boulders, any non-coal material which may arrive in coal rake/ coal trucks is to be removed from running conveyor and disposal is to be done to designated place as directed by NTPC - JPL's EIC. Minimum three persons per location shall be deployed in a row for effective operation of stone picking and they should use full body safety harness while performing this job safely.

Continuous and safe operation of stone picking station during coal conveying is crucial. Penalty of Rs.5000 per instance will be imposed if stone picking station found un-manned during coal conveying OR any of the operator found working without full body harness hooked properly.

- 2.1.17 Contractor to ensure that foreign material/ excess water/ stones i.e. material other than coal is not to be fed to bunker or stacked in Coal heaps. Coal lumps received from mines are to be broken before feeding.

Metal pieces'/trap iron detected by metal detector are to be searched from coal and brought to CHP control room for information and records.

Also any foreign material found in RC feeder/ mill should be collected and brought to the CHP control room for information and record

- 2.1.18 The system running period shall be optimized to reduce the wear & tear of the equipment. The efficient operation shall be provided to achieve full and

uninterrupted generation even during rainy season with sticky coal. 100% availability of CHP for the requirement of plant operation shall be maintained by the contractor.

- 2.1.19 Tarpaulin covering of coal piles in the yard as directed by NTPC - JPL EIC (Tarpaulin will be provided by NTPC - JPL). During rainy season, the stock pile normally to be covered as desired by EIC.
- a) Sand bags in requisite qty are to be used for securing the tarpaulin over the stockpile. The supply of these bags will be under the scope of contractor.
- b) Picking of foreign material and stone from coal yard as per the direction of NTPC - JPL#s EIC.
- 2.1.20 Survey and physical verification of coal on monthly/quarterly basis shall be performed by NTPC - JPL. The Contractor should provide manpower assistance & stock pile properly shaped (trapezoidal) / compacted.
- 2.1.21 NTPC - JPL plans to start Biomass co-firing in a bid to reduce green gas emission and cut pollution. In line of this Bio-mass pellets/fuel may be used as co fuel at NTPC - JPL. Unloading of Biomass pallets/fuel (operation of truck tippler etc.), manual feeding /blending as per NTPC - JPL#s EIC instruction is in the scope of contractor.
- 2.1.22 Experienced man power should be deployed for the job of stone picking, person deployed should be well versed with the job of stone picking from the running conveyors of coal handling plant. He should be physically healthy and capable of communicating in Hindi.
- 2.1.23 Operator Logbooks & check list are to be maintained on continuous basis at all operator locations viz. TPs, WT, S/R, Crusher House, Bunker, etc. as directed by EIC.
- 2.1.24 Installation and Operation of extra submersible and/or dewatering pumps whenever required for smooth operation of CHP. (Equipment will be provided by NTPC - JPL)
- 2.1.25 Manpower is to be deployed as per the proposed skill matrix & same will be evaluated before hiring. Wages category should not be lower than that as per defined in proposed skill matrix. Wherever indicated, the wage category is lowest that required. Contractor may deploy manpower with higher wage categories also.
- 2.1.26 MIS must be maintained as provided by NTPC-JPL
- 2.1.27 Development of area including tree plantation, beautification, installation of signage board, poster shall be in the scope of contractor.
- 2.2 Operation and maintenance of Railway Siding**
- 2.2.1 Scope of Work under this Contract broadly covers providing services for Operation of Railway Yard, Maintenance of Railway Track (Approx. **9.6** Km), Locomotive Operation & Maintenance services for a period of 24 months for Jhabua Power Limited 1x600 MW Thermal Power Plant, Seoni Madhya Pradesh as per norms & practice followed on the INDIAN RAILWAY.
- 2.2.2 JPL siding has Railway track of approx. **9.6** KM length. Permanent way at Owners plant shall be maintained as per Indian Railway standard for a speed of **20** KMPH and Railway Yard operation shall be done for unloading of coal from rakes.
- 2.2.3 Operation and Maintenance of Railway Yard and 02 nos. Diesel Loco Engine including placement of rake for unloading platform area. Receipt and dispatch of coal rakes along with hook up & release and co-ordination with Railway for timely release

(without demurrage).

- 2.2.4 Railway Track Operation & Maintenance as per IRPWM or as per JPL manual, Loco Maintenance & operation of Marshalling yard.
- 2.2.5 U.S.F.D Test shall be carried out once in a year in the month of October by RDSO approved agency and it will be in Contractor scope.
- 2.2.6 Over all operations shall be carried out as per SWR (Station Working Rule).
- 2.2.7 Operation & Maintenance of Locomotives shall be done by experienced Loco operators & Loco Diesel Mechanics. All OLW running schedule maintenance shall be done by the Contractor. Expert services shall be provided by the Owner.
- 2.2.8 Receiving and releasing of coal rakes at Owner's yard shall be ensured through proper coordination with Railways (Binaiki/concern railway stations).
- 2.2.9 Releasing of brakes of wagons with appropriate stopper/gripper, de-coupling, coupling, and placement of loaded wagon at wagon tippler in required manner.
- 2.2.10 Noting down of rake details and number of each wagon & other details.
- 2.2.11 Collection of empty wagon and reformation of rakes to return to the Indian Railways. As decoupling of wagons at wagon tippler. Releasing of brakes, hose pipe air knuckle pin of wagons, etc. by working personnel for smooth operation of rakes.
- 2.2.12 To attend derailment of wagons and locomotives during operation of rakes in close coordination with railways & NTPC-JPL EIC.
- 2.2.13 Due to faulty track maintenance. De-railment may occur at site and recovery of demurrage charges shall be in Contractor's scope. If required by NTPC-JPL, It will be decided after joint finding report.
- 2.2.14 Any other related work not specified above but required for operational requirement of system and as per Direction of Engineer In-Charge (EIC).
- 2.2.15 Releasing and hooking of rakes.
- A) Removal of covering / tarpaulins from incoming coal rake safely to facilitate unloading & proper stacking after removal.
- 2.2.16 Total time permitted to the contractor for receiving. Releasing, collection of empty wagon and reforming of rake is less than 4 hour. Penalty shall be applicable on Contractor's account for above in case of any delay.
- 2.2.17 Small modifications and painting work will be in contractor's scope. However, materials in owner scope.
- 2.2.18 Housekeeping of all Railway area including Yard master building, Loco Shed and Toilets with consumable item is contractor scope.
- 2.2.19 Bulge wagons inspection should be done before wagons placement at Wagon Tippler and bulge wagons photo to be taken and same to be reported to JPL Shift Engineer.
- 2.2.20 If any defective wagon received from railway. Wagons photo should be taken and

same to report to Shift engineer & its manual unloading within stipulated time of 04 hr (to avoid demurrage).

2.2.21 Liasioning with Railway for each and every defective and bulge wagon to avoid Demurrage and damage & deficiency charges. After complete rake unloading, every wagons should be checked properly for proper cleaning and wagons door closed properly before the rake is released to railways.

2.2.22 De-railment and any incident happened with wagons and railway claim for that, all charges shall be recovered from contractor.

2.2.23 Shunting Speed for push back 5 km/hr and normal speed for yard operation is 8-10 km/hrs. To be maintained.

2.2.24 Grass cutting and both side track cleaning shall be in contractor's scope (up to 10 mtr on either side which obstructs for view of track).

2.2.25 Preventive Maintenance shall be done every month for 8 degree curve line. Main line, IMWB line, Re. D line and others track line on quarterly basis or as per agreed schedule.

2.2.26 Both locomotives Preventive Maintenance shall be done as per JPL / OEM schedule.

2.2.27 Maintenance of compressor. Battery charger, re-railment equipment shall be scope of contractors.

2.2.29 The scope of work for Maintenance of Track broadly includes following

Maintenance of Railway track shall be need-based maintenance as per IRPWM. Technical specifications for maintenance of Permanent Way are mentioned hereunder:

Regular Inspection of the Permanent Way

- If any miscreant activity is noticed it shall be intimated to the PWI/ Track In-Charge (TIC) and immediate action for the safety of traffic shall be taken.
- Proper record shall be maintained regarding the inspection and materials replaced in the track every day.
- Track reading of each day maintenance shall be recorded & submitted to Owners EIC on daily basis for certification & shall be produced along with the monthly RA bill.

Maintenance of Track:

This item includes the following activities

- **Alignment of Track:** The longitudinal and cross-levels shall be so adjusted that it shall give a safe and comfortable movement to traffic at 20 KMPH speed. The alignment shall be straight and free of kinks. The alignment of the track shall be checked by railway recommended equipment / eye judgment sighting the rail from a distance of about four rail lengths. Small error in the alignment shall be corrected by slewing the track after loosening the cores at the ends and drawing out sufficient ballast at the end of sleepers. Creep, if any shall be rectified.

- ✓ For civil / track maintenance: Track should be maintained to Indian Railway Standard and it must pass inspection and zero derailment. Implementation of recommendation if any.
- Gauging: Gauge shall be correct and uniform within following permissible tolerance limit.
 - ✓ Straight track: 3mm tight to 6 mm slack.
 - ✓ On curves with radius of more than 400 meters: 3mm tight to 15 mm slack.
 - ✓ On curves with radius of less than 400 meters: Up to 20mm slack.
- Cross-Levels & Super Elevation: Proper cross levels of the track in straight portion and required super elevation & versine in curves shall be maintained for smooth and safe movement of traffic. Super Elevation & Versine shall be calculated as per the Indian Railways for 20 KMPH speed.
- Adjustment of Joint Gaps: The permissible value of gaps in rail joints is 6mm with a tolerance limit of (+) or (-) 2 mm. Any deviation from the permissible tolerance limit is noticed. Then it shall be adjusted by pullingback the rail in the opposite direction.
- Maintenance of Points & Crossings:
 - ✓ Points and crossings should be within 1 in 20 Cant.
 - ✓ The gauge shall be uniform, except at a point just ahead of toe of the switch where it shall be slightly be slack (enough to house the leaf of tongue rail).
 - ✓ The clearance at the toe, Heel of switch, at check rails and wing rails shall be maintained.
 - ✓ Packing under the sleepers shall be checked. It must not be loose, defective especially under the crossing and the switch.
 - ✓ The chairs, fastening and all other fittings shall be checked properly. The chairs/ loose/ missing fittings shall be tightened (as required)/ replaced immediately. If worn out.
 - ✓ Creep anchors shall be checked regularly and creep shall not be allowed.
 - ✓ The condition of stock e, tongue rails shall be carefully examined. Bent tongue rail shall be straightened wherever possible. Badly worn out and damaged stock e, tongue rails shall be replaced by serviceable ones. Lubrication of the gauge face of the tongue rail shall be done to reduce wear on switches. Cleaning e, lubrication of slide chairs shall be done periodically.
 - ✓ Gauge over the turnouts shall be mentioned uniformly. Track portions on concrete sleepers shall be maintained by packing the ballast. Rails found defective shall be changed. Lubrication of fish plates joints as per need.
- Inspection of curves and its maintenance:
 - ✓ The curves shall be inspected in every month and versine & super elevation shall be corrected whenever & wherever required as per Indian Railway standard & documentation to be submitted to NTPC-JPL.
 - ✓ Recouping the ballast on the track to maintain super elevation in the scope of the Contractor. Ballast shall be supplied by the Owner. Transportation with loading & unloading of the ballast from the available site to the track & spreading cost shall be

done/ borne by the Contractor.

- Packing up Slacks: Packing of slacks shall be done where the alignment is kinky or top level is uneven to restore the track to normal condition. The lifting of sleepers shall be done as in-through packing. Proper care shall be taken so that the packing of adjacent sleepers does not get disturbed. In addition of packing up slacks. Through packing operation with sequence is best done continuously from one end towards the other.
- Cleanliness of Track: For easy visual inspection of all fittings and fixtures. The grass. The weed and unwanted debris in the track up to cess shall be removed periodically as per IRPWM manual.
- All maintenance spares & consumables (Excluding stiff paste of plumbago (graphite) and cheap kerosene oil made up in the proportion of 3kg of plumbago to 2kg of Kerosene oil may be used. Black oil or reclaimed oil for oiling fish bolts and nuts may be used. The following quantities to the specification mentioned should suffice for 100 nos single joints)
- Fitments & fasteners and all track materials shall be supplied by the Owner at their stores on free of cost basis to the Contractor. Collection and transportation of the above material to the required site shall be Contractors responsibility.
- An annual maintenance schedule shall be made out for the Contract period and a monthly schedule shall be made out by the last day of the previous month. The Contractor shall intimate the progress of implementation of the monthly schedule and the short fall shall be carried forward. The progress of implementation of annual maintenance schedule shall be monitored every month, so as to complete it within the year.
- Clearing the debris from track lines is included in the maintenance responsibility of the Contractor. Routine cleaning of associated equipment is also in the scope of work of the Contractor.
- In addition to packing up slacks through packing operation with sequence is best done continuously from one end towards the other.
- Rectification of weld failures and rail fractures shall be restored by the Contractor at the earliest.
- Thermit Welding shall be in scope of Contractor.
- Portion and Mould shall be in scope of Contractor.
- Repairing & maintaining of cess, where ever required is in the scope of the Contractor.
- Activity of side drain cleaning and de-silting the minor bridges shall be completed before monsoon by the Contractor. This activity has to be performed every year within the contract period.
- Overhauling of level crossing whenever required & replace the damage fittings, if any is in the scope of the contractor.
- Maintenance of level crossing like barrier's missing LC indicator & LC road repair are in the scope of the Contractor.

- Greasing of all curves (with graphitized grease) irrespective of the degree, greasing of ER clips, greasing of the rail gauge face, point & crossings shall be done by the Contractor. Greasing of all fish plate & alternate fishplate bolt in every six month is in the scope of Contractor.
- Employing local youths along the track shall be as per advice of Owner's management is in the scope of Contractor.
- The Contractor shall ensure to mobilize one gang of Ten (10) Nos. Gangmen for maintenance of track. Any additional manpower, if required, for execution of some work shall be arranged by the Contractor without any cost implication to the Owner.
- The Contractor shall deploy additional resource during the monsoon (at least for four months (i.e. July, August, September and October) for smooth operation of traffic without any additional cost. If monsoon period preponed or extended same manpower will be extended without any additional cost.
- The Contractor should ensure to mobilize Key man in Railway Yard besides the above gang for inspecting the Railway Track. Key man report should reach Owners authority everyday through the PWI of the Contractor.
- Monthly, weekly maintenance schedule & daily progress report with reading & half yearly plan shall be provided by the Contractor to Owners EIC.
- The Contractor shall ensure that there shall not be any derailment in the yard due to improper operation/Improper track maintenance. In case of derailment on account of Contractors improper maintenance/Operation, penalty imposed by railway / cost for re-railment shall be recovered from the Contractor.
- The Contractor shall make necessary arrangement to get the track inspected in every three (03) months by railway authorities and shall obtain the TFC (track fitness certificate).
- Fixation and checking of rail & guard rail wherever required shall be in the scope of Contractor.
- Owner shall not be responsible for any delay in maintenance of the track in section due to any disturbance. The Contractor shall ensure the smooth maintenance of the track without any delay or disturbance through close co-ordination with railways / NTPC-JPL EIC.
- Any other work as per Railway norms & instructions which is mandatory for smooth and trouble free operation of Railways.
- Providing sufficient manpower and supervisory staff for maintenance of track.
- It is the duty of the Contractor to keep good relation and liasioning with Railway administration for smooth running of the traffic. Contractor shall ensure that there shall not be any stoppage of loco & rake in the section due to any Reasons attributable to the Contractor.
- Contractor shall ensure that there shall not be any accident in the section.
- All T&P as per IRPWM for manual maintenance of track including torches, flash light, color flags, earthing chains, poles and emergency lights shall be in the scope of

Contractor.

Routine Track Inspection

The PWI shall inspect the entire section at least 3 days a week by push trolley / automated trolley or more often as necessary and shall.

- Take note of the Kilometer gauges requiring immediate attention and direct and instruct the Mate for doing the work.
- Check the gangs work done on the previous day in details and take remedial actions or any short comings.
- Ensure systematic work 'Round the Year' Schedule/ Programme for track maintenance.
- Instruct and upgrade men at methods of work;
- Mark and initial musters of gang, Gateman if any and artisan staff.
- Check the correctness of the gauge and spirit levels with gangs once a months.
- Arrange for replacing of all unserviceable tools and plants and defective or perished equipment for protection of track. Will not allow the gangmen to take the tools to their residence and will ensure that these are deposited in the nominated tool box/room. He will take special precaution of the safe keeping of the fish bolt spanners and crow bars.
- Ensure that Mates, Key men, Gagmen, Gatemen, Artisans and helpers patrolmen and watchmen have a knowledge of rules, in which they should regularly counselled and periodically examined.
- Check the imprest tools, safety equipment and materials with gangs once a month.
- He shall maintain the progress of the maintenance work in a "Gang Chart" which should be up dated every time he makes a round of inspection.
- Measure and maintain the "Creep" of rails once in 3 month in creep Register.
- Conduct detailed inspection of points and crossings and record and findings in appropriate points and crossings register. The points and crossings inspection shall be done once in 3 months for each points and crossings.
- Take versine and super elevation and gauge readings of all curves in the section and record the findings in the "Curve Inspection Register" where in each curve should be thus checked once in 3 months on cyclic order.
- He shall especially be vigilant and check for and maintaining the relevant track parameters as per "Indian Railways Schedule of Standard Dimensions for Railway" Any infringement should be promptly removed.
- PWI shall prepare monthly progress report in Annexure 'A' of the work under his control and submit the same to the Engineer-in-Charge of the contract by 2nd of each month.
- The PWI shall keep liaison with the sectional PWI of the Indian Railways and accompany periodical obligatory inspection by the Indian Railway officials and obtain the 'Fitness certificate' for the private Railway Siding. Charges if any payable to the Railways for inspection and issue of fitness certificate shall be borne by FCI.
- The PWI should also act as an extension to the Contractor to ensure that the rules laid

down in Acts and Regulations, and as modified from time to time, are strictly complied with.

- The PWI should maintain a “Daily Material Transaction Register” which should show details of all materials received from FCI and used for the maintenance of the track.
- The contractors PWI will prepare the maintain a “Section Register” to record important details of the track/Section.

2.2.30 The scope of work for Locomotives Maintenance broadly includes following:

Maintenance and operation Locomotives of the following work is required to be carried out. That will not be limited to the following it is only indicative in nature and contractor has to carry out the complete work related to loco O&M including all incidental works. If any:

- 100% PM compliance of JPL Loco on monthly basis.
- Maintenance and checking of Bemco re-railing equipment and loco battery charger.
- 100% availability of both locomotive 1&2 for rake operation.
- 100% re-railment equipment and loco battery charger availability.
- 100% availability of man power for loco maintenance.
- Non-availability of JPL locomotives due to poor maintenance then demurrage charges should be scope of contractors.
- Basic tools supplement for maintenance and waste cotton clothes will be in contractor scope.
- Contractor provides basic PPE to its manpower and ensure its manpower will follow JPL safety compliance.
- Contractor must provide commercial loading vehicle of adequate capacity for material shifting whenever required.
- Transportation & Travel for staff and workers shall be in the scope of contractor & shall be in hard top vehicle having valid vehicle fitness certificate.
- Contractor has to comply following IR/Statutory requirement at JPL site. Contractor shall ensure that all of their workmen should be insured under ESI as applicable in Seoni district.
- Workmen for whom ESI is not applicable. The same should comply with WCA policy.
- Contractor should comply in fulfilling to PF. Bonus. And minimum wages to their workmen

2.2.31 Other Terms and Conditions

- Maintenance of the Manned and unmanned Railway crossing, 25MT gantry crane shall be in the scope of Contractor.
- In case of replacement of damaged safety boards. Contractor shall fix the boards.
- Contractor shall be responsible for round the clock maintenance & if the situation requires maintenance personal after general shift then the same shall be arranged by the Contractor without any financial cost to Owner.

- Watch & Ward: It is the prime responsibility of Contractor for smooth operation of railway traffic in Jabalpur- Nainpur route. It is the duty of the Contractor to keep good relation with the Indian Railway administration for smooth running of the traffic. Also the Contractor should ensure that there will not be any stoppage of loco/rake in the section due to any reason.
- The Contractor shall ensure the safety of Railway properties like clip, liner, fishplate, cable etc. in the section.
- Contractor has to ensure smooth operation of the railway crossing for the smooth movement of the JPL inward and outward rake. Maintenance of level crossing like missing LC indicator & LC road repair are in the scope of the Contractor
- Looking at the security measure, the Contractors labour shall not be allowed to remain inside the plant area after completion of work. No worker shall be allowed to reside in the plant. The Contractor shall keep the labour outside plant premises but near to plant for ensuring quick availability.
- The Contractor shall provide enough quantity of GUR to each person.
- The Contractor shall arrange for medical checkup of the workmen employed by them for the works under this Contract. They can avail services of the medical staff provided at Owner's plant. Contractor shall submit monthly check up report of each worker to Owner's EIC for records.
- Age limit for retired Indian Railway employees shall be 65 years. Only physically Fit employees shall be allowed to work above age of 65 years. In this regards decision of Owner's EIC shall be final.
- The contractor workmen shall be allowed to enter & leave the Owners premises through main gate only or as per the route specified by owners EIC.
- It is the duty of Contractor to keep good relation & liasioning with Indian Railway administration for smooth running of the traffic. Also the Contractor shall ensure that there shall not be any stoppage of loco/ rake in the section due to any reasons attributable to the Contractor.
- The Contractor shall also ensure that there shall not be any accident in the section.
- Up keeping & maintenance of railway bridge from take-up point to inside plant shall be the responsibility of contractor.
- Maintenance of electrical panels & lighting, loco dc battery, MLDB, LP is in the scope of contractor

OHE Operation & Maintenance

- Operation and Maintenance of OHE/PSI inside plant
- Isolation of lines as per JPL requirement
- General maintenance of OHE line inside plant
- Maintenance of Batteries in SSP building.

- General Maintenance of equipments in SSP buildings(i.e cleaning, Maintenance of records of tripping and healthiness checking of equipment)
- Regular Inspection of G- Gumpers.
- Cantilever adjustments and dropper adjustments etc.
- Installation of lights / illumination on OHE post.

JPL SCOPE

- 1 All Spares for execution of work
- 2 Co-ordination with railway for permit.

2.3 Housekeeping of CHP and Railway siding area

2.3.1 Contractor has to ensure Mechanized and Manual housekeeping system

2.3.2 Cleaning of all parts of conveyors like belt, pulley, idlers, motor, and gearbox, and frame, walkway for each conveyor to keep it neat and clean by removing jamming of coal, dust etc on daily basis. Each conveyor system except motor & gearbox should be wash with water at least once in month. The pits of the WT Hopper, WTs are to be kept clear from coal, mud, slurry and other material. The coal taken from various pits in CHP is to be fed either in to the hoppers and the tippler or in the coal stock yard areas as per direction of EIC.

Cleaning of transfer and discharge chute of each conveyor & crusher house on regular frequency as per schedule and as on required to remove chock by water if required (minimum once in a month.)

2.3.3 Cleaning of crusher house, all transfer points, junction towers on daily basis with broom to keep it neat and clean. If required water washing to be done.

2.3.4 Cleaning of equipment like motor, gearbox, tripper, TP, WT, ILMS, computers, desk, etc. on daily basis by cloths, cleaner or by any suitable means.

2.3.5 Cleaning of trenches, drains by removing mud of any type and keeping it clear for free flow of water. Trenches includes all trenches near TP/JNT, WT control room, trenches both side of main road of CHP, near Crusherhouse, CHP control room, CHP Pump house and if any in CHP & Coal yard area. Cleaning of road from WT upto JNT-4.

2.3.6 Housekeeping of the total area under scope including Cleaning of Road, drainage, Toilet etc. within CHP.

2.3.7 Housekeeping of all areas in the RLY, CHP, TP, WT like Building, MCC room, CHP Roads / Drains , Toilets Support areas like etc. also to be taken care by Contractor on daily basis.

Consumables such as phenyl , toilet cleaner, perfume , mosquito repellent /freshener etc are to be provided by contractor in requisite quantity. All Water tank of the buildings should be cleaned once in 03 months and logbook of the same to be maintained and counter signed by JPL executive. In CHP control room mosquito repellent/ room freshener should be provided on regular basis. If consumable not provided by contractor and if NTPC-JPL has to provide, recovery @1.5 times the cost of consumable will be levied from RA bill.

- 2.3.8 Soak away pit (Septic Tank) cleaning will be in the scope of contractor as and when required or within a week after the instruction given by NTPC - JPL's EIC. Penalty @ # 2000.00 per day may be imposed by EIC if EIC feels that contractor is willfully not doing the job or there is unjustified delay in doing the job.
- 2.3.9 Tools Tackles and Hosepipe for plantation and watering the tree/Washing /cleaning work will be in the scope of contractor. If EIC feels that sufficient tools tackles not provided NTPC - JPL will impose penalty @#50 per day per item. Penalty amount shall be deducted from the monthly bill.
- 2.3.10 Minimum recommended items/tools for housekeeping/ Operation is mentioned in Annexure-7 in this contract. In case EIC feels that work is hampering due to non-availability of items /tools and contractor is willfully not making the item/tool available in spite of instructions of EIC, penalty @#50 per day per item may be imposed. EIC decision shall be binding in this case.

2.4 Maintenance of Coal Handling Plant Equipment including Firefighting system of CHP

2.4.1 The Maintenance of all the equipment & System including mechanical, electrical and C&I systems in the Coal Handling Plant of 1 x 600 MW of NTPC-JPL Thermal Power Plant, (NTPC - JPL) will be done as per the broad plan envisaged in this document. The details of Maintenance activities are indicated as below:

2.4.2 Preventive Maintenance of Equipment & Systems: Preventive Maintenance (PM) of all the system and equipment in CHP should be completed within the given time frame as per OEM recommendation/EIC instruction. Tentative Schedule is indicating Annexure-3.

2.4.3 Predictive Maintenance:

The predictive maintenance of equipment should be done. Any rectification required as per the findings of the Predictive maintenance is in the scope of this contract.

2.4.4 Breakdown Maintenance:

Dismantling, Repair/Rectification of Equipment / Component as per the direction of EIC, within the reasonable time frame fixed by NTPC - JPL/EIC.

2.4.5 Overhauling:

Contractor will carry out overhauling of all major CHP equipments such as Apron feeder, Crusher, Vibrating Feeders, Trippers, Stacker Reclaimer, conveyor system Wagon Tippler, pumps & motor as per OEM recommendation. (additional manpower / T&P during overhauling.) as and when required.

Belt Jointing:

The scope of work for belt vulcanization includes condition monitoring of belts, cold/hot belt jointing, belt patching work, pulley lagging, fixing of mechanical fasteners (if required), longitudinal-cut repairs etc. as per direction of EIC. All T&P and consumable such as splicing tools, grinder, cutter, spanners cleaning agent, rubber skims, grinding wheel, vulcanizing compound, solution etc., is in scope of contractor.

Conveyor Belt, pulley lagging sheet and belt vulcanizing machine will be supplied by NTPC - JPL.

2.4.6 Maintenance of CHP Auxiliaries& FIRE FIGHTING SYSTEM:

Maintenance of CHP auxiliaries such as dry fog dust suppression system, plain water dust suppression system, dust extraction system, ventilation system, air conditioning system, de-watering pumps & motor, sump pumps & motor, service water system, potable water system, cooling water system, air compressors, EOTs, Hoists, winch machine installed in CHP area, grill maintenance of WT, coal bunkers, Complete CHP Fire Fighting System etc is also in scope of contractor.

2.4.7 Miscellaneous works:

As per the requirement and on the directions of EIC, following miscellaneous works (to the extent of respective quantities specified) will be inclusive in the scope of work:

Painting Jobs to the extent of maximum of 1000sqmeter/year. Paint will be done with one coat primer and two coat paint. Supply and arrangements of accessories like Ladder, Scaffoldings and any other item for executing the painting jobs will be in the scope of contractor. Paint will be supplied by NTPC - JPL.

Except from the above painting jobs writing/markings works, as and when required, will be in the scope of contractor. 01 painter must be deployed for beautification work.

Area development and 500 tree plantation shall be done in a year.

Replacement of roof sheeting & side sheeting of entire area in the scope of the contractor, if required.

Steel Fabrication work to the extent of approx (2MT) per month (up to maximum of 48MT in 36 months). Only steel will be provided by NTPC - JPL.

Cable laying/ panel fixing /modification or relocation for plant modification included in the scope as follows;# HT Cable Laying: - approx 1500 m/year (up to Maximum 3500mtr in 36 months)

LT Cable Laying: - approx 5000 m/year (up to Maximum 15000mtr in 36 months)# Control Cable:- approx 10000 m/year (up to Maximum 20000mtr in 36 months)

Cables shall be provided by NTPC - JPL & cable laying shall be underground/over ground/on trestle as required as per NTPC specifications)

An Ambulance vehicle with all accessories including driver, must be deployed at site for 24*7 to mitigate any medical emergency. Diesel / petrol consumption will be under scope of contractor only.

SCHEDULE OF WORKS IN CHP.

SCHEDULE - "A" – JOBS IN CHP

1. Preventive Maintenance of Conveyors.
2. Preventive Maintenance of wagon tippler.
3. Preventive Maintenance of side arm charger.
4. Preventive Maintenance of apron feeder & dribble conveyor.

5. Preventive maintenance of crusher.
6. Preventive maintenance of stacker reclaimers.
7. Overhauling of fluid coupling.
8. Fluid coupling replacement.
9. Gear coupling replacement.
10. Drive alignment of conv. / hyd. Drives.
11. Replacement of conveyor drive pulley DE/NDE bearings.
12. Replacement of gear box internals.
13. Replacement of Conveyor Gear Box.
14. Replacement of complete crusher hammers set.
15. Replacement of conveyor drive pulley.
16. Crusher screens replacement.
17. Replacement of crusher breaker plate.
18. Overhauling of gear box.
19. Apron-feeder shaft replacement.
20. Apron -feeder bearings replacement.
21. Balancing of old usable crusher hammers.
22. VGF screens replacement.
23. Servicing / overhauling of water pumps.
24. Preventive Maintenance/ Overhauling of HT/LT Motors.
25. Scheduled oil filtration of oil filled transformers/ILMS.
26. Preventive Maintenance of HT/LT Switchgears.
27. Preventive Maintenance of Transformers.
29. Maintenance of Battery & Battery charger.
30. Maintenance of Earthling & lightning system.

SCHEDULE - "B" – JOBS IN CHP

1. Preventive maintenance of Vibro grizzly feeders
2. Preventive maintenance of movable trippers
3. Replacement of conveyor non- drive pulley
4. Preventive maintenance of rev. Belt feeders & belt feeders
5. Preventive maintenance of ILMS.
6. Servicing of coolers of scoop couplings.
7. Replacement of hold back.
8. Replacement of crusher hammers
9. Replacement of flap gate actuator.
10. Cleaning of Vibro grizzly feeder tray.
11. Overhauling of sump pumps / cleaning of its pits.
12. Overhauling of water pumps & compressors.
13. Take up lifting and freeing of pulley.

14. Replacement of resilient plate of FCU.
15. Replacement of oil seal of gearbox (input/ output).
16. Preventive maintenance works in EOT crane / elec. Hoists. SCHEDULE - "C" – JOBS IN CHP
1. Preventive maintenance sump / water pumps & compressors.
2. Preventive maintenance works DS / DE / VENT. Fans.
3. Replacement of deck / seal plate
4. Preventive maintenance works in FF / yard sprinkler system.
5. Crusher liner plate replacement
6. Preventive maintenance of flap gates
7. Replacement of idlers
8. Skirt rubber replacement
9. Greasing of conveyor pulley bearings
10. Chute patching / repairing / liner fixing
11. Miscellaneous cutting / welding job
12. Other miscellaneous jobs in CHP. SCHEDULE - "D" - JOBS IN CHP

1. Hot vulcanising of NN belts in CHP belt feeders
2. Hot vulcanising of NN belts in CHP conveyors
3. Cold vulcanising of NN belts in CHP conveyors
4. Cold lagging of conveyor pulleys in CHP.

IV. DETAILED SCOPE OF WORK FOR CHP MAINTENANCE ACTIVITIES.

A. SCHEDULE - "A" - JOBS IN CHP

1. PREVENTIVE MAINTENANCE OF CONVEYORS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts of motor, fluid coupling, gearbox & Plummer block. Checking oil level of gearbox and fluid coupling. Top up / replace oil as per requirement.
- b) Tightening of coupling bolts (Fluid coupling / geared coupling).
- c) Greasing of gear coupling / GTU pulley bearings.
- d) Grease the tail pulley bearings.
- e) Checking of belt scrapper and its rectification if any.
- f) Checking of skirt rubber / skirt board & its supports and rectifications, if any.
- g) Take up trolley checking & applying cadmium compound on wire ropes.
- h) Identifying damaged idlers & Idler frames. Replace the same.
- i) Checking the condition of Conv. Belt & joints healthiness.

2. PREVENTIVE MAINTENANCE OF WAGON TIPLER

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts / body liner bolts / coupling bolts of motor, fluid coupling, gear coupling, oil pump and Plummer blocks.
- b) Check the alignment of racks drive gear, support rail , rail table & side frame support roller assembly. Lubricate support rollers & rake with pinion.
- c) Check oil level of G/boxes & hyd. oil tank top up / replace the oil as per requirement.
- d) Cleaning / replacement of strainers of all Hyd. sys. in WT.
- e) Greasing of gear coupling and bearings.
- f) Check all Hyd. Brakes & adjust if reqd. Also check all body lines & its bolts.
- g) Check for any Hyd. Oil leakage from hoses, joints & connectors, rectify it.
- h) Clean all Hyd. Power pack, pump & hyd. Motors.
- i) Check all rack & pinion fixing bolts for proper tightness & lubricate it properly.
- j) Check all the Hyd. Cylinders for any oil leakage.
- k) Check all wheel gripper assy., shoes & Hyd. Cylinders.

3. PREVENTIVE MAINTENANCE OF SIDE ARM CHARGER

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts / body liner bolts / coupling bolts of motor, fluid coupling, gear coupling, oil pump and Plummer blocks.
- b) Check the alignment of SAC rails, track supports, spine bars, rakes & support rollers. Do realignment of any components if required. Lubricate it properly.
- c) Cleaning / replacement of strainers of all Hyd. sys. in WT.
- d) Greasing of gear coupling and bearings.
- e) Check all Hyd. Brakes & adjust if required.
- f) Check for any Hyd. Oil leakage from hoses, joints & connectors, rectify it.
- g) Clean all Hyd. Power pack, pump & hyd. Motors.
- h) Check the support & guide rollers.
- i) Check the drive & idle sprockets.
- j) Lubricate the bearings of support & guide rollers.
- k) Check the CBC coupling for its freeness.
- l) Check the Arm sheave & ropes for any damage, lubricate the same.

4. PREVENTIVE MAINTENANCE OF APRON FEEDER & DRIBBLE CONVEYOR.

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts of Hyd. Motor, gearbox & Plummer block. Checking oil level in Hyd. Oil tank. Top up / replace oil as per requirement.
- b) Tightening of bolts drive sprocket segments.
- c) Grease the Head & tail pulley bearings and all Plummer blocks.
- d) Identifying damaged idlers & Idler frames. Replace the same.

e) Checking the condition of Conv. Belt link (sections) healthiness.

5. PREVENTIVE MAINTENANCE OF CRUSHER

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts / body liner bolts / coupling bolts of motor, fluid coupling, gear coupling, oil pump and Plummer blocks.
- b) Check oil level of scoop coupling. Top up / replace the oil as per requirement.
- c) Clean the scoop coupling & its shaft; it should be free of oil leakage.
- d) Cleaning / replacement of suction strainers of scoop pump.
- e) Greasing of gear coupling and rotor bearings.
- f) Open the crusher inspection door. Clean accumulated coal. Check condition of crusher internals like screens, breaker plate, kick off plates, tramp iron chute etc.
- g) Tightening of all bolts.
- h) Check Hammers condition for thinning and replace the ones which got thinned beyond permissible limits
- i) Crusher bearing greasing, Gear box oil level checking and replacement if reqd.
- j) Oil cooler cleaning.
- k) Do hard facing of rotor end disc, inner arms once in six months.

6. PREVENTIVE MAINTENANCE OF STACKER RECLAIMER

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts / body liner bolts / coupling bolts of motor, fluid coupling, gear coupling, oil pump and Plummer blocks.
- b) Check oil level of FCU & G/ boxes top up / replace the oil as per requirement.
- c) Cleaning / replacement of strainers of all Hyd. sys. in S/R
- d) Greasing of gear coupling and bearings.
- e) Check all Hyd. Brakes & adjust if reqd.
- f) Check the slew BRG. Greasing auto pump & ensure proper lubrication.
- g) Check for any Hyd. Oil leakage from hoses, joints & connectors, rectify it.
- h) Clean all Hyd. Power pack, pump & hyd. Motors.
- i) Check all Buckets fixing bolts & bucket teeth bolts for proper tightness.
- j) Check the CRD's for its proper functioning.
- k) Check all belts & pulleys for joints & lagging conditions.
- l) Check all the Luffing Cylinders for any oil leakage.

7. OVERHAULING OF FLUID COUPLING

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Removal of hub from fluid coupling
- b) Dismantling of fluid coupling.
- c) Replace the damaged parts if any such as bearings, impeller, runner, diaphragm, etc.

- d) Replace all oil seals in the FCU.
- e) Assembling of fluid coupling.
- f) Fixing of hub on shaft.
- g) Oil tops up leakage checking and rectification any.

8. FLUID COUPLING REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of fluid coupling and resilience plate to site from Central stores (or) CHP stores.
- b) Removing the existing fluid coupling.
- c) Removing of multi disc.
- d) Fixing of new hub on fluid coupling.
- e) Fixing of resilience plate on motor boss, if necessary.
- f) Fixing of fluid coupling.
- g) Alignment checking and rectification if any.
- h) Oil top up in fluid coupling for which no extra amount will be paid.
- i) Removing and fixing of guards are in contractor's scope.
- j) If any jig is required for that is to be arranged/fabricated by party.
- k) Gas required for this job is in party's scope.
- l) Shifting of old fluid coupling to CHP workshop (or) Central workshop.

9. GEAR COUPLING REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shift new gear coupling to site from central stores / central workshop.
- b) Fixing / removing of gear coupling guard.
- c) Remove gear coupling bolts and parting plane bolts of gearbox.
- d) Remove top half of gearbox and take out output shaft of gearbox from casing.
- e) Remove gear coupling halves from pulley and gearbox.
- f) Fix new gear coupling valves with sleeves on gearbox and pulley.
- g) Place output shaft into its position in the casing and put top half of gearbox casing in position.
- h) Tighten the parting plane bolts and check alignment with pulley and carry out corrections if any.
- i) After completion of alignment, fix the coupling bolts and grease the coupling.
- j) If any jig / clamp is required for removing gear coupling, that is to be fabricated by party for which steel only will be issued on free of cost and ownership of jig will be with JPL. Oil tray for heating is to be arranged by party.
- k) Any gas required is to be arranged by party for which no extra amount will be paid.

10. DRIVE ALIGNMENT OF CONV. / HYD. DRIVES

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Making a clamp for fixing dial gauge.
- b) First note down the misalignments in the total drive system.
- c) Fixing of dial gauge and alignment checking and rectification.
- d) The final readings should be within 0.1 mm both radial & axle.
- e) Alignment details to be provided.
- f) Shims will be given on free of cost.
- g) Any welding required i.e., in party's scope
- h) The party should have mill right fitter.

11. REPLACEMENT OF CONVEYOR DRIVE PULLEY BEARINGS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of bearing and plumber block from central stores to site.
- b) Take up lifting and freeing of drive pulley.
- c) Decouple the drive from coupling.
- d) Removal of old bearing and plumber block.
- e) Fix new bearing on shaft and lock nut should be tightened properly.
- f) Greasing of the bearing after proper cleaning.
- g) Plummer blocks fixing.
- h) Alignment with gearbox.
- i) Re-coupling of the drive pulley.
- j) Normalisation, trial run and rectification if any.
- k) If any jig is required that is to be supplied / made by the party.
- l) Gas is to be arranged by the party.
- m) Lubricants will be arranged by JPL free of charge.
- n) After replacing bearing the shaft should be checked with spirit level.

12. REPLACEMENT OF GEAR BOX INTERNALS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shift all internals to be replaced to site from central stores.
- b) Removal of coupling bolts and decoupling of the input / output shaft from fluid coupling / pulley.
- c) Removal of top cover of gearbox.
- d) Remove hub / gear coupling from input / output shaft.
- e) Remove hold back.
- f) Assemble new shaft(s) with new bearings, hub / gear coupling and hold back.
- g) Clean gearbox inside and faces of gearbox
- h) Re-fix the internals in gearbox.
- i) Fix top cover by applying hold-tight.
- j) Check the alignment.
- k) Coupling of gearbox with fluid coupling/ pulley.

- l) Trial run and rectifications, if any.
- m) If any jig is required is to be made by party.
- n) Gas is in party's scope.
- o) Remove old bearings etc. and clean and deposit in CHP stores.

13. REPLACEMENT OF CONVEYOR GEAR BOX

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shift new gearbox to location.
- b) Shift input shaft hub / output shaft gear coupling to site from central stores.
- c) Fixing of input shaft hub / output shaft gear coupling on new gearbox (old hub / gear coupling has to be removed from old gearbox and mount on the new one).
- d) Decouple the old gearbox on input and output side.
- e) Removal of foundation bolts of gearbox.
- f) Removal of old gearbox from its position.
- g) Placement of new (assembled) gearbox in position.
- h) Alignment of gearbox with pulley and motor / fluid coupling.
- i) Fixing of coupling bolts after completion of alignment.
- j) Trial run and rectifications, if any.
- k) Shift old gearbox to CHP workshop or central workshop.
- l) Remove old gear coupling from gearbox output shaft.
- m) Remove coupling hub from input shaft.
- n) Clean the gearbox.
- o) If any jig is required for this job that is to be made by party.
- p) Gas is in contractor's scope.

14. REPLACEMENT OF COMPLETE HAMMERS SET.

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of new hammers to site and their balancing as per the instruction of EIC .
- b) Proper balancing of hammers for A&C , B&D rows are to be ensured.
- c) Collection of PTW.
- d) Open the side windows of crusher cover on both sides and unlock the suspension bars.
- e) Remove suspension bars and hammers of one row.
- f) Fix new hammers and suspension bars.
- g) Close the side windows after locking the suspension bars.
- h) Repeat (c) to (f) to replace the hammers of other rows.
- i) Trial run and rectifications, if any.
- j) Shifting of old hammers to scrap yard.

15. REPLACEMENT OF CONVEYOR DRIVE PULLEY

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Lift the take up and free the damaged pulley.
- b) Shift the new pulley to site.
- c) Fix the sleeve, BRGS on pulley with the Plummer blocks.
- d) Removal of geared coupling bolts and foundation bolts of old pulley.
- e) Removal of old pulley from location.
- f) Placement of new pulley on location.
- g) Check the level of pulley & rectify it.
- h) Alignment of new pulley with the system.
- i) Tightening of foundation bolts.
- j) Greasing of both end bearings and geared coupling.
- k) Lowering of take up.
- l) Trial run and rectifications, if any.

16. CRUSHER SCREENS REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Proper working platform arrangement is to be fabricated inside Crusher discharge chute.
- b) All bolts are to be removed by opening / gas cutting.
- c) Damaged / worn out screen to be properly removed from location.
- d) New screen is to be fixed by maintaining proper gaps.
- e) Re-fixing of bolts and tightened by providing lock nuts.
- f) Removal of Zigs from Crusher discharge chute.
- g) Inspection doors to be closed after completion of job.
- h) Gas, tools etc. are in Party's scope.

17. REPLACEMENT OF CRUSHER BREAKER PLATE

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Crusher cover to be opened (both front and back).
- b) Breaker plate has to be brought from central store/CHP store by party for which no extra amount will be paid.
- c) Remove old breaker plate cutting of bolts may be necessary.
- d) Fix new breaker plate.
- e) If any welding/cutting is required is to be borne by the party.
- f) Crusher covers to be closed both front and back.
- g) Old breaker plate is to be shifted to scrap yard or the area shown by Area Engr. / EIC.
- h) Hydra / truck will be provided by JPL for shifting it from stores.

18. OVERHAULING OF GEARBOX

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Draining of oil from gearbox.
- b) Removal of parting plane bolts and side cover bolts.
- c) Removal of gearbox top cover & Removal of all internals.
- d) Cleaning and inspection of all shafts, bearings.
- e) Replacement of both input and output oil seals.
- f) Cleaning of both halves of gearbox casing (Internally & externally)
- g) Placement of all internals in position.
- h) Apply HOLDITE at parting planes and place top cover.
- i) Tightening of parting plane and side cover bolts.

19. VIBROFEEDER SHAFT REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of new shaft to site.
- b) Remove the drive belts , Pulley & drain the lube. Oil from tank.
- c) Open the gear housing cover & remove both drive & driven gears.
- d) Free the bearing housing from VGF body
- e) Removal of old / damaged shaft.
- f) Fixing of new shaft in position and BRG. housings at both ends.
- g) Re-fix the gears by maintaining the correct position of eccentric masses.
- h) Replace the oil seals.
- i) Refill the Lube oil, fix the drive pulley & V belts.
- j) Trial run and rectifications, if any.

20. VIBROFEEDER BEARINGS REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Remove the drive belts , Pulley & drain the lube. Oil from tank.
- b) Open the gear housing cover & remove both drive & driven gears.
- c) Free the bearing housing from VGF body
- d) Removal of old / damaged Bearings from housings.
- e) Fixing of new BRG in position and BRG. housings at both ends.
- f) Re-fix the gears by maintaining the correct position of eccentric masses.
- g) Replace all the oil seals.
- h) Re-fix the bearing housing end covers.
- i) Refill the Lube oil, fix the drive pulley & V belts.
- j) Trial run and rectifications, if any.

21. BALANCING OF OLD USABLE CRUSHER HAMMERS.

- a) Select & segregate good old reusable hammers from the old used hammers lot.
- b) Take individual hammer weight & record it with numbers.

- c) When complete set + 10 nos. achieved ask area Engr. to give its balancing sequence with each numbers.
- d) Proper balancing of hammers for A&C , B&D rows are to be ensured.
- e) Shift the Hammer set to Crusher floor where next replacement is due.
- f) Shifting the useless scrap old hammers to scrap yard.

22. VGF SCREENS REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a) First clean the coal deposit on all the trays with a crow bar.
- b) Then clean it with water jet & ensure that there is no coal.
- c) Protect the conveyor belt below by continuous water washing it.
- d) Remove the damaged screens.
- e) Fix the new screens(one or more) properly.
- f) Use proper fixing bolts of specified quality & number.
- g) Do proper welding if instructed by EIC.
- h) Take trail run & do the rectifications if any.

23. OVERHAULING OF WATER PUMPS / COMPRESSORS IN CHP

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Remove the coupling bolts after electrical isolation is ensured.
- b) Remove the defective pump from the drive base frame.
- c) Take the pump to O/H shop.
- d) Open the pump & inspect all internal parts.
- e) Replace the worn out / defective parts.
- f) Re-assemble the pump carefully.
- g) Replace all old seals / glands etc.
- h) After assembling check the pump shaft for its freeness.
- i) Shift the pump back to its working location.
- j) Install the O/H pump & couple it to motor.
- k) Take trail run & do the rectifications if any.

B. SCHEDULE - "B" - JOBS IN CHP

1. PREVENTIVE MAINTENANCE OF VIBRO GRIZZLY FEEDERS:

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation and coupling bolts of motor and body of VGF.
- b) Check oil level of the chamber and top up / replace the same as per requirement.
- c) Check for any deformation in foundation springs & side support rubber discs.
- d) Inspect the inlet chute for any leakage of coal and rectify the same.

- e) Inspection of tray liners & main foundation springs.
- f) Clean the Vibro feeder tray.
- g) Check drive, driven shaft, pulley and “V” belt condition.
- h) Check skirt rubber condition and replace if necessary.
- i) Check for any oil leakage from the BRG. Housing covers, rectify it.
- j) Check the tightness of all housing & level indicator cover bolts.

2. PREVENTIVE MAINTENANCE OF MOVABLE TRIPPERS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts and coupling bolts of pulleys, motor & gearbox of LT drive and CRD drive.
- b) Checking of oil level in gearboxes and top up/ replace the same as per requirement.
- c) Greasing of all pulley bearings.
- d) Lubricate the sprockets & its chain properly.
- e) Flap gate Gear box bolts to be tightened & flap gate internal to be cleaned.
- f) Operation of F/Gate to be checked.
- g) Brake adjustment and checking the condition of Brake shoe.
- h) Checking of rail clamp for effective application.

3. REPLACEMENT OF CONVEYOR NON DRIVE PULLEYS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Lift the take up and free the damaged pulley.
- b) Shift the new pulley to site.
- c) Properly fix the bearings & Plummer blocks on new pulleys.
- d) Removal of foundation bolts of old pulley.
- e) Removal of old pulley from location.
- f) Placement of new pulley on location.
- g) Check the level of pulley & rectify it.
- h) Alignment of new pulley with the system.
- i) Tightening of foundation bolts.
- j) Greasing of both end bearings and geared coupling.
- k) See and ensure that the pulley is freely rotating by hand.
- l) Lowering of take up.
- m) Trial run and rectifications, if any.

4. PREVENTIVE MAINTENANCE OF REV. BF & BELT FEEDERS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation bolts of motor, fluid coupling, gearbox & Plummer block.
Checking oil level of gearbox and fluid coupling. Top up / replace oil as per

requirement.

- b) Tightening of coupling bolts (Fluid coupling / geared coupling).
- c) Greasing of gear coupling / GTU pulley bearings.
- d) Grease the tail pulley bearings.
- e) Checking of belt scrapper and its rectification if any.
- f) Checking of skirt rubber / skirt board & its supports and rectifications, if any.
- g) Take up trolley checking & applying cadmium compound on wire ropes.
- h) Identifying damaged idlers & Idler frames. Replace the same.
- i) Checking the condition of Conv. Belt & joints healthiness.
- j) Periodical oil replacement of G / box. / FCU.

5. PREVENTIVE MAINTENANCE OF ILMS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Tightening of foundation and coupling bolts of motor, gearbox and pulleys.
- b) Checking oil level of gearbox oil and top up / replace if required.
- c) ILMS Drive pulley and tail pulleys bearings greasing.
- d) ILMS belt metal strips bolts checking.
- e) Check the belt for any sway & adjust the tension, it should be at centre.
- f) Trial run and rectifications, if any.

6. SERVICING OF COOLERS OF SCOOP COUPLINGS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Clean dirt or foreign material from cooler with pressurized water and tubes surfaces with wire brush.
- b) Check for any choking of inlet and outlet (water side and oil side)
- c) Check plates and sealing healthiness.
- d) Check whether adequate water pressure is available at coolers.
- e) Check the flow meter is showing the correct readings or not.
- f) Check packing / gaskets for healthiness.
- g) Check for all piping's for any leakage.

7. REPLACEMENT OF HOLD BACK

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of hold back to site from central stores.
- b) Removal of hold back from gearbox.
- c) Fix new hold back.
- d) Filling of oil in hold back.
- e) Shifting of old hold back to CHP workshop (or) central workshop.
- f) Any jig required for removing hold back is to be made by party.
- g) Gas for this job is in party's scope.

8. REPLACEMENT OF CRUSHER HAMMERS (single row)

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Open the side windows of crusher cover on both sides and unlock the suspension bars.
- b) Identify the location of missing hammer(s)
- c) Check the conditions of other hammers also to identify any other weak hammer.
- d) Remove suspension bars up to a length so as to place new hammer(s) in position.
- e) Fix new hammers (equal wt. of broken one) and removed hammers in position.
- f) Close the side windows after locking the suspension bars.
- g) Old serviceable hammers of equal weight only should be used.
- h) Repeat (a) to (f) to replace missing / weak hammers of other rows.
- i) Trial run and rectifications, if any.

9. REPLACEMENT OF FLAP GATE ACTUATOR

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of new / repaired actuator to site.
- b) Decouple existing actuator with flap gate lever.
- c) Dismounting of old actuator after removal of foundation bolts.
- d) Mounting of new / repaired actuator in position.
- e) Check alignment with the flap gate actuator.
- f) Tighten the foundation bolts.
- g) Couple the actuator lever pin with flap gate lever.
- h) Manually operate it to both sides & check the gaps.
- i) Trial operation and rectifications.

10. CLEANING OF VIBRO GRIZZLY FEEDER TRAY

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Inspection doors are to be opened.
- b) Coal accumulated to be removed by crow bars / shovels.
- c) Vibro feeder Tray, screens, discharge chutes are to be cleaned thoroughly.
- d) After cleaning the entire mentioned item it should be shown to area Engineer before closing all the inspection doors.

10. OVER HAULING OF SUMP PUMPS / CLEANING OF ITS PITS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Remove the drive belts / coupling bolts after ensuring Elec. isolation.
- b) Remove the sump pump from the pit.
- c) Clean the sump.
- d) Check the impeller, its key & key ways.
- e) Replace the defective parts.

- f) Grease the bearings & re-install the pump.
- g) Fix back the drive belts / coupling bolts after ensuring Elec. isolation.
- h) Tighten all bolts and coupling bolts.
- i) Fixing of coupling guard.
- j) Trial run and rectifications, if any.

11. OVER HAULING OF WATER PUMPS & COMPRESSORS

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Remove the drive belts / coupling bolts after ensuring Elec. isolation.
- a) Check the impeller, its key & key ways.
- b) Replace the defective parts.
- c) Grease the bearings & re-install the pump.
- d) Fix back the coupling bolts .
- e) Tighten all bolts and coupling bolts.
- f) Fixing of coupling guard.
- g) Trial run and rectifications, if any.

12. TAKE UP LIFTING AND FREEING OF PULLEY

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Shifting of chain pulley blocks, slings, D- shackles, belt clamps etc to site.
- a) Collect the PFW.
- b) Clamping of belt.
- c) Positioning of chain pulley blocks at take up.
- d) Lifting of take up.
- e) Pulling of belt to free the desired pulley.
- f) Lowering of take after completion of job on that pulley.
- g) De- clamping of belt.
- h) Removal of T&P from site.

13. REPLACEMENT OF RESILIENT PLATE OF FCU

First ensure proper isolation of eqpt. & permit to work clearance.

- a) Remove coupling guard of fluid coupling.
- b) Remove coupling bolts and multidisc.
- c) Remove fasteners of fluid coupling and resilient plate and remove the fluid coupling from location.
- d) Remove the damaged resilient plate by removal of fasteners connecting resilient plate with the driving boss.
- e) Fix new resilient plate on the driving boss using fasteners.

- f) Mount the fluid coupling in place using fasteners.
- g) Fit the multidisc and couple both half couplings.

15. REPLACEMENT OF OIL SEAL OF GEARBOX (INPUT/ OUTPUT)

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Remove coupling guard.
- b. Decouple the input/ output shaft.
- c. Remove parting plane bolts of gearbox.
- d. Open the top cover of gearbox and remove the shaft (Input/ output whose oil seal need to be replaced).
- e. Remove half coupling from shaft.
- f. Remove damaged oil seal from end cover and fit new oil seal.
- g. Fit the half coupling on the shaft and place the assembled shaft in position.
- h. Apply HOLDITE on parting plane and place top cover of gearbox in position.
- i. Tighten all parting plane bolts and coupling bolts.
- j. Fixing of coupling guard.
- k. Trial run and rectifications, if any.

16. PREVENTIVE MAINTENANCE WORKS IN EOT CRANE / ELEC. HOISTS.

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Ensure that the EOT / HOISTS is not in Service.
- b. Remove the defective components from Hoist / EOT.
- c. Install new parts in Hoist / EOT.
- d. Check the oil level in all gear boxes & top up if required
- e. Tighten all bolts after fixing with proper gaskets.
- f. Cancel the PTW & check and rectify the defects if any.

C. SCHEDULE - "C" - JOBS IN CHP

1. PREVENTIVE MAINTENANCE Sump / Water Pumps & Compressors:

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Ensure that the equipment is not in service.
- b. Grease all the bearings.
- c. Check & arrest the water leakage.
- d. Replace the gland packing if required.
- e. Tighten all bolts after fixing with proper gaskets.
- f. Tighten all foundation bolts.
- g. Cancel PTW & test the pump for proper working.

2. PREVENTIVE MAINTENANCE WORKS DS / DE / VENT. FANS.

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Ensure that the equipment is not in service.
 - b. Remove the defective belts / other components/ bag filters.
 - c. Check the belt tension and correct it.
 - d. Install new valves / bag filters.
 - e. Tighten all bolts after fixing with proper gaskets.
 - f. Cancel the PTW & check and rectify the defects if any.
- 3. REPLACEMENT OF DECK / SEAL PLATE**

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Plates required for this job are to be drawn from Central stores.
 - b. Old damaged seal plate or lip plate to be removed from its positions.
 - c. New seal plate or lip plate is to be fixed after cutting as per exact dimension.
 - d. Old damaged plates are to be shifted to scrap yard.
 - e. Cutting welding is in party's scope. Plates and fasteners will be issued free of cost.
- 4. PREVENTIVE MAINTENANCE WORKS IN FF / YARD SPRINKLER SYSTEM**

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Ensure that the line is de-pressurised & water is drained completely.
 - b. Remove the defective valve / DV / water sprinkler from circuit.
 - c. Install new valves / DV / water sprinkler.
 - d. Tighten all bolts after fixing with proper gaskets.
 - e. Cancel the PTW & check and rectify the defects if any.
- 5. CRUSHER LINER PLATE REPLACEMENT**

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Shifting of new / hard faced liner plate to site.
- b. Open the front doors of crusher.
- c. Clean the crusher body & check for any damage & loose parts.
- d. Removal of old / damaged liner plate from CR. body.
- e. Fixing of new / hard faced liner plate in position.
- f. Closing of front doors.

6. PREVENTIVE MAINTENANCE OF FLAP GATES

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Tightening of foundation bolts of actuator bracket and Plummer blocks.
- b. Greasing of flap gate bearings.
- c. Flap gate actuator bearing greasing.
- d. Actuator pin checking.

- e. Inspection of flap gate gap inside the chute.
- f. Operating the flap gate once in both the directions for checking jamming.
- g. Manually operate the gate to both ends & check the gap between the flap and chute, adjust if the gap is more than 2 – 3 mm.

7. REPLACEMENT OF IDLERS

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Shift idlers from main stores to the site.
- b. Remove respective stand and replace the defective idler.
- c. Re-installation of idler stand in position.
- d. Shifting of defective idler to the designated location.
- e. Replacement of 3 nos. troughing / carrying idlers or 2 nos. “V” type return idlers / one no long flat return idler will be consider as one unit.

8. SKIRT RUBBER REPLACEMENT

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Removal of old skirt rubber after loosening the fasteners
- b. Cut the skirt rubber of required size from scrap conveyor or skirt rubber
- c. Fixing the new skirt rubber & tightening the fasteners
- d. Take trial run & adjust if required.
- e. Complete one side skirt rubber will be considered as one unit.
- f. If bolts / fixtures needs to be modified or replaced without additional cost.
- g. Cutting welding if any for this job will not be paid extra.

9. GREASING OF CONVEYOR PULLEY BEARINGS

First ensure proper isolation of eqpt. & permit to work clearance.

- a. Lubricants will be arranged by JPL free of charge.
- b. Lock the pulley shaft by means of chain blocks.
- c. Open the top cover of bearings.
- d. Remove the old greasing completely from the housings.
- e. Refill the fresh grease of reqd. Qty.
- f. Put back the BRG top cover & fix the bolts , tight it with torque wrench.
- g. 2 nos. BRGs. Of a pulley greasing is considered as one unit.

10. CHUTE PATCHING / REPAIRING / LINER FIXING

First ensure proper isolation of eqpt. & permit to work clearance in paper.

- a. Measurement of patch to be applied in concurrence with JPL Maint. Engineer.
- b. Cutting of the required size plate.
- c. Shifting of welding accessories to site.
- d. Ensure that hot permit to work has been issued.

- e. Arranging proper scaffolding for climbing up to patch to be welded.
- f. Removal of scaffolding after the patch work is over.
- g. One liner fixing will be considered as one unit.
- h. Spraying of water in and around the area of welding / cutting

11. MISCELLANEOUS CUTTING / WELDING JOB

First ensure proper isolation of eqpt. & permit to work clearance in paper.

- a. Shifting of cutting / welding accessories to site.
- b. The working area should be thoroughly cleaned first before starting work.
- c. Shifting of items to be welded (example: plates, angles, pipes, etc.) weight of such items will not be more than 50 kgs.
- d. All required precautions to be taken to prevent fire.
- e. 2 Mtrs. Length of cutting / welding will be considered as one unit.
- f. Water hose pipes should be kept ready before starting cutting.
- g. After completion of welding work the area / area down below has to be water washed thoroughly to avoid fire

12. OTHER MISCELLENOUS JOBS IN CHP

First ensure proper isolation of eqpt. & permit to work clearance in paper.

- a. V- belt replacement in VGF / Vent. Fans / DE system
 - b. Hose pipe replacement.
 - c. Coupling guard removal and re- fixing.
 - d. Replacement of scrapper blades
 - e. Replacement of coupling bolts
 - f. Flap gate operation by hook chuck
 - g. RP gate operation by hook chuck
 - h. Replacement of valves up to 50 mm size.
 - i. Cleaning of spray nozzles.
 - j. Any maintenance / repairing work in fire fighting systems.
 - k. Gland packing / gasket replacement
 - l. Lubrication of slew bearing of stacker
 - m. Oil top up to 50 lts.
 - n. Cleaning of filters.
 - o. Gear box oil replacement in EOT cranes
 - p. Gear box oil replacement in Hoists.
- D. SCHEDULE - "D" - JOBS IN CHP**

1. HOT VULCANISING OF NN BELTS IN CHP CONVEYORS

Position the joint which needs vulcanising in a convenient location at carrying side. Shift & keep ready the Vulcanising M/C at jointing location before PTW request. Ensure proper power supply at working location. First ensure proper isolation of Eqpt. & permit to work clearance.

Follow the belt manufacturers & Vulcanising KIT supplier's instructions carefully.

- a) Clamp the belt on carrying side near belt jointing location.
- b) Lift the take up and free the BELT of required length.
- c) Pull the belt of sufficient length required for HOT vulcanising.
- d) Clamp the belt on return side near belt jointing location.
- e) Remove the idler frames at jointing location.
- f) Remove the damaged portion of belt / weak joint.
- g) Complete the joint preparation by splicing / cord buffing.
- h) Ensure that the deck is in level / level it by wood & ply supports.
- i) Place the Vulcanising M/C Bot. plate in position.
- j) Align both the ends of belt properly to each other.
- k) Use Hot Blowers is required if moisture is more.
- l) Complete the joint preparation by placing Bot. cover rubber, Vul. solutions cords, inter-cords & top cover then cloths ect.
- m) Prepare & cut the edges.
- n) Complete heating & cooling at specified temperatures.
- o) After cooling remove the vul. M/C.
- p) Install the idler frames at jointing location.
- q) Normalize the belt by removing the clamps & releasing the take up.
- r) Take trail run & give clearance for load operation.

2. HOT VULCANISING OF NN BELTS IN CHP BELT FEEDERS

Position the joint which needs vulcanising in a convenient location at carrying side. Shift & keep ready the Vulcanising M/C at jointing location before PTW request.

Ensure proper power supply at working location.

First ensure proper isolation of Eqpt. & permit to work clearance.

Follow the belt manufacturers & Vulcanising KIT supplier's instructions carefully.

The above procedure laid down in scope 01 of schedule 'D' needs to be followed except that the KIT & splicing method will be different for textile belts.

3. HOT VULCANISING OF NN BELTS IN CHP CONVEYORS

- a) Position the joint which needs vulcanising in a convenient location at carrying side. Shift & keep ready the Vulcanising M/C at jointing location before PTW request.
- b) Ensure proper power supply at working location.
- c) First ensure proper isolation of Eqpt. & permit to work clearance.
- d) Follow the belt manufacturers & Vulcanising KIT supplier's instructions carefully.

The above procedure lay down in scope 01 of schedule 'D' needs to be followed except that the KIT & splicing method will be different for textile belts.

4. COLD VULCANISING OF NN BELTS IN CHP CONVEYORS

Position the joint which needs vulcanising in a convenient location at carrying side.
First ensure proper isolation of Eqpt. & permit to work clearance.

Follow the belt manufacturer's / supplier's instructions carefully for splicing methods.

- a) Clamp the belt on carrying side near belt jointing location.
 - b) Lift the take up and free the BELT of required length.
 - c) Pull the belt of sufficient length required for COLD vulcanising.
 - d) Clamp the belt on return side near belt jointing location.
 - e) Remove the idler frames at jointing location.
 - f) Remove the damaged portion of belt / weak joint.
 - g) Complete the joint preparation by splicing.
 - h) Ensure that the deck is in level / level it by wooden ply supports.
 - i) Use Hot Blowers is required if moisture is more.
 - j) Complete the joint preparation by grinding / buffing & applying solution then drying it , repeating the same at both ends of belt . Complete jointing of belts.
 - k) Prepare & cut the edges.
 - l) Complete the joint by properly hammering to avoid air gaps.
 - m) Install the idler frames at jointing location.
 - n) Normalise the belt by removing the clamps & releasing the take up.
 - o) Take trail run & give clearance for load operation.
5. COLD LAGGING OF CONVEYOR PULLEYS IN CHP.

Position the joint which needs vulcanising in a convenient location at carrying side.

- First ensure proper isolation of Eqpt. & permit to work clearance.
- Supply of lagging sheets is in party's scope
- The above procedure lay down in scope 04 of schedule 'D' needs to be followed except that the freeing pulley removing the old lagging & Vul. Solution for lagging and lagging sheets required for Drive / Non Drive pulleys will be different.

3.0 Planning

3.1 For the scope of Operation & Housekeeping of plant /area

- 3.1.1 Daily coal feeding plan will be provided by NTPC - JPL EIC.
- 3.1.2 Planning shall be done for adequate blending of coal mix as directed by NTPC - JPL.
- 3.1.3 Planning of coal feedings Schedule to bed one as per plan given by NTPC - JPL.
- 3.1.4 Planning of running of conveyor system & rake unloading system to be done so that system running hours optimize.
- 3.1.5 Coal conveying operation system time to planned such that schedule maintenance can be met on time.
- 3.1.6 Routine cleaning/monitoring/ pre-operation checks to be planned so that conveyor operation not delayed.
- 3.1.7 All pre-operational checks to be planned to avoid any delay in rake unloading.

3.2 For the scope of Maintenance Works

- 3.2.1 Contractor will prepare and submit a preventive maintenance schedule and servicing schedule for all CHP equipment including scope based on recommendations of OEM

or as per discussion with NTPC - JPL EIC. This schedule for the next month to be submitted by 25th of every running month and get the same approved from NTPC - JPL EIC. The schedule so prepared is to be followed by the Contractor failing which appropriate penalty will be levied as per penalty mentioned elsewhere in this document.

- 3.2.2 Contractor shall submit PM and overhauling checklist before start of work for review of NTPC - JPL EIC. The reviewed checklist shall be adhered to while carrying out the work under the scope of work. The Contractor shall submit every Monday the Report of PMs done on Previous week with complete PM Check list duly signed by Contractors authorized Maintenance in-charge.
- 3.2.3 Contractor shall go through all the current defects/noted /reported defects through Control Room defect register at least twice in a day
- 3.2.4 Most of the maintenance activities are taken up in planned way except emergency jobs. This shall require site supervisor/engineer to go through the defects noted down in control room defect register and check the same at site and submit the job plan for the jobs to be done.
- 3.2.5 Planning shall be done on weekly and daily basis. It shall be based on the current defects, predictive maintenance, preventive maintenance; opportunity based maintenance and shall be in consultation with the NTPC - JPL EIC.
- 3.2.6 Weekly plan shall be prepared every week by Contractor and such duly signed weekly plan for next week will be submitted to NTPC - JPL EIC by Friday of every running week. Daily planning shall be done one day earlier and shall be in line with weekly planning.
- 3.2.7 EIC Approval of Daily/ weekly/ monthly program submitted by contractor shall not relieve the contractor from any obligation under the Contract.
- 3.2.8 Planning of jobs also includes working out requirement of consumables and spares and verifying the availability and getting them issued from respective stores, a day in advance of taking up the job at site.
- 3.2.9 Also contractor shall be required to take-up various maintenance activities as per the instruction of NTPC - JPL's EIC. Most of the maintenance activities are taken up in planned way except emergency jobs.
- 3.2.10 At the start of contract, Contractor shall assess the spare parts requirement of various equipment's and would advise NTPC – JPL EIC.
- 3.2.11 Consumption of spares for routine maintenance like conveyor belts, MS plates, idlers, hammers etc. should be given six months in advance. Reconciliation statement has to be produced every month.

4.0 Work execution

4.1 Mechanical maintenance includes planning and execution:

- 4.1.1 Preventive maintenance,
- 4.1.2 Breakdown maintenance,
- 4.1.3 Condition based and Predictive maintenance
- 4.1.4 Overhauling, reconditioning and testing of existing plant system and equipment.
- 4.1.5 Failure analysis of major equipment/ repeated breakdown

- 4.1.6 Statutory compliance and approvals to be taken by Contractor of plant equipment, tools/tackles, EOT's & hoist etc. as per prevalent rules and regulation
- 4.1.7 Maintenance of all mechanical equipment from wagon tippler to top of boiler (discharge to bunker) for bunkering path, reclaim path and stacking path including ventilation systems, dust extraction system, dust suppression system, wagon tippler, side arm charger, stacker reclaimer, apron feeder including hydraulic system, compressed air system, screens, crushers, various gear boxes, conveyor & its components, sampling system, magnetic separator, flap gates, chutes, sump pumps and other equipment as set out at Annexure-2 (List of equipments for CHP).
- 4.1.8 It includes servicing, lubrication of mechanical part of equipment like bearing, roller, gearbox, hydraulic system, valves, pumps, pulleys, etc.
- 4.1.9 It includes attending any chute leakages (attending any chute leakages will be considered as repair work and this repair of chutes will be considered as fabrication work)
- 4.1.10 It includes repairing, alignment, replacing, overhauling of part of equipment like bearings, rollers, liners, crusher hammer, shafts, screen, pumps, valves, pulley, gear box & its part, hydraulic system and its part, wagon tippler, stacker reclaimer etc. including handling and lifting of Equipment / spares to any floor with the help of existing T&Ps or Contractor's own arrangements.
- 4.1.11 It includes repairing, replacing of conveyor belt, adding or cut and joints of conveyor belt as on requirement. It includes hot and cold vulcanizing of conveyor belt as per requirement.
- 4.1.12 It includes maintaining hydraulic oil purity level by purification, topping up, sending samples to NTPC - JPL Chemistry lab for periodical testing. Testing of samples will be done by NTPC - JPL chemistry department. Oil Purification Units will be supplied by NTPC - JPL.
- 4.1.13 It includes pulley lagging work as on requirement. Pulley lagging sheet will be provided by NTPC - JPL.
- 4.1.14 It includes maintenance of EOTs and hoists, winch machines etc.
- 4.1.15 It includes replacement of crusher hammers, crusher and screens, liner plates for feeders and discharge chutes etc. Spares will be supplied by NTPC - JPL.
- 4.1.16 It includes minor painting works of structures and strengthening of structures of transfer points, Conveyor galleries junction towers, equipment base foundation etc any other structure related to CHP as per instruction of EIC.
- 4.1.17 It includes all type of welding, cutting jobs as required. Cleaning of work place is in the scope of the contractor. The Contractor shall follow good housekeeping practices to the satisfaction of NTPC - JPL-EIC.
- 4.1.18 All the scrap/waste generated should be regularly disposed off to the scrap yard or any other designated place inside the plant boundary as instructed by NTPC - JPL-EIC.
- 4.2 Electrical**
- 4.2.1 Preventive and break down maintenance of Switch gear/module and Motors of TT/WT/ SAC/ SCR, Apron feeder, magnetic-separators/FG/ conveyor-system/dust collectors & extraction system/coal crushers/separators/ ILMS/Suspended-Magnet/Coal Sampling Unit, Sump pumps/Dewatering pump, VGF/BF/RBF, Metal

- detectors, Wagon Tippler & related electrical & electronic controls. Scoop Actuators, Thruster brake, Rail clamp (S/R, T /T), wheel choke feeder, belt jointing machine, VFD, PLC, DCS etc. (Elevators, Ventilation Exhaust Fan, Pump House motors, Dribble conveyor, EOT cranes, Hoist)
- 4.2.2 TRANSFORMERS Routine and Breakdown maintenance of Power transformers: Cleaning, Checking, repair and replacement of gaskets/bushing/OFFLTC/ oil level in conservator and bushings/silica gel & breather/temperature controller/pressure relief diaphragm/ testing of control & power circuits/meggering/ interlocks/trip and closing contracts/ventilation system/ tightness of control and power connections/earth pits and connections/safety requirements, earth pits/ NGR/ Temperature measurements/measurement of earth-pit resistance / filtration of oil/replacement of oil/Removal of Grass in all the Transformer Yards. Transformer/ ILMS/ SM oil testing shall be done by NTPC - JPL chemistry department. Sample to be collection and delivery to NTPC - JPL Chemistry is in the scope of contractor.
- 4.2.3 HT-MOTORS Preventive and Breakdown maintenance of HT-motor: shifting of the motors to/from the work site if required/ Cleaning, Checking, repair and replacement of lubricating oil/greasing of bearings/replacement of bearings/ terminal connection/control and power circuits/tightness of power cable terminations /insulation/winding resistance and inductance/ interlock and trip contacts/winding and bearing temperature/ Circuit Breaker operations/earth connections/control and power cable laying & jointing/safety requirements/complete overhauling of the motors.
- 4.2.4 LT-MOTORS preventive and Breakdown maintenance of LT-motor: shifting of the motors to/from the work site/Cleaning, Checking, repair and replacement of connection/control lubricating and power oil or grease/bearings/terminal circuits/ tightness of power cable terminations/ insulation/ winding resistance and inductance/ interlock and trip contacts/abnormal sound/winding and bearing temperature/Circuit Breaker or starter operations/earth connections/control and power cable laying & jointing /safety requirements/rewinding of all type of AC and DC motor and minor repairing & balancing works of motor shaft & bearing housing (if needed)/complete overhauling of motors. Repairing of DC/AC Brakes.
- 4.2.5 OVERHAULING OF HT,LT MOTORS Decoupling/Coupling/motor-shifting/ Dismantling/ Assembling/replacement of any damaged parts of above said equipment/Cleaning, checking, repair and replacement of lubricating oil or grease/bearings/terminal connection/re-lugging of terminations/tightness of power. cable terminations/value of insulation resistance /resistance and inductance/cooling system and ribs / abnormal sound/carbon brushes/ slip rings/holders/ air filter/ Varnishing/ drying in the ovens/painting/ no load test.
- 4.2.6 PCC & MCC SWITCHGEAR PANELS VFD AND LOCAL CONTROL PANELS: - Preventive and breakdown maintenance of HT and LT switchgear panel and Low voltage panels (Load), power JB's and welding DB's. Cleaning, checking, repair and replacement of control and power fuses/fixing and moving contacts/arching chutes/control and power circuits/insulation values of switch gear and bus/operation (close and open) of Circuit breaker, MCCB and contractor/related interlocks / tightness of power and control circuits / load current / transducers / ammeters / energy meters /relays

- /CT/PT/control transformer/earthing connections/control and power cable laying & jointing (straight through and end termination) and re-lugging /safety requirements/bus duct /Removing of Power and control cable as and when any modification, safety, maintenance requirement jobs are being done.
- 4.2.7 CRANES:- Preventive and breakdown maintenance of lift, EOT, Monorail, Hoists: Cleaning, checking, repair and replacement of control and power fuses/fixing and moving contacts/arching chutes/control and power circuits/insulation valves of switchgear and bus/Operation of contactors and MCCB/interlocks/tightness of power and control circuits/load current/ammeters/voltmeters/relays/control transformer/timers/manipulator/limit switches/ down shop leads/ cables/control and power cable laying & jointing indications/ earthing /danger boards /safety Requirements/ rewinding of motors/brakes etc.
- 4.2.8 PROTECTION SYSTEM Cleaning checking of all the relay and protection system, 11KV, 3.3 KV system and 0.4KV protection relays. Check the tightness of control circuits / auxiliary supply/ signal and protective relays / testing and calibration of protective relay/ trip circuits / earthing measurements. (O&M of Conveyor protection system like of ZSS, PCS, BSS and installation of any modification or new protection system)
- 4.2.9 DC system, STATION BATTERY, BATTERY CHARGER AND INVERTER:- Periodical maintenance of Battery, UPS and Inverter: Cleaning, checking of specific gravity/level of distilled water/topping of distilled water/acid/individual battery voltages/tightness of battery leads and terminations/UPS, Inverter and Battery panels/control and power circuits/insulation values/fuses of control and power circuits/Voltmeters/ammeters/control system of UPS, float and float cum boost chargers/earthing/ applying petroleum jelly.
- 4.2.10 GENERAL area & control room LIGHTING, Street lighting, High Mast AND VENTILATION & exhaust FANS:-Replacement of lamps as & when required, fittings and preventive maintenance, Periodical inspection and replacement of lamps, ballasts, starters, battery of entire lighting system including arena lighting. Periodic cleaning & complete overhauling of all lighting panels in the plant. Cleaning and checking of fixtures/tightness of control circuits/ automatic lighting system/sockets/LDB/SLDB/Testing of ELCB and other portable equipment's regularly. Repair and replacement of Exhaust fans/ rewinding of the motors including sigma search lights. Spares will be provided by NTPC - JPL. Area lighting improvement if required.
- 4.2.11 Street Light and High tower mast maintenance in CHP area. Mobile van and ladder for this purpose will be provided by NTPC - JPL.
- 4.2.12 AIR CONDITIONERS:- Already Installed A/C system (package AC and split AC & window AC) provided in the CHP area. PACKAGE AC installed in CHP, Scope include PM of Package AC & split AC system, upkeeping.
- 4.2.13 DEWATERING /SUBMERSIBLE PUMPS AND THEIR CONTROLS: Maintenance of motors/power and control circuits/troubleshooting/overhauling/greasing/Oil seal replacements/ measurement of IR values and winding resistance/rewinding of the motors.

- 4.2.14 OVERHAULING OF HT,LT MCC BUS SECTIONS, Annual Overhauling /Servicing/
P.M. of HT and LTBoard bus section-overhauling of MCC
- 4.2.15(A) REMOVAL OF, BREAKERS, MODULES, SFU FROM THE PANEL.
- 4.2.15(B) CLEANING OF MODULES, BREAKERS, PROTECTIONRELAYS, PANELS
- 4.2.15(C) BUS BAR, INSULATORS, TIGHTNESS OF BUS BAR.
- 4.2.15(D) CHECKING&TIGHTNESSOFALLPOWER&CONTROLCABLE CONNECTION.
- 4.2.15(E) MEARSURE IR VALUE OF BUS BAR &MODULES.
- 4.2.14.6 CHECK ALL CONTROL FUSE RATING & REPLACEIF REQUIRED.REPLACE
DEFECTIVECOMPONENTS.
- 4.2.14.7 CHECKING AND SEALING OF HOLES IN CABLE GLANDPLATE.
- 4.2.14.8 CHECKING OF EARTHINGSYSTEM.
- 4.2.14.9 REMOVAL & DISPOSAL OF WASTE OIL/ GREASE /CHEMICAL/ SCRAP AT
IDENTIFIED LOCATION.
LT-INCOMMER/BUS-COUPLER: -
- 4.2.14.10 CLEANING/INSPECTION / TIGHTNING OF POWER / CONTROL CABLES
- 4.2.14.11 CLEANING/INSPECTION OF BKR ARCING CONTACT & ARC CHUTE
- 4.2.14.12 CHECK CARBON BRUSHES OF SPRING CHARGING MOTOR
- 4.2.14.13 CHECK OPERATION OF SPRING CHARGING MOTOR.
- 4.2.14.14 CHECK AND PROVIDE MISSING CIRCLIPS AND LOCKNUTS ETC
- 4.2.14.15 CHECK OPERATION OF BKR IN TEST POSITION
- 4.2.14.16 REMOVAL &DISPOSAL OF WASTE OIL/ GREASE/ CHEMICAL/ SCRAP AT
IDENTIFIEDLOCATION.
- 4.2.14.17 Main incomer cable inspection & fault finding from BTG 3.5 M to CHP switchboard.
- 4.2.14.18 Thermography checking for Switchgear and motors is in contractor scope as per
defined time
- 4.2.14.19 Rewinding of all (upto 200KW)L.T. motors, Brakes .Alltheservices,logisticsrequired
fortherewindingoftheHTmotors
- 4.2.14.20 Specialized OEM engineer for VFD required for VFD related faults in Stacker and Hoist
- 4.2.14.21 All additional manpower, tools and tackles, consumables and services for AOH
activities will be in scope of contractor
- 4.2.14.22 All Checklist & PM compliances provided to jpl EIC, must be adhered by contactor
to fulfill requirement & submit the same after completing the job & Compliances must
be greater than 98%
- 4.2.14.22 Rain and dust proofing of all motor local panel and motor itself with
proper canopy shall be in contractor scope
- 4.2.14.23 In case of any breakdown of transformer winding, transportation, shifting its
installation & commissioning shall be in contactor
- 4.3 C&I**
- 4.3.1 24 hour Assistance for the plant operation having adequate competency to working
PLC & related instrumentation in AF, S/R, SAC, TPs ,CSU, CONVEYOR
SYSTEM,WTarea, CHP Control Room.

- 4.3.2 All breakdown maintenance in the areas as stated above.
- 4.3.3 Routine & breakdown maintenance of Air filter lubricator, Impulse lines.
- 4.3.4 Overhauling of all the Control and instrumentation equipment in the entire AF, S/R, S AC, TPs, CSU, CONVEYOR SYSTEM, WT area.
- 4.3.5 Calibration, dismantling, mounting, repair, overhauling, routine maintenance, preventive maintenance, cleaning, replacement and checking the operating condition while on site and in the NTPC - JPL C&I laboratory for all the field instruments viz.-Indicators, Switches, weigh-bridge, Belt Weighment system, WT weighing system, gauges & related instrumentation.
- 4.3.6 Routine checking of control power supply, main power supply, connection tightness etc for all the electrical actuators and tightness will be in Contractor scope.
- 4.3.7 Additions/deletions/modification works involved in the cable route, cable tray, impulse lines, instruments, instrument airline, panel cutouts, electronic earthing pit etc. as and when required at the direction of MTT-P, EIC.
- 4.3.8 Contractor has to arrange for temporary power supply from the point decided by NTPC - JPL, EIC for site calibration, maintenance, and repair works execution. Contractor should provide all the hardware required for making these arrangements
- 4.3.9 Any maintenance/ repair jobs in PLCs will be in Contractor scope under the guidance of MTT-P, EIC. If there is fiber splicing required in CHP area, its cost will be borne by contractor
- 4.3.10 Contractor has to daily/periodically check/inspect the field instruments, panels, etc. in case of any damage/misalignment/mal-operation/abnormal conditions, will have to immediately inform the same to MTT-P, EIC.
- 4.3.11 All maintenance / repair / overhauling etc. for the HYDRAULIC, pneumatic/ motorized actuators will be carried out by Contractor.
- 4.3.12 Maintenance, minor repair works, cleaning of computers, printers, mouse etc- involved in plant automation, will be in the Contractor scope.
- 4.3.13 Painting of damaged, dismantled, and rusted portions etc in field instrumentation and panels will be in Contractor scope. Paint will be supplied by NTPC - JPL.
- 4.3.14 Fabrication of items like canopies, junction boxes, Panel cutouts for installing any instruments, mounting brackets for any field mounted instruments, siphons for instruments, thermo wells for temperature gauges fabrications shall be in Contractor scope.
- 4.3.15 Checking, cleaning, servicing, preventive maintenance and overhauling of DCS Panels in all MCCs/ equipments and its related battery bank and its battery chargers etc.
- 4.3.16 Maintenance of UPS along with their Battery Bank, PA system & firefighting system installed in CHP area and ensuring its availability.
- 4.3.17 Contractor must have ferrule printing machine and ensure the required consumable as per attached typical consumable list.
- 4.3.18 Calibration of All Belt Weighers/Weigh Bridges & Wagon Tippler Weighing system will be in contractor scope.

4.3.19 All Electronic Earth Pits routine maintenance and checking shall be in Contractor's Scope. If any New Earth pit has to constructed (including Excavation and Civil Work), will also to be done by Contractor

5.0 Quality

5.1 Operation Quality

- 5.1.1 Operation of all equipment to be done as per SOP/as per NTPC - JPL EIC instructions.
- 5.1.2 Operation of all equipment to be done within rated technical parameter of equipment and system.
- 5.1.3 Operation of all equipment to be done with optimum utilization to ensure minimum running hrs.
- 5.1.4 Equipment should not run with any major defect with bypassing any interlock, protection, alarm etc.
- 5.1.5 Operation to be done with ensuring all safety standards.
- 5.1.6 Operation to be done with ensuring all environmental norms.
- 5.1.7 Operation and testing as per LMI of fire fighting equipments/auto spray/ smoke detector/ equipment installed for fire safety purpose.

5.2 Maintenance Quality

- 5.2.1 All maintenance activities which are carried out by the contractor should confirm to best engineering practices and be carried out in minimum time possible.
- 5.2.2 Contractor to offer quality that is consistently dependable for the entire duration of the assignment in whatever jobs are done under the scope of the contract.
- 5.2.3 Contractor to demonstrate and give reliable services to avoid repetitive defects of the same nature.
- 5.2.4 All the jobs shall be carried out to the satisfaction of the engineer in charge and his decision shall be final and binding on the Contractor.

6.0 Progress reporting and meetings

- 6.1 The daily/weekly/monthly report(s) of contractor will be submitted to NTPC - JPL's EIC as per requirement in agreed format & shift log book/register will also be maintained in their respective format.
- 6.2 Any event which is likely to affect smooth operations should be promptly informed to control room & NTPC - JPL's EIC.
- 6.3 Contractor shall have to submit reconciliation statement for materials issued by NTPC - JPL at the end of the month or as demanded by NTPC - JPL's EIC.
- 6.4 Contractor shall be required to furnish satisfactory job completion report to NTPC - JPL's EIC. The submission of report should be on daily basis and consolidated monthly report shall be submitted within 3 days of next month.
- 6.5 Equipment running hours, maintenance data sheet of each equipment, analysis reports of breakdowns, root cause failure analysis report, are to be submitted within time schedule as specified by NTPC - JPL's EIC.
- 6.6 Equipment operating parameter to be maintained and submitted.
- 6.7 Daily defect list to be maintained and submitted.
- 6.8 Daily belts scale reading data to be maintained and submitted shift/day wise.

- 6.9 Coal stock reports to be maintained and submitted daily.
- 6.10 Daily meeting with NTPC - JPL's EIC & team to be done regarding daily work status.
- 6.11 Contractor shall keep at least 03 nos Functional Mobile Phones with each of his plant manager, operation-in-charge and maintenance-in-charge.
- 6.12 Monthly performance review meeting to be done at the end of month, date will be decided by NTPC - JPL's EIC.
- 6.13 Monthly performance to be presented by contractor's by first week of next month to NTPC - JPL's higher management.
- 6.14 Safety meeting of NTPC – JPL as per schedule is to be participated by contractor's site manager and safety officer.

7.0 **Special terms & conditions**

- 7.1 After completion of PM, contractor has to ensure that there will be no abnormal/surprise break-down within two consecutive PMs. The Contractor shall submit the report of Preventive Maintenances (PM) carried out in the prescribed format countersigned by NTPC - JPL's EIC
- 7.2 The manpower required for maintaining the plant as per the requirement/ scope of the contract has to be mobilized fully by the Contractor.
- 7.3 The extra requirement of manpower as per plant condition has to be mobilized by the Contractor within 1 Hrs. of such requirement in case of emergencies.
- 7.4 The specified manpower and tools in any section of this contract is the minimum requirement for such requirement. Any additional requirement arising out of the plant condition has to be met by the Contractor within 1 Hrs. of such requirement.
- 7.5 The Contractor has to arrange transportation of lubricants & spare sand steel from NTPC - JPL store. Suitable vehicle for transportation & loading arrangements will be in the scope of Contractor.
- 7.6 The plant manager of the contractor shall authorize two of his representatives to collect materials from NTPC - JPL as per requirement. The contractor shall return all unused/partially used/scrap materials to NTPC – JPL central store/ field stores within two days of completion of work. Contractor should take receipt of the material returned to NTPC - JPL.
- 7.7 Tools, tackle and safety devices for lubricants transport, storage & filling will be arranged by the Contractor.
- 7.8 All Consumables required for the operation, maintenance & testing will be in the scope of Contractor. List of such consumables is as per following table :

Emery roll, Rustoline Cleaning agents, sand paper, lugs electrical contact cleaners, necessary tape, including PVC and HT insulation tape, soldering iron O-rings cotton waste, brazing torch Loctite, cotton cloth de-soldering pump general electrodes CRC-226 test board DA, CTC 24V hand lamp with transformer Oxygen argon filler wires gland ropes, marking clothes belt vulcanization chemicals mechanical fasteners for belt clamping Washer all sizes small screws MS nut, bolt, washer upto 16mm size, Oil seals upto 100mm outer dia SS Shims HT nut, bolt, washer upto 16mm size#

Gasket - oil, water, rubber type etc Sleeve / Connection of hydraulic hoses (for replacement of these items inthe process of repair of hydraulic hoses , hydraulic hoses repair is also in the scope of contractor) Love-Joy coupling e.g. star/strip

Bush couplings #fullor part replacement (part-e.g.- pin, bush, nuts , washer etc)Hard facing electrodes(for hard facing of HEM Equipments / chutes or as per instruction of EIC). Grinding /cutting wheel.

- 7.9 Quality of consumable is very important and thus only reputed company consumables should be used for equipment. Contractor to get all make and brand certified by NTPC - JPL EIC. NTPC - JPL EIC will have the authority to reject any consumable if it does not satisfy good quality and Brand in due course of use/installation. Contractorhas to maintain sufficient inventory of all consumables in his scope to ensure no work is being held up due to non-availability of consumable
- 7.10 All handling equipment and special T&P supplied by OEM shall be handed over to the contractor for use during the period of contract. Contractor shall maintain all these in good working condition for the entire period ofthe contract. At the end of the contract, contractor shall return these in original good working condition.
- 7.11 Any damage caused to the T&P shall have to be made good by the contractor, including the cost of spares(if required). If contractor is not able to repair the T&P cost of the damaged component including repair charges as decided by NTPC - JPL EIC shall be recovered from the contractor however, liability of the contractor on this account is limited executed value of the contract.
- 7.12 All the Tools &tackles required to carry out the maintenance of the plant will be in the scope of Contractor.Contractor should maintain sufficient tools to take up the jobs simultaneously. Minimum recommended Tools and tackles. are enclosed atAnnexure-4.
- 7.13 If any temporary facilities to work at site including area lighting, working platforms, round the clock have to be arranged by the Contractor.
- 7.14 24V / 240V hand lamps and transformer as directed by NTPC - JPL's EIC shall be in Contractor scope forareas wherever required for safety.
- 7.15 The contractor shall complete the entire work within the reasonable time given by NTPC - JPL's EIC. Adequatemobilization and arrangement of work crews & work time has to be arranged and managed by the Contractor.
- 7.16 The Contractor shall submit the report of daily works carried out by next day.
- 7.17 In case spares are not readily available at site or O&M store and same are required to be removed from any other unit or place, then Contractor is bound to do the same free of cost.
- 7.18 At the start of contract the Contractor shall assess the spare parts requirement of various equipment's and would advise NTPC - JPL's EIC.
- 7.19 Any miscellaneous work not mentioned in scope but is essential for completion of servicing/ overhauling ofany equipment in the scope, shall be deemed to be in the scope of Contractor.
- 7.20 NTPC - JPL's EIC reserves the right to mobilize additional manpower, Tools &Plants for execution of job, within the scope of this contract, at the risk & cost

- of the Contractor, if NTPC - JPL's EIC reasonably feels that Contractor is unable to execute the job within time frame & quality standards.
- 7.21 Contractor has to maintain the availability of specialized manpower (High Skilled) round the clock at the vicinity of the plant so as to attend any defect (Breakdown) within a reasonable time.
 - 7.22 All Hoists, tools & tackles, and special T&P handed over by NTPC - JPL should be tested & certified by competent authority & records of the same need to be maintained at site. This will be in scope of contractor.
 - 7.23 Maintaining Hydraulic oil purity and sending samples to NTPC - JPL Chemistry lab for periodical testing is also in scope of contractor. Testing of samples will be done by NTPC - JPL chemistry.
 - 7.24 All type of welding, cutting jobs as required are also in scope of contractor.
 - 7.25 Contractor has to arrange operators of Hoists which are installed in scope of maintenance area. All the maintenance required for hoists will also be in the scope of contractor.
 - 7.26 PPEs required for all the staff & staff/workmen to be arranged by the Contractor at its own cost. 06 nos of HT suits and 06 nos of LT suits to be provided by contractor for safe HT/LT isolation. The PPEs should be of reputed make and approved by NTPC - JPL's safety department. The same shall be tested/ verified by NTPC - JPL's safety department from time to time.
 - 7.27 The contractor and their staff/ workmen shall abide by all safety regulations of NTPC - JPL in all circumstances and continuously contribute in achieving safety, Health & Environment objectives of site.
 - 7.28 The contractor to strictly follow permit to work system of NTPC - JPL while carrying out any job.
 - 7.29 Contractor has to engage a safety coordinator to supervise and execute all the safety related activities at site.
 - 7.30 Contractor has to comply with all Statutory Requirements
 - 7.31 Scaffolding including material for maintenance work shall be in Contractor scope. Bamboo scaffolding is not allowed in the plant premises. In case of non-availability of scaffolding with contractor, the same will be issued from NTPC - JPL's store and recovery will be done as per terms and conditions mentioned elsewhere in the contract.
 - 7.32 Insurance of the manpower, equipment and T&P owned and provided by the Contractor at NTPC - JPL's Site shall be in the scope of Contractor
 - 7.33 Contractor's personnel should mark their attendance according to the procedure specified by the NTPC - JPL's EIC.
 - 7.34 Contractor shall ensure compliance with safety and statutory requirements
 - 7.35 Safety and security of the CHP equipments is responsibility of the contractor
 - 7.36 Operator log books, Shift-Charge Logbook and Misc Log books as per the LMI and other stationary items/papers/Register/Checklists used in day to day work. In case mentioned items not provided, recovery @ Rs100 per item per day may be recovered from the monthly bill on sole discretion of EIC.
 - 7.37 Following reports are to be submitted on monthly basis: 1) PM COMPLIANCE, 2) BD MAINTENANCE, 3) MODIFICATION WORK REPORT, 4) 5S, 5) HOUSE KEEPING INDEX,

6) DEMMURAGE REPORT, 7) RAKE REPORT,8) EQUIPMENT AVAILABILITY, 9) BELT LOAD FACTOR, 10) INCIDENT OF FOREIGN MATERIAL, 11) Monthly system / equipment Audit report

12) NON AVAILABILITY OF CONSUMABLE/T&P,

13) MAN POWER COMPLIANCE,

14) OHS COMPLIANCE.

In case report is not submitted penalty @Rs 500.00 per report per month shall be imposed.

- 7.38 Minimum one Shift Charge Engineer _Assistant responsible for overall CHP operation shift activities in consultation with CHP operation shift charge Engineer of JPL and one Desk Engineer should be available in Each shift in CHP control room except night shift (02 desk engineer must be available). For electrical isolation and normalization one no. electrician should be available per shift. Non deployment of man power as per mentioned shall carry the penalty @ Rs500.00 for each manpower per shift shall be imposed. This shall be implemented in addition to the man power non compliance penalty.
- 7.39 CHP Operation In-Charge Assistant, shall have to be deployed who will be responsible for overall planning & execution of operation and housekeeping of CHP in consultation with CHP operation in charge of JPL
- 7.40 Three supervisors per shift for housekeeping works should be deployed and one supervisor in general shift will be deployed for overall supervision of housekeeping. Non deployment of man power as per mentioned shall attract penalty as per the NTPC - JPL's EIC discretion.
- 7.41 Detail manpower deployment as per Annexure provided.
- 7.42 Painters and Gardeners have to be deployed as per the requirement (preferably on daily basis). Tools and tackles for Painter and Gardener shall be in the scope of contractor. Non deployment of man power as per mentioned shall attract penalty as per the NTPC - JPL's EIC discretion.
- 7.43 One mechanical maintenance in-charge and min 04 nos of maintenance engineers/supervisors are to be deployed. Non deployment of man power as per mentioned shall attract penalty as per the NTPC - JPL's EIC discretion
- 7.44 SAFETY:
- 7.44.1 Contractor has to follow the OHS requirements of the owner as attached in Annexure-9 of this document.
- 7.44.2 Contractor has to provide PPE like safety helmet, safety shoe, safety goggles, safety gloves, nose mask, safety belt, safety jacket etc. to their workers. Without proper PPE's workers will not be allowed to go at site for doing the job.
- 7.44.3 The contractor will have to use tested and certified lifting Tools & Tackles (like chain pulley block, maxpuller, safety belt, hydraulic jack, sling, D-shackle, etc) from any govt. approved agency.
- 7.44.4 Party must produce the load testing certificate of their tools & tackles at the starting of the work.

- 7.44.5 The contractor has to maintain a first aid box at the site office as per statutory requirement.
- 7.44.6 The body of grinders / buffing machines & hot blowers must be made up of fiber.
- 7.44.7 Contractor should arrange health checkup for all their employees at the time of induction of employee at NTPC - JPL.
- 7.44.8 All electrical tools like hand lamps, extension boards etc. shall be of good make, in proper condition and properly insulated with all safety features. Any damaged tools shall not be used and shall be replaced immediately.
- 7.44.9 The agency shall take adequate precautions to prevent fire accidents during work by providing water in containers, Gunny Bags, sheets etc. and thereby ensure safety of man and plant.
- 7.44.10 Contractor should make it sure that the workers are having good knowledge of road safety, job safety, using emergency tripping systems, use of PA system, operation of fire extinguishers, etc. Contractor has to arrange safety induction training and regular safety trainings at site for their workmen regarding various safety systems and precautions.
- 7.44.11 Contractor has to submit Safety Clearance Certificate from NTPC - JPL's Head of Safety before submitting 1st RA Bill.
- 7.44.12 The contractor will provide safe working condition to all his workmen at site including safe means of access, railing, stairs, ladders, scaffolding etc.
- 7.44.13 The engineer in charge shall have the right at his sole discretion to stop the work, if in his opinion, the work is being carried out in such a way that it may cause accident. The contractor shall not be entitled for any damages/ compensation for stopping of work due to safety reasons.
- 7.44.14 Contractor has to use High voltage and low voltage electric shielding suits suitably during isolation/normalization of HT/LT electrical circuit breakers.
- 7.44.15 The contractor should ensure that proper permit to work (PTW) has been issued from CHP operation, before commencement of work.
- 7.44.16 Safety audits will be done time to time by the owner and contractor has to comply the observations raised in safety audit.
- 7.45 Every effort has been made to make all the terms of this contract very clear in all aspects. However, in case of any confusion arise in the meaning of any clause of this contract, the decision of EIC shall be final and binding on the contractor.

8.0 Staffing and Man power requirement

- 8.1 The manpower deployment shall be done as per instruction of EIC.
- 8.2 Contractor shall maintain required manpower all the time so that plant availability is not affected due to lack of manpower.
- 8.3 All deployed manpower to be go through safety induction training before deployment for work.
- 8.4 All the workers should be medically examined annually at the cost of contractor.
- 8.5 Contractor shall appoint an individual (the "Plant Manager"), who shall be authorized and empowered to act as the agent for and on behalf of the Contractor on all matters concerning this contract.

- 8.6 If the existing Plant Manager is dismissed/removed or is otherwise unable to carry out his duties or term of his appointment ends, the Contractor shall appoint suitably qualified and experienced replacement, after due approval from the NTPC - JPL's EIC.
- 8.7 It is imperative to submit bio-data of all staff before induction at site. Interviews may be conducted by NTPC - JPL's EIC for key persons to verify their competency and approval shall be given to the Contractor to depute them at this site accordingly. NTPC - JPL's EIC shall have the exclusive right to decide the suitability of the person for scope of work. The decision of NTPC - JPL's EIC shall be final and binding on Contractor.
- 8.8 It is clarified that the skill matrix as given in Annexure -5 is tentative only and changes may be made in consultation with NTPC - JPL's EIC depending on requirement post the execution of this contract.
- 8.9 The contractor shall ensure the availability of any additional manpower required for the normal/ emergency/Overhauling work. The same shall be deployed by the contractor without any additional cost.
- 8.10 The contractor shall deploy trained and experienced operators, having valid licenses to operate special equipment.
- 8.11 An average of personnel as per annexure (excluding office staff deployed by the contractor for their own site office) per day should be deployed by the contractor to carry out the work under this contract.
- 8.12 Residence facilities and transportation facilities for their manpower will be under scope of contractor. Contractor has to establish the residence colony of the manpowers and JPL-NTPC will provide the land for the same. Transportation to and fro to plant and temporary residence area will be under scope of contractor only.

Break-up of manpower will be as per Annexure-

The above break-up may vary not beyond +/- 10% according to the requirement of work and on the discretion of EIC. However, the total deployment must be minimum per day. Penalty for less deployment shall be levied in accordance with clause-17.3.6 of this contract.

Electrical maintenance personnel should have expertise in HT/ LT Breakers, HT/ LT Motors, Batteries and its charger, Cable jointing, Transformers, PLC, PA System, etc should be available.

C&I maintenance personnel should have at least one year experience for maintenance of PLC/DCS, HMI/MMI computers and CHP related field instruments of C&I areas.

- 8.13 In case all equipments are not handed over (Refer Annexure-6) requirement of minimum manpower deployment for smooth operation and maintenance of plant will be decided after mutual discussion after award of contract.
- 8.14 Contractor shall be responsible for persons deployed by him, to make them familiar with the site and comply with all rules and regulations of NTPC - JPL.
- 8.15 NTPC - JPL's EIC reserves the right to review the work performance, assigned Key Performance Indicators (KPI) and deliverables as per this contract and revise the regular deployed manpower strength to meet the business targets.

- 8.16 The contractor shall be solely responsible for the employment policies for contractor staff. Such policies are to be consistent with any labour laws in force.
- 8.17 The contractor shall observe directives relating to minimum age for employment, acceptable conditions of work with respect to minimum wages, hours of work and occupational health and safety and all other statutory norms.
- 8.18 The Contractor shall be solely responsible for obtaining in a timely fashion any required clearances and permits for the contractor Staff. NTPC - JPL's EIC reserves the right to reject any staff of contractor based on the performance, character or behavior of the contractor staff.
- 8.19 Contractor shall without prejudice give priority to local contractors provided that quality, delivery times, reliability, experience and other terms are comparable to those offered by others.
- 8.20 Only personnel with the highest work ethics and experience shall be engaged at the Plant
- 8.21 Entire contractor's staff shall have proper Personal Protective Equipment with training in the appropriate safety and environmental procedures to ensure that the risk of accident is minimized.
- 8.22 Joint Venture/ Consortium Agreement/ Sub-contract will not be considered for this contract.
- 8.23 Minimum 20 Nos (unskilled)+2 (semi-skilled) Nos additional manpower are to be deployed by the contractor for housekeeping during 05 month in a year from June to October to maintain additional works due to rainy season (It can be extended without any additional cost, if monsoon period will extend). This shall be additional to the regularly deployed manpower. Non deployment of this manpower shall attract penalty in accordance with clause-17.3.6 of this contract**
- 8.24 Additional manpower for manual cleaning of wagon shall be deployed to ensure no demurrage charges or delay due to wagon cleaning after unloading of wagons. Railway coordination without additional cost shall be done for proper releasing of rake after unloading. Demurrage charges pertaining to non-cleaning of wagon, will be borne by the contractor.**
- 8.25 The manpower is not deployed as per skill matrix (Annexure-5) penalty @#500 per day per person shall be imposed.
- 8.26 Coordination with railway without additional cost for D&D charges, rake releasing, rake operation, WT re-certification / issues raised by railway for WT and railway siding.
- 8.27 Damage & deficiency charges, Demurrage charges and other damage charges will be under scope of contractor.
- 8.28 Coordination with railway to avoid rake bunching at PJPB siding to avoid demurrage charges under the scope of contractor.
- 9.0 Exclusions from the scope of the contract**
- 9.1 Coal Sampling from rake, yard, conveyor etc.
- 9.2 Supply of major mobile equipments viz. dozers, pay loaders, skid steer loader, Hydra, forklift.
- 9.3 Insurance of NTPC - JPL's plant and equipment
- 9.4 Oil Filtration Equipment

10.0 NTPC - JPL's scope of work

- 10.1 All the spares required for the maintenance of the equipment will be provided by NTPC – JPL excluding the Consumables listed elsewhere in this document which are in Contractors Scope. However, Contractor has to give planning of critical spares well in advance and maintain actual status at site.
- 10.2 Lubricating Oil/ Hydraulic Oil for the equipment & machinery.
- 10.3 Special electrodes excluding Hard Facing Electrodes (SS, Dissimilar Steel, Cut Electrode etc.) and fasteners above size of 16mm.

11.0 Inclusion and exclusion summary

Description of Activity Responsibility Remarks NTPC - JPL Contractor

- 11.1 Total Operation & maintenance assistance of the coal handling Plant. As per the contract & scope of work
- 11.2 All type of Fuel required for O&M, NTPC - JPL shall arrange coal at its own cost and at designated unloading areas. Further operation shall be in Contractor's scope
- 11.3 Overhauling Contractor's responsibility:
Contractor would carry out the job in supervision of OEM . if required.
- 11.4 Electricity, Water & Air Supply is NTPC - JPL's responsibility to be provided by NTPC - JPL.
- 11.5 All type of consumables, lubricants, oil and grease which go into the system/ equipment NTPC - JPL's responsibility:

Consumables (excluding the Consumables listed elsewhere in this document which are in Contractors Scope) which are going in to the system/ equipment e.g. Lubricants, all type of chemicals, oil and grease for routine, preventive & breakdown maintenance shall be provided by NTPC - JPL. Hard facing electrodes, special gaskets and HT bolts shall be provided by NTPC - JPL.

If any excess consumption takes place due to mal- operation or defective workmanship or poor maintenance of Contractor, then the same shall be charged to Contractor. Proper record shall be maintained by the contractor for consumable given by NTPC - JPL.

Contractor's responsibility: Consumables (including the Consumables listed elsewhere in this document which are in Contractors Scope) like general purpose welding electrodes, filler wires, grinding/cutting wheels, cotton waste, adhesive, gases for gas-cutting i.e .Oxygen, DA/Metal cutting gas etc.or any other consumables which are required to perform the smooth work
- 11.6 Spares Parts which goes in to the System/ equipment. The list of initial Spares purchased by the NTPC - JPL shall be handed over to contractor after signing of the Contract.

Contractor's responsibility:

Subsequent to the submission of this list of initial spares, Contractor shall check and inform with proper justification if any other Spares are required. Contractor & NTPC - JPL shall jointly review and maintain Minimum inventory

- 11.7 Inventory of Spare Parts & consumables y NTPC - JPL's responsibility:

Procurement of spare parts not in scope of contractor same will be done by NTPC - JPL

11.8 Drawings, Manuals & Technical Literature NTPC - JPL's responsibility:

Shall be provided by the NTPC - JPL in English Language, if available. Contractor's responsibility:

Contractor to review the list of available drawings, manuals & technical literature & give its requirement if any to NTPC - JPL.

11.9 **Operational Limits for the following:**

NTPC - JPL is responsible for bringing the coal rakes/ coal truck/ coal dumper.

Contractor's responsibility: O&M of CHP & railway siding shall be in contractor's scope. Rake handling, unloading, bunkering, Feeding of coal to emergency hopper by dozers/ loaders (provided by NTPC - JPL), rake releasing shall be in the scope of contractor.

B Disposal of solid waste by Contractor's responsibility: Contractor shall dispose the CHP solid waste at a mutually agreed location inside the plant boundary.

NTPC - JPL's responsibility:

Further disposal shall be with NTPC - JPL.

C Waste water Contractor's responsibility:

Contractor shall dispose at mutually agreed location within the plant boundary.

D Coal Handling delivered by Wagons (BOXN) NTPC - JPL's responsibility: Placement of coal rakes at wagon tippers

Contractor's responsibility: Entire Railway siding & CHP operation & maintenance from railway take up point to WT and onwards will be done by Contractor. Also, after rake received from railway including placement to release will be in scope of contractor.

Total rake handling must be done in specific given time as per railway. In Wagon Tippler the wagons have to be unloaded within specified hours.

If the unloading can't be done within the specified hours at WT and unloading is delayed at for reasons due to problems in RLY siding & CHP, per hour demurrage imposed by IR would be deducted from contractor's monthly bill.

If unloading can't be done within specified hours due to boulders stone, slurry/sticky coal, bulged wagons, bunching of rakes, stoppage due to non-availability of spares demurrage will be mutually decided at the end of every month. (As per Annexure of Demurrage distribution)

11.10 Plant Safety and Security Contractor's responsibility: Contractor shall have his own security for his own stores. In addition, he will take responsibility for the safety of its personnel working in NTPC - JPL.

11.11 Painting of all equipment/ building structures Contractor's responsibility: Painting to the extent of 1000 sqm per year will be in scope of Contractor. Contractor shall have to maintain the colour code and quality as per NTPC - JPL's EIC instruction. All T&P required for painting will be in scope of contractor.

NTPC - JPL's responsibility: Supply of paint.

11.12 Plant Upkeep Services Contractor's responsibility: Housekeeping of the entire CHP and associated areas shall be in the scope of contractor.

11.13 Plant horticulture & land scraping NTPC - JPL's responsibility: Ensure that no damage occurs to the initial horticulture and landscaping provided by NTPC - JPL within the specified limit.

Contractor's responsibility:

Maintaining, watering the existing plants and tree plantation in CHP area as per the instructions of EIC.

11.14 Personnel Insurance , Contractor's responsibility: Workman Compensation, Group Insurance policies and any other requirement as per the local laws for the personnel engaged by contractor shall be responsibility of contractor. Any type of claim bound to pay for personnel engaged by contractor shall be responsibility of Contractor.

11.15 Stores Management Contractor's responsibility: Material withdrawal from the store & transport to workplace is in contractor scope as well as scrap generated during O&M of CHP shall be properly disposed off/transported at specified location as decided by NTPC - JPL's EIC

11.16 Fuel management, Inventory management, Contractor's responsibility: Proper stacking shall be done by the contractor. All assistance in density measurement etc shall be done by the contractor.

11.17 Regular preventive and breakdown maintenance, O&M Contractor's responsibility

11.18 Annual Shutdowns and Overhauls Contractor's responsibility: Overhauls of major CHP equipment such as wagon tippers, conveyors, paddle feeders, trippers etc as per schedule given in the contract. Additional manpower during overhauling will be in vendor scope.

11.19

11.20 Special tools and tackles Contractor's responsibility: contractor should arrange all general tools and tackles for day to day O&M. The upkeep and responsibility to return the tools and tackles provided by NTPC - JPL (if any) at the end of contract in good working condition shall be in the scope of contractor.

NTPC - JPL's responsibility: NTPC - JPL shall handover special tools supplied by OEM to the contractor.

11.21 Use of EOT Cranes/Monorail hoists Contractor's responsibility: EOT/Monorail Hoists/ Lifts installed in CHP shall be handed over with required license & statutory certificate by NTPC - JPL to contractor. All equipments shall be tested and get rectified by contractor as per statutory requirement.

License/statutory certificate for all types of Lifting T&Ps e.g EOTs, Chain pulley blocks, Monorail hoists, Winching machines, Hook-Chook, Wire-ropes, Slings, D-shackles, etc renewal is also in contractor's scope.

- 11.22 Training & Development of O&M staff , Contractor's responsibility: Contractor shall provide sufficient no. of required training to its staff for smooth & effective operation and maintenance of CHP
- 11.23 if any accident/Mishappening occurs while carrying out the work. The Contractor himself would be solely responsible for that. In no case Owner shall pay any compensation and shall not be responsible for any statutory liabilities which may occur during the period of above work. Accident and medical insurance shall be arranged by the Contractor for all workers. Contractor shall provide all the required safety equipment & Devices to the workers engaged for the work under this Contract and same shall be used during the course of work.
- 11.24 The Contractor has to deploy retired Railway/ qualified personnel for assistance in Railway operation including operation of Locomotives and Marshalling Yard. A confirmation of having Railway retired employee/ qualified personnel at the disposal of the Contractor shall be preferred. Contractor shall get all employees approved by the Owner's EIC by producing necessary documents prior to execution of the contract.
- 11.25 In case of dispute the discretion/decision of the head of plant (O&M) will be final or otherwise jurisdiction of court will be at Seoni / Jabalpur.
- 11.26 Medical/Canteen Facilities NTPC - JPL's responsibility:
Necessary space for canteen and Medical infra shall be provided by NTPC - JPL if available.
- 11.27 Residential Accommodation for contractor's staff & Contractor's responsibility
- 11.28 Evaluation of plant Operation & furnishing recommendation on cost effective ways to improve the plant performance (NTPC - JPL's responsibility): Control check and final parameters defining and evaluation. Contractor's responsibility): To provide necessary assistance and supports during evaluation.
- 11.29 Calibration of instruments y y Control check by NTPC - JPL. Calibration of instruments to be got done by contractor
- 11.30 Statutory testing of lifting Tools and tackles & In the scope of Contractor
- 11.31 Coal Handling/ Stock Yard Verification (Contractor's responsibility): For survey and physical verification of coal on monthly/quarterly basis physical verification of coal, contractor should provide manpower assistance. Calibration of all belt weighers and wagon tippler weighing scale from time to time and by external agency once in a year to be done by contractor at their cost
- 11.32 Condition monitoring (Contractor's responsibility): Contractor should keep qualified people at site for effective implementation of Condition based monitoring. The required equipment would be provided by the contractor.
NTPC - JPL's responsibility): Control check by NTPC - JPL
- 11.33 Clearing of tanks, sumps, drains and tranches , Contractor's responsibility
- 11.34 Special jobs like belt vulcanizing y Contractor's responsibility

11.35 Equipment capacity adequacy test, Contractor's responsibility: CHP capacity test as per approved procedure is to be carried out as per LMI

12.0 Responsibility for completeness

12.1 Any minor work/services/supplies which has not been specifically mentioned in the specification/drawing/scope of supply/work of this contract, but are essential for safe, trouble free & proper execution of this contract, are to be provided/rendered free of cost by the contractor, unless expressly excluded in this contract.

12.2 It is understood that contractor have duly inspected the site and its surroundings and have satisfied itself as to all technical, commercial, and general condition affecting the site and the work including the nature of the ground and sub-soil, the extent and nature of the work and materials necessary for carrying out the works, the means of communication, and in general all risks and contingencies influencing or affecting the scope of this contract. Contractor shall not be entitled to any adjustment of the contract price on grounds of misinterpretation or misunderstanding under this clause.

13.0 Contract duration

2 years Contract with provision of extension for another 12 months. Date of mobilization to be notified by NTPC - JPL's EIC. If it is required to extend the contract up to 3 months by NTPC - JPL's EIC, Contractor has to extend the contract on same rate and same terms and conditions. Accordingly, BG will be deposited for the increased amended amount of the contract value by the contractor.

14.0 Submission of documents

The contractor shall submit following documents (copies) before start of work:

- 14.1 Test certificates of pulling and lifting machines and appliances.
- 14.2 Details of workers to be deployed with name, permanent address, category, their family /dependents, correct age etc.
- 14.3 Details of supervisory staff to be deployed including qualification & experience.
- 14.4 Welders Test Certificates
- 14.5 Authorization for receipt of material from NTPC - JPL, for signing of measurement books etc.
- 14.6 Labour license specific to the contract.
- 14.7 List of T&P brought into plant premises along with their serial nos. and dates of year of purchase.
- 14.8 List of consumables brought into plant premises along with their serial nos. and dates and year of purchase wherever applicable.
- 14.9 Insurance policy for the workers to be deployed in this contract.
- 14.10 Safety undertaking
- 14.11 Any other document specified elsewhere or required for performance of contract or as per statutory requirement

15.0 Payment terms

- 15.1 Contract price will be FIRM without any variation on per year Basis. Escalation % on YoY basis will be mentioned separately.
- 15.2 100% of the payment along with applicable taxes shall be paid on prorata basis within thirty (30) days against submission of monthly progressive Running Account (RA) bills duly certified by NTPC - JPL's EIC. Payments shall be made after receipt of clear invoice from the Contractor subject to adjustment of the following:
 - 15.2.1 The previous payments made, if any.
 - 15.2.2 Holds suggested by NTPC - JPL's EIC, if any,
 - 15.2.3 Statutory Deductions (e.g. Income Tax, TDS etc.), if any,
 - 15.2.4 Other deductions such as Liquidated Damages, etc., if any.
 - 15.2.5 Deduction for security deposit, if any.
- 15.3 Payments for a month will be released to the contractor based on equipments handed over for operation & maintenance. For this purpose, index on % of equipments handed over for operation and maintenance will be calculated every month. e.g. Payment for month = BOQ Rate X Index%. This payment amount will be subject to other penalties/ deductions as per terms and conditions mentioned elsewhere in the contract. List of equipments considered for the above purpose is enclosed at Annexure-6.
- 15.4 Contractor shall ensure submission of following documents prior to submission of RA Bill No.1:
 - 15.4.1 Acceptance of the Contract
 - 15.4.2 CPBG, if applicable
 - 15.4.3 Site mobilization certificate certified by NTPC - JPL's EIC
 - 15.4.4 Certificate from the NTPC - JPL's Head Safety for completion of safety setup by the Contractor
 - 15.4.5 Copies of Insurance Policies, licenses required under the Contract
- 15.5 Payment shall be made against RA bills on monthly basis on submission of the following documents:
 - 15.5.1 Invoice in three (03) sets (Clearly indicating PO No., Goods and Service Tax Reg. No. and Income Tax PAN No.)
 - 15.5.2 Reconciliation statement for material issued, if any, duly approved by NTPC - JPL's EIC.
 - 15.5.3 Contractor shall submit following documents along with submission of last RA bill:
 - 15.5.3.1 Certificate of Completion issued by NTPC - JPL's EIC
 - 15.5.3.2 'No-claim certificate' and 'Certificate for Release of Final Payment',
 - 15.5.3.3 Final reconciliation statement for material issued, if any, duly approved by NTPC - JPL's EIC.
 - 15.5.3.4 Final Payment shall be made after adjusting the amounts due to NTPC - JPL by Contractor including applicable liquidated damages, previous payments made and statutory deductions, if any,
- 15.6 Enclosures to RA bills:
 - 15.6.1 The RA bills must be submitted along with (i) the names of the labour employed for the services, (ii) salaries paid to them, (iii) amount of PF deducted from the salary of the labour, (iv) Contractor's contribution, (v) amount deposited in Regional Provident Fund Commission (RPFC) against each labour and (vi) copy of the challan for the

- amount deposited in RPFC till previous month, duly certified by the NTPC - JPL's EIC, (vii) Receipt of Jaggery (Gur), 100 Grams per person per day) (viii) NTPC - JPL's HR clearance certificate. Consumables, T&P etc to be distributed to employees should be entered through main gate duly endorsed by CISF on duty.
- 15.6.2 Contractor shall also submit month wise labour payment record duly certified by the NTPC - JPL's EIC along with the RA Bill. No payment shall be released for RA Bills submitted without these documents.
- 15.6.3 The payments certified through RA Bills shall be treated as advance payments against the Final Bill. The quantities of service certified by the RA Bill shall not be considered as Final and the same will not entitle Contractor to raise any claim, whatsoever.
- 15.7 Please note that any certificates issued or payment released shall neither be considered as conclusive evidence of the satisfactory performance of the service covered under the Contract, either wholly or in part, nor shall any certificate or payment be construed as acceptance of defective or improper service or as relieving Contractor from their responsibility under this Contract.
- 15.8 Final payment is conditional upon the fulfillment of Contractor's obligations to provide all documentation as required by NTPC - JPL. Invoice(s) shall not be processed for payment until all such obligations are fulfilled.
- 15.9 Contractor shall be liable for any loss to NTPC - JPL incurred on account of wrong invoicing on Contractor's part.
- 15.10 All the payments under the Contract shall be made by the NTPC - JPL directly to the Contractor.
- 16.0 Taxes & Duties**
- 16.1 The Contract Price is inclusive of all Taxes and Duties . GST is to be quoted by Bidder in Price Bid / Price Schedule section-VI.
- 16.2 Any other tax applicable on the date of Contract, whether considered or not by the Contractor in their final Offer, shall be to account of the Contractor. Any new Tax or variation in applicable taxes after the award of the Contract up to the Scheduled Completion of the entire Services shall be to the account of the NTPC - JPL. Contractor shall inform the applicability of Taxes & Duties to NTPC - JPL and take prior approval before raising such invoice.
- 16.3 If there is a delay in Completion on account of the Contractor and if there is any Statutory increase in Duties/ Taxes/ Levies during the period of delay, in such case the difference shall be in account of the Contractor.
- 16.4 As regards Indian Income Tax, Surcharge of Income Tax, Withholding Tax or any other Corporate Tax, NTPC - JPL shall not bear any Tax liability whatsoever irrespective of the mode of contracting. The Contractor shall be liable and responsible for payment of all such Taxes, if attracted under the provisions of law. NTPC - JPL shall however deduct applicable Tax at source as per law from all payments to be made to the Contractor and NTPC - JPL will issue the TDS certificates for the same to the Contractor.
- 16.5 Should the Contractor fail to provide the services or a part thereof within the specified period, NTPC - JPL shall be entitled at its option;
- 16.5.1 To source the required services from elsewhere of similar description after giving due notice to the Contractor on Contractor's risk and Cost.

16.5.2 To cancel the Contract or part thereof if so desired and to execute the Works/ Facilities at the risk and cost of the Contractor.

17.0 Deliverables and Penalty/deduction

17.1 Coal Rake Unloading:

Allowed handling time for BOXN wagons rake 5 hrs/ WT. The allowed unloading time shall start from placement of loaded wagons at wagon tippler/and release of complete rake. If the contractor fails to unload the rake due to wagon tippler problem or any reasons within allowed unloading time indicated above, per hour demurrage as imposed by IR would be deducted from contractor's monthly bill. The decision of NTPC - JPL's EIC shall be final and binding.

Agency will ensure the availability of sufficient T&Ps round the clock as per requirement in the working area for proper execution of work i.e. Hammer, Belcha, Tagadi, phawara, brooms, Hose pipe for washing purpose, Panji with long 2 meter handle, Pocking Rod, Torch 01 nos. (03 cell) for supervisor in each shift

PPEs -Shoes, Helmet (Standard Company/ suggested by MUNPL Safety), nose mask, hand gloves etc. are to be provided to each of the personnel working in unloading area to make the safe working in the area.

Before every placement of rake for unloading, checking of Track thoroughly for any overflow of coal, lumps etc. on track is to be ensured.

During unloading, if coal is stuck up between wagon doors or inside the wagon, the same is to be cleared by manual pocking

During rake handling process (i.e start receiving time to rake releasing time) at RLY siding / WT, if de-railment occurs on any place, Re-railing of wagon will be in the scope of contractor and demurrage due to this delay also shall be in account of contractor as imposed by IR. If the re-railment is done by IR, charges of re-railment taken by IR shall also be imposed to contractor

Contractor will co-ordinate/ liaison with MGR/Railways in order to avoid any bunching of rakes/ release of empty rakes and to avoid any demurrage. Any demurrage occurred will be recovered from contractor's monthly bill (except demurrage on account of delay due to derailment in MGR/ Non-availability of Loco/ Breakdown in OHE)

Detail demurrage distribution will be as per KPIs and delay contribution as attached Annexure.

Anexure -X : Demurrage Charge (DC) & LOCO detention charges Distribution Sheet

Sl. No.	Major Issues/ Points	Calculation/ Justification	Account ability (Owner)	Accountabil ity (Contactor)	Remark

1	Rake handling which includes placement, unloading and release within stipulated time given by railway. (5 hrs of PJPB)	Demurrage & wagon deficiency charges due to faulty track and other reasons attributable to CHP & Railway yard O&M vendor is the sole responsibility of contractor. DC must be Calculated on Per loaded wagon of rake with a charges as per railway. (As per railway revised /penal charges, as & when applicable) reference letter - No.TC-I/2022/201 /efile/2(3394909)	NO	Yes	No Remark
2	Damage & deficiency charges	As per railway	NO	YES	
3	LOCO detention charges	As per calculated by RLY and contribution factors which is levied due to contractor	NO	YES	
4	Debit & Credit system for DC charges	There is a Debit & Credit System Applicable for DC timing calculation. If Applicable as per Railway rules	to be followed as per railway rules	to be followed as per railway rules	No Remark
5	Wagon Issues	Delay due Wagon Issues will not accounted to Contractor (Like Sick Wagon, Bulge Wagon)	Yes	No	Proper Wagon door locking must be ensured By Contactor. If required tied with wire to avoid delay due to door opening during or after tripling.

6	Boulders/ Stone	Delay due to Grizzly Jamming & its cleaning due Heavy Coal Boulders/ Stones.	Yes (HEME will be provided to remove stones from grizzle).	Yes But Grizzly condition (healthiness & cleaning) to be ensured by contactor to avoid grizzle choking and boulder passing.	
7	Over Filled / Over Loaded Wagon	Delay Due to Over filled Wagons (Over height) Or Overloaded Wagon (>95 MT) must not accounted on contactor. i.e. Evacuating & Levelling of Overhight / Over filled Wagon by Pocklain. & for the >95 MT Wagon , return from table (when found Overweight) & manual unloading by Pocklain.	Yes	No	A Time Limit will be set by JPL for removal of Overheight/ Over filled Coal.
8	Inspection Delay Time after every rake	After every rake the delay due to Inspection of WT & associated equipment (either by MMD, EMD or C&I), must not to be accounted in Contactor account if approved by client	Yes	No	
9	Delay due to Heavy Rain/ Heavy Wind	Due to Heavy Rain/ wind Conditions Unloading was stopped for human and machine safety. It must not be accounted for	Yes	No	this will be agreed only in case of high wind speed. For the monsoon/rainy season preparedness to

		Contractor, if approved by client			be done accordingly.
10	Wet, Sticky and Muddy Coal	For Wet, Sticky & Muddy Coal, Feed rate of Belt conveyor drop to minimum (~400 TPH), to avoid slippage of heavy coal at tail end , choking of various CHP parts (like chute, Grizzly choking, VGF chocking), Belt sway issues etc. This delay must not to be accounted on contractor account.	Yes	YES Scrapper condition / FG condition / chute condition / grizzly conditions to be monitored shift basis (with Checklist) and corrective action to be taken accordingly by contractor. (Non-compliance of above will attract the DC)	
11	Spare Issue	Delay due to non availability of Spare Parts during any breakdown/ defect must not be accounted at contractor account.	Yes	No	OK
12	Delay due to Feeding Strategy	Delay due to feeding strategy must not be accounted in Contactor account. Example - Low GCV rake is placed , and Stacker is placed at High GCV area/ Low GCV bunker are filled and vice-versa.	Yes	No	Contactor has to sign off during Next 24 hrs. by JPL CHP-Operation Incharge (in his absence JPL Operation Head), that this delay is not accounted on

		(similarly many examples may occur)			Contractor account. A register must be maintained. And at the end of month its must be scanned and send for final accounting.
13	System constraint	Any System constraints must not be attributed on contractor account . Example- if planned work/ S/D work is taken for BWSR with agreement of Maintenance & Operation Incharges of CHP, and Suddenly rake arrives.	Yes	No	Contractor has to sign off during Next 24 hrs. by JPL CHP- Operation Incharge (in his absence JPL Operation Head) & CHP- Maintenance Incharge, that this delay is not accounted on contractor account. A register must be maintained. And at the end of month its must be scanned and send for final accounting.
14	Load Cell Calibration/ Drop test	Delay (Ex. additional time for clearing the belts & WT hoppers) for the Load Cell Calibration/ Drop test must not be contributed to Contactor account, if approved by client	Yes	No	

15	Owner Instructions/ Other Unforeseen Events	Delay due to Owner Instruction/ Other Unforeseen Events must not be accounted in Contactor account. Example- OEM trial, Oil testing, sudden inspections and Any Others.,	Yes	No	Contactor has to sign off during Next 24 hrs. by JPL CHP-Operation Incharge with the reason (in his absence JPL Operation Head), that this delay is not accounted on contactor account. A register must be maintained. And at the end of month its must be scanned and send for final accounting.
16	Delay due to running defects during tripping	Equipment & System defect	No	Yes	All running defects will be ON contactor account.
17	WT pit area housekeeping	WT pit area housekeeping to be done with high priority	No	Yes	Any issue (delay) arising due to Housekeeping (below Tippler table) will be on contractor account.
18	Route Change Over	Contractor account	No	Yes	Since It should be pre-planned activity for system monitoring, healthiness (its regular O&M job)
19	Crusher hammer repair work	Crusher hammer repair work is a regular O&M work	No	Yes	Delay due to Crusher hammer repair work will be on contractor account. (since there are two stream)
20	Demurrage due to manual	Manual cleaning of wagons after	NO	YES	Additional manpower must

	cleaning of wagon	tippling. All delay must be in account of contractor.			be deployed for manual cleaning of wagon at post tippling.
21	Derailment charges / penalties	Derailment charges due to faulty track is the sole responsibility of contractor. Back to back penalty as imposed by Railways on JPL	NO	YES	
Not e :	Apart from all above points, delay due to any running/ identified defects, Preventive Maintenance, CBM, Operational mistakes will be on account of O&M agency (contractor).				

Service Level Agreement

Key Performance Indicator (KPI) and applicable Liquidated damages for O&M Services of CHP & WT : Jhabua Power Limited, Seoni, M.P.

S N	KPI	Required Expected Level	Penalty	Reconciliation Period	Remark
1	CHP & RLY Availability (including WT)	>98%	a) for 97% - 98 %, Penalty will be 1% of Monthly contract value b) Below (<) 97%, for every 1 % drop, additional Penalty of 2% of Monthly contract value. Example- If Availability is 94.3%, then total penalty will be 7 % (1%+2%+2%+2%) of monthly contract value.	Monthly	Maximum annual LD shall not exceed 15 % of Annual Basic Contract Value (excluding Fatality). The decision of JPL's EIC shall
2	Equipment Availability (CHP & WT & RLY)	>95%	Below 95%, for every drop of 1%, Penalty will be 1% of monthly Contract Value	Monthly	
3	Generation loss due to CHP & RLY Issue / Low Bunker Level	0 KW/hr	For any loss of Generation due to CHP Issue/ Low bunker level, LD @ 5% on monthly Contract Value.	Monthly	
4	CHP & RLY & WT equipment PM Compliance (Equipment level)	>98%	LD @ 0.5% for every 1% drop from 98% Level for all Identified Equipment List of CHP & WT, and also total	Monthly	

			sum of PM worklist of all Individual equipment's.		be final while finalizing monthly penalties, if any.
5	CHP & RLY & WT Corrective Maintenance/ Defect Compliance (Equipment level)	>95%	LD @ 1% for every 1% drop from 95% level (reason attributed to Agency)	Monthly	
6	Wagon Unloading & Cleaning Time	< 4 hrs./ WT	Demurrage Charges levied by Indian Railways.	Monthly	
7	Wagon damage / deficiency charges / penalties during handling levied by railways	100%	Penalties levied by railway will be Bourne by the Agency / contractor	Monthly	
8	Belt Utilization	>50%	If BUF is < 50%, a penalty @1% of monthly contract value for every 1% slippage, shall be levied on prorated basis. (it is subjected to Max 5% of Contract price.	Monthly	
9	CHP bunker Level Monitoring and Maintaining	>50%	0.5% of monthly contract value per instance; subject to a maximum of 2% of monthly contract value. (a) It will be monitored in every shift through either Bunker Level sensors or of rope dropping method.) (b) If it is specified by JPL to empty the bunker, No penalty will be imposed on such occasions.	Monthly	
10	Any Transportation OR any Damage to Mill Feeders & Mill Bunkers due to Metallic Pieces /Foreign Particles	0' (Zero Instances)	a) For any instances of transportation of Foreign Material /metallic pieces in Mill feeder and bunker, it will have a penalty of Rs. 1000/- per instance through Photographic evidence. (if no damage is happening in mill/ feeders) b) If any instances of damage occurs to mill / feeder parts or belts due to Metallic Pieces/ Foreign Material coming through	Monthly	

			<p>bunker., 1.5 times of Cost (damaged material) will be deducted from monthly bill of CHP Contractors</p> <p>c) Further any Generation Loss occurs (loss due to mill tripping/ Mill unavailability) due to Damage to Mill Feeders & Mill Bunkers due to Metallic Pieces /Foreign Particles coming through bunkers, Penalty Clause no. 3 will apply.</p>	
11	Specific Energy Consumption	<p>< 2 Kwh/MT coal handled (for the month of Jan to June, and < 2.2 KWh/MT (for the Month of July to Sept.)</p>	<p>On monthly avg. basis-</p> <p>a) LD of 0.5 % of monthly Contract Value, for Sp. Energy of 2 kwh-2.2 kWh (monsoon period Sp. energy of 2.2 kwh-2.4kwh/MT of Coal handled)</p> <p>b) LD of of 1 %of monthly Contract Value, for Sp. Energy is > 2.2 kWh/ MT of Coal handled (monsoon period Sp. energy of >2.4 kwh/ MT of Coal Handled)</p>	Monthly
12	Minimum Manpower Compliance (The indicative manpower are exclusive of Reliever for maintaining weekly off/Sundays/ National Holydays/Holidays/ Workman Leaves etc.)	> 95%	<p><100 % but >=95%, No deduction</p> <p><95 %, but > 90%, deductions shall be category wise average manpower rates</p> <p>Below 90%, penalty @ 1.5 times of category wise monthly manpower.</p>	Monthly
13	Housekeeping Compliance for CHP & RLY (other than Coal/ dust spillage)	100%	Rs. 2000/-for Every instance of non compliance of Housekeeping (based on photographic evidence on mail.)	Monthly
14	Housekeeping Compliance for CHP &	> 80 % of	Nil (0), if Scorecard value is 80%-100%	Daily basis

	RLY (Coal & Dust spillage)	Score card	<p>1% of Daily Contract Price, if Scorecard is >70% - < 80%</p> <p>2% of Daily Contract Price, if Scorecard is >65% - <70%</p> <p>3% of Daily Contract Price, if Scorecard is > 60% - < 65%</p> <p>5% of Daily Contract Price, if Scorecard is < 60 % (considered as Poor Housekeeping/ No Housekeeping)</p>	monitored & calculated (approved by JPL Engr-In-Charge) But Monthly Reconciled	
15	Documentation Compliance (CHP & RLY)	100%	for any Non Compliance of required documentation (< 95%), LD of 1% of monthly Contract Value.	Monthly	
16	Compliance to environment norms (CHP & RLY)	100%	For Every Identified Instance of Non Compliance (evidence though mail, Photographic evidence, Govt/ Local Community Complains), LD of Max 1% of monthly contract value.	Monthly	
17	Yard Management, Pile Maintenance Compliance & FIFO Compliance. (Defined based on Company's guidelines)	99%	Less than 99 % , will attract Max. of 1% of Monthly Contract Price, based on evidences.	Monthly	
18	Stone-picking compliance (Will be judged by a committee comprising Contractor and Engineer Incharge JPL as per the guidelines)	100%	Weekly Monitoring - (Minimum .Once), Every Instance of Non compliance will attract Rs. 2000/- per instance	Monthly	
19	Fire and Safety Compliance	Zero Accident (LTI)	Minimum Rs. 20000/- for every incident (accident). it will be increased based on Severity of the Incident.	Monthly	
		Zero Fire incidents in CHP area	Minimum Rs. 10000/- for every fire incident. It will be increased based on Severity of the Incident.	Monthly	

		(other than Coal Heap)			
		Zero Fire Instances in Coal Heap	Rs. One 1000/- On daily basis for every fire location of Heap (as per daily Check list)	Monthly	
20	Coal Quantity loss	< 0.5 %	Repeated Instance of Losses of 0.5% (from received coal quantity to fired coal quantity) for contentious 3 months, and its combined sum for any continuous three months is more than 2% will penalty of 2% from 3rd month of monthly Contract price.	Monitoring on monthly Monthly basis	
21	Availability of T&P and consumables	100%	In case any work is delayed due to non-availability of tools & tackles/ equipment/ consumables which are in the scope of the contractor penalty shall be applicable. INR 1000.00/- per instance / day against unavailability of T&P & consumables	Monthly	
22	Availability of Locomotives (2 nos.)	100%	The Contractor shall be ensure that the JPL provided Locomotives are well maintained and available for 24X7 operations LD @ 1% of monthly contract value shall be levied for every 1% reduction or unavailability of locomotives	Monthly	

17.2 Safety:

17.2.1 Penalty for Fatal accident/ Major accident will be levied as indicated below

Description of Compliance Detail Description Criteria Penalty (lump sum)

Fatal Accident/ Major accident Any accident leading to death of workmen* per no of accident #5,00,000 Any accident leading to any percentage of permanent disability* per no of accident #2,00,000

* Penalty will be levied based on the accident report prepared by the NTPC - JPL-Safety. Till the finalization of report, amount will be withheld. These penalties are apart from the compensation to be paid to the workmen by the contractor as per statutory requirements of Workmen Compensation Act.

17.2.2 Penalty for Safety and OHS Compliance will be levied as detailed below: 5% part of monthly bill amount will be considered as base for OHS related issues. Base amount for OHS related issues (A) = 0.05 x (bill amount of month)

Penalties for minor accident/ incident/ non-compliance will be calculated as the percentage of (A) Description of Compliance Detail description Criteria Penalty (% of A)

Minor accident/ dangerous occurrence Any accident leading to Lost Time Injury of 3 mandays or more Per no of incident 10

Any accident leading to unconsciousness, requiring resuscitation, requiring admittance to hospital Per no of incident 10

Collapse or failure of lifting appliances or hoist or conveyors or other similar equipments/ machine: Per no of incident 10

Collapse or failure of a crane, derrick, winch, hoist or other appliance used in raising or lowering persons or goods or any part thereof, or the overturning of a crane Per no of incident 10

Explosion or fire causing damage to the structure of any room or place in which persons are employed, or to any machine or plant, resulting in the complete suspension of ordinary work Per no of incident 10

Electrical short circuit (flashover) or failure of electrical machinery, plant or apparatus, caused by explosion or fire, causing structural damage involving its stoppage or disuse Per no of incident 10

Minor Incidents Reported fire incidents per no of incident 2

Severe Safety Violation Non-use of Safety Belt during working at height per instance 2

Non-use of Arc suit during electrical isolation/normalization of HT/LT modules per instance 2 Use of lifting tools without valid test certificates per instance 2

Non-Compliance of Safety Norms/ Safe conditions Non-use OR improper use of any PPEs (Safety Helmet, Safety shoe, Goggles, Hand gloves, ear plugs, etc) per instance 0.5

Improper use of safety belt Or damaged safety belt per instance 0.5 Non-compliance of MUNPL Permit To Work System per instance 0.5

Non-compliance of observation of various safety audit within the agreed target date Pro-rata basis 2.0 Non-compliance of near miss incident recommendations per instance 0.5

Any unsafe condition reported (welding m/c earthing, use of ELCB, plug-tops, extension boards, damaged gashoses, flashback arrestor, unsafe handling, wheel guard, coupling guard, belt guard, scaffolding, temporary platform, etc) per instance 0.5

Non-compliance of testing of lifting tools, T&P, etc (chain block, hoist, hook chuck, sling, de-shackle, safety belt, full body harness, etc) as per statutory requirements per instance 0.5

Any unsafe act regarding road safety (seat belt, crash helmet, over-speeding, etc) inside NTPC - JPL premises per instance 0.5

Improper condition observed for hand tools, equipment, T&P, etc per instance 0.5

Improper condition observed of vehicles owned by contractor or their workmen per instance 0.5

Safety training to employees (Target: Min 10% of total manpower per month) (Nil penalty if target achieved) Pro-rata basis 2

Compliance to safety sustainability practices Conductance of safety pep talks/ Tool Box Talks with employees per month (Target: inclusion of all employees in that month) (Nil Penalty if target achieved) Pro-rata basis 2

Non Compliance to the conduction of safety motivational programme for employees (Target: Min 01 programme per month) (Nil Penalty if target achieved) No any programme conducted 2

No compliance to health checkup of employees (health checkup to be done for the employee at the time of induction and subsequently annually) per employee not checkup 0.25

Safety inspection will be done time to time. Penalty as indicated above will be levied at the time of release of RA Bill.

17.3 Other Deliverables

S.No KPI Target Penalty Formula Remark

17.3.1 Equipment Availability Un-availability of each critical equipment ≤ 72 hrs in a month If critical equipment is unavailable for more than 72 hrs due to any breakdown, the penalty will be levied @ #1,000/- for each extended day of un-availability. Critical Equipments are PF, WT, SAC, AF, VGF, Crusher, BF, BF, Conveyor, VF, SR, air compressors and Cooling water pumps, (Number of days of extended unavailability x #1,000) Contractor will not be responsible for availability loss due to issues related to power interruption and non-availability of spares.

If in-case, the standard time required to complete the work is itself more than 72 hrs, EIC will decide the appropriate free time allowed to the contractor to carry out the job.

17.3.2 PM compliance $\geq 95\%$ If the PM compliance is less than 95% the penalty shall be 0.1% of monthly contract price for each percentage Number of PM jobs executed $\times 100 /$ Number of PM jobs scheduled for the month

17.3.3 Belt Utilization $\geq 60\%$ ($\geq 50\%$ for Monsoon season)

(Monthly Average) If the belt utilization is less than target, pro-rata penalty @0.5% of monthly contract price per 1% slippage shall be levied (Coal Reclaimed) $\times 100 /$ (conveyor belt capacity) \times (number of operating hours) Monsoon season will be from July to October

17.3.4 Generation Loss due to low bunker level 0 KWhr Penalty will be levied @#2,00,000 per million unit of generation loss Penalty (in Rs) = [Generation loss in million units (MU) in a month] $\times 0.2$ (Rs million) The penalty will be limited to 5% of monthly contract value

17.3.5 Housekeeping compliance $\geq 80\%$

Gradation of service level (see remarks)

1. Gradation is $\geq 80\%$ then no penalty deduction
2. Gradation is $< 80\%$ but $\geq 70\%$ the penalty deduction will be 2% of monthly bill
3. Gradation is $< 70\%$ the penalty deduction will be 4% of monthly bill A committee and location-wise schedule will be developed with the combination of both NTPC - JPL and contractor to evaluate cleanliness of area. The location-wise observation score to be marked in %. The overall location monthly average score should be meet out the target. (see annexure-9 guidelines for housekeeping in CHP area)

17.3.6 Manpower compliance Average manpower per day for the month shall not be less than stipulated minimum manpower per day

Daily manpower attendance should not be less than 95% of stipulated minimum manpower. If avg manpower per day for the month fall below 100% penalty imposed is #2000 per manpower shortage per month.

AND

If daily attendance fall below 95% the contractor shall be charged #2000 per manpower shortage per day. Penalty = [#2000 \times manpower shortage per month] + [#2000 \times manpower shortage per day]

Where:

Manpower shortage per month = [(stipulated minimum manpower per day) \times (No of days of month)] - (Total mandays deployed in the month)

Manpower shortage per day = (0.95 \times stipulated minimum manpower per day) - (actual manpower deployed for the day)

Stipulated minimum manpower per day shall be in accordance with clause-8.11 and clause-8.22

17.3.7 Incidence foreign material in RC Feeder/ mill (in a month) Zero instances In case of any breakdown of mill/ RC Feeder due to foreign material, a penalty of Rs 10,000/- instance shall be levied

17.4 Non-availability of T&P and Consumables:

In case any work is delayed due to non-availability of Tools & Tackles/ equipment/ consumables which are in the scope of the Contractor, LD @ Rs.200/- (Rupees Two Hundred Only) per instance shall be applicable. The LD amount shall be recovered from the Contractor's monthly RA bill. In case the Tools & Tackles/ equipment/ consumables which are in the scope of the Contractor are arranged by NTPC - JPL to expedite the work, the cost of arranging the material/ equipment shall be deducted/ recovered from the Contractor's monthly RA bill. The decision of the NTPC - JPL's EIC shall be final in this regard. Recovery will be done as following rates:

17.4.1 Welding machine: =#500 per day

17.4.2 Argon/ DA/ Oxygen gas: 2.60 X LPP of NTPC - JPL

17.4.3 Large Oven: =#250 per day

17.4.4 Truck, Trailer, etc: As per NTPC - JPL's prevailing rates

17.4.5 Chop Saw without cutting wheel: # 250 per day

17.4.6 Any other consumable item: 1.30 X "PSL price or escalated LPP"

17.4.7 Any other returnable item: @1% of PSL price per day.

17.5 Non-Performance:

For any other non-performance of the contractor, NTPC - JPL's EIC reserves the right to levy the penalty to the contractor limited to 1% of the monthly contract value. This will be in addition to other penalties deducted, if any during the month.

17.6 Deduction for Painting, Fabrication, cable laying and Split AC works

Painting, Fabrication and cable laying works are included in the contractor's scope of work as indicated elsewhere in the contract. However, if such works doesn't get materialized to full extent, deduction for non-completed portion will be done from contractor's final bill at following rates:

Painting Works @ Rs 105.5 per sqm # Steel fabrication @ Rs 17500 per MT # HT Cable @ Rs 230/m,

LT Cable @ Rs 94/m

Control Cable @ Rs 20/m

It is clarified in case the contractor is willfully not performing the above works, NTPC - JPL reserves the right to levy additional penalty as decided by NTPC - JPL's EIC. The decision of NTPC - JPL's EIC will be final and binding.

17.7 Contractor shall undertake to pay the LD/ Penalty at the rates stipulated above and NTPC - JPL shall not be required to prove actual loss or damage.

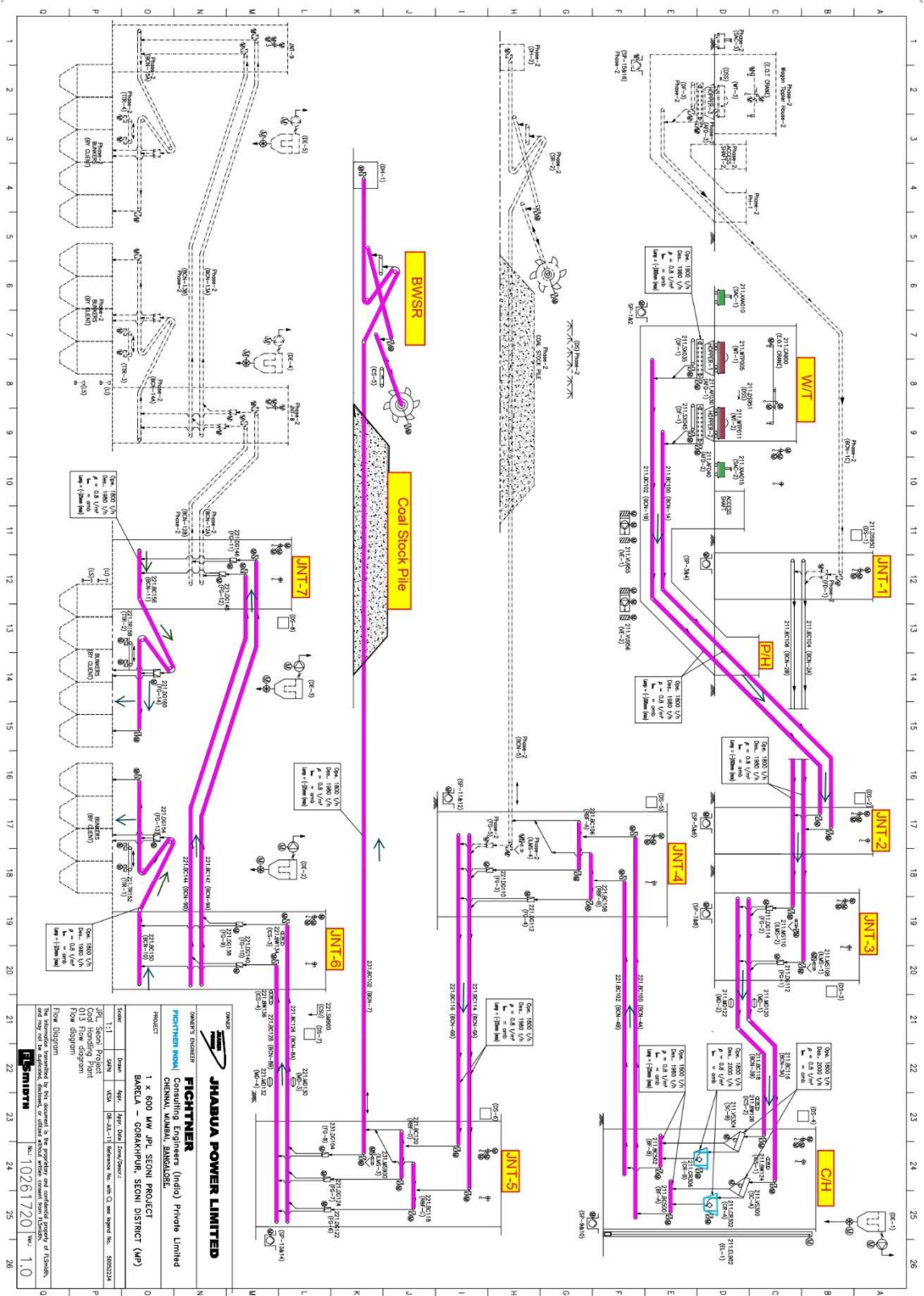
17.8 Penalty payable by the Contractor shall be deducted by NTPC - JPL from outstanding payments due to the Contractor.

17.9 The above will, however, not absolve the Contractor from completing the balance works and will also not in any way prejudice the other rights of the NTPC - JPL to get the Work completed through other agency at the contractor's risk and cost.

- 17.10 No penalties except penalty for manpower compliance (S.no. 17.3.6) will be imposed on the contractor during the stabilization/mobilization period of first one months.
- 17.11 In case of dispute wrt penalty, committee can be formed to resolve the issue but this will be at the discretion of EIC.

#Annexure-1: Coal flow diagram & Railway Siding Layout

Annexure 1.1 Coal Flow Diagram



JHABUA POWER LIMITED

OWNER'S ENGINEER
FICHTNER
FICHTNER INDIA Consulting Engineers (India) Private Limited
CHENNAI, KERALA, BANGALORE.

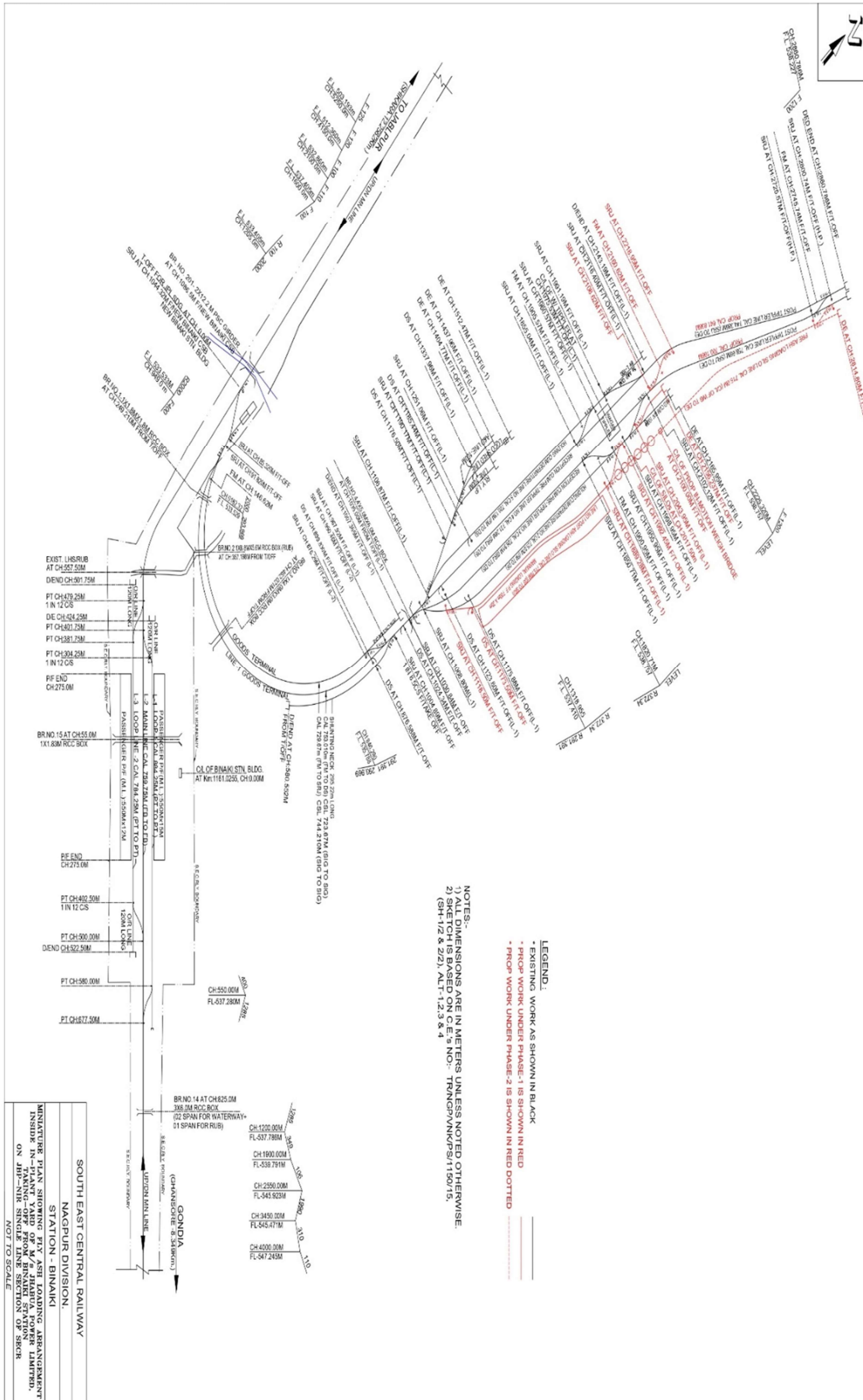
PROJECT
1 x 600 MW PLSI SEONI PROJECT
BARELA - GORAKHPUR, SEONI DISTRICT (MP)

Scale: 1:1
Date: 15/08/2017
Drawn By: Sanku Sanku/Pratik
Checked By: Sanku Sanku/Pratik
Rev: 01
Project No: 15-2017-1
Revision No. with C: 08
Report No.: 50225234

Flow Diagram
013 Flow diagram
Pipe design

Flow Diagram may not be substituted, balanced or altered without written consent from FICHTNER.
Scale: 1:1
Project No: 15-2017-1
Revision No. with C: 08
Report No.: 50225234

Annexure 1.2 Railway Siding Layout



#Annexure-2: Details of Coal Handling Plant

The major systems covering the coal handling plant are as below.

A. Unloading System

Wagon Tippers: 02 nos of WT-1&2 are installed. Side arm chargers are for placement of wagon on the tippler table & removal of empty wagon from tippler table after tipping are also installed. Coal from wagon tippers fallson to apron feeders (AF-1 & AF-2). Apron feeder AF-1 & AF-2 are each of 1800 NTPC - JPL capacity. Apron feeder sreceiving coal from Wagon Tippers, can drop coal on to either conveyor-1A or conveyor-1B. Other subsystem consists of ventilation system, plain water dust suppression system in, paddle feeders and wagon tippers etc

Wagon unloading system: -

Coal for power plant will be conveyed from coal fields by conventional BOXN type railway wagons. Coal unloading will be by wagon tippler. Each wagon tippler will be provided with a side arm charger capable of handling a full rake of 58 loaded wagons into the wagon tippler hopper. Apron feeder is provided below the outlet of each wagon tippler hopper. Dribble feeder provided below the apron feeder collects the coal spilled from the apron feeder. In the first phase, apron feeder & dribble feeder will feed into tunnel belt conveyors BCN -1A/1B & further to conveyors BCN-2A/B through flow divider. BCN-2A/B will feed BCN-3A/B in turn feed coal to screens and crushers. In the second phase, coal will be unloaded from wagons by either of the wagon tippers -3 & 4 provided in the wagon tippler house WT-2 in addition to unloading from wagon tippers-1 & 2 at wagon tippler house WT-1 Apron feeder and dribble feeder provided below the outlet of each wagon tippler hopper will feed onto tunnel conveyors BCN-1C/1D & further to conveyors BCN-2A/2B through flow divider.

Screening & Crushing: -

Belt conveyors BCN-3A/B will further feed into the crusher house. Only single stage Crushing is envisaged. Each conveyor will have a flow divider, two screens and two Crushers. The screens provided in the crusher House will be of vibrating grizzly type

Which will screen out (-) 25 mm coal from the feed, and only (+) 25mm coal is fed to The crushers where the same will be crushed to (-) 25mm size. Ring granulator type Crushers will be provided. In the first phase, each stream of conveyor will be provided with one crusher & one Screen, provision for the second screen and crusher per stream to be made available in the second phase.

Bunker Feeding System:-

The crushed coal of (-) 25mm size would be fed to belt conveyor BCN-4A/B which in turn will feed to conveyors BCN - 6A/6B via reversible belt feeder. Conveyors BCN- 6A/B will feed to another set of reversible belt feeders located at junction tower JNT-5 which will feed either to stockyard conveyor BCN - 7 or to the steam generator bunkers through series of belt conveyors BCN- 8A/B, 9A/B, 10 & 11 through travelling trippers as shown in the flow diagram.

Each row of SG bunkers will be fed by a single conveyor with traveling tripper. In the second phase, the crushed coal would be fed to belt conveyor BCN-4A/B in turn to stockyard conveyor BCN-5 for stacking. If the stockyard is full the crushed coal will be diverted to the coal yard of first phase through conveyor BCN-6A/B or to the steam generator bunkers through series of belt conveyors BCN- 8A/B, 9A/B, 10 & 11 of first phase or to the steam generator bunkers of second phase through series of belt conveyors BCN-12A/B, BCN-13A/B, BCN-14 & BCN-15.

Stacking and reclaiming

Stacking:-

When steam generator bunkers are full, the crushed coal will be diverted to stockpile through Reversible Belt Feeder RBF-C/D at Junction Tower (JNT-5), and reversible yard Conveyor BCN-7. Stacker cum reclaimer will be mounted on BCN-7 for stacking and reclaiming. The stacker would stack coal on both sides of the tracks. In the second phase, when steam generator bunkers are full, the crushed coal will be diverted to stockpile through Reversible Belt Feeder RBF-A/B at Junction Tower (JNT-4), and reversible yard Conveyor BCN-5. Stacker cum reclaimer will be mounted on BCN-5 for stacking and reclaiming. The stacker would stack coal on both sides of the tracks.

Reclaiming:-

The coal from stock pile will be reclaimed by bucket wheel on the boom conveyor of stacker cum reclaimer, to feed onto reversible yard conveyor BCN-7 which will feed in to bunkers through conveyor BCN-8A/B, BCN-9A/B, 10 and 11. In the second phase, the coal from stock pile will be reclaimed by bucket wheel on the boom conveyor of stacker cum reclaimer, to feed onto reversible yard conveyor BCN-5 which will feed in to bunkers through conveyor BCN-8A/B, BCN-9A/B, BCN- 12A/B, BCN-13A/B, BCN-14 and BCN-15.

Other facilities in the plant

Dust control in the plant:-

Coal yard will have water sprinkler system for dust suppression. The system will operate around the stacking area whenever the stacker is in operation. At other times, in case required, the dust suppression system will operate along the entire length of the stockpile, in a pre-designed cycle, so that about 90 m length of the pile is sprayed with water at any time. All the transfer points in the junction houses will be provided with dry fog dust suppression system. A dedicated compressor system will be provided for the coal handling plant. Dust extraction system will be provided in the crusher house from the incoming conveyor till crusher inlet. DFDS will be provided at transfer points from crusher outlet onwards in the crusher house system. Bunker ventilation system consisting of extraction hoods, bag filter and fan will be provided as required.

Ventilation facilities:-

Fresh air ventilation system will be provided for all underground tunnels, junction house floors, etc.

Miscellaneous facilities:-

Fire detection, alarm and fire-fighting system will be provided for the entire coal handling plant. This will be provided as part of a separate package. Freight cum passenger elevator will be provided in the crusher house for easy approach to all the floors.

Hoisting Facilities. Manual - Equipments weighing 500 to 3000 kg and up to a lift of 10 m. · Electric - Equipments weighing beyond 3000 kg and or for a lift of more than 10 m. · E.O.T cranes of about 25T capacity at wagon tippler house. Auxiliary equipments like coal sampling system, belt weigh scales, magnetic separator, metal detectors, etc. will be provided as per flow diagram. Coal yard will be provided with run off pit where water running off the coal yard, floor wash water from junction towers and water from sump pits will be collected, allowed to settle down and then pumped to the central monitoring basin for treatment and disposal.

Design input:-

The following input data are considered for design of the Coal Handling plant:

(a) Weighted Average Gross Plant heat rate	: 2256.1 kCal / kWhr
(b) Gross Calorific Value of coal	: 3150 kCal / kg
(c) Unit capacity in first phase	: One unit of 600 MW
(d) Unit capacity in second phase	: Future 600 MW unit
(e) Size of coal required in the SG bunkers	: (-) 25 mm
(f) Coal receipt	: BOXN wagons.
(g) Guaranteed wagon tipping rate	: 25 Tips/Hr.
(h) Peak payload per wagon	: 60 T
(i) Duty of coal handling plant	: 24 hours continuous
(j) Operating time for coal handling plant	: Three shifts.
(k) Coal stockpile size	: 20 Days' stock of crushed coal.
(l) Power feeders from main unit switch gear 11KV Feeders	: Two numbers of

Assumptions: -

The following values are assumed for sizing the plant capacities:

- a) Density of coal
- For calculation of volume : 800 kg/cu.m
 - For structural design : 1200 kg/cu.m
- b) Surcharge angle for coal : 20 degrees.
- c) Conveyors toughing : Three equal roll 35 degree
- d) Conveyor fill factor : 0.8
- e) Conveyor slope factor : 0.91
- f) Maximum lump size of the coal received : 250/300 mm.

Auxiliary System:-

- a) **Suspended Magnets:** Two nos. of Suspended magnets (SM-1 and SM-2) are provided on Conveyor 1A/1B at Pent House-1 and two nos. of suspended magnets (SM-3 and SM-4) are provided on conveyor 12A/12B near TP-12 for removal of tramp Iron pieces.
- b) **Metal Detectors:** Two nos. of Metal detectors MD-1 and MD-2 are provided on Conveyors 3A/3B and two nos. Metal Detectors MD-3 & MD-4 are provided on conveyor 8A/8B to detect non-magnetic metallic materials present in coal.
- c) **In-line Magnetic Separators:** Two nos in-line magnetic separators (ILMS-1 & ILMS-2) are provided at discharge end of conveyor 2A/2B and one LMS (ILMS-3) is mounted at the discharge end of Conveyors BCN 7 (Reclaiming mode) for removal of metallic ferrous tramp from coal.
- d) **Belt Scale:** Two numbers Belt Scale (BS-1 & BS-2) are provided on Conveyor 3A and 3B and two nos. Belt scales BS-3 & BS-4 are provided on Conveyors 8A/8B, for measurement of coal flow rate.
- e) **Coals sampling:** - CSU-1 is provided in JNT-6 to sample coal.

f) Belt Protection Devices:-

All the conveyors will be provided with following instruments/ safety protections to ensure safe and trouble free operation:

Pull Cord Switches

Belt sway Switches

Zero Speed Switches

Chute Block switches

g) Dust Suppression and Extraction System:-

Plain water dust suppression is provided in Paddle Feeder,- Apron feeder , - Wagon Tippler and Stockyard. Further, all the conveyors receiving and discharge end are equipped with dry fog dust suppression system. In addition, dust extraction system is installed in crusher house.

- h) **Ventilation System:-** Coal Handling Plant in (-) minus meter locations, bunker floor, MCC's, Battery rooms etc are equipped with ventilation system.
- i) Coal water drainage system including coal slurry settling system
- j) All pumps in CHP area including sump pumps, de-watering pumps, cooling water pumps, potable water pumps, service water pumps, dust suppression pumps, sprinkler pumps, etc. All associated piping system of above pumps.

Annexure-2A

List of Equipments in CHP

S. no. Area / Equipment Description

1. Conveyor belt Total length-7.4 Km (NN 2000/5-1.9 Km, ST 1800 - 2.45 Km, NN 1600/4 - 2.59 Km, NN 1250/4-11.12 Km etc.), Capacity - -1980TPH, Belt width- – 1600 to 2200 mm belt speed-3.14 m/s.
2. Belt Feeder 02 nos, Capacity-1980 TPH, Belt width-1800mm, Belt speed- 2.4 m/s, Motor – 5 KW, belt material – NN 800/5 Gear box B3-250 (PREMIUM), Fluid coupling-370SDFC
3. Crusher 02 nos, Capacity-1980 TPH, make- ThyssenKrupp RPM-- 480 ,1 MW No of hammers 22 nos (2x30 – 2x31) , Weight of hammer- 24 kg – 34 Kg , Material- Manganese cast steel Gr-3, IS276 – Manganese alloy
4. Stock pile– 02 nos Length-- 505 M Width — 40 M Height-10M., Each pile capacity-1 L MT .
5. Stacker Reclaimer 1 no capacity-1980 & 1500 TPH (Stacking and reclaiming respectively) Reach- 40 M Slew– (+) 5 deg to (-) 9 deg Make-FLSmidth
 - a. 16 nos of eared motor installed in double wheel bogie arrangement Make – International Combustion India Limited
 - b. 2 nos of hydraulic slew motors MRTA 12000 P Make – Parker Calzoni
 - c. 1 no of boom conveyor with 40 Meter Length Gear box – Helimax, Coupling – Fluid coupling – Premium Make.
6. 1 no of Bucket wheel drive MRTA 35000 T
7. 2 nos of VGF screen – 1980 TPH Make – ThyssenKrupp
8. Dust suppression system Sprinkler System for WT, Coal Stack Yard & , Dry Fog System for Crusher House & Chutes.
9. 2 nos of Wagon tippler Make – FLSmidth, Rexroth make hydraulic system for tipping drive (2 nos of hydraulic motor Hagglunds make), top clamp (6 nos of Rexroth make hydraulic cylinders), side clamp (4 nos of Rexroth make hydraulic cylinders), platen wheel gripper (4 nos of Rexroth make hydraulic cylinders) and inhaul wheel gripper (2 nos of Rexroth make hydraulic cylinders).
10. 2 nos of Side arm charger machines with Rexroth make hydraulic system including 4 nos of Poclairn make hydraulic motors for long travel and Rexroth make Hydraulic cylinders for arm and coupler arrangement.

11. 2 nos of Dribble feeder each sat the bottom of Apron feeder with 5.5 Kw electric motor.
12. BCN 10 & 11 Upto TTR 1 & 2 respectively with 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 97 meter – motor – 160 Kw, NN belt 800/4 FR grade, gear box new Allenberry make – CKB – 280, fluid coupling Premium make– SDFC 450.
13. BCN 1 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 190 meter – motor – 355 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 400, scoop coupling Premium make – PST 570.
14. BCN 2 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 145 meter – motor – 160 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 280, fluid coupling Premium make – SDFC 450.
15. BCN 3 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 380 meter – motor – 250 Kw, NN belt 1250/4 FR grade, gear box – New Allenberry make CKB – 355, scoop coupling Premium make – PST 500.
16. BCN 4 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 125 meter – motor – 250 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 355, scoop coupling Premium make – PST 500.
17. - BCN 6 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 125 meter – motor – 355 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 400, scoop coupling Premium make – PST 570.
18. CONVEYOR 7A/B Belt width-1600mm,belt speed-3.4m/ sec, capacity - 2200T/hr., angle - length-157.376/153.876 motor-375KW, belt mat.- N/N1250/4, gear box- B3- 450, fluid coupling: PST-570 J 24 CONVEYOR 8A/B Belt width-1600mm, belt speed-3.4m/sec, capacity- 2200T/hr., angle-, length-77.344/77.332, motor- 200KW, belt mat.-N/N1250/4, gear box-B3-355, fluid coupling: PST-500. - BCN 7 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 707 meter – motor – 355 Kw, NN belt 1250/4 FR grade, gear box – New Allenberry make CSB – 400, scoop coupling Premium make – PST 570.
19. BCN 8 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 475 meter – motor – 710 Kw, NN belt 1600/4 FR grade, gear box – New Allenberry make CKC – 560, scoop coupling Premium make – PST 660.
20. BCN 9 A/B 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 80 meter – motor – 160 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 280, fluid coupling Premium make – SDFC 450.
21. BCN 10 & 11 1600 mm belt width, belt speed 3.14 m/s, capacity – 1980 TPH, length – 97 meter – motor – 160 Kw, NN belt 800/4 FR grade, gear box – New Allenberry make CKB – 280, fluid coupling Premium make – SDFC 450.
22. FLAP GATE 11 NOS. AT DIFFERENT LOCATION
23. COAL SMPLING UNIT 1 no.
24. Compressor 1 no Kirloskar make – KES 132 – 7.5, operating pressure – 7.5 Bar, Motor – 132 Kw with SF 1.2, free air delivery – 865 cfm.
25. Metal detector 2 NOS. BCN-1A (MD1)/1B (MD2), MODEL: SUPER SEARCH METAL DECTOR, COAL LUMPSIZE (-) 400MM 2 NOS. 8CN-6A (MD3)/6B (MD4), MODEL: SUPERSEARCH METAL DECTOR, COAL LUMP SIZE (-) 50MM 2 Nos. PULSE TYPE METAL DETECTOR. - Two nos. of Tramp type Oretronic III Metal detectors MD-1 and MD-2 are provided on Conveyors 3A/3B and two nos. Metal DetectorsMD-3 &MD-

- 4 are provided on conveyor 8A/8B to detect non-magnetic metallic materials present in coal.
26. – 2 nos of Vibrating grizzly feeder in crusher house with 2000 TPH capacity make – ThyssenKrupp, 45 Kw Motor.
 27. Two nos in-line magnetic separators (ILMS-1 & ILMS-2) DC operated oil cooled electro magnet type are provided at discharge end of conveyor 2A/2B and one LMS (ILMS-3) is mounted at the discharge end of Conveyors BCN 7 (Reclaiming mode) for removal of metallicferrous tramp from coal. Belt width – 1600 mm, operating height – 500 mm, , 3.14 m/s belt speed, 1980 TPH, Make – Magnetics corporation of India.
 28. 2 nos of Aluminium coil suspended magnet system of Make – Elektromag installed in BCN 1A/B. Magnet rating – 10 KW, Operating voltage – 115 V DC, Operating height – 300-400 mm.
 29. TRANSFER POINTS – 7 nos.
 30. ELEVATOR 2NOS. (CRUSHER HOUSE,) – 01 no at crusher house
 31. DUST SUPPRESSION PUMP– 2 nos of DSS pump for coal stock yard (1 working + 1 standby). Horizontal centrifugal 2 stage pump, Make KBL, Model – RKB 100/23 E, capacity – 130 m³/hr., RPM – 2900, Motor – 75 Kw.
 32. Wagon Tippler pump 2 nos of DSS pump wagon tippler and wagon pre wetting system, 3 stage horizontal centrifugal pump, Make – KBL, Model – RKB 65/19 E, Capacity – 85 m³/hr., RPM – 2900, Mootor – 45 Kw
 33. DFDSS pump– 2 nos of DFDS + service water pumps, 4 stage horizontal centrifugal pump, Make – KBL, Model – RKB 50/15 L, Capacity – 25 m³/hr., RPM – 2900, Motor – 18.5 Kw.
 34. DUST EXTRACTIONFAN– 1 no at crusher house with 180 Kw motor.
 35. PULLEY DE AND NDE, NDE, Bend, snub, take up pulley – 122 nos.
 36. SCRAPPER INTERNAL AND EXTERNAL SCRAPPER AT ALL TRANSFER POINT.
 37. IDLER TOTAL IDLERS- more than 30,000 NOS.(CARRYING, IMPACT, V-ROLL RETURN, SELF ALLIGN,FLAT RETURN)
 38. FAN FOR VENTILATION 50 WATT-7NOS, 0.55KW-4NOS, 5.5KW-4NOS, 7.5KW-9 NOS, 9.3KW-2NOS, 11KW-3NOS, 15KW- 3NOS, 18KW-12 NO, 22KW-1NO, 30KW-1NO, 0.75 KW- 32 Nos
 39. Hoists Make Tractel Trifor Electric Hoists: 71 nos of manual and electrical hoists at complete CHP (JNTs and Conveyors).

Annexure-4: Minimum recommended Tools and Tackles

All required tools &tackles for smooth running of entire CHP are in Contractor scope with tested by competent person as per factories act 1948. Minimum recommended are as under:

- 1.1 LOTO Locks with different colours (As per Dept. code) no- 60 Nos (20 for Red, 20 Yellow , 20 green , 20 blue)
- 1.2 Grass cutting machine 02 nos

- 1.3 Portable metal detector for MD -1 /2 /3 /4 area for time saving and easy identification.
Nos-4
- 1.4 Water jet cleaning machine for radiator and JNT floor cleaning
- 1.5 Torches for area operators/Engineer / SIC (each Area)
- 1.6 Chain Blocks [capacity(MT) 1, 2, 3, 5, 10]- 4each
- 1.7 Hook Chook upto 5 MT 2 each
- 1.8 Hand drill machine upto 8mm 2 nos
- 1.9 Slings and wire ropes of various capacities- as per requirement
- 1.10 D-Shackles of various capacities - as per requirement
- 1.11 Hydraulic Jacks (10/25 T-2each & 50T- 1no
- 1.12 Allen key sets (mm & inches) 2 nos each
- 1.13 Ring, D Spanner, box spanner, Socket spanner set (complete range upto 32mm) -2 sets each
- 1.14 Adjustable slide and pipe wrenches (6"&12") - 2sets
- 1.15 Bearing Puller upto 17 MT - 2 each
- 1.16 GreaseGun4"- 2nos
- 1.17 Bucket Grease Gun - 2nos
- 1.18 Bastard (Rough cut) Files a Flat, b. Round - 2sets
- 1.19 Fine cut Files (a) Flat, (b) Round, (c) Half Round - 2 sets
- 1.20 Hack saw frame with 1 dozen blades (12") - 4nos
- 1.21 Three phase welding machines (min 1 no. for each TP),
- 1.22 Portable Welding Machines 4nos
- 1.23 Grinding machines of various size (FF2/AG4/AGS/AG7 - 2 nos each
- 1.24 Gas cutting set (6 nos with minimum 50m hose),
- 1.25 Brazing set 2nos),
- 1.26 Hammers- 5 kg &10 kg 3 Nos each
- 1.27 Screw driver set of various sizes- 4sets
- 1.28 Circlip Plier (inside &Outside)- 3set
- 1.29 Shim Cutter- 03nos
- 1.30 Hand Oil Pump &Motorized Oil Pump- 1 no each
- 1.31 Belt Pulling Clamps- 1set
- 1.32 Torque wrench upto to 4000 Nm - ono each
- 1.28 Slogging wrench (30 / 36 / 41/ 46/ 50/ 55/ 60/ 65/ 70/ 75) – 2 nos each
- 1.29 Adjustable outside micrometer (Size 0-150mm), (50-300mm) 1 no. each
- 1.30 Inside micrometer (Size50-150mm),(50-300mm) 1 no. each
- 1.31 Outside micrometer, size 0-25mm- 2 nos
- 1.32 Vernier calipers 0-150mm, Dial type 2 nos
- 1.33 Vernier calipers 0-300mm, Dial type 2 nos
- 1.34 Universal Spirit level 150mm- 2 nos
- 1.35 Dial gauges 0-10mm, 0.01 LC- 5 nos
- 1.36 Feeler Gauge 01 No. Each size Metric 0.025 to 1mm (26Blades) 6"- 2 nos
- 1.37 Feeler Gauge 01 No. Each size Metric 0.025 to 1mm (26 Blades) 12"- 2 nos

- 1.38 Straight edge, 500mm, 1meter= 1 no each
- 1.39 Surface plate, 300x300 mm 1 nos
- 1.40 Master level -100mm, 150mm 1each
- 1.41 Die and Tap set (upto 30mm) 1 set each
- 1.42 Magnetic base with dial gauge 0-10 mm 2 set each
- 1.43 Thread Gauge set (BSP, BSW, UNC, Metric fine/coarse)- 1 set
- 1.44 Slip Gauge set-1 set
- 1.45 Hot & Cold joint vulcanizing tool kit-1 set each
- 1.46 Winch -10 ton 1nos
- 1.47 Bench Drill machine up to 20mm with drill bits 1 nos
- 1.48 Tap set (mm & inch size) (20MM & 1 INCH) -1 no each
- 1.49 Die set (BSP thread) (internal & external) upto 1 inch -1 no each
- 1.50 Portable electronic weighing machine for hammer balancing 1 nos
- 1.51 Bearing Induction Heater 1nos
- 1.52 Pocketable temperature meter/Temperature Pen 1nos
- 1.53 Ultrasonic thickness gauge/D-meter 1nos
- 1.54 Transport Vehicles such as tractor & trolley
- 1.55 Bus and Van for transportation of workmen
- 1.56 Digital multi-meters -5nos, AC & DC clamp-on meters-5nos,
- 1.57 Insulation testers - 500V, 1.0 KV, 2.5 KV, 5KV and 15 KV - 2 no. each
- 1.58 Motor Checker - 2nos.
- 1.59 05 no of manual Crimping tools up to 16Sqmm,
- 1.60 03 Kits of Electrician tools, Soldering iron with solder wire (2No) 1-ph(230V), De-soldering pump
- 1.61 Pipe wrench 300mm
- 1.62 Pliers (nose & cutting) 6 Nos
- 1.63 Screw driver/ Connector 6SET,
- 1.64 Test lamp Holder with lead 12No
- 1.65 T&P carrying bag 5No
- 1.66 Torch 3 cell minimum 5Nos
- 1.67 Hand Crimping Tool upto 50 sqmm 2No
- 1.68 Hydraulic operated crimping tool required for relogging work above size 50sqmm
- 1.69 Air blower- 5No.
- 1.70 OFC Splicing machine
- 1.71 Earth Resistance Tester
- 1.72 Milliamps injector for 110V/ 240V transducer testing
- 1.73 3 phase Variac of 500 V
- 1.74 Hydraulic Crimping Tool upto 630 sqmm cable
- 1.75 CRM Kit # 01no
- 1.76 Multi gas detector
- 1.77 Reflective jackets for all workman
- 1.78 Fire resistant blankets 12 nos
- 1.79 Acid resistant Apron -04 nos

1.80 Portable earthing rod – 08

1.81 Flash Arc suit-02

1.82 Fire extinguisher -10 Nos

INDICATIVE C&I LIST OF T&P			
SL NO	DESCRIPTION	Unit	Min. Stock
1	BOX SPANNAR set	NO	5
2	D Spanner Set	NO	5
3	ADJUSTABLE SPANNAR	NO	5
4	PIPE WRENCHES	NO	5
5	CUTTING PLAYER	NO	10
6	COMBINATION PLAYER	NO	10
7	NOSE PLAYER	NO	5
8	CIRCLIP-INSIE&OUTSIDE PLAYER	NO	10
9	FLAT FILE ROUGH	NO	10
10	FLIE HALF ROUND ROUGH	NO	10
11	FILE ROUND	NO	10
12	FLAT FILE SMOOTH	NO	10
13	FILE HALF SMOOTH	NO	10
14	FILE ROUND SMOOTH	NO	10
15	ALLEN KEYS(METRIC/ENGLISH) SET	NO	10
16	ALLEN KEYS(METRIC/ENGLISH) EACH	NO	10
17	NUMBER PUNCH	NO	2
18	LETTER PUNCH	NO	2
19	Aluminium Tag Punch Machine	NO	1
20	WATER LEVEL HOSE PIPE-8MM	NO	10
21	WATER LEVEL HOSE PIPE-12MM	NO	10
22	BLACK RUBBAR HOSE PIPE FOR AIR	NO	10
23	STAR SCREW DRIVER	NO	20
24	SCREW DRIVER	NO	20
25	Tester	NO	20
26	Greese Gun	NO	2
27	Drill Machine with drill bit (all size)	NO	3
28	SPRIT LEVEL-300MM	NO	6
29	AIR BLOWER	NO	2
30	INDUSTRIAL VACUUM CLEANER	NO	2
31	DIGITAL MULTIMETERS	NO	10
32	High Precision Multimeter	NO	5
33	LAZER THERMO METER	NO	2
34	Digital Electronic Earthing Resistance TESTER	NO	2
35	CRIMPING TOOLS 0 SQMM TO 400SQMM	NO	2

36	CRIMPING TOOLS 400 SQMM TO 1000SQMM HYDRALIC	NO	2
37	HAND GLOVES (INSULATED)	NO	10
38	TOUNG TESTERS	NO	5
39	TOUNG TESTERS (milli Amps)	NO	2
40	CUTTING & FLARING TOOLS FOR COPPER and SS TUBE	NO	2
41	Ferrule Printing Machine (for C&I Cables)	NO	1
42	Precision Screw Driver / Watch Maker	NO	2
43	Tool Kit for each Technician	NO	10
44	Impulse tube Hydraulic Pressurize Bending Unit (all sizes tubes)	NO	1
45	Copper tube bender with Cutter	NO	2
46	SS tube bender with Cutter	NO	2
47	Hand torch	NO	4
48	Insulated spanner set	NO	1
49	Pointer Puller (for gauges)	NO	2
50	Ladder 10 mtr	NO	1
51	RJ45 Crimping Tool	NO	1
52	BNC crimping Tool	NO	1
53	LAN Tester	NO	2
54	Holesaw Cutter (6 to 32 mm)	NO	2
55	Hygrometer (for Battery electrolyte)	NO	5
56	Thermometer (digital)	NO	10
57	HART Communicator	NO	2
58	Soldring Iron SET (with soldering wax, rope)	Nos	10
59	Fibre Splicing Machine	NO	1

ELECTRICAL TOOLS LIST				
S. NO	EQUIPMENT	MAKE	MODEL	QUANTITY
1	MULTIMETER	FLUKE		4
2	CLAMP METER	FLUKE		2
3	LT INSULATION TESTER	RISHAB		2
5	HT INSULATION TESTER	Kyoritsu		2
6	EARTH TESTER	WOCO		1
7	MOTOR CHECKER	MCM INSTRUMENTS		1
8	LUX METER	HTC		1
9	ELCB TESTER	SEW		1
10	TEMPERATURE GUN	STANELY		2
11	RING SPANNER 6X7	TAPARIA		2
12	RING SPANNER 8X9	TAPARIA		2
13	RING SPANNER 10X11	TAPARIA		2

14	RING SPANNER 12X13	TAPARIA		2
15	RING SPANNER 14X15	TAPARIA		2
16	RING SPANNER 16X17	TAPARIA		2
17	RING SPANNER 18X19	TAPARIA		2
18	RING SPANNER 20X22	TAPARIA		2
19	RING SPANNER 21X23	TAPARIA		2
20	RING SPANNER 24X27	TAPARIA		2
21	RING SPANNER 25X28	TAPARIA		2
22	RING SPANNER 30X32	TAPARIA		2
23	DOUBLE END SPANNER 6X7	TAPARIA		2
24	DOUBLE END SPANNER 8X9	TAPARIA		2
25	DOUBLE END SPANNER 10X11	TAPARIA		2
26	DOUBLE END SPANNER 12X13	TAPARIA		2
27	DOUBLE END SPANNER 14X15	TAPARIA		2
28	DOUBLE END SPANNER 16X17	TAPARIA		2
29	DOUBLE END SPANNER 18X19	TAPARIA		2
30	DOUBLE END SPANNER 20X22	TAPARIA		2
31	DOUBLE END SPANNER 21X23	TAPARIA		2
32	DOUBLE END SPANNER 24X27	TAPARIA		2
33	DOUBLE END SPANNER 25X28	TAPARIA		2
34	DOUBLE END SPANNER 30X32	TAPARIA		1
35	ADJUSTABLE SPANNER 8"			1
36	ADJUSTABLE SPANNER 15"			1
37	MEASURING TAPE 3MTR			1
38	HAMMER 1/2 KG			1
39	COMBINATION PLAYER	TAPARIA		1
40	WIRE STRIPPER			1
41	ROUND FILE 12"			1
42	FLAT FILE 12"			1
43	CHAMPION SET	TAPARIA		5
44	HEXA FRAME 6"			1
45	HEXA FRAME 12"			1
46	ALLEN KEY SET MM			1
47	SCREW DRIVER 250 MM	TAPARIA		3
48	complete TOOL BOX			4
49	NOSE PLAIR	TAPARIA		3
50	KNIFE			1
51	LT HAND GLOVES			5
52	HT HAND GLOVES			5
53	CRIMPING TOOL			2
54	LETTER PUNCHING			1
55	NUMBER PUNCHING			1
56	AIR BLOWER			2
57	Hydraulic crimping tool			2
58	Industrial vacuum cleaner			1
59	Hot blower			1

60	Bearing Puller HT & LT motor			1
61	Bearing induction heater LT			1
62	Bearing Fitting tool for LT			1
63	AC Leakage tester			2
64	DC clamp on meter			1
65	Teflon hammer			2
66	Cooper rod			1
67	Drill machine			1
68	Phase sequence Meter			1
69	Discharge Rod-11KV			5

T&P for Railway siding

SL.NO.	DEPARTMENT	TOOLS DETAILS	Unit	Qty
1	OPERATION	Torches 2/3 cells to the workers as per requirements.	No	20
2		Flash light (green & red) to all points' man	No	20
3		Flag-Red & Green	No	20
4		Hammers to all C&W to staff as per requirement (Wooden handle).	No	10
5		Adjustable (Sli) wrench to change track points.	No	10
6		Metallic bar (Shovel)	No	6
7		Spade	No	5
8		Belcha	set	5
9		DE spanner 6-32 mm	set	2
10	MAINTENANCE	Ring Spanner	No	4
11		Adjustable Wrench 12". 18". 24"	No Each	2
12		Light Hammer (4.5 pounds)	No	10
13		Heavy Hammer (8 pounds)	No	10
14		Fawada (hindi)	No	10
15		Gaiti (hindi)	No	10
16		Spade	No	10
17		Rack-ballast	No	2
18		Hand rack ballast	No	20
19		Rail-Trolley	No	4
20		Dipplory	No	1
21		Push Trolley	No	1
22		Flag-Red & Green	No	8
23		Ratchet with drill bit (for rail hole)	No	2
24		Gauge cum level	No	3
25		Spirit level	No	2
26		Hydraulic jack (25 ton)	No	1
27		Crow bar	No	30
28		Dog Spikes (Kutta in Hindi)	No	6
29		Track lifting jack (10 ton)	No	3
30		Measuring Tape (3m., 10m., & 30m.) (Each 2 no.)	No	6
31		AT Welding kit	SET	2
32		Welding transformer 1/2/3 phsse with 50 Meter Welding lead & other accessories required for welding	No	2
33		Pipe wrench 12".18".24". (Each 1 no.)	No Each	1
34		Flat file Coarse/Fine	No. Each	3
35		Half round files Coarse/Fine	No	3
36		Hacksaw frame with blade	No Each	4
37		Wire rope slings 12, 18 & 25 mm	No.	6
38		Circlip Plier	No	2
39		Small Grease Gun	No	2
40	Drill Machines	set	1	
41	Allen Key Set (All types)	No Each	2	
42	Grinder (FF-2/AG7)	No	2	
43	Vernier Caliper,Range:0-300mm	No	2	
44	Dial gauge with magnetic stand	No	1	
45	Temperature Gun	No	1	
46	Letter Punch	set	2	
47	Number Punch	set	2	
48	Cotton Waste and Cloth	as per requirement		
49	Kerosine Oil	as per requirement		
50	USFD Machine	as per requirement		
51	Rail-cutter	No	1	
52	Rail grinder	No	3	
53	Multi meter	No	2	
54	P-way inspection kit	set	1	
55	Hydro-meter	No	4	
56	Hooter	No	3	
57	Safety Belt	No	3	
58	D-Shakles (2MT, 3MT, 5MT & 10MT)	No	8	
59	Polyster Wed Sling	No	2	
60	Spray Gun	No	1	
		auto level machine	No	1

SL. No.	Description	Capacity	Remark's
OHE T&P			
1	Ladder Aluminium		09 Meter With (Sliding)
2	Chain Pulley Blocks	2 Ton	
3	Tarfer	1.5Ton,03	
4	D Ring & Open Spanner	10 To 32	
5	Screw Driver SET		
6	Tester		
7	Cotton Waste.	Kg	
8	Rope	22 MM	
9	Wire Rope	10 MM	
10	Safety Belt		
11	Kuppi		
12	Auto clamp		
13	Hammer	02 Kg	
14	Kamla Clump.		
15	Pull Lift		1.5Ton

PENALTY ON ABOVE IS NOT BROUGHT WITHIN FISRT MONTH

2. In addition to above if any tool/tackle is required to complete the job contractor has to arrange free of cost.

Consumable List :

LIST OF CONSUMABLES TO BE SUPPLIED BY CONTRACTOR

01. Kerosene, diesel, petrol and rustolene, petrolium Jelly, CRC 2.26.
02. CTC, Benzene etc.
03. Hacksaw blades.
04. Cotton waste.
05. Markine cloth and old cloth and muslin.
06. Asbestos cloth.
07. Prussian blue.
08. Lead wire (1.0 mm, 1.5 mm, 0.5 mm)
09. Liquid soap/soappowder.
10. Carborundum grinding paste (fine, medium and coarse)
11. Cut off wheels.
12. Grinding wheels.
13. Oil stones.

14. Mounted wheels and rotary cutters.
15. Oxygen, LPG and DA cylinders.
16. DP test kit and coir rope.
17. Welding and brazing electrodes of various grades.
18. Cardium compound.
19. Chalks, marking pens, and thermal chalks up to 600°C
20. Sander discs and wheel.
21. Insulation and medical tapes.
22. Polythene sheets.
23. Material for blast cleaning purposes.
24. Hand gloves (asbestos and rubber, cotton, leather), manila rope.
25. Needle file set.
26. Air blower (electric)
27. Electric drills (1/4", 1/2", 5/8")
28. Ball pen hammer of various sizes.
29. Electric switchboards and floor light arrangements.
30. Magnifying glasses.
31. Plastic/fiber helmets for labors.
32. Gas cutting and welding goggles.
33. Argon gas welding equipment.
34. Hand gloves Cotton & Leather.
35. Anabond
36. M Seal
37. Brush
38. Electric Bulbs (60W/24V)
39. Battery DC Torch (Long range and High illumination)
40. Gaskets (Rubber, Oil sheats, oil papers)
41. Glands ropes and asbestos ropes
42. Fevicol (998) & Fevifold
43. Coir rope
44. Conical grinding stone
45. Cotton tape rope
46. Drill bits
47. Emery sheets
48. FG Tape varnished roll
49. Fibre glass sheet
50. Ferrules of different sizes
51. Fibre sleeve
52. Gouch/Gerb screws
53. Insulation screws and wood screw
54. Holdtite Graphite compound
55. Holdtite Liquid sealant
56. Devcon Metal past
57. Lugs (Alluminium/copper)

58. Loctite (Flange, sealant, thread sealant, bearing retainer)
59. MS Fasteners of all sizes
60. O Ring/ Cord
61. PVC Solution & Teflon tape
62. Paint Brush, wirebrush
63. Raval Plugs
64. Pendant Holder
65. Twine and Varnish
66. All sizes of Shims
67. Sand paper
68. Shellac
69. Soldering paste & rod
70. Spark lighter, welding Glass, welding holders.
71. MCB DP, TP & 4P up to 63A
72. Brake liner plate for BWSR and TTR
73. Hire make 70 amp Diodes for ILMS
74. OM automation 190V DC rectifier for brake coil
75. Carbon brush for hooter and spring charge motors
76. LT motors Terminal block
77. 12V Battery connectors
78. Cu brazing machine
79. Hot air blower with temp control
80. Oil seals, circlips and lock pin for motor and Breakers
81. Aluminium Tape/3"
82. Battery 1.5V AA (Pencil Battery)
83. Battery 1.5V AAA (Pencil Battery)
84. Battery Terminal clips (Crocodile clips)
85. Battery 9 Volt
86. Cable Tie (all type)
87. Contact Cleaner (Kilnit-350ML)
88. Waste Cotton
89. Cotton Tape 1"
90. CRC 2-26 (Spray-500ML) 91. DC 2-226
92. Fill And Forge
93. Glass Fuse 0.5A
94. Glass Putty
95. Glass Fuse 250 mA (for PLC)
96. Glass Fuse 1 A & 2 A (for PLC)
97. Glass Fuse 500 mA (for PLC)
98. O-Ring Kit (all sizes)
99. O-Ring Rope (all sizes)
100. Hydro Meter (for battery electrolyte)
101. Insulation Tape (all colors)
102. ISOLATION TAG/BLUE

103. Locktite-262
104. Lugs 0.5 Sq.mm Pin Type Copper
105. Lugs 1.5 Sq.mm CU. Ring Type
106. Lugs 1.5 Sq.mm Pin Type Copper
107. Lugs 2.5 Sq.mm. Cu. Pin Type Copper
108. Lugs 2.5 Sq.mm. Cu.-Ring Type Copper
109. Non Insulation Tape 1"
110. Nylon rope
111. Polythine cover
112. Salt (for Electronic Earthing Pit)
113. Charcoal (for Electronic Earthing Pit)
114. Silican Spray 550MI(Ecosil)
115. Silicon Silant
116. Stanvac
117. Tool mates off-line contact cleaner co2
118. Waxy Fillam
119. Soldring Iron SET (with soldering wax, rope)
120. TEFLONE TAPE
121. RUSTOLINE
122. PACKING TAPE 3"(BROWN)
123. HOLD TIGHT / Lock tight
124. MEASUREMENT TAPE-3MTR
125. MEASUREMENT TAPE-5MTR
126. MEASUREMENT TAPE-10MTR
127. MEASUREMENT TAPE-15MTR
128. MEASUREMENT TAPE-30MTR
129. RUBBAR HAND GLOVES (for Battery maintenance)
130. TESTER
131. Apron (for battery maintenance)
132. Eye Goggles (for battery maintenance)
133. Araldite
134. RJ-45 Connector
135. SpringWasher(4 & 6mmdia)
136. SpringWasher(8mmdia)
137. SpringWasher(10mmdia)
138. SpringWasher(12mmdia)
139. Copper Washer (6mm dia)
140. Copper Washer (8mm dia)
141. Copper Washer (10mm dia)
142. Copper Washer (12mm dia)
143. Transparant Polythene bag
144. Self-adhesive thin plastic packing-6" wide roll
145. Wire / Cable – 3CX2.5Sqmm, 4C X 2.5Sqmm (300Mmtr to maintain for vendor internal work.

146. Industrial type switch boards
147. Domestic type switchboards
148. 24 V DC Light (for confined space work)
149. Halogen & tube (500W & 1000W)
150. Teflon hammer
151. Copper rod
152. Varnish
153. Lugs 4 Sq.mm. Cu. Pin Type Copper
154. Lugs 4 Sq.mm. Cu.-Ring Type Copper
155. Lugs 6 Sq.mm. Cu. Pin Type Copper
156. Lugs 6 Sq.mm. Cu.-Ring Type Copper
157. Lugs 4 Sq.mm. Cu. Pin Type Copper
158. Lugs 4 Sq.mm. Cu.-Ring Type Copper
159. Lugs 10 Sq.mm. Cu. Pin Type Copper
160. Lugs 10 Sq.mm. Cu.-Ring Type Copper
161. Straight through lugs for 2.5Sqmm, 4 Sqmm , 6sqmm and 10 sqmm.
162. HT & LT adhesive tape
163. Terminal block upto 10 Sqmm
164. HT & LT gloves

Indicative C& I list of Consumables			
SL NO.	Description	UNIT	Min. Stock
1	Aluminium Tape (all sizes)	Roll	20
2	Battery 1.5V AA (Pencil Battery)	No's	10
3	Battery 1.5V AAA (Pencil Battery)	No's	20
4	Cell - 4 V / 6V / 12V (rechargeable with charger)	No's	20
5	Battery Terminal clips(Crocodile clips)	No"s	10
6	Battery 9 Volt	No's	20
7	Cable Tie (all type)	Pkt	100
8	Contact Cleaner (Kilnit-350ML)	Btls.	10
9	Waste Cotton	Kgs.	5
10	Cotton Tape 1"	Roll	20
11	CRC 2-26 (Spray-500ML)	Ltrs.	10
12	DC 2 -226	Nos	10
13	Fill And Forgate	Ltrs.	10
14	Glass Fuse 0.5A	No's	100
15	Glass Putty	Kgs.	20
16	Glass Fuse 250 mA (for DCS / PLC)	No.s	50
17	Glass Fuse 1 A (for DCS / PLC)	No.s	50
18	Glass Fuse 500 mA (for DCS / PLC)	No.s	50
19	O-Ring Kit (all sizes)	No.s	50
20	O-Ring Rope (all sizes)	Set	1

21	Insulation Tape (all colors)	Roll	100
22	ISOLATION TAG/BLUE	Pcs	100
23	Loctite-262	Nos	10
24	Lugs 0.5 Sq.mm Pin Type Copper	No's	200
25	Lugs 1.5 Sq.mm CU. Ring Type	No's	100
26	Lugs 1.5 Sq.mm Pin Type Copper	No's	300
27	Lugs 2.5 Sq.mm. Cu. Pin Type	No's	300
28	Lugs 2.5 Sq.mm. Cu.-Ring Type	No's	26
29	Non Insulation Tape 1"	Roll	13
30	Nylon rope	Roll	10
31	Polythine cover	Mtr.	150
32	Salt (for Electronic Earthing Pit)	Kgs.	50
33	Charcoal (for Electronic Earthing Pit)	No's	50
34	Silican Spray 550MI (Ecosil)	Ltrs.	1
35	Silicon Silant	No	2
36	Stanvac	No	2
37	Tool mates off-line contact cleaner co2	No's	6
38	Waxy Fillam	Nos	3
39	TEFLONE TAPE	Roll	20
40	RUSTOLINE	NOS	5
41	PACKING TAPE 3"(BROWN)	ROLL	30
42	HOLD TIGHT / Lock tight	Nos	3
43	MEASUREMENT TAPE-3MTR	Nos	2
44	MEASUREMENT TAPE-5MTR	Nos	2
45	MEASUREMENT TAPE-10MTR	Nos	2
46	MEASUREMENT TAPE-15MTR	Nos	2
47	MEASUREMENT TAPE-30MTR	Nos	2
48	RUBBAR HAND GLOVES (for Battery maintenance)	Nos	2
49	Apron (for battery maintenance)	Nos	2
50	Eye Goggles (for battery maintenance)	Nos	2
51	Araldite	Nos	5
52	RJ-45 Connector	Nos	20
53	Spring Washer (6mm dia)	Nos	20
54	Spring Washer (8mm dia)	Nos	20
55	Spring Washer (10mm dia)	Nos	20
56	Spring Washer (12mm dia)	Nos	20
57	Copper Washer (6mm dia)	Nos	20
58	Copper Washer (8mm dia)	Nos	20
59	Copper Washer (10mm dia)	Nos	20
60	Copper Washer (12mm dia)	Nos	20
61	Teflon Washer (6mm dia)	Nos	20
62	Teflon Washer (8mm dia)	Nos	20
63	Teflon Washer (10mm dia)	Nos	20

64	Teflon Washer (12mm dia)	Nos	20
65	Transparant Polythene bag	Kgs.	2
66	Self-adhesive thin plastic packing-6" wide roll	Nos	10
67	M-SEAL	Nos	10
68	Metal Seal	Nos	5
69	anchor fastener	Nos	500

S.NO:	Consumable item for MMD	DESCRIPTION	UNIT	Stock Qty to be maintained
1	Hacksaw blade	mini	Nos	2
2	Hacksaw blade		Nos	0
3	Welding Apron		Nos	5
4	Welding Holder	600amps	Nos	1
5	Leather Hand Gloves		Pair	0
6	Rubber hand Gloves 12"		Pair	3
7	"O" Ring cord 2.5mm		Mtr.	4
8	"O" Ring cord 3mm		Mtr.	4
9	"O" Ring cord 4mm		Mtr.	4
10	"O" Ring cord 5mm		Mtr.	4
11	"O" Ring cord 6mm		Mtr.	4
12	Welding Electrode	6013-3.15mm	Case	4
13	Welding Electrode	6013- 4 mm	Case	4
14	Welding Electrode	7018-3.15 mm	Case	4
15	Welding Electrode	7018-4 mm	Case	4
16	Welding rod	7018X2.5mm	pkt	4
17	Welding rod	6013X2.5mm	pkt	4
18	Silicon spray (SEALENT)		Nos	4
19	Teflon Tape		Nos	4
20	Grinding wheel AG7		nos	14
21	Grinding wheel AG4		nos	14
22	Grinding wheel AG5		Nos	14
23	Cutting Wheel 7"		Nos	14
24	Cutting wheel 5"		Nos	14
25	Pencil (Batti)		pkt	1
26	Plactic Pan		Nos	12
27	Cutting wheel 4"		Nos	14
28	Polythene		kg	4
29	Reflector tape Yellow		Nos	1
30	Welding cutting nozzle B3/64		Pcs	9
31	Flash back arreastor		Pcs	15
32	Anabond 666		Nos	5

33	Asbeasto packing sheet (gas kit)		kg	10
34	Welding glass black		Nos	10
35	Welding glass white		Nos	10
36	AG4 buffing wheel paper		Nos	10
37	Buffing wheel 4"		Nos	5
38	Eamery paper roll		Roll	5
39	WD-40		Nos	12
40	Restoline		Nos	7
41	M-seal		Kg's	2
42	AG7 buffing Wheel paper		nos	5
43	Brush 3"		Nos	4
44	Anabond 406/402/410		Nos	5
45	Knife blade (Taparia)		nos	20
46	Welding Helmet		Nos	8
47	Wire brush black		Nos	5
48	TBS 3001 Cold Solution		ltrs	20
49	TBS 3001 Hardner(60ml bottle)		Bottle	20
50	T4451 hot solution		ltr	20
51	Cover Compound		kg	15
52	Cotton Waste (cloth)		kg/ month	100
53	Brown/Transparent tape 2"		Nos	41
54	MS Nut & Bolt with Washer	M20 x 60mm	kg	10
55	Tool Box (Book)		Nos	5
56	Apron Feeder (Book)		Nos	8
57	Chp House Kiiping Man Power Details (Book)		Nos	0
58	steel Screw 3/4"		PKT	3
59	Punch Machine		Nos	1
60	Nylon Rope (Twin)		Roll	10
61	Paint Brush 50MM		Nos	0
62	JUTT (Cotton Waste)		kg/ month	10
63	Asbestor hand gloves		PR	2
64	Paint Brush 25 MM		Nos	2
65	Paint Brush 100 MM		Nos	20
66	FLAP DISC 5"		Nos	17
67	Eamery paper roll (100/120)		Nos	2
68	LINE DORI		Roll	3
69	Anabond 202		Nos	5
70	Brass Shim 0.05		RFT.	0

71	Brass Shim 0.1		RFT.	0
72	Brass Shim 0.2		RFT.	0
73	Brass Shim 0.5		RFT.	0
74	GI B/N/W 8x50mm		Nos	26
75	GI B/N/W 10x50mm		Nos	86
76	M.S. N/B/W 10x50mm		Kg's	5
77	M.S. N/B/W 10x100mm		Kg's	5
78	M.S. N/B/W 8x50mm		Kg's	5
79	M.S. N/B/W 8x100mm		Kg's	5
80	Emery paper 100n		nos	0
81	Emery paper 130/150n		nos	0
82	Araldite 36gms		nos	4
83	DPT test kit		Kit	1
84	Hose clamp (Cutting hose pipe)		nos	3

Annexure-5: Proposed skill matrix of Manpower

➤ **Yard Master:** Day to day pursuance for receiving coal rakes at Owner's Railway Yard by taking the daily position of rakes. Permission for entering coal rakes in Owners Railway Yard from Indian Railway Authorities and to supervise & co-ordinate all works related to operation of Railway including Owner's railway yard with Indian Railway and Owners Authorities. Daily log book shall be maintained as per IRS.

Note- Supervision of unloading of coal rakes, co-ordination with chemistry department for coalsampling shall be the responsibility of yard Master. The work center shall be Owners Railway Yard.

➤ **Asst. Yard Master:** Asst. Yard Master will follow the instruction of Yard Master and responsible for the placement of Rack at nominated one Asst. Yard Master in work will ensure that all track are free from any obstructions before receiving I} departure of the rack and also responsible for shunting work.

➤ **Loco Operator:** Smooth operation of locomotives at Owners plant. Loco operator should have experience to operate **DL-1400-HDRIV-TTP-CC-BG-135T** SAN make locomotives. Daily log book shall be maintained as per IRS.

➤ **Carriage Fitter:** He shall mainly carry out the work of releasing of brakes of all the wagons. Hose pipe air releasing work. Checking of knuckle pin. Etc. of all the rakes received at Owner's plant.

➤ **Points Man:** To assist loco operator for movement of locomotive and to look after the placement of loaded wagons at Wagon Tippler and collection of empty wagons from all Wagon Tipplers I} Track Hopper. He shall be responsible for operation of switches in Owners Railway Yard.

➤ **Shunt Man:** To do shunting of wagon of the loaded rakes at inhaul side one by one for placement on Wagon Tippler. Formation of rake in inhaul side and coupling of unloaded wagon at outhaul side of track hopper.

➤ **Loco Engine Mechanic:** Maintenance of Loco engine and follow schedule

maintenance as per **DLW** schedule.

- **Electrician:** Checking of ignition points. Batteries. Indication light and follow schedule maintenance as per DLW schedule.
- **Helper:** Miscellaneous work like material issue from store. Work with Loco Engine Mechanic and support on site activities.
- **Welder:** For CBC coupler knuckle pin welding. Damage wagons welding and miscellaneous welding work required in maintenance.
- **Porter:** Handing over the shunting memo to Railway loco and receiving the placement memo from Railway Guard.

➤ **P.W.I.**

- ✚ Inspection and maintenance of track including turnouts and curves in a satisfactory and safe condition for traffic.
- ✚ Efficient execution of all works incidental to track maintenance.
- ✚ Accountably of stones in his charge.
- ✚ Forecasting requirement of P.Way materials for the upkeep of the track under his charge 6 months in advance.
- ✚ He shall be vigilant to locate faults in the P.Way and promptly remedy them.
- ✚ During routine inspections he shall check for any weakness in bridges/culverts and structure affecting track and promptly report such matter to the Engineer-in-Charge.
- ✚ Trees in proximity to and liable to foul the track during storms should be felled after observing the prescribed formalities required as per relevant Acts and promulgations of the Govt.
- ✚ He shall permit no work affecting the safety of the track except under his personal supervision.

a. Category Remark Job Qualifications & Exp

CHP Operation In-charge_

Assistant Responsible for overall CHP operation and CHP upkeep activities in consultation with CHP operation in charge of MUNPL Planning of CHP equipment operation for efficient and safe coal unloading, conveying, stacking. Planning and compliance of various SOPs and Management Instructions. CHP area upkeep. Handling of operation team and coordination with maintenance team. Engg Graduate electrical/Mechanical with min 3 years relevant industrial experience.

OR

Engg Diploma with min 5 years relevant industrial experience

Shift Charge Engineer _Assistant Responsible for overall CHP operation shift activities in consultation with CHP operation shift charge Engineer of MUNPL CHP equipment operation for efficient and safe coal unloading, conveying, stacking. Ensure CHP equipment operation as per compliance of various SOPs and Management Instructions. CHP area upkeep.

Handling of operation team and coordination with maintenance team. Engg Graduate electrical/Mechanical with min 2 years relevant industrial experience.

OR

Engg Diploma with min 3 years relevant industrial experience

Control Desk Engineer/ Operator (Highly Skilled) For CHP control room+ for WT control room + field supervision
Control room: - Operation of CHP through PLC, Logging data, reports, defects communication /resolving with maintenance, PTW issuance. WT operation as on requirement

Field supervisor:- Monitoring and coordinating operation activities, coal unloading, Stockyard activities with local contractors for smooth operation, Isolation for Maintenance, Housekeeping guidance, coordination with railway in charges/WT team for smooth unloading of coal rake. Engg Diploma with min 2 years relevant industrial experience

OR

Engg Graduate Electronic/ electrical/Mechanical with min 1 year relevant industrial experience.

Skilled Operator (Skilled) For Apron feeders + For UG belt + for Crusher House monitoring
Monitoring/Operation of

1. Apron feeder
2. Dust Extraction system
3. Dust suppression system
4. Crusher House equipments
5. Flap Gate
6. Tunnel water Sump pumps
7. Magnetic separator & removal of collected Iron pieces
8. Resetting Pull chord trip.
9. Chute inspection /Removal of Chocking
10. Ventilation system. Engg Diploma with min 1 years relevant industrial experience OR

ITI with min 2 years relevant industrial experience

Skilled Operator

For Stacker reclaimer + for coal stockyard monitoring
S/R Operator: Operation of Stacker reclaimer, monitoring of all lubrication and parameters of S.R equipments, coordination with maintenance team for defect rectification.
Yard sup:- Handling of coal yard activities, making of coal heap, records of heap clearance, Guide to dozer for proper heaping, yard water sprinkling, etc Engg Diploma with min 1 years relevant industrial experience

OR

ITI with min 2 years relevant industrial experience

Conveyors/ TP Operator

For various locations of coal conveyors, Transfer points, pump house Monitoring/ Operation of:

1. Coal conveyors,
2. Flap gates,
3. Magnetic separators including removal of metals,
4. Metal detectors
5. BSS/PCS reset
6. Chutes including assistance in removal of jamming

Coordination with CHP, TP, WT control room and maintenance team for defect rectification
ITI with min 06 months relevant industrial experience

Tripper Operator/ Bunker floor supervisor (Skilled)

For bunker area + traveling tripper etc

Operation of Traveling tripper to fill bunker, inspection/measurement of bunker level, monitoring of conveyors & its components, operation of DFDS, DE, DS and auxiliary, coordination with CHP, JNT, WT control room for coal feeding activities ITI with min 1 year relevant industrial experience

b. Skill matrix for proposed manpower for Maintenance of Coal Handling Plant

1 Engineer In charge _Assistant

(01 for mechanical and 01 for electrical & 01 for Instrumentation BE (Mech / Elect/ Instrumentation) in consultation with CHP maintenance in charge of MUNPL Engg Graduate electrical/Mechanical/Instrumentation with min 3 years' experience.

OR

Diploma in relevant discipline with min 5 years' experience

Experience of Wagon tippler/Side arm charger/Stacker reclaimers/ Crushers/ Screens/DE system/Conveyor system/ Paddle feeder/Gear box/ pumps/ compressors/ AC system/FDPS etc. Should have worked with similar industries of material/coal handling of capacity more than 1000 TPH. Experience of Overhauling activities of Coal handling plant equipments/system. Incharge: - Planning of CHP equipment maintenance to prevent breakdown. Planning and compliance of PM. Analysis of breakdown for root cause, and preparing and implementing Preventive action plan. Handling of maintenance team. Coordination with operation team. Spare planning. Modification/innovations to improve the system. Supervisor: - To execute the tasks in fields with team and guide the team according to the Incharge's plan

Maintenance Engineer/ supervisor _Assistant BE/Diploma (Mech / Elect/ Instrumentation/relevant professional qualification) in consultation with CHP maintenance Engineer of MUNPL BE/diploma mechanical/relevant professional qualification experience with more than 2 years for BE and more than 3 years for Diploma, in coal handling plant maintenance OR with relevant industrial experience. Experience of Wagon tippler/Side arm charger/Stacker reclaimers/ Crushers/ Screens/DE system/Conveyor system/ Paddle feeder/Gear box/ pumps etc. Should have worked with similar industries of material/coal

handling of capacity more than 1000 TPH. Experience of Overhauling activities of Coal handling plant equipments/system. Supervision of CHP equipment maintenance to prevent breakdown. Execution and compliance of PM. Analysis of breakdown for root cause, and implementing Preventive action plan. Handling of maintenance team. Coordination with operation team. Modification/innovations to improve the system. To execute the tasks in fields with team and guide the team according to the Incharge's plan

2 **Skilled fitter+** technician+ Electrician ITI/Experienced Preferred ITI in mechanical\ Electrical\ instrumentation/

>3years experience in Conveyor maintenance, gearbox maintenance, motors, control instruments, Rotating part maintenance, Wagon tippler maintenance, Stacker reclaimers maintenance, should have worked with Coal/Material handling of capacity of more than 1000 TPH

Execution of maintenance activities of CHP equipment & dozers, rectification of defects, restoration of breakdowns. Follow PM schedules

3 **Skilled Fitter** (Hydraulic) ITI/Experienced ITI in mechanical especially in hydraulic system, >3 years working experience in maintenance of hydraulic system of wagon tippler/Stacker reclaimers. Execution of maintenance activities of CHP equipment especially hydraulic system. Monitoring and maintaining hydraulic oil conditions/ spare management of hydraulic system. Rectification of defects, restoration of breakdowns. Follow PM schedules.

4 **Skilled welder/Cutter** ITI Experienced ITI in mechanical especially in hydraulic system, >3 years working experience in welding/Cutting of MS, SS, CS. Execution of maintenance/Welding /cutting activities of CHP equipment, rectification of defects, restoration of breakdowns. Follow PM schedules

5 **Skilled Helper** Experienced Helping Maintenance team as directed.

6 **Rigger** Experienced ITI in mechanical. And/ OR >3 years working experience in Coal handling plant maintenance activities. (like Belt lifting etc.) Rigging activities during belt replacement, maintenance work at height or else.

7 **Belt Vulcanizer** Experienced ITI in mechanical. And / OR >3 year working experience in belt joint of EP & Steel chord conveyors. Jointing activities of conveyor belts. Preparation and joint of EP & Steel chord belts

RLY siding ,CHP, WT - Maintenance manpower

Sr no	Category of manpower	Proposed Manpower	Min. Qualification	Min. Experience
Railway Siding				
1	Yard Master	4	Diploma engineering in	7-9 years' experience in RLY siding
2	Astt. Yard Master	4	Diploma engineering in	4-6 years' experience in RLY siding
4	Porter	4	12th & ITI	2-4 years' experience in RLY siding
5	Loco Pilot	7	12th or ITI	5-10 years' experience in operate DL-1400-HDRIV-TPP-CC-BG-135T SAN make locomotives
6	C&W Fitter	7	ITI / diploma in engineering	5-10 years' experience in RLY siding
7	Points man	19	ITI / diploma in engineering	2--4 years' experience in RLY siding
8	Shunt man	18	12th or ITI	2-3 years' experience in RLY siding
9	Welder	3	12th or ITI	2-3 years' experience in RLY siding
10	PWI - Track maintenance	1	ITI / diploma in engineering	Exerience in Retd. PWI/SSE (P Way): 1 No.
11	Mate - Track maintenance	2	12th or ITI	5-10 years' experience in RLY siding
12	Black Smith - track maintenance	1	12th or ITI	2-3 years' experience in RLY siding
13	Key man - track maintenance	4	12th or ITI	2-3 years' experience in RLY siding
14	Gengman - track maintenance	13	12th or ITI	2-4 years' experience in RLY siding

16	Sr. LOCO mechanic	1	ITI / diploma in engineering	7-10 years' experience in LOCO engine
17	LOCO mechanic	1	ITI / diploma in engineering	5-7 years' experience in LOCO engine
18	LOCO electrician	1	ITI / diploma in engineering	4-6 years' experience in LOCO engine
19	LOCO helper	1	12th or ITI	4-6 years' experience in LOCO engine
20	Safety officer	3	B.Sc with Diploma with industrial safety certified	2-4 years' experience in RLY siding
21	OHE O&M fitter	1	ITI / diploma in engineering	8-10 years' experience in OHE O&M
22	OHE O&M Asstt fitter	1	ITI / diploma in engineering	5-7 years' experience in OHE O&M
23	OHE O&M technician	1	12th or ITI	2-5 years' experience in OHE O&M
24	OHE O&M helper	1	12th or ITI	2-3 years' experience in OHE O&M
		97		

Operation

1	Operations Head	1	BE / Diploma in Engineering	7-10 years' experience in O&M CHP
2	Coal Yard Management/ Coal Movement Supervisors and Rake Operations	4	Diploma in engineering	2-5 years' experience in O&M CHP
3	Shift In Charge	4	BE / Diploma in Engineering	5-10 years' experience in O&M CHP
4	Desk Operating Engineer - CHP	4	BE / Diploma in Engineering	5-10 years' experience in O&M CHP
5	Wagon Tippler PLC Engineer	10	BE / Diploma in Engineering	5-10 years' experience in O&M CHP
6	CHP Operators	39	ITI / diploma in engineering	5-10 years' experience in O&M CHP

7	WT field operator	7	ITI / diploma in engineering	5-10 years' experience in O&M CHP
8	SAC Operator	7	ITI / diploma in engineering	5-10 years' experience in O&M CHP
9	Tippler shunt man	22	10th /12th	2-3 years' experience in O&M CHP
10	CHP Operator Asst	7	ITI / diploma in engineering	5-10 years' experience in O&M CHP
11	Electrician for Isolation / normalisation of MCC breakers	4	Diploma in electrical Engineering with CLASS-C certified	5-10 years' experience in O&M CHP
12	CHP Helpers - Semiskilled	10	12th & ITI	2-3 years' experience in O&M CHP
13	Stone Picker	21	10th /12th	2-3 years' experience in O&M CHP
14	Housekeeping Helper	91		0-3 years' experience in O&M CHP
		231		

Mechanical

1	Maintenance -In-charge	1	BE / Diploma in Mechanical Engineering	7-10 years' experience in O&M CHP
2	Maintenance Engineer	6	BE / Diploma in Mechanical Engineering	3-6 years' experience in O&M CHP
3	Hydraulic engineer	1	BE / Diploma in Mechanical Engineering	3-6 years' experience in O&M
4	Mill Wright fitter	2	ITI	8-10 years experience
5	Hydraulic fitter	2	ITI	3-5 years' experience
6	Hydraulic technician	2	10/12 th Pass	5-7 years' experience
7	Assistant Hydraulic technician	3	10/12 th Pass	3-5 years' experience
8	Fitter	6	ITI	3-5 years' experience
9	Belt Jointer	2	ITI	3-5 years' experience

10	Welder	6	ITI	3-5 years' experience
11	Cutter/ Grinder	2	ITI	3-5 years' experience
12	Rigger	10	10/12 th Pass	4-6 years' experience
13	Mechanical Semiskilled helper	15	10/12 th Pass	2-3 years' experience
	Total Mechanical Manpower	58		
	Control & Instrumentation			
1	C&I In-Charge	1	BE / Diploma in C&I Engineering	08 years and above
2	Engineer	5	BE / Diploma in C&I Engineering	04 years and above
3	Technician for CHP	8	ITI	03 years and above
4	Technician for WT	4	ITI	03 years and above
	Total C&I Manpower	18		
1	Electrical			
2	Electrical In charge	1	BE / Diploma in Electrical Engineering	10 years
3	Engineer	4	BE / Diploma in Electrical Engineering	6 years
4	Electrician – MCC Shift wise	7	ITI	5 years
5	Electrician field and lighting	7	ITI	5 years
6	Welder	1	ITI	3 years
7	Motor Fitter	1	ITI	5 years
8	Helper	2	10 the	2 years
9	HT Cable jointer	1	ITI	5 years
	Total Electrical Manpower	24		
	Administration			
1	Site In charge	1	BE / Diploma	12-15 years' experience in O&M CHP
2	Dy. Site In charge	1	BE / Diploma	8-10 years' experience in O&M CHP

3	Planning engineer	1	BE / Diploma	5-7 years' experience in O&M CHP
4	HR/Admin	1	MBA, MSW, PGDM in HR	5-7 years' experience
	IR	1	MBA, MSW, PGDM in IR	5-7 years' experience
5	Store/Purchase	3	Graduation	3-5 years' experience
	Safety Incharge	1	B.Sc with Diploma with industrial safety certified	5-7 years' experience
6	Safety Officer	4	B.Sc with Diploma with industrial safety certified	2-4 years' experience
	Total Admin Manpower	14		

* Additional monsoon housekeeping manpower(unskilled & semi-skilled) for June to October – **20 + 2**

Cumulative	442
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Sr no	Category of manpower	Proposed Manpower
WT & RLY Office and MCC housekeeping		
1	Office attender and housekeeping staff	5
2.	Sweeper	2
3.	MCC housekeeping staff	2
4.	Gardener	2

Annexure-6: Index on % of equipments handed over for O&M

Sno Equipments Sno Equipments

1. Conveyor 1A / 1B
2. Apron feeder A/ B
3. Conveyor 2A/ 2 B
4. Conveyor 3A / 3 B
5. Conveyor 4A / 4 B
6. Conveyor 6A / 6 B
7. Conveyor 7D

8. Conveyor 8A / 8 B
9. Conveyor 9A / 9B
10. Conveyor 10 / 11
11. TTR 1 / TTR 2
12. Belt Feeder-A /B /C / D
13. Wagon Tippler-01 / 02
14. Side Arm Charger-01 38. Side Arm Charger-02
15. Crusher-01 & Crusher-02
16. Vibrating Grizzly Feeder-01 & Vibrating Grizzly Feeder-02
17. Stacker Reclaimer
18. JNT sump pumps
19. DFDS -1/2 pump
20. DSS pump -1/2
21. Portable water pump -1/2
22. Tunnel ventilation fan
23. MCC-1 / 2/ 3 ventilation fan

ANNEXURE-7: Minimum recommended Tools/Items for Housekeeping/ Operation

S. No. Tools/ Items Quantity

- 1 WALKIE-TALKIE SETS 20
- 2 BELCHA 80
- 3 TASHLA 30
- 4 GAINTI 10
- 5 JHARU AS PER SITE REQUIREMENT (30 must be maintained in stock all the time)
- 6 KULHARI(AXE) 05
- 7 DANTI(HASIYA) 30
- 8 Hacksaw 3
- 9 JHADU WITH LONG HANDLE AS PER SITE REQUIREMENT
- 10 SAFETY BELT 20
- 11 KHURPI 05
- 12 NOSE MASK AS PER SITE REQUIREMENT FOR EACH EMPLOYEE
- 13 Torch-High Beam 05
- 14 Torch # 3 cell 30
- 15 HAND GLOBE AS PER SITE REQUIREMENT
- 16 GOGGLES AS PER SITE REQUIREMENT
- 17 EAR PLUG AS PER SITE REQUIREMENT
- 18 BAMBOO(BAS) 40

- 19 PONCHA AS PER SITE REQUIREMENT
- 20 PHINYL AS PER SITE REQUIREMENT
- 21 HARPIK AS PER SITE REQUIREMENT
- 22 BALTI(BUCKET) 10
- 23 JUG 10
- 24 TOILET BRUSH AS PER SITE REQUIREMENT
- 25 PHINYL TABLET (Naphthalene balls) AS PER SITE REQUIREMENT
- 26 ROOM FRESHENER AS PER SITE REQUIREMENT
- 27 HAND WASH AS PER SITE REQUIREMENT
- 28 HIT AS PER SITE REQUIREMENT
- 29 PHAVADA 30
- 30 POKING ROD 30
- 31 KHICHNA 30
- 32 PVC PIPE 1" 200M
- 33 VIPER 10
- 34 DUSTBIN 10
- 35 HAMMER 10
- 36 HAND TROLLEY 30
- 37 SAFETY BARICADING TAPE AS PER REQUIREMENT
- 38 FIRE WATER HOSE WITH NOZZLES 30
- 39 GUM BOOTS 20 PAIR
- 40 RAINCOATS 20
- 41 UMBRELLAS 20
- 42 Grass cutting Machine 02
- 43 Light baton for WT area 10
- 44 10 set of helmet with light option (for tunnel area)
- 45 All PPEs related to work
- 46 Reflective jacket

ANNEXURE-8: GUIDELINES IN RESPECT OF HOUSEKEEPING OF CHP AREA

Related Area General guidelines to focus for housekeeping

COMMON TO ALL AREAS No any moving part should be rubbing with coal

No any coal dust layer should be there on equipment, sensors, Local panels, JB's, handrails No any coal dust layer should be there on cable trays, pipelines, etc

No cobwebs (makdi ka jala) on equipments, cable trays, pipelines, walls, ceilings, etc

All sign-boards, displays, safety display boards, etc must be clean and intact and should not be hanging loosely No hanging cables or light fixtures

CONVEYOR GALLERIES Conv gallery walkway should be walkable. Coal/ slurry layer should not be there in walkway.

No any foreign material lying in the walkway/ deck plates/ return side

No accumulation of coal/ slurry layer on deck plate and below return rollers

No any cobweb (makdi ka jala) should come in between the human movement

TP FLOORS (INCLUDING HEAD-END AND TAIL-END) No coal/ slurry layer should be there on floor No any scrap/ foreign material/ spare should be lying here and there

No oil /grease spillage on floor or equipment (scoop/ gearbox)

BUNKER FLOOR (INCLUDING TRIPPER) No any incidence of coal falling up to ground floor area should be there

No any foreign material accumulation on bunker floor

No coal accumulation on travelling tripper travelling tracks

No oil /grease spillage on floor or equipment (scoop/ gearbox/ hydraulic oil pipelines etc)

Drains on all the sides of should be clean of coal accumulation / foreign materials/ debris

ALL (-) MTR AREAS (CONV-13A/B, CONV-1A/B, ERH, TP-10) All sumps should be clean of coal slurry and foreign material

Good amount lighting should be there No water accumulation to be there

All drains should be covered with gratings

Drains must be clean of any coal accumulation, chockage, foreign material

WAGON TIPPLER (INCLUDING APRON FEEDER FLOOR AND STONE-YARD) No coal accumulation in pit area

No coal/ slurry layer should be there on apron feeder floor

No coal / stone boulders accumulated between WT-1 and WT 2 No coal layer accumulated on spray headers/ handrails/ cable trays

No any wooden debris, trash, waste, foreign material, etc should be lying here and there in the area No coal layer accumulation on window glasses of WT control room

Stone boulders must be stacked month-wise in demarcated area and to be preserved for previous 02 months with ongoing month

STACKER / RECLAIMER (INCLUDING STOCK-YARD) Coal stock to be properly levelled and packed almost trapezoidal form

During Monsoon coal stock to be covered with LDPE sheets which are to be properly spread on coal stock and to be properly secured with coal bags.

Coal should not come outside over the side walls of stock yard No coal accumulation should hinder the stacker movement Stockyard drains should be clean of accumulated coal and debris No coal accumulation on slew gear and gearbox area

No coal layer on transformer, terminal, CRD, field JBs etc. No scrap lying here and there on any floor of stacker.

No oil spillage in any area

Stacker MCC room should be clean and without any foreign material lying inside the room.

CHP MCC, CONTROL ROOM, PUMP HOUSE, TOILETS, CHP OFFICE BUILDING Floor should be clean and

free from any unwanted material lying haphazardly.

No dust layer should be there on equipment, Local panels, JB's, handrails, window glasses, etc
No any dust layer should be there on cable trays, pipelines, etc

No cobwebs (makdi ka jala) on equipments, walls, ceilings, etc

All sign-boards, displays, safety display boards, etc must be clean and intact and should not be hanging loosely
No hanging cables or light fixtures

All drain points of roofs and floor should be clean and free from chockage.

Annexure-9: Occupational Health & Safety - OHS

Refer document on occupational health and safety (OHS) enclosed with bidding documents

OHS REQUIREMENTS FOR LONG TERM CONTRACTS:

This specification establishes the Occupational Health and Safety(OHS)management requirements to be complied by the Contractors during work at site. Requirements stipulated in this specification shall supplement the requirements of OHS management given in relevant Act(s) / Legislations, Conditions of Contract. Where different documents stipulate different requirements the most stringent shall be adopted.

1. REFERENCES

This document should be read in conjunction with followings:

- 1.1. OHS REQUIREMENTS (PART-I)
 - 1.1.1. Requirement of OHS management System (Condition of Contract required to be complied by the Contractor.
 - 1.1.2. Annexure-X Relevant IS Codes for Personal Protection.
 - 1.1.3. Annexure-Y Penalty for Violation of OHS Norms
- 1.2. OHS REQUIREMENTS (PART-II) Contractor Stage Wise Clearance (Format)
- 1.3. OHS REQUIREMENTS (PART-III) Contractor OHS Competence Assessment (Format)

DEFINITION OF TERMS

- 1.4. Introduction
 - 1.4.1. The following terms used in this manual are defined as follows and shall be construed accordingly.
 - a) Owner means the company who has set up plant and shall include its legal successors in title and permitted assignees as well as its authorized officers/ Representatives.
 - b) Contractor / Service Provider means the agency that is awarded the Contract for the plant and shall be deemed to include its legal successors in title and permitted assignees as well as its authorized officers / Representatives.
 - c) Safety means the freedom from unacceptable risks of personal harm, property & environment i.e. the avoidance of accident and incidents.

- d) Occupational Health means the physical wellbeing of a person and freedom from any illness caused due to working conditions.
- e) Hazard means a situation with the potential to cause harm including human injury, damage to property, plant or equipment, damage to the environment, or economic loss.
- f) Risk means the probability of something adverse happening and its severity. It is a combination of the probability or frequency, of the occurrence of a defined hazard and the magnitude of the consequences of the occurrence.
- g) Foreseeable means which is likely or possible.
- h) Chief Fire & Safety Officer means an officer nominated by Owner as Chief Fire & Safety Officer to look after fire & safety activities at site (Head-Fire & Safety).
- i) Officer to look after fire & safety activities at site (Head-Fire & Safety).
- j) Engineer-In-charge means an officer nominated by Owner as In charge for this Contract.
- k) OHS Plan means the contract specific, Occupational Health & Safety plan that the Contractor has prepared for safe execution of the contract work.
- l) Reportable Accident / Incident means an Accident or Incident that is reportable to the Owner's Representative/Safety Officer. It shall include all fatalities, major, minor injury accidents, dangerous occurrences or any property damage and all accidents which results in incapacity for more than Forty Eight hours or more excluding the day of accident.
- m) Major Injury Accident is defined as:
 - i) Any fracture,
 - ii) Any loss of a limb or part of a limb:
 - iii) Dislocation of the shoulder, hip, knee or spine;
 - iv) Loss of sight (whether temporary or permanent):
 - v) Penetrating injury to the eye: or Any other injury that:
 - vi) Leads to unconsciousness
 - vii) Requires resuscitation:
 - viii) Requires admittance to hospital;
- n) Dangerous Occurrence is defined as:
 - i) Collapse or failure of lifting appliances or hoist or conveyors or other similar equipments/ machine:
 - ii) Collapse or failure of a crane, derrick, winch, hoist or other appliance used in raising or lowering persons or goods or any part thereof, or the overturning of a crane;
 - iii) explosion or fire causing damage to the structure of any room or place in which persons are employed, or to any machine or plant, resulting in the complete suspension of ordinary work.
 - iv) Electrical short circuit or failure of electrical machinery, plant or apparatus, caused by explosion or fire, causing structural damage involving its stoppage or disuse:

2. CLASSIFICATION OF CONTRACT

2.1. The Contractor is classified with respect to the size and man power deployed for execution of job as under.

CATEGORY OF CONTRACT No OF WORKERS DEPLOYED OR/AND CONTRACT VALUE

CLASS-A Deployed employee more than 200 Nos or/and Contract Value above 100 Lac in a year

CLASS - B Deployed employees more than 100 up to 200 Nos or/and Contract Value above 50 Lac up to Rs100 Lac per year

CLASS -C Deployed employees up to 100 Nos. or/and Contract Value up to 50 Lac in a year

3. **MANAGEMENT OHS COORDINATOR & RESPONSIBILITY**

3.1. Contractor shall be fully responsible for planning and implementing OHS requirements.

- a) Contractor as a minimum requirement shall designate / deploy the following to co-ordinate the OHS requirements (Contractor has to appoint safety officer / supervisor approved by Owner and as per law and strength of his workers at site as specified in category of contract)
- b) Safety Officers of Contractor shall have minimum qualification B.SC. with Diploma in industrial Safety from recognized institute & good communication skill with an attitude to implement safety at his site. Safety Officer shall have minimum 3 years of experience in similar jobs Safety supervisor shall have minimum qualification intermediate with good Communication skill. He shall have experience as Safety Supervisor for a period of minimum 3 years in any reputed company.

CATEGORY OF CONTRACT NUMBER or SAFETY OFFICER/ SAFETY SUPERVISOR REQUIRED

CLASS-A Deploy minimum one qualified & experienced Safety Officer as per factory act thereafter One Safety Supervisor for every 100 workers

CLASS - B Deploy minimum one experienced safety supervisor (Diploma in industrial safety) and thereafter one for every 100 workers

CLASS - C Deploy one experienced supervisor exclusively for safety activities

- c) Contractor shall indemnify and hold harmless, Owner & their representatives free from any and all liabilities arising out of non-fulfillment of OHS requirements.

4. **DETAILS OF OHS MANAGEMENT SYSTEM BY CONTRACTOR**

4.1. The Class-A, Contractors should sign and submit, Contractor OHS Requirement Part I, II, & III documents to the Owner, and should have a documented OHS Policy to cover commitment of their Organization to ensure Occupational Health and Safety aspects in their line of operations. Safety clearance certificate will be applicable to gate-pass and induction system only.

4.1.1. On Award of Contract

- a) The Contractor shall prior to start of work submit their Occupational Health and Safety Manual or Procedures and OHS plans with safety roadmap and action plan for accident prevention to Owner and head safety at site for approval. The Contractor shall participate in the Kick-off meeting with Owner to finalize OHS plans including the following:
 - i) Job procedure to be followed by Contractor for activities covering: Handling of equipments, Scaffolding, Electrical Installation, describing the risks involved actions to be taken and methodology for monitoring each activity with checklists,

- ii) Owner review/audit requirement.
 - iii) Organization structure along with responsibility and authorities, records / reports etc on OHS activities.
- 4.2. The Class-B, Contractors should sign and submit OHS Requirement Part I& II documents to the Owner, and OHS Competence Report of their organization to ensure Occupational, health, and safety aspects in their execution of work I operations. Safety clearance certificate will be applicable to gate pass and induction system only.
- 4.2.1. On Award of Contract

The Contractor shall prior to start of work submit his OHS Tool/ Equipment Inspection reports for approval by Owner head safety of site and safe work practices & Inspection report every month as required by the owner. The Contractor shall participate in the kick-off meeting with Owner to Plans OHS requirement including the following:

- i) Job procedure to be followed by Contractor for activities covering : Handling of equipments, Scaffolding, Electrical Installation, describing the risks involved actions to be taken and methodology for monitoring each activity with checklists,
- ii) Owner review requirement.
- iii) Organization responsibility and authority etc. on OHS activities

- 4.3. The Class-C, Contractors should sign and submit OHS Requirement Part I&II to the Owner, and Ensure Occupational, Health and Safety aspects in their execution of work / operations. For non-critical job safety clearance certificate will be applicable to gate pass and induction system only.

4.3.1. On Award of Contract

- a) The Contractor shall prior to start of work discuss Occupational, Health and Safety aspects and safe work practices for approval of Owner and understand the Owner's procedures for OHS in detail including following:

- i) Job procedure to be followed by Contractor for activities covering: Handling of equipments, scaffolding, electrical Installation, describing the risks involved, actions to be taken and methodology for monitoring each activity with check lists as required by safety.
- ii) Owner review requirement.

- 4.4. All Contractors (Class-A. B & C) shall implement approved occupational, Health and safety Management procedures including but not limited to as brought out under part-I & II. Contractor shall also ensure during Job Execution:

- 4.4.1. Arrange all OHS permits before start of activities (as applicable) like Hot work, Confined space work. Work at Heights, Lug Out & Tag Out (LOTO) procedure for critical electrical jobs. Electrical PTW, storage of chemical / explosive materials and its use and implemental precautions mentioned therein.

- 4.4.2. Submit timely the completed checklist on OHS activities. Monthly OH report, accident reports, and investigation reports etc as per Owner requirements. Compliance of instructions on OHS shall be done by Contractor and informed to Owner safety head on priority.

- 4.4.3. Ensure that Resident Engineer/Site-In-Charge of the Contractor shall attend all the Safety / OHS meetings arranged by Owner. Only in case of his absence from site that a

second senior most person shall be nominated by him in advance and communicated to Owner.

4.4.4. Carryout Safety audits / inspection at sub-contractor's works as per approved OHS document and submit the reports to Owner for review.

4.4.5. Assist in OHS audits by Owner, review periodically and submit compliance report. Generate and submit OHS records / report as per OHS Plan. Appraise Owner on OHS activities at site.

5. OHS REQUIREMENTS(PART-1)

5.1. CONDITIONS OF CONTRACT REQUIREMENTS TO BE COMPLIED BY ALL CONTRACTORS

5.1.1. The OHS management system of the Contractor shall cover the OHS requirements including but not limited to what are specified under Clause 4.0.0 and Clause 5.0.0 above.

5.1.2. The Contractor shall ensure that the Occupational, Health and Safety requirements are clearly understood and faithfully implemented at all levels, at worksite.

a) The Contractor should visit site before quoting for the tender. During execution his Qualified / Competent/Responsible / Trained / Licensed Supervisor should remain present round the clock on the job.

b) Contractor has to plan and organize safety system / practices in consultation with Engineer-In-Charge and Safety Officer head safety of Owner before commencing job and must ensure that no unsafe method of work is used and no unsafe conditions exist in the vicinity of his work place, ensure proper communication and co-ordination with other agencies working in and around their site of work place, & if any hazards are found, Contractor should eliminate it.

5.1.3. The Contractor shall promote and develop consciousness for Occupational Health, and Safety among all personnel working for the Contractor. Regular awareness programs and work site meetings shall be arranged on OHS activities to cover hazards associated at work place along with accident prevention measures involved in various operations during construction.

a) The Contractor has to ensure that his workers are trained and instructed to carry out specific & particular job in safest manner & shall promote/develop OHS culture among his workers.

b) The employees employed by the Contractor should be skilled and competent in accordance with the job requirement to the satisfaction of Engineer-In-charge.

The Contractor shall arrange to provide safety training to all its employees. Whenever asked by Owner, the Contractor shall send their employees for safety training / Safety Induction training and for such day the contractor shall pay the employee average daily salary.

c) The Contractor shall provide training on use of the extinguishers and first aid to all its employees and records thereof shall be submitted to Engineer In-charge and Head of Safety of Owner. The training may be provided independently or may be nominated to the programs being organized by Owner from time to time.

5.1.4. Contractor has to arrange suitable first aid measures such as First Aid Box, trained personnel to give First Aid, ensure fire protection measures such as: adequate

number of steel buckets withstand and water in consultation of concern Owner representative.

- 5.1.5. The Contractor shall evolve a comprehensive planned and documented system for # implementation and monitoring of the OHS requirements. This shall be submitted to Owner for approval. The monitoring for implementation shall be done by regular inspections and compliance to the observations thereof. The Contractor shall get similar OHS requirements implemented at his sub-contractor(s) work site/office.

However, compliance of OHS requirements shall be the sole responsibility of the Contractor. Any review / approval by Owner shall not absolve Contractor's own responsibility / liability in relation to all OHS requirements.

- 5.1.6. Non-Conformance on OHS by Contractor (including Sub-contractors) as brought out during review/audit by Owner representative shall be resolved forthwith by Contractor. Compliance report shall be provided to Owner.

- 5.1.7. The Contractor shall ensure participation of its Resident Engineer/ Site-In-Charge in the Safety/ OHS meetings arranged by Owner, The compliance of any observations shall be arranged on priority. Contractor shall assist Owner to achieve the targets set on OHS.

- a) Contractor will actively participate in OHS activities, Inspections, Safety committee meetings whenever called.
- b) Display at #site office and work locations caution boards, list of hospitals, emergency services should be available.
- c) Provide posters, banners for safe working to promote safety consciousness.

- 5.1.8. The Contractor shall take all safety precautions to avoid any accident to its employees or Damage to plant equipment. All Reportable accidents (Including Fatal & Dangerous Occurrences) and other personnel injuries shall be reported and investigated by a team of Contractor's senior personnel for root cause & recounted corrective and preventive actions. Findings shall be documented and suitable actions taken to avoid recurrences shall be communicated to Owner. Owner shall have the liberty to independently investigate such occurrences and Contractor shall extend all necessary help and co-operation in this regard.

All reportable and First aid injuries shall be investigated by concern section in-charge/ supervisor on similar line on that of reportable injuries.

- 5.1.9. The Contractor shall adhere consistently to all provisions of OHS requirements. In case on non-compliance or non-providing safe work environment or continuous failure in implementation of any of OHS provisions; Owner may impose stoppage of work without any cost & time implication to Owner and/or impose a suitable financial penalty for non-compliance with a notice of suitable period, #5000 per day up to a cumulative limit of 10% (ten percent) of Contract Value with a ceiling of #20 LAC. This penalty shall be in addition to all other penalties specified elsewhere in the Contract. The decision of imposing stoppage work, its extent & monetary penalty shall rest with Owner & binding on the Contractor,

- a) In the event of execution of job in unsafe manner, Company will have all right to terminate the Contract without any notice and compensation.

- b) If any of the above rules is violated by Contractor, penalty will be proposed by Plant Safety Head/ Engineer-in-charge to deduct the amount as suggested from the bill.
- c) While working if any damage takes place to Company's property, charges will be recovered from contractor other than penalty.
- 5.1.10. The Contractor should know Owner onsite emergency plan and explain to its workers. Also its workers should know about Safe Assembly points, Emergency Exit, sirens and evacuation procedure. The Contractor must demonstrate onsite emergency plan by periodically conducting exercises of various scenarios in consultation / presence of Owner officials to witness as an observer.
- 5.1.11. The Contractor shall report immediately about the minor/ serious injury/ fatality in his work area to the Safety Officer In-charge and Engineer In-charge and shall submit full details of accident in writing to Engineer-in-charge and Safety Officer In-charge on the prescribed format. In case of near miss accidents / minor injury, Contractor shall report the same immediately to Safety officer/Engineer In-charge and HR Department. The contractor shall investigate an incident however minor it is, analyze the underlying cause and devise an action plan of corrective and preventive action to avoid its recurrence. The Contractor shall submit the status of compliance to the Safety officer In-charge and Engineer-In-charge.
- 5.1.12. Contractor shall ensure the following facilities/activities at his residential area/colony.
- a) Contractor should ensure that their worker's children are not allowed in the plant/workplace.
- b) Suitable facilities for toilet in hygienic condition, drinking water, proper lighting & ventilation shall be provided at Residential sites and camps, commensurate with applicable Laws / Legislation.
- 5.1.13. The Contractor shall ensure that all their staff and workers including their sub-contractor(s) shall be provided and wear Safety Helmet. Safety shoes, fluorescent jacket and Other Personal Protective Equipments (Conforming to Indian Standard) as required / advised based on type of work and hazard associated. Contractor shall also ensure while working at height use of full body Harness, fall protection devices i.e. life line, fall arrestor, safety nets, protective goggles, gloves, ear plug/ muff etc. by the personnel as per job requirements. Apart from PPEs if any other equipment like welding machine, bar cutter machine, RCCBs, etc. found defective then penalty will be imposed and owner may discard the same as above all items and issue new available equipment in his store and may recover 1.5 times cost from Contractor's bill.

PERSONAL PROTECTIVE EQUIPMENTS

- a) Where the workers are exposed to high noise level area, a suitable ear plugs/ ear muffs are to be provided to reduce the exposure below high noise level.
- b) Whenever any worker is engaged on a work at a place from which he is liable to fall more than two meters shall be provided with full body Harness (equipped with shock absorber and lifelines), which are secured to a fixed structure.

- c) All these gadgets shall conform to relevant IS specifications or equivalent international standard, and same should be approved by MUNPL Safety Department.
- d) In case, the Indian standards do not exist for particular personal protective equipment, the approval of quality shall be obtained from Engineer In-charge / Head of Safety. It will be the responsibility of Contractor to ensure that all his employees use these equipments without fail.

5.1.14. Any Contractor who needs temporary electrical supply, he must follow the procedure of Electrical Maintenance Section.

TEMPORARY POWER SUPPLY

The Contractor should ensure that all electrical Installations/equipment used in O&M work area comply with the requirements of latest electricity acts/ rules.

- a) The Contractor shall take all adequate measures to prevent any worker from coming into physical contact with any electrical equipment or apparatus, machines or live electrical circuits which may cause electrical hazards during the construction work. The contractor shall provide sufficient MCB, RCBOs / RCCBs for all the portable equipments, electrical switchboards, distribution panels etc, to prevent electric shocks to the workers and/or resulting into fire emergency.
- b) Contractor's Cables / Equipment's / Supply boards should be standard and fitted with RCBO/RCCB. adequately insulated and where necessary it should be Fire retardant /Water resistant types and provide adequate protection against any mechanical damage and comply with IS specifications. Contractor should ensure all electrical equipments are adequately earthed prior to electrical connection and electrical cables are laid on safe route and overhead.
- c) Contractor should ensure that for any work execution inside Confined Space, guarded Hand lamps used must be of 24 Volt and extension boards, RCCBs / RCBOs, switches and plug pins are in perfect order & placed outside the confined space.
- d) The Contractor should ensure use of double insulated / Plastic /fiber body hand tools or low voltage hand tools.
- e) Cable used for supply extension shall be 3 core/4 core as per site requirement.

5.1.15. All electrical Contractors should have qualified / licensed electrical supervisor(s), while executing any electrical job. They should take appropriate precautionary measures to prevent any untoward incident in consultation with Engr-In-charge.

ELECTRICAL WORK

- a) Wherever Owner's "permit to work system" Safety Rules prescribe, the Contractor shall not undertake any work till the permit is obtained for the specific work in accordance with Owner's Rules.
- b) Prior to starting of any work he should follow the PTW procedure, (A written permit from concern section) and ensure electrical isolations, necessary earthings, shorting the line, cordoning and display of warning signs/ caution boards.

- c) He should not use any metallic tape, wire and umbrella etc. in switchyard and Civil Contractor's also should instruct his staff not to carry any metallic rods etc. such materials that touches live parts of switchyard / HT lines.

5.1.16. The Contractor shall provide safe means of access to any working place including provisions of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen.

WORKING AT HEIGHT

- a) For execution of the job at all heights, suitable safe and strong scaffolding shall be provided by Contractor to avoid accident of any person. Hindrance to others, plant equipments and structures.
- b) All working platforms, ways and other places of O&M work area shall be free from accumulations of any materials causing obstruction and tripping.
- c) For execution of the job by worker working at height, must use full body Harness double lanyard conforming to their type of use and relevant IS specifications.
- d) For execution of the job on fragile roof (all heights) a suitable Rooftop safety ladder (catwalk) must be used.
- e) Contractor shall ensure that a proper Safety Net System shall be used at appropriate locations. The safety net shall be located not more than 10 feet (3.0 meters) below the working height at site to arrest or to reduce the consequences of a possible fall of person/ equipment and tools while working at different heights.
- f) Wherever workers are exposed to the hazard of falling into water, the Contractor shall provide adequate equipment (life boat, life jackets etc.) for saving the employees from drowning and rescuing from such hazards.

5.1.17. The Contractor shall provide all necessary provisions for safety while working in confined space as mentioned under the factories act and rules, including provisions of Testing and Certification from competent authority (person), as and when required during all operations of the work for the safety of his workmen.

WORKING IN CONFINED SPACE

- a) No person should be allowed to enter any chamber, tank, pit, pipe, flue or other confined space at its work area in which any gas, fume, vapor or dust is likely to be present or deficiency of Oxygen is likely to be there to such an extent as to involve risk to persons unless it is provided with a manhole of the required size or other effective means of egress. The Contractor shall take practicable & reasonable measures to remove any gas, fume, vapor or dust to bring it within the permissible limits and to prevent any risk to the workers.
- b) Work is to be carried out under direct supervision of responsible & competent supervisor.
- c) Worker working inside the confined space must be well experienced and with necessary PPEs.
- d) Harness and suitable lifeline in the hands of outside co-worker, engaged for special rescue assistance in case of emergency.

- e) For execution of the job in confined space, suitable safe and strong approaches shall be provided by Contractor to avoid accident.
 - f) Use of 24V Guarded Hand lamps, while working in confined space is must.
- 5.1.18. The Contractor shall assign to his workmen, tasks commensurate with their qualification, experience and state of health for driving of vehicles, handling and erection of materials and equipments. All lifting equipments shall be tested & certified by competent authority and shall be thoroughly examined before use. The Contractor shall provide adequate and suitable lighting at every work place and approach before starting the actual operations at night.

MATERIAL HANDLING

- a) Whatever tools tackles, slings, lifting equipments and Lifting machines, crane, etc are brought and used by contractor during execution of job should be of reputed make.
 - b) Contractor has to produce its test certificates from competent person to Engineer-In-Charge/ Safety Officer.
 - c) No person should be allowed to carry, lift or move any load so heavy, which may likely cause him injury as prescribed under State factories rules.
- 5.1.19. The Contractor shall fulfill all necessary statutory provisions for use and storage of hazardous chemicals. For Hazardous / Toxic material/ Chemicals, if stored/ Used by Contractor at site it should be done as per guidance and approval from safety section and chemical laboratory section.

HAZARDOUS MATERIAL

- a) Contractor shall ensure storage and utilization methodology of materials that are not detrimental to the environment. Where required Contractor shall ensure that only the environment friendly materials are selected.
- b) Hazardous and/or toxic materials such as solvent coating or thinners/paints shall be stored in appropriate containers separately at safe distance in segregated manner.
- c) All hazardous materials shall be labeled with the name of the materials, the hazardous associated with its use and necessary precautions to be taken.
- d) Contractor shall ensure that during the performance of the work, all hazards to the health of personnel have been identified assessed and eliminated.
- e) Chemical spills shall be contained and cleaned up immediately to prevent further contamination.
- f) Where contact or exposure of hazardous materials could exceed limits or could otherwise have harmful effects: appropriate personal protective equipments such as gloves, goggles, aprons, chemical resistant clothing & respirator shall be used.

CARE IN HANDLING INFLAMMABLE GASES

The Contractor has to ensure all precautionary measures and exercise utmost care in handling of inflammable gas cylinders/ inflammable liquids/ paints etc. as required under the law and /or advised by the company.

5.1.20. Contractor shall ensure deployment of appropriate equipment and appliances for adequate safety and health of the workmen and protection of surrounding areas.

CARE FOR FLOOR OPENING, OVERHEAD PROTECTION AND SIGN BOARDS

- a) Where necessary Contractor should arrange Sign / Caution boards. Red light Signals for night caution, Cordoning by Tape, Rope, fence etc.
- b) The Contractor shall ensure that all floors steps, stairs, passages and gangways are to be properly maintained and shall be kept free from obstructions and substances likely to cause persons to slip, fall and trip.
- c) The Contractor shall not remove any part of equipments (like guards etc.) or gangways (like fencing, base etc.) or other systems without the permission of the Engineer-In-charge.
- d) Wherever any guards / other parts of the system are removed for repair, it shall be restored back to its place, before any operation or use of the equipment. The Contractor shall not hand-over/ allow operating these equipments till the guards are provided at its place.
- e) In case any opening in gangway / access etc. is caused due to removing any part of base for lifting of material or otherwise, either the opening shall be suitably fenced or suitably covered to prevent fall of any person in such openings in consultation with Engineer In-Charge. Temporary fencing shall also be provided whenever required along with appropriate caution boards, lighting etc.
- f) Every floor opening at elevation from ground level through which a worker, material, equipment, etc. may fall at O&M work area shall be covered and/or guarded suitably by the Contractor to prevent such falls.
- g) Wherever there is a possibility of falling of any material, equipment or workers while working at heights, a suitable and adequate safety net should be provided. The safety net should be in accordance with BIS Standards or as specified by the head safety.
- h) The Contractor shall ensure that vessel, sump, tanks pit or opening in ground or in a floor which by reason of its depth, situation, construction or contains or may be a source of danger at his workplace shall be either securely covered or fenced and necessary measures for protection against falling material / objects.
- i) The Contractor shall ensure that any area exposed to risk of falling materials, articles or objects is fenced with railings or cordoned off or otherwise suitably guarded from inadvertent entry of any person.
- j) The Contractor shall not allow any worker to examine any part of the machinery or to carry out the lubrication or other adjusting operation while the machinery is in motion. The workers working near the machinery in motion shall be provided with tight fitting clothes as required under State Factories Rules.

TEMPORARY COMBUSTIBLE STRUCTURE

Temporary combustible structure shall not be built near or around work site / plant area.

5.1.21. Contractor will not start any excavation without taking a general work permit for excavation, (more than 500mm deep) including clearance from Civil Section / Electrical Maintenance Section / Fire & Safety section / any other Utility.

EXCAVATION WORK

- a) While executing any excavation, Contractor will have to take maximum precaution so that any underground cables/pipeline are not damaged to prevent accident. If damage takes place charges will be recovered from Contractor. Excavation for cable laying will have to be completed on the same day or within shortest possible time.
- b) After completion of job he has to provide necessary cable protector (tiles) on the cables before back filling of earth and resurface the Finish Ground Level / road as per instructions of Engineer-in-Charge.
- c) While excavating deep (more than 1.0 meter) for foundation, Contractor has to take precaution against land sliding. He has to provide adequate cordoning to the excavated areas. Also provide danger signboard and red lamp (for night caution) till work is completed, use of safety belts & adequate standard approach/ ladder must be ensured till completion of work.

5.1.22. All persons deployed at site shall have knowledge and comply with the environmental laws, rules &

regulations relating to the hazardous materials substances and wastes. Contractor shall not dump, release or otherwise discharge or dispose-off any such materials without the express authorization of Owner.

5.1.23. While carrying out welding & gas cutting work Contractor must ensure that all welding cutting equipments should be of standard make and adequate protections are provided and safe against electrocution, fire, non-ionization radiations, fumes etc.

WELDING & CUTTING WORK

- a) Ensure that welding transformer supply cable should be of adequate size, insulated and lay down through safe route and ensure that sparks / welds do not fall on cables.
- b) Ensure that welding transformer is provided with local isolating switch.
- c) Ensure that welding transformer is effectively earthed.
- d) Ensure that outgoing negative lead is effectively connected to job only.
- e) Ensure that outgoing negative & positive lead is of adequate size with respect to the maximum welding current requirements.
- f) Welding holder should be of adequate size and insulation.
- g) Ensure that safety shoes and other necessary PPEs are provided to welder, gas cutter and his co-workers.
- h) Ensure that welding shields/ barriers are provided where necessary.
- i) Ensure that cylinders are not thrown/rolled while handling.
- j) While using or transporting gas cylinders at site, cylinders shall be mounted on trolleys / hand cart.
- k) Flash back arrester for gas torch and standard regulator (ISI) shall be used while using gas cylinders at site.
- l) The Contractor will not use the domestic LPG for industrial purpose as per Gas Control Act.

- m) Ensure that gas hoses connections of cutting torch and regulator are with suitable and adequate size clamps and hoses shall be ISI Marked.
- n) While executing work on plant floors. while transporting of cylinders ensure that stair steps, railings etc should not be damaged.
- o) Gas cutting work at confined area/minus level shall be carried out with DA Gas only & Availability of DA cylinder to be ensured.

5.1.24. All personnel exposed to physical agents such as ionizing or non-ionizing radiation, ultraviolet rays or similar other physical agents shall be provided with adequate shielding or protection commensurate with the type of exposure involved.

RADIOGRAPHY (NDT) TEST

- a) The Contractor shall take necessary action as per the statutory regulations and protocol of Owner. In case of failing this type of job will not be allowed to be carried out.

5.1.25. Contractor shall ensure that a high degree of housekeeping is maintained and after completion of job Contractor has to clear site at its own so that (debris, scaffolding etc.) it may not cause hindrance/ accident to others. Contractor shall ensure the followings:

HOUSE KEEPING

- a) All surplus earth and left out unwanted materials are removed / disposed off from the working areas to identified location as directed by EIC.
- b) Unused surplus Cables, steel items and steel scrap lying scattered at different places within the working areas are removed from a workplace to an identified location(s) immediately after completion of work. All wooden scrap, empty wooden cable drums and other combustible packing materials shall be removed from workplace to identified location(s).
- c) Roads shall be kept clear and materials like: pipes, steel, sand, boulders, concrete, chips and bricks etc, shall not be allowed on the roads to obstruct free movement of men and machineries.
- d) Fabricated steel structural, pipes & piping materials shall be stacked properly.
- e) Water logging on roads shall not be allowed.
- 1) No parking of trucks/trolleys, cranes and trailers etc. shall be allowed on roads, which may obstruct the traffic movement.
- g) Utmost care shall be taken to ensure overall cleanliness and proper upkeep of the working areas.
- h) Trucks carrying sand, earth and pulverized materials etc. shall be covered while moving within the plant area.

5.1.26. The objective is to cover all types of scraps generated during different stages of activities including its disposal in a manner to minimize their harmful concentration / effect to health safety and environment. **DISPOSAL OF SCRAPS**
DISPOSAL OF METALLIC SCRAP

These types of scrap are normally generated during operations like Gas Cutting, Welding, Fabrication,

maintenance etc. Scrap bins / designated places shall be marked to keep the metallic scrap. These bins / designated places shall be approachable to cranes and trucks. Disposal of these scraps from time to time to the Scrap Yard or designated places shall be ensured by the Contractor.

DISPOSAL OF NON-METALLIC SCRAP

These types of scraps are normally generated by damaged Rubber Seals, Liners, V-belts. Conveyor belts, Rubber diaphragms, HOPE pipes etc. Scrap bins / places shall be earmarked and made approachable to cranes and trucks. Disposal of these scraps shall be ensured periodically to dispose at the area provided in the Scrap Yard / designated places by the Contractor.

DISPOSAL OF MACHINING SCRAP

The machining scraps are generated during various machining operations like Turning, Drilling, Boring/Milling, Slotting etc. Small bins shall be earmarked in their respective area/site to keep these scrap. After filling the scrap bins, the same shall be dumped at the designated places.

DISPOSAL OF SCRAP ITEMS OTHER THAN ABOVE

All other scraps that are not mentioned above should be stored in the designated places and subsequent disposal action shall be taken up to satisfaction.

DISPOSAL OF USED COTTON WASTES

Cotton waste is a general consumable item used during every maintenance activity. In each area separate bins shall be kept available to keep the used cotton waste / rags. Approachable to cranes / trucks, the accumulated cotton waste shall then be collected periodically and disposed at the designated places as earmarked.

HANDLING AND DISPOSAL OF LUBRICANTS

- a) During handling, the lids of the barrels in fresh oil and grease shall be ensured sufficiently tight, so that no spillage occurs during transportation.
- b) These fresh oil / grease barrels shall be kept at the designated places in a bonded area by proper marking, so as to avoid mixing of good & used lubricant barrels. The barrels shall be kept in such a way that, there will be no spillage to the ground and surface drain, any oil leakage to the ground shall be covered with saw dust immediately and wiped out by cotton waste immediately and put back to the cotton waste bin.
- c) Used oil and grease shall be taken from these barrels by means of barrel pumps and spatula respectively. Sufficient care shall be taken to avoid spill over. Any small spillover shall be immediately wiped out by cotton waste and put back to cotton waste bin. After removal of oil / grease, the lid shall be put back to the barrel. During greasing of equipments, the old grease coming out of the

equipments and the fresh spillover of grease if any shall be immediately wiped out by cotton waste and put back to cotton waste bin.

- d) Jen-y cans and funnels: the direct topping up without funnel shall be avoided for topping up of oil. Any leakage/spillage shall be immediately removed by cotton waste and put back to waste bin.
- e) During oil changing, old oil shall be drained first to containers/ trays so that no oil spills outside. Then the drain plug shall be put back. Then, fresh oil shall be put in to the equipment through oil filling plug. With the help of jerry can and funnel. The direct oil filling without funnel shall be avoided. Oil spillage/overflow during oil filling shall be wiped out immediately by cotton waste and put back to cotton waste bin.
- f) In case of oil or grease leakage/spillage due to breakdown then spillages shall be attended quickly. The oil or grease spill over shall be wiped out immediately by cotton waste and put back to cotton waste bin. The item under breakdown shall be subsequently repaired/ replaced.

DISPOSAL PROCEDURE

- a) The used oil, after oil changing shall be kept in the place designated for keeping empty barrels duly marked as "Used Oil". All the barrels shall be kept in a bonded area to prevent soil contamination due to spillage /leakages.
 - b) The used oil barrel and empty grease drums shall be covered always to avoid ingress of rainwater. These barrels shall be kept at identified places to avoid leakage to surface drain or soil.
 - c) Once used oil barrels are filled up and grease drums are empty, arrangements shall be made to take away these barrels / drums for disposal to the suitable disposal designated sites.
 - d) The old soaked materials shall be collected separately and disposed at designated place or disposed off as per Owners direction.
- 5.1.27. The materials shall be stacked properly, which should not cause hindrance to others and lead to any accident. After completion of the job all the materials should be removed and taken up from the site.

STACKING OF MATERIALS

- a) All the drainage lines / channels should be kept free from choking.
- b) While transporting the materials care should be taken so as to ensure no spillage during loading, transportation and unloading at site, the entire surplus earth, after digging work shall be immediately disposed off to designated site.
- c) Similarly no spillage shall be allowed on the road.
- d) Scaffolding material before and after use shall be stacked properly.

5.1.28. Attempts should be made to use minimum quantity of water in every construction activity.

WATER CONSERVATION

- a) In no case water overflowing shall be allowed.
- b) In no case fire hydrant water shall be used for any other purpose.
- c) Attempts should also be made to use minimum quantity of water to clean the spillages.

d) Defective leaking water points during the course of activities shall be attended immediately.

5.1.29. As far as practicable sufficient care should be taken so as to ensure that the emission levels from heavy machineries and vehicles are kept minimum.

VEHICULAR EMISSION AND SOUND GENERATED BY THE HEAVY VEHICLES.

Periodic check of exhausts of the machineries shall be carried out and the Contractor shall take up necessary corrective action.

5.1.30. Besides the above guidelines, the Contractor shall at its own expenses arrange to comply all other environmental conditions stipulated in the GCC / Work Order arrangements made by the Company time to time.

6. ANNEXURE-X

RELEVANT IS - CODES FOR PERSONAL PROTECTION

IS: 2925- 1984 Industrial Safety Helmets

IS: 4770-1968 Rubber gloves for electrical purposes

IS: 6994.1973 (Part-I) Industrial Safety Gloves (Leather & Cotton Gloves) IS: 1989-1985 (Part-I & III) Leather safety boots and shoes

IS: 3738-1975 Rubber knee boots

IS: 5557-1969 Industrial and Safety rubber knee boots

IS: 6519-1971 Code of practice for selection, care and repair of Safety footwear IS: 15298-2002 Leather Safety footwear having direct molding soles

IS: 5983 - 1978 Eye protectors

IS: 9167 -1999 Ear protectors IS: 3521-1983 Full body harness

7. GENERAL REQUIREMENTS FOR OCCUPATIONAL HEALTH AND SAFETY

The Contractor has to comply with Factory Act and Rules and other Labour Laws such as minimum Wages Act and Contract Labour Act and State Labour Welfare Fund Act and other applicable statutes & laws. The Contractor has to take care of Occupational, Health and Safety requirements, Welfare, Working Hours, and Annual Leave with wages of his workers. Contractor has to follow rules of ESI, W.C. Act, & PF for their workers as per rules of the state.

7.1.1. All Contractors to work as per instructions of Engineer-In-Charge

a) The Contractor shall get the medical examination conducted of all his employees including his sub-contractor employees/workers working in hazardous areas/process once before the employment and thereafter once in every year by a qualified medical practitioner as per the factories act, 1948 and related State factories rules. The necessary registers and records relating to the medical examination of all the employees should be maintained in the Formats prescribed as per the applicable Factories Act/Rules & shall submit to the owner on demand.

- b) Contractor should obtain necessary safety work permits from concern section /Safety section before starting the job when needed.
- c) Contractor has to adhere with Owner's permit systems for Hot work. Confined Space entry, Working at height, HV system etc. As applicable.
- d) The Contractor has to carry out work during shut down with isolation in stipulated time as instructed by Engineer-In-Charge, if applicable.

Note: The formatting of texts in the above SOW and T&C may vary, therefore kindly refer to the attachment of the PO for proper viewing.

**Section VI
Billing Break up for**

NIT :JPL/C/Contracts/NIT/23-24/120007553

Dated 10/05/2023

"Comprehensive Operation and Maintenance Contract for Coal Handling Plant and Railways"

S.No.	Service PO detail	Area	UOM	Quantity	Per month Cost	Total Cost	
A	Operation & Maintenance cost of CHP & WT-1/2	CHP					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total A						
B	20 unskilled and 2 semiskilled manpower for Monsoon season (for 4 month)	CHP					
a	Cost for 1 st year		month	4	-	-	
b	Cost for 2 st year		month	4	-	-	
c	Cost for 3 rd year		month	4	-	-	
	Total B						
C	Operation of railway siding	Railways					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total C						
D	Operation & Maintenance cost of LOCOs	Railways					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total D						
E	Maintenance of railway track	Railways					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total E						
F	Operation & Maintenance cost of Railway siding OHE	Railways					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total F						
G	Manual Wagon cleaning during Monsoon after tipping.	Railways					
a	Cost for 1 st year		month	12	-	-	
b	Cost for 2 st year		month	12	-	-	
c	Cost for 3 rd year		month	12	-	-	
	Total G						
	Total A + B + C + D + E + F + G						
	GST extra @ 18%				18%	-	
	Total Cost with GST					-	

S. No	Summary of Price	1st Year	2nd Year	3rd Year	Total	GST	Total
1	CHP	1	2	3	1+2+3		
2	Railways	4	5	6	4+5+6		
3	Total	1+4	2+5	3+6	Sum should be same		
4	GST						
5	Grand Total						Sum should be same

- Note
1. Evaluation will be done considering costs for 2 years only
 2. Provision of Extension for additional 12 months will be considered if required



JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

SECTION – VII

FORMS & PROCEDURES

TABLE OF FORMS AND PROCEDURES

S. No.	Attachment / Annexure Nos.	Description
		Bid Form & Attachments
1	Attachment-1	Bid Form
2	Attachment-1A	Bid Security (EMD)
3	Attachment-1B	Bid Security Declaration
4	Attachment-2	Authority to Sign Bid
5	Attachment-3	Bidders Qualification Documents in line with attached Performa-3A & 3B
6	Attachment-4	Sub-Contractor proposed by Bidder
7	Attachment-5	Equipment / Machinery Deployment Schedule
8	Attachment-6	General Declaration
9	Attachment-7	Electronic Fund Transfer (EFT) Form
10	Attachment-8	Details along with copy of PF and ESI Registration, PAN and GST Reg.
11	Attachment-9	Declaration Regarding GST
12	Attachment-10	Technical Compliance (Section-V)
13	Attachment-11	Integrity Pact
14	Attachement-12	Declaration of No Deviation Certificate (<i>GTE</i>)
15	Attachement-13	Declaration of Compliance of Qualifying Requirement (<i>GTE</i>)
16	Attachement-14	Acceptance of Banning Policy(<i>GTE</i>)
17	Attachement-15	Acceptance of Fraud Prevention Policy(<i>GTE</i>)
18	Attachement-16	Acceptance of NTPC Safety Rules and Standard Safety Rules as per Tender Documents (<i>GTE</i>)
19	Attachement-17	Declaration of Local Content(<i>GTE</i>)



1. BID FORMS



BIDFORM

Date:-----

NIT/IFB/TenderEnquiryNo: JPL/C&M/Contracts/NIT/22-23/----

Name of Contract Package: **“Comprehensive Operation & Maintenance Contract for Coal Handling Plant & Railway Siding”**

To

JHABUA POWER LTD.
CIN NO: U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sir,

- 1.0 Having examined the Bidding Documents including subsequent amendments and clarifications, the receipt of which is here by acknowledged, we the undersigned, submit our bid for the Works under the above-named Contract Package, in full conformity with the said Bidding Documents.
- 2.0 We have understood the instructions and the terms and conditions mentioned in the bidding documents furnished by you and have thoroughly examined the detailed scope of work laid down by you and are fully aware of nature and scope of work required
- 3.0 We hereby confirm our acceptance and compliance to the provisions and terms and conditions contained in the bidding documents.
- 4.0 We declare that the work will be executed strictly in accordance with the requirement.
- 5.0 Our proposal shall remain valid for acceptance for a period of 90 days from the date of opening of the 'Technical & Commercial Proposal' by JPL.
- 6.0 We hereby furnish our 'Bid' comprising the following as per prescribed formats:

Attachment-1A: Bid Security Declaration

(In case if bids from Joint Venture are applicable as per Tender Conditions; Attachment-1B shall be applicable).

Attachment-2: Authority to Sign the Bid

Attachment-3: Bidders Qualification Documents *(As per QR Criteria-If applicable as per Tender Conditions)*

- Attachment-4: Sub-Contractors proposed by Bidder *(If applicable as per Tender Conditions)*
- Attachment-5: **Not Applicable**
- Attachment-6: General Declaration
- Attachment-7: Electronic Fund Transfer (EFT) Form
- Attachment-8: Details along with copy of PF and ESI Reg., PAN and GST Reg.
- Attachment-9: Declaration regarding GST
- Attachment-10: Technical Compliance
- Attachment-11: Integrity Pact *(If applicable as per Tender Conditions)*
- 7.0 Our 'Technical and Commercial Bid' and 'Price Bid' along with EMD are being submitted. Physical submission of required documents as per Tender Conditions are also complied. We hereby confirm that our Techno-Commercial Bid does not contain any Price content entry. Further, we confirm that our Price Bid does not contain any matter in respect of Technical and/or Commercial aspects other than the details specifically sought in the price Bid.
- 8.0 We are aware that the Schedule of Quantities does not generally give a full description of the work to be performed under each item and we shall be deemed to have read the Technical Specifications, Drawings and other Sections of the Bidding Documents to ascertain the full scope of work included in each item while filling in the rates and amount/prices. We agree that the entered rates and amount/prices shall be deemed to include the full scope as aforesaid, including overheads and profit.
- 9.0 We declare that as specified in the GCC Tender Documents, prices quoted by us in the Bid Price Schedule/Schedule of Quantities are FIRM.
- 10.0 We declare that prices left blank in the Bid Price Schedule/Schedule of Quantities will be deemed to have been included in the prices of other items. The total for each Schedule and the total of grand summary shall be deemed to be the total price for executing the subject package in complete accordance with the Contract, whether or not each individual item has been priced.
- 11.0 We confirm that our Bid Prices include all taxes (Except GST), duties, levies and charges as may be assessed on us, our Sub-Contractor/Sub-Vendor and those imposed on our equipment, materials, supplies and services to be used in the performance of the Contract or furnished under the Contract.
- 12.0 We have read all the provisions of the Bidding Documents and confirm that notwithstanding anything stated elsewhere in our bid to the contrary, the provisions of the Bidding Documents, are acceptable to us and we further confirm that we have not taken any deviation to the provisions of the Bidding Documents anywhere in our



bid. We hereby agree that we shall furnish all necessary justification to establish the reasonableness of the rates/prices, if required by you.

Any deviation, variation or additional condition etc. or any mention, contrary to the provisions of Bidding Documents and its subsequent Amendment(s)/ Clarification(s)/Addenda/Errata (if any) found anywhere in our bid proposal, implicit or explicit shall stand unconditionally withdrawn, without any cost implication whatsoever to the Employer, failing which our bid shall be rejected.

13.0 We undertake, if our bid is accepted, to commence work under the subject package immediately on issue of your Letter of Award/Service Purchase Order and to complete it within the time specified in the SCC.

14.0 We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the Contract to be entered into, if the award is made on us, and that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal, in all respects for and in good faith, without collusion or fraud.

Dated this Day of 2022

Thanking you,

Yours faithfully,

(Signature).....
(Name).....
(Designation).....
(Common Seal)

Business Address / Contact Detail:

.....
.....

Note: Bidders may note that no prescribed proforma has been enclosed for:

- (a) Attachment 2 (Authority to Sign the bid) (Legal Documents)
- (b) Attachment 10: Technical details & data sheets, drawings, compliance to scope of work etc



ATTACHEMENT NO. 1 (1A & 1B)

BID SECURITY DECLARATION



ATTACHMENT – 1A

“BID SECURITY DECLARATION”

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

In accordance with Enq / NIT / IFB under your Bid DocumentNo..... ,
We, M/s.....[Bidder'sName]. having our Registered/
Head Office at (hereinafter called the
'Bidder') wish to participate in the said tender for [Name of Package]
.....

We confirm that we have read the provisions of the bidding document no.....and
we hereby declare the following:

1. We confirm that, in case we withdraw our offer within the validity period of the offer provided in the bidding documents or any extension thereof, then we shall be treated as ineligible for participation in the future tenders issued from JPL for a period of **06 months** from the date of withdrawal of the bid.
2. In addition, we also confirm that in case after having been issued the Notification of Award/Purchase Order of a package, we either do not accept the Notification of Award/Purchase Order or do not sign the Contract or do not submit an acceptable Performance Security as per bidding documents provision, and which result in tender being annulled then we shall be treated ineligible for participation in re- tendering of this particular package and contractual action may be taken against us as per the provisions of the Bidding documents. Further, JPL shall also be free to take further actions as per the provisions of the policy for Withholding and Banning of Business Dealings.



Date:

Place:



Signature

Name of the Authorized person



BID SECURITY DECLARATION (IN CASE OF BID FROM JOINT VENTURE: If applicable) ACCORDANCE WITH SCC

BIDDER REQUIRES TO ATTACH THE SAME AS ATTACHMENT-1B (If applicable as per Tender Conditions)



ATTACHMENT – 1B

“BID SECURITY DECLARATION”
(IN CASE OF BID FROM JOINT VENTURE)

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

In accordance with Invitation for Bids under your Bid Document No., M/s.....[PartnerName]..... having its Registered/Head Office at.....and M/s.....[Other Partner's Name]..... having its Registered/Head Office at (hereinafter collectively called the 'Bidder') wish to participate in the said bid for [Name of Package]

We confirm that we have read the provisions of the bidding document no. and we hereby declare the following:

1. We confirm that, in case we withdraw our offer within the validity period of the offer provided in the bidding documents or any extension thereof, then we shall be treated as ineligible for participation in the future tenders issued from JPL for a period of **06 months** from the date of withdrawal of the bid.
2. In addition, we also confirm that in case after having been issued the Notification of Award/Purchase Order of a package, we either do not accept the Notification of Award/Purchase Order or do not sign the Contract or do not submit an acceptable Performance Security as per bidding documents provision, and which result in tender being annulled then we shall be treated ineligible for participation in re-tendering of this particular package and contractual action may be taken against us as per the provisions of the Bidding documents. Further, JPL shall also be free to take further actions as per the provisions of the policy for Withholding and Banning of Business Dealings.

Date:

Place:

Signature and Name of the Authorized person of each Partner of Joint Venture

DOCUMENTS RELATED TO AUTHORITY TO SIGN THE BID

BIDDER REQUIRES TO ATTACH THE SAME AS ATTACHMENT-3

(To be sent in Fee/Pre-Qual/Technical Cover envelope)

BIDDER MAY TAKE NOTE OF THE FOLLOWING POINTS WHILE SUBMITTING ITS BID

1. POWER OF ATTORNEY DULY NOTARIZED BY A NOTARY PUBLIC INDICATING THAT THE PERSON (S) SIGNING THE BID HAS/HAVE THE AUTHORITY TO SIGN THE BID AND THE BID IS BINDING UPON THE BIDDER DURING THE FULL PERIOD OF ITS VALIDITY BACKED BY A COPY OF BOARD RESOLUTION / OTHER RELEVANT DOCUMENT TO DEMONSTRATE THE AUTHORITY OF THE PERSON ISSUING THE POWER OF ATTORNEY. TO BE FURNISHED ALONG WITH THE BID.

2. POWER OF ATTORNEY TO THE AUTHORIZED SIGNATORY OF THE BIDDER FOR SIGNING OF BID AND JDU/JV AGREEMENT ETC., WHEREVER APPLICABLE, TO BE SUBMITTED ALONG WITH BID AND SHOULD BE DATED NOT LATER THAN THE DATE OF SIGNING THE BID.

BIDDER TO ENSURE THAT BID SECURITY / INTEGRITY PACT TO BE SUBMITTED IN ORIGINAL STRICTLY AS PER SPECIFIED FORMATS DULY SIGNED IN ORIGINAL BY AUTHORIZED SIGNATORY AND STAMPED

BIDDER'S QUALIFICATION

(As per QR Criteria mentioned in Enq / NIT / IFB)



ATTACHMENT – 3A

BIDDER'S QUALIFICATION (SIMILAR WORKS) IN LINE WITH QUALIFYING CRITERIA
(To be sent in Fee/Pre-Qual/Technical Cover envelope)

To,
JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

In order to fulfil the Qualifying Requirements stipulated at Enq / NIT / IFB we, the bidder, declare that we have executed the following work of.....as per details given below: (strike out which ever not applicable)

SL. No.	Name of Work(s) / Contract(s) to be considered	Name and Address of Client /Owner	Ref. No. LOA / PO / WO & Award Date	Date of Completion of work		Executed Value (As per QR Criteria)	Completion Certificate (Ref. / Date)	Remarks
				As per Contract	Actual			
1	2	3	4	5	6	7	8	9

Notes:

- i) Certificate from owner M/s..... is enclosed at Annexure.....
- ii) Copy of Award Letter / Work Order / Purchase Order issued by Client enclosed at Annexure.....
- iii) Documentary evidences in support of above details enclosed at Annexure.....
- iv) Please enclose the details work-out in a separate sheet indicating the item and the cumulative value considered to meet the QR

- v) Enq / NIT / IFB shall be referred regarding Number of Similar Work(s) to be submitted
- vi) Bidders to attached additional sheet of same format as required.



ATTACHMENT – 3B

(Details pertaining to Financial Criteria of Qualification Requirement as per the Enq / NIT / IFB)

(To be sent in Fee/Pre-Qual/Technical Cover envelope)

Bidder's Name and Address: To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

1. To satisfy the requirements specified in Enq / NIT / IFB, We give below the following details:

1. In terms Enq / NIT / IFB, we confirm that our Average Annual Turnover during the preceding Three Financial Years as on date of Techno-Commercial Bid Opening is not less than

In support of above, we are enclosing Audited Financial Statements.

Sl.No	Financial Year	Amount in Rs.
1.		
2.		
3.		
4.	Average Annual Turnover for the preceding three (3) Financial Years as on date of Techno- Commercial Bid Opening.	
5.	We have enclosed Audited Financial Statements for the last 3 financial years at	Annexure to Attachment-3B

6.	<p>Since we are not able to furnish our audited financial statements, on standalone entity basis, we are submitting the following documents for substantiation of our Qualification:</p> <p>*Copies of unaudited unconsolidated financial statements of the bidder along with copies of the audited consolidated financial statements of our Holding Company for the last 3 years enclosed at Annexure to this Attachment 3B.</p> <p>*Certificate from the CEO/CFO of the Holding Company stating that the unaudited unconsolidated financial statements form part of the consolidated Financial Statements of the Holding Company, is Enclosed enclosed as per the format at Appendix-A to this Attachment-3B.</p>	
7.	Audited results for the last financial year as on the date of Techno-Commercial bid opening enclosed	YES */NO*
	In case not enclosed, financial results certified by a practicing chartered accountant enclosed	YES */NO* Enclosed at Annexure
	In case financial results certified by a practicing chartered accountant not enclosed, then Audited financial statements for FY also enclosed.	YES */NO* Enclosed at Annexure
	Further, a Certificate from the CEO/CFO of the Bidder stating that the Financial results of company are under audit as on the date of Techno- Commercial Bid Opening and the certificate from the practicing chartered accountant certifying the financial parameters is not available, is enclosed Annexure as per the format at Appendix-B to this Attachment-3B.	

2. Since we do not satisfy the Financial Criteria stipulated at Enq / NIT / IFB, on our Own, we give below the following details of our **Holding Company**:

- i. Name and Address of the Holding Company:
- ii. Turnover of the Holding Company with following details:



Sl.No	Financial Year	Amount in INR
a)		
b)		
c)		
d)	Average Annual Turnover for the preceding three (3) Financial Years as on date of Techno-Commercial Bid Opening.	
e)	We have enclosed audited Financial Statements for the preceding three (3) Financial years	Annexure to Attachment-3B



Sl. No	Description	As on last day of the Preceding financial year
iii.	Paid-up Share Capital of the Holding Company	
iv.	Net Worth of the Holding Company	
v.	%age of Net worth to Paid-up Share Capital of the Holding Company	
vi.	A Letter of Undertaking from the Holding Company, supported by Board Resolution of the Holding Company, pledging unconditional and irrevocable financial support for execution of the contract by the bidder in case of award is enclosed as per the format at Appendix- B to this Attachment-3B. A power of attorney of the person signing on behalf of holding company is also enclosed at Annexure to this Attachment-3B.	
vii.	Documentary evidence like Annual Report/Audited financial statements together with relevant schedules for the preceding financial year/ certification of financial statements from a practicing Chartered Accountant etc. in respect of holding company in support of above is enclosed at Annexure to this Attachment-3B.	
viii.	Audited results for the last financial year as on the date of Techno-Commercial bid opening enclosed	YES <input type="checkbox"/> */NO* <input type="checkbox"/>
	In case not enclosed, financial results certified by a practicing chartered accountant enclosed	YES <input type="checkbox"/> */NO* <input type="checkbox"/> Enclosed at Annexure
	In case financial results certified by a practicing chartered accountant not enclosed, then Audited financial statements for FY ----- also enclosed.	YES <input type="checkbox"/> */NO* <input type="checkbox"/>
	Further, a Certificate from the CEO/CFO of the Holding Company stating that the Financial results of company are under audit as on the date of Techno-Commercial Bid Opening and the certificate from the practicing chartered accountant certifying the financial parameters is not	available, is enclosed Annexure as per the format at



Appendix-B to this Attachment-3B.



Enclosed at Annexure



Date : (Signature).....
Place : (Printed Name of Authorised person
having Power of attorney.....
(Designation).....
(Company seal).....

**(Details pertaining to Financial Qualification of the bidder
as per the Enq / NIT / IFB)**

Dear Sirs,

1. To satisfy the requirements specified in Enq / NIT / IFB, We give below the following details:

1. We hereby confirm that **Net Worth of our company as on the last day of the preceding financial year is not less than 100% of its paid-up share capital.**

The Details are as under:

Sl. No	Description	As on last day of the preceding financial year
1.	Paid-up Share Capital	
2.	Net Worth	
3.	%age of Net worth to Paid-up Share Capital	
4.	Documentary evidence like Audited financial statements for the preceding financial year* in support of above is enclosed at Annexure to this Attachment-3B.	

Sl. No	Description	As on last day of the preceding financial year
5.	<p>Since we are not able to furnish our audited financial statements, on standalone entity basis, we are submitting the following documents for substantiation of our Qualification:</p> <p>(i) Copies of unaudited unconsolidated financial statements of the bidder along with copies of the audited consolidated financial statements of our Holding Company for the last 3 years enclosed at Annexure to this Attachment-3B.</p> <p>(ii) Certificate from the CEO/CFO of the Holding company stating that the unaudited unconsolidated financial statements form part of the consolidated Financial Statements of the Holding Company, is</p>	



	enclosed as per the format at Appendix-A to this Attachment-3B.	Enclosed at Annexure
6.	<p>Audited results for the last financial year as on the date of Techno-Commercial bid opening enclosed</p> <p>In case not enclosed, financial results certified by a practicing chartered accountant enclosed</p> <p>In case financial results certified by a practicing chartered accountant not enclosed, then Audited financial statements for FY also enclosed.</p> <p>Further, a Certificate from the CEO/CFO of the Bidder stating that the Financial results of company are under audit as on the date of Techno-Commercial Bid Opening and the certificate from the practicing chartered accountant certifying the financial is not available, is enclosed Annexure as per the format at Appendix-C to this Attachment-3B.</p>	<p>YES <input type="checkbox"/>*/NO* <input type="checkbox"/></p> <p>YES <input type="checkbox"/>*/NO* <input type="checkbox"/> Enclosed at Annexure</p> <p>YES <input type="checkbox"/>*/NO* <input type="checkbox"/> Enclosed at Annexure</p>

2. Since we do not satisfy the Financial Criteria stipulated at Enq / NIT / IFB, on our Own, we give below the following details of our **Holding Company**:

Sl. No	Description	As on last day of the preceding financial year
i.	Name and Address of the Holding Company:	
ii.	Paid-up Share Capital of the Holding Company	
iii.	Net Worth of the Holding Company	
iv.	%age of Net worth to Paid-up Share Capital of the Holding Company	
v.	We have enclosed audited Financial Statements for the preceding three (3) financial years	YES <input type="checkbox"/> */NO* <input type="checkbox"/> Enclosed at Annexure



Sl. No	Description	As on last day of the preceding financial year
--------	-------------	--

- | | | |
|-----|---|---|
| vi. | Audited results for the last financial year as on the date of Techno-Commercial bid opening enclosed | YES <input type="checkbox"/> */NO* <input type="checkbox"/> |
| | In case not enclosed, financial results certified by a practicing chartered accountant enclosed | YES <input type="checkbox"/> */NO* <input type="checkbox"/>
Enclosed at Annexure |
| | In case financial results certified by a practicing chartered accountant not enclosed, then Audited financial statements for FY also enclosed. Further, a Certificate from the CEO/CFO of the Holding Company stating that the Financial results of company are under audit as on the date of Techno-Commercial Bid Opening and the certificate from the practicing chartered accountant certifying the financial is not available, is enclosed Annexure as per the format at Appendix-B to this Attachment-3B. | YES <input type="checkbox"/> */NO* <input type="checkbox"/>
Enclosed at Annexure |

3. Since we do not satisfy the Financial Criteria stipulated at Enq / NIT / IFB, on our Own, we give below the following details of four subsidiary or subsidiaries of **Holding Company**:

Sl. No	Description	As on last day of the preceding financial year
--------	-------------	--

- | | | |
|------|---|--|
| i. | Name and Address of our subsidiary or subsidiary(ies) of Holding Company: | |
| ii. | Paid-up Share Capital | |
| iii. | Net Worth | |
| iv. | %age of Net worth to Paid-up Share Capital | |
| v. | We have enclosed audited Financial Statements for the preceding three (3) Financial years | |





Sl. No	Description	As on last day of the preceding financial year
--------	-------------	--

- | | | |
|-----|---|---|
| vi. | Audited results for the last financial year as on the date of Techno-Commercial bid opening enclosed | YES <input type="checkbox"/> */NO* <input type="checkbox"/> |
| | In case not enclosed, financial results certified by a practicing chartered accountant enclosed | YES <input type="checkbox"/> */NO* <input type="checkbox"/>
Enclosed at Annexure |
| | In case financial results certified by a practicing chartered accountant not enclosed, then Audited financial statements for FY also enclosed. Further, a Certificate from the CEO/CFO of subsidiaries of the Holding Company stating that the Financial results of company are under audit as on the date of Techno-Commercial Bid Opening and the certificate from the practicing chartered accountant certifying the financial is not available, is enclosed Annexure as per the format at Appendix-B to this Attachment-3B. | YES <input type="checkbox"/> */NO* <input type="checkbox"/>
Enclosed at Annexure |

We further confirm that notwithstanding anything stated above, the Employer reserves the right to undertake- a physical assessment of the capacity and capabilities including financial capacity and capability of the Bidder / his Collaborator(s) / Associate(s) / Subsidiary(ies) / Group Company(ies) to perform the Contract, should the circumstances warrant such assessment in the overall interest of the Employer in accordance with ITB Clause.

4. Networth means the sum total of the paid up share capital and free reserve. Free reserve means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus.
5. Other income shall not be considered for arriving at annual turnover.
6. "Holding Company" and "Subsidiary Company" shall have the meaning ascribed to them as per Companies Act of India.

Date : (Signature).....



Place :



(Printed Name of Authorised person
having Power of attorney.....

(Designation).....

(Company seal).....



APPENDIX-A

**PROFORMA OF CERTIFICATE FROM THE CEO/CFO OF THE HOLDING
COMPANY IN ACCORDANCE WITH BDS**

(To be submitted by Bidder alongwith the Techno-Commercial Bid)

Ref. :

Date :

Bidder's NameandAddress:

To

**JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997**

Dear Sirs,

- 1.0** I, Mr.....(CEOoftheCompany/CFOoftheCompany)*declarethatM/s (Name of theHolding Company) is the Holding Companyof M/s..... (Name of the Bidder).
- 2.0** I hereby confirm and undertake that the unaudited unconsolidated financial statements submitted in respect of the bidder as part of the bid reference no.....dated.....have been considered for the purposes of the finalisation ofConsolidated Financial Statements of the Holding Company as part of the Annual Reports.
- 3.0** I further, certify that the figures in the unaudited unconsolidated financial statements are true and correct and same have been duly reflected in the audited consolidated financial statements and / or Annual Report of the HoldingCompany.



Yours

faithfully

(Signature)



Date : (Name & Designation).....

Place : (Name of the Holding Company)

(Seal of Holding Company)

Note : *Strike off whichever is not applicable.



APPENDIX-B

PROFORMA OF LETTER OF UNDERTAKING

(TO BE FURNISHED ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

(To be executed by the Holding Company Supported by Board Resolution and submitted by the Bidder alongwith the Techno-Commercial Bid, Applicable to the Bidder for meeting the stipulated Financial Qualifying Requirement as per Enq / NIT / IFB)

Ref. :

Date :

Bidder's Name and Address:

To

**JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997**

Dear Sirs,

1.0 We, M/s..... declare that we are the holding company of M/s (Name of the Bidder) and have controlling interest therein.

M/s.....(Name of the Bidder) propose to submit the bid for the package(Name of the package)



for (Name of the Project) under bid reference no. dated and have sought financial strength and support from us for meeting the stipulated Financial Qualifying Requirement as per Clause of Enq / NIT / IFB.

- 2.0 We hereby undertake that we hereby pledge our unconditional & irrevocable financial support for the execution of the said package to M/s (Name of the Bidder), in case they are awarded the Contract for the said package, at the end of the bidding process. We further agree that this undertaking shall be without prejudice to the various liabilities that M/s (Name of Bidder) would be required to undertake in terms of the Contract including the Performance Security as well as other obligations of the Bidder/Contractor.
- 3.0 This undertaking is irrevocable and unconditional, and shall remain in force till the successful execution and performance of the entire contract and/or till it is discharged by Employer.
- 4.0 We are herewith enclosing a copy of the Board Resolution in support of this undertaking.

Yours faithfully

(Signature of Authorised Signatory on behalf of the Holding Company)

(Name & Designation).....

(Name of the Holding Company).....

(Seal of the Holding Company).....

Witness :

(1)



(2)

Date:

Place:

NIT/IFB/Tender Enquiry No
(SUB-CONTRACTORS)

Bidder's Name & Address

To,

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

The following details in respect of each Sub-Contractor proposed by us in our bid are annexed to this Attachment.

1. Name of the Sub-Contractor and the broad scope of work proposed to be sub-contracted to him.
2. The following details of the Sub-Contractor:
 - (i) Similar work executed in Industrial/Infrastructure projects in the last seven (7) years including achievements.
 - (ii) List of plant & equipment proposed for deployment indicating whether the plant of equipment are lying idle and/or will be diverted from other works indicating likely date of release by client.
 - (iii) Technical manpower available for deployment.
 - (iv) Financial status for last three(3) years.
 - (v) Letter of confirmation from the Sub-Contractor, signifying his confirmation to execute the Work.

Date:

Signature.....

Place:

Name of Authorised person having Power of attorney.....

Designation.....

Common Seal.....

Note : 1. The Bidder shall furnish the above details for each of the agencies/sub-contractors separately as per Clause No. of SCC.

**NIT/IFB/ Tender Enquiry No
(EQUIPMENT/ MACHINERY DEPLOYMENT SCHEDULE)**

Bidder's Name & Address:

To,

**JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997**

Sl. No.	Equipment Type/Capacity	Min. Nos required as indicated in Technical Specification	No. proposed to be deployed	No. already available for immediate deployment	Period by which balance eqpt. will be deployed	Place from where balance eqpt. will be brought	Number intended to be purchased	Period by which New T&P can be deployed	Quantum of work that can be achieved during peak period/shift
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

- 1.
- 2.
- 3.
- 4.

Note : Further information for equipment (if any)

The above list of equipment & machinery is a minimum requirement. However, we shall deploy any other equipment & Machinery which may be required as per the direction of Engineer-in-charge to execute the work satisfactorily and as per time schedule stipulated in the bar chart.

Date :

(Signature).....

Place :

(Name)
(Designation).....

(GENERAL DECLARATION BY BIDDER)

To,

**JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997**

Dear Sirs,

We hereby confirm that :

1. We have carefully read General Conditions of Contract, Special Conditions of Contract, Technical Specification and Bid Drawings (including amendments/ errata) and Schedule of Items and all other Bidding documents.
2. Our technical team/technically competent officer visited the site to apprise our selves about availability of construction materials, unskilled labour, access to site and other infrastructure/enabling facilities (including availability of water/power) needed for the execution of the contract.

Date:
Place:

Signature.....
Name of Authorised person having Power of attorney
.....
Designation.....
Common Seal.....

--	--	--	--	--	--	--	--	--	--

F) 9 DIGIT MICR CODE OF THE BANK BRANCH (ENCLOSE COPY OF A CANCELLED CHEQUE)

--	--	--	--	--	--	--	--	--	--

G) 11 DIGIT IFSC CODE OF THE BANK

--	--	--	--	--	--	--	--	--	--	--

H) BANK ACCOUNT NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--

I) BANK ACCOUNT TYPE (TICK ONE)

SAVING	CURRENT	LOAN	CASH CREDIT	OTHERS
--------	---------	------	-------------	--------

IF OTHERS, SPECIFY

--	--	--	--	--	--	--	--	--	--	--

5. PERMANENT ACCOUNT NUMBER (PAN)

--	--	--	--	--	--	--	--	--	--	--

6. E-MAIL Address for Intimation regarding release of payments

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or credit is not affected at all for reasons of incomplete or incorrect information, I/We would not hold the Company responsible

SIGNATURE

DATE

--	--	--	--	--	--

(AUTHORISED SIGNATORY)

Name:

OFFICIAL STAMP

BANK CERTIFICATION:

It is certified that above mentioned beneficiary holds a bank account no..... with our branch and the Bank particulars mentioned above are correct.

DATE

--	--	--	--	--	--

SIGNATURE

(AUTHORISED SIGNATORY)

Authorisation no.:

Name:

DETAILS OF PF, ESI, PAN and GST REGN.

To,

JHABUA POWER LTD.
 CIN NO : U40105WB1995PLC068616
 (A Joint Venture of NTPC)
 Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
 Distt: Seoni (M.P.)
 PIN: 480997

Dear Sir,

The details of our registration are as under:

(a) PF no. (If asked for in the tender)

The PF no. allotted by concerned RPFC under EPF scheme 1952 is as under:

PF Number	
------------------	--

Note: Copy of PF registration certificate issued by the concerned RPFC duly attested by the bidder under his seal and signature to be submitted.

(b) ESI registration number, if applicable (If asked for in the tender)

Our ESI registration number to cover our employees under the ESI Act:

ESI Registration Number	
--------------------------------	--

Note: Copy of ESI registration duly attested by the bidder under his seal and signature to be submitted.

(c) PAN number

Our PAN number is as under:

Permanent Account Number	
---------------------------------	--

Note: Copy of card indicating PAN number duly attested by the bidder under his seal and signature to be submitted.

(d) GST number, if applicable (If asked for in the tender):

Our GST Reg. No. is

GSTIN (Location....)	
GSTIN (Location....)	
GSTIN (Location....)	

Note : Copy of registration with up to amendment to be enclosed.

Date : (Signature).....

Place : (Name)

(Designation).....

(Company Seal)

ATTACHMENT - 9

DECLARATION REGARDING GST

(Kindly Send the declaration on your company's letterhead duly sealed n signed)

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Declaration regarding GST :

Please submit the GST% in BOQ sheet (Price Schedule / Price Bid) only along with rates.

Except information about GST in BOQ Sheet (Price Schedule / Price Bid); Bidder may provide other GST Information like GST Scheme he opted, TDS / Reverse Charge Mechanism (RCM) or others which are considerable to process Bid and to GST obligation.

Date.....

Signature

Place.....

Name.....

Designation.....

Company Seal.....

**TECHNICAL DETAILS, DATA SHEETS, DRAWINGS, COMPLIANCE TO SCOPE OF WORK
etc.(As per Tender Conditions and Section-V)**

(To be Send with Technical Cover envelope)

(INTEGRITY PACT)

(To be submitted in original in separate sealed envelope alongwith the Bid)

Between

..... (hereinafter referred to as “The Employer”)

and

..... (hereinafter referred to as “The Bidder/Contractor “)

Preamble

The Employer invites the bids from all eligible bidders and intends to enter into contract for **Comprehensive Operation & Maintenance Contract for Coal Handling Plant & Railway Siding at NTPC-JPL** with the successful bidder(s), as per organizational systems and procedures. The Employer values full compliance with all relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with its Bidder(s) and/or Contractor(s).

Inordertoachievethegoals,theEmployerwillappointanIndependentExternalMonitor(IEM), who will monitor the bidding process and the execution of the contract for compliance with the principles mentioned above.

Section 1 Commitments of the Employer

1. The Employer Commits itself to take all measures necessary to prevent corruption and to observe the following principles in this regard:
 - a) No employee of the Employer, either in person or through family members including relatives, will in connection with the bidding for or the execution of a contract, demand or accept a promise for or accept for him/herself or for a third person,anymaterialorimmaterialbenefittowhichhe/sheisnotlegallyentitledto.

- b) The Employer shall, during the bidding process treat all Bidders with equity and reason. The Employer will, in particular, before and during the bidding process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the bidding process or the contract execution.
 - c) The Employer will exclude from the process all known prejudiced persons.
2. If the Employer obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PCA or if there be a substantive suspicion in this regard, the Employer will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 Commitments and Undertakings by the Bidder/Contractor

- 1 The Bidder/Contractor commits and undertakes to take all measures necessary to prevent malpractices & corruption. He commits himself to observe the following principles during his participation in the bidding process and during the execution of the contract:
- a) The Bidder/ Contractor undertakes not to, directly or through any other person or firm offer, promise or give or influence to any employee of the Employer associated with the bidding process or the execution of the contract or to any third person on their behalf any material or immaterial benefit which he/she is not legally entitled, in order to obtain in exchange any advantage of any kind whatsoever during the bidding process or during the execution of the contract.
 - b) The Bidder/ Contractor undertake not to enter into any undisclosed agreement or understanding, whether formal or informal with other Bidders. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelization in the bidding process.
 - c) The Bidder/Contractor undertakes not to commit any offence under the relevant Anti-corruption Laws of India; further the Bidder/Contractor will not use improperly, any information or document provided by the Employer as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically for purposes of competition or personal gain and will not pass the information so acquired on to others.

- d) The Bidder/ Contractor will, when presenting his bid undertakes, to disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2 The Bidder/ Contractor will not instigate and allure third persons/parties to commit offences outlined above or be an accessory to such offences.

Section 3 Disqualification from Bidding Process and Exclusion from Future Contracts

1. If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of any provisions of Section-2 or in any other form so as to put his reliability or credibility as Bidder into question, the Employer shall be entitled to disqualify the Bidder(s)/ Contractor(s) from the bidding process or to terminate the contract, if signed on that ground.
2. If the Bidder/ Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Employer shall be entitled to exclude including blacklist and put on holiday the Bidder/ Contractor for any future tenders/contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Employer taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 3 years.
3. A transgression is considered to have occurred if the Employer after due consideration of the available evidence concludes that no reasonable doubt is possible.
4. The Bidder with its free consent and without any influence agrees and undertakes to respect and uphold the Employer's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
5. Subject to full satisfaction of the Employer, the exclusion of Bidder/ Contractor could be revoked by the Employer if the Bidder/ Contractor can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Section 4 Compensation for Damages including Forfeiture of Earnest Money Deposit/ Security Deposit/ Performance & Advance Bank Guarantees

1. If the Employer has disqualified the Bidder/ Contractor from the bidding process or has terminated the contract pursuant to Section 3, the Employer shall forfeit the Earnest Money Deposit/Bid Security, encash Contract Performance Bank Guarantees in addition to excluding the bidder from the future award process and terminating the contract.
2. In addition to 1 above, the Employer shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract due to Contractor's Default.

Section 5 Previous Transgressions

- 1 The Bidders swear on oath that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country conforming to TI approach or including with any Public Sector Enterprise/ Undertaking in India or any Government Department in India that could justify bidder's exclusion from the tender process.
- 2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the bidding process or the contract, if already awarded, can be terminated on this ground.

Section 6 Company Code of Conduct

Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

Section 7 Independent External Monitors

- 1 The Employer will appoint competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 2 The monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He shall report to Chairman/CMD of the Employer or a person authorized by him.

- 3 The Bidder/Contractor accepts that the Monitor has the right to access without restriction to all project documentations of the Employer including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to this Project Documentations. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Sub-Contractors/JV partners/Consortium member with confidentiality.
- 4 The Employer 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 Employer 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 on notice, a violation of this agreement, he will so inform the Management of the Employer (Chairman/CMD of the Employer or a person authorized by him) and request 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. However, Independent External Monitor shall give an opportunity to the Bidder/contractor to present its case before making its recommendations to the Employer.
- 6 The Monitor will submit a written report to Chairman/CMD of the Employer or a person authorized by him within 8-10 weeks from the date of reference or intimation to him by the Employer and, should the occasion arise, submit proposals for correcting problematic situations.
- 7 The Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors of JPL Board.
- 8 If the Monitor has reported to Chairman/CMD of the Employer or a person authorized by him a substantiated suspicion of an offence under relevant IPC/PC Act, and he has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 9 The word "Monitor" will include Singular or Plural.

Section 8 Pact Duration

This Pact comes into force from the date of signing by all the parties. It shall expire for the Contractor 12 months after the last payment under the respective contract, and for all other unsuccessful bidders 6 months after the contract has been awarded.

Section 9 Miscellaneous Provisions

- 1 This Pact is subject to Indian Law. The place of performance and jurisdiction shall be New Delhi.
- 2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 3. The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.
- 4. If the Contractor is a JV partnership/Consortium/Associate, this agreement must be signed by all the partners of JV/Consortium Partners/Associate as the case may be.

The Parties hereby sign this Integrity Pact aton thisday of..... 20....

Employer

Bidder/Contractor

Witness

Witness

1. _____

1. _____

2. _____

2. _____

- Note:
- 1. The each page of Integrity Pact is to be signed and witnessed by the Signatory who has signed the bid and the same is to be submitted in a separate sealed envelope along with bid.
 - 2. The word 'Employer' should be read as per SCC.

DECLARATION OF NO DEVIATION CERTIFICATE

(To be accepted online under GTE and Scan to be uploaded in Fee/Pre-Qual/Technical Cover)

Bidder's Name and Address:

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

With reference to our Bid Proposal No.....dated
.....for.....
.....against Bidding.....we hereby confirm that we
have read the provisions of bidding documents along with its subsequent Amendment(s) / Clarification(s) /
Addenda/Errata for subject package and further confirm that notwithstanding anything stated anywhere to the
contrary, the stipulation of bidding documents are acceptable to us and we have not taken any deviation to the
provisions of bidding documents.

We further confirm that any deviation/ variation / additional conditions to the provisions of Bidding Documents
and its subsequent Amendment(s)/Clarification(s)/Addenda / Errata found anywhere in our Techno-
Commercial Proposal and Price Proposal, implicit or explicit, save those pertaining to rebates offered, shall
stand unconditionally withdrawn, without any implication whatsoever to Employer, failing which the Bid shall be
rejected.

(Signature)

Date :

(Printed Name).....

Place :

(Designation).....

**DECLARATION OF COMPLIANCE OF QUALIFYING
REQUIREMENT**

Bidder's Name and Address:

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

With reference to our Bid Proposal No.....dated..... for.....against
Bidding we hereby confirm that:

- a. The number of reference Plants/Orders quoted by Bidder in Attachment- 3 of the bid, for establishing compliance to the specified Qualifying Requirement (QR), are in accordance with the provision specified above.
- b. The reference Plants/ Orders/ declared, shall only be considered for evaluation/ establishing compliance to Qualifying Requirement (QR). Any reference Orders declared more than as specified above shall not be considered for evaluation/establishing compliance to Qualifying Requirements.
- c. No change or substitution in respect of reference Plants/Orders for meeting the specified Qualifying Requirement (QR) shall be offered by the bidder.

(Signature)

Date :

(Printed Name).....

Place :

(Designation).....

(ACCEPTANCE OF BANNING POLICY)

Bidder's Name and Address: To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs

1. WehavereadthecontentsoftheBanningPolicyofNTPC(displayedonitstenderwebsite <http://www.ntpctender.com>) attached with this Bidding Document and agree to abide by this policy. Further, in terms of requirement under Banning Policy we hereby declare the following:

- WehavenotbeenBanned/BlacklistedasondateofsubmissionofbidbyMinistry of Power or Government ofIndia.
- We have not employed any public servant dismissed / removed or person convicted for an offence involving corruption or abetment of suchoffences
- Our Director(s)/Owner(s)/Proprietor/Partner(s) have not been convicted by any court of law for offences involving corrupt and fraudulent practices includingmoral turpitude in relation to business dealings with Government of India or JPL / NTPC or NTPC's group companies during the last fiveyears.

2. We further declare asunder:

that if at any point subsequent to award of Contract, the declarations given above are found to be incorrect, JPL shall have the full right to terminate the contract and take any action as per applicable laws for breach of contract including forfeiture of Bid Security / Performance Bank Guarantee.

(Signature)

Date :

Name of AuthorisedPerson

Place :

Designation

(ACCEPTANCE OF FRAUD PREVENTION POLICY)

Bidder's Name and Address:

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

We have read the contents of the Fraud Prevention Policy of NTPC displayed on its tender website <http://www.ntpctender.com> and undertake that we along with our associate/collaborator/subcontractors/subvendors/consultants/service providers shall strictly abide by the provisions of the said Fraud Prevention Policy of NTPC.

(Signature)

Date :

Name of Authorised Person

Place :

Designation

(ACCEPTANCE OF NTPC SAFETY RULES / STANDARD SAFETY RULES)

Bidder's Name and Address:

To

JHABUA POWER LTD.
CIN NO : U40105WB1995PLC068616
(A Joint Venture of NTPC)
Jhabua Power Ltd , P.O-Barela, Tehsil: Ghansore
Distt: Seoni (M.P.)
PIN: 480997

Dear Sirs,

We have read the contents of the NTPC Safety Rules displayed on its tender website <http://www.ntpctender.com> & Standard Safety Rules as per Tender Documents and undertake that we along with our associate/ collaborator/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly abide by the provisions of these Safety Rules.

(Signature)

Date :

Name of Authorised Person

Place :

Designation

DECLARATION OF LOCAL CONTENT

Dear Sirs,

We have read the provisions of "Preference to Make In India and granting of purchase preference to local suppliers" enclosed with the Bid Data Sheets. In terms of the requirement of the aforesaid provisions, we hereby declare the following:

1.0 In order to avail purchase preference, we confirm that we are a Local Supplier, and the local content included in the package is% of our total bid price for complete scope of work for Transportation of Coal under RCR Mode as per details given below

Sl. No.	Description of Goods & Services	Quantity/ Weight	Value of Local Goods & Services	% of Total bid Price	Details of the location(s) at which the local value addition is made

A certificate from the statutory auditor or cost auditor (in the case the bidder is a company) or from a practicing cost accountant or practicing chartered accountant (in respect of bidders other than companies) giving the percentage of local content has been placed at Annexure-1 to this Attachment

2.0 Further, we hereby confirm the following:

Whether the bidder is presently debarred / banned by any other procuring entity for violation of 'Public Procurement (Preference to Make In India), Order 2017' (PPP-MII Order) dated 15.06.2017 issued by Department of Industrial Policy and Promotion (DIPP)	YES/NO

*** Strike off, whichever is not applicable**

3.0 We agree to furnish any information as a proof of the above to your satisfaction as and when required.

Note : 1) Continuation sheets of like size and format, may be used as per Bidder's requirement and shall be annexed to this Attachment.

2) Certificate pertaining to percentage of local content from statutory auditor or cost auditor / practicing chartered accountant or cost accountant is to be furnished in cases where the total bid price is more than INR 10 Crores.

(Signature)

.....

Date :

Name of Authorised Person

Place :

Designation

SECTION-VII-FORMS & PROCEDURE

Contractor Safety Manual



JHABUA POWER LIMITED
Barela, Seoni (MP)

MISSION : Zero Harm
No Harm to any JPL Stakeholder

INDEX

1.0 INTRODUCTION/PURPOSE	4
2.0 SCOPE.....	4
3.0 DEFINITIONS	4
4.0 GENERAL RESPONSIBILITIES:.....	4
5.0 SAFETY REQUIREMENTS:.....	5
6.0 WORKPLACE REQUIREMENTS:.....	5
7.0 SITE ACCESS	6
8.0 SAFETY PROGRAM	6
9.0 EMERGENCY RESPONSE AND EQUIPMENT	6
10.0 SPILLS AND INCIDENTAL RELEASES OF HAZARDOUS MATERIALS	7
11.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)	7
12. LIST OF PPES & SAFETY EQUIPMENT'S (APPROVED MAKE/MODEL)	7
12.0 ELECTRICAL SAFETY.....	12
13.0 LOCKOUT/TAGOUT (LO/TO)	12
14.0 HOT WORK.....	13
15.0 COMPRESSED GAS SAFETY.....	13
16.0 CONFINED SPACES	14
17.0 LADDERS	14
18.0 SCAFFOLDING	15
19.0 FALL PROTECTION	15
20.0 CHEMICAL SAFETY	16
21.0 HAND TOOLS.....	16
22.0 CRANES AND HOISTS	17
23.0 HOUSEKEEPING.....	17
24.0 WASTE DISPOSAL	17
25.0 ROOF WORK.....	18

26.0 RIGGING	18
27.0 OVERHEAD WORK.....	18
28.0 ELEVATED WORK	19
29.0 WORK ZONE TRAFFIC CONTROL	19
30.0 PENALTY SYSTEM	19
31.0 ACCIDENT REPORTING AND INVESTIGATION	20
32.0 GENERAL RULES TO FOLLOW.....	20
UNDERTAKING	22

1.0 INTRODUCTION/PURPOSE

- ❖ Jhabua Power Limited (JPL) is going to implement this Contractor Safety Manual to allow the contracting Organization to conduct the business at JPL as safely as possible. The manual is an agreement between JPL & the contracting agency to achieve the mission of Zero Harm.
- ❖ We **INSIST** that the contractor agency must familiarize his people with the contents of this manual and abide by all Rules and Guidelines mentioned there in the manual.
- ❖ Contractor shall be solely responsible for the safety of his employees, sub-contractors and agents during execution of the work

2.0 SCOPE

The JPL Contractor Safety Manual applies to all the Contractors providing services for Jhabua Power Limited.

3.0 DEFINITIONS

- JPL: Jhabua Power Limited
- The Factories Act: The Factories Act, 1948
- Contractor: Organization who is contracted by JPL to perform work or services for JPL at JPL premises.
- Subcontractors: Organization that is contracted by the Contractor to perform work or services for JPL at JPL premises.
- Contractor Employee: Any employee or service provider of a Contractor or Subcontractor.
- Side Incharge (Contractor Lead): The person designated by a Contractor and is responsible for Safety of the Contractor Employees.
- JPL Contact (EIC, Engineer in charge): The JPL employee who is responsible for JPL's contract with the Contractor. This responsibility may be designated, but the contact will be clearly identified prior to start of the work.

4.0 GENERAL RESPONSIBILITIES:

- JPL intends to hire only those Contractors who can provide services in a safe and healthy manner. By accepting a contract, the Contractor commits that he has the required skills, experience, expertise and commitment to perform work in a safe and healthy manner, and will allow only those Contractor Employees who are properly trained and supervised to work at JPL premises.
- If a contract between JPL and a Contractor allows for the Contractor to subcontract, the Subcontractor must have all the skills, experience, expertise and commitment to perform work in a safe and healthy manner, and that the Contractor will allow only those Subcontractor Employees who are properly trained and supervised to work at JPL premises. The Contractor is also responsible for providing this Contractor Safety Manual to the Subcontractor before work on JPL premises begins.
- A Contractor is responsible to keep JPL informed about its activities, and the activities of its Subcontractors. This is to be accomplished by the Side Incharge (Contractor Lead) with the JPL Contact.
- JPL is not responsible for safety and health policies or practices of any Contractor or Subcontractor. This Manual is to provide guidance to Contractors and Subcontractors on how they can satisfy their own

responsibilities in this regard.

5.0 SAFETY REQUIREMENTS:

- Contractor shall have sufficient knowledge, experience and understanding of thermal power plant work practices, safety & health hazards and other regulatory requirements pertaining to the work to be performed.
- Contractor shall perform the work using qualified workers who are adequately trained in the requirements of their particular job and skilled in the work assigned to them.
- Contractors shall provide proof of worker credentials (training, Qualification certificates, license etc.) on request/joining.
- Contractor shall comply with the requirement of Factory Act 1948, M P Factory Rules 1962 and other central & State laws, rules, regulation & time to time released orders of governing authority.
- Contractor shall comply with all company posted requirements, information provided by the company on site specific hazards and emergency response plans.
- Contractor shall review this manual with his employees, sub-contractors and consultants.
- Contractor shall have dedicated safety representative at the work site all the times. Contractor shall provide the qualifications of the proposed safety representative to company for review and approval.
- Contractor dedicated qualified safety representative shall perform inspection of operations, facilities and equipment's used in the performance of the work and participate in joint inspections, audits with company on request. Contractor shall immediately address any unsafe conditions, equipment's or action identified during inspection.
- Contractors shall ensure workers comprehend job specific safety related information including individuals in English, Hindi, Punjabi or any language which is easily understandable.
- Regularly Scheduled Safety Meetings: Contractor shall conduct regularly scheduled safety meetings. Attendance shall be required by all workers. Contractor shall keep a written record of the meetings that includes date, location, names or signatures of attendees, and topics covered. Contractor shall inform workers of factual circumstances resulting in incidents and near misses and discuss how to correct and prevent such situations from recurring.
- Daily Toolbox talk Meetings: Contractor shall conduct and document a daily morning safety meeting with all applicable workers to discuss Work activities, address any safety and health concerns for the Work to be performed, review any near miss incidents and how they could have been avoided, and prepare or review the appropriate Job Safety Analysis. Contractor shall provide such documentation to JPL upon request.

6.0 WORKPLACE REQUIREMENTS:

- Professional Conduct - Contractor shall conduct itself in a professional manner at all times while on Company Property. Horseplay, practical jokes, any type of harassment, abusive or objectionable language, or other inappropriate behavior on the job shall not be tolerated.
- Consequences for Non-Compliance - Working safely is a condition of employment at JPL. Any Contractor violating these rules and/or procedures will be required to permanently leave JPL premises.
- Weapons - All firearms, knives and other weapons are strictly forbidden at all JPL premises.

- Acts and threats of violence (physical or verbal) are strictly prohibited.
- Contractor shall inform its employees, suppliers, and subcontractors before entering Company Property that Company and its authorized representatives can search the person, vehicle, and other property of individuals while entering or departing from Company Property.
- The possession or use of narcotics, drugs, or intoxicating beverages of any kind is prohibited on JPL premises. Workman of Contractor shall immediately remove from the Workplace, if found in drug and alcohol testing violation.
- Contractor shall not bring unauthorized individuals (e.g., friends, relatives, or observers) onto Company premises.

7.0 SITE ACCESS

- Each Contractor Employee must carry his ID card when entering or providing services at JPL.

8.0 SAFETY PROGRAM

- The Contractor will have a safety program that outlines the requirements for performance of Contractor Employees specific to their activities. The Contractor is responsible for ensuring that this safety program meets the requirements of law, including but not limited to compliance with applicable Factories Act and other legal requirements.
- The Contractor will ensure that Contractor Employees have been trained prior to performing any activity at JPL
- The Contractor will ensure that its employees know the requirements outlined in this manual prior to beginning any work activity.
- The Contractor will communicate specific hazards found at JPL that may affect the safe work of Contractor Employees (e.g., working with chemicals, working in confined places, Electrical Hazards).
- The Contractor will be responsible for the direct supervision of Contractor Employees.

9.0 EMERGENCY RESPONSE AND EQUIPMENT

- Access to exits and to any emergency equipment (e.g., safety showers, eyewash fountains, firefighting equipment) must be kept clear at all times.
- The Contractor is responsible for communicating emergency procedures to Contract Workers. At all JPL facilities, immediate evacuation is required when audible alarm is sounded and/or an announcement is made to evacuate.
- Contractor Employees must leave by the closest/safest exit, as quickly as possible. After exiting the building, Contractor Employees must assemble in marked Safe Assembly Point and report immediately to the Side Incharge (Contractor Lead).
- The Side Incharge (Contractor Lead) is responsible for informing their JPL contact that the evacuation of all Contractor Employees was successful.




10.0 SPILLS AND INCIDENTAL RELEASES OF HAZARDOUS MATERIALS

- Contractor Employees must report any spill of chemicals or hazardous materials to their JPL contact immediately.
- A Contractor bringing any chemical or hazardous material onto JPL premises is required to provide their JPL contact with an MSDS for each substance and to use only approved, labeled containers for these substances.
- Provisions for spill prevention, response, and disposal of wastes generated from any potential clean-up activities from Contractor chemicals / hazardous materials must be discussed with the JPL contact before starting work with these substances.











11.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)










- **General:** "PPE Hazard Assessment" means the process of identifying, selecting, and documenting appropriate personal protective equipment (PPE) for workplace hazards.
- Contractor shall provide, at its own expense, and enforce the use of all appropriate job specific PPE's and any posted Company requirements.
- Contractor shall ensure that all workers are trained in the proper use of applicable PPE's prior to performing Work.
- Approved hard hats, hard-toed boots or shoes, and safety glasses shall be worn on all Company worksites.
- Loose or floppy clothing, neck chains, loose jewelry, or loose long hair is prohibited.
- Rings shall be removed when working in areas where they could catch on moving objects or sharp protrusions or come into contact with electrical circuits.
- Clothing, including gloves, shall not be cleaned by blowing with compressed air, blowing with compressed gases, or washing in a flammable liquid


TO HAVE UNIFORMITY IN THE USAGE OF PPE'S, APPROVED MODELS AND MAKE OF PPE'S AS MENTIONED BELOW ARE ACCEPTABLE AT JPL WORKPLACE.

LIST OF PPES & SAFETY EQUIPMENT'S (APPROVED MAKE/MODEL)			
S.No.	Item	Make/Model	Photograph
1	Industrial Safety Helmet	Joseph leslico / Karam/ 3M/Savior make with ratchet. IS 2928 & EN 397 approved Qty: White for Engineer / Supervisor, Yellow for Workman, Red for Electrician, & Green for Safety.	
2	Safety Shoes	LIBERTY make "WARRIOR" brand / Allen Cooper / Karam / Udyogi/ Bata low-cut 2mm thick leather safety shoes with IMPORTED Esjot alloy toecaps & Double density directly injected PU black & Grey sole/ Safety shoe can allow ISI mark. As IS:15298	
3	Ear Plug	Honeywell / Karam/ 3M™ E-A-R™ UltraFit™ cloth/cotton Corded Earplugs, in poly bags/Carrying Case 2. Reusable, Triple flange design. NRR 25 dB	

		Karam EP 02 / 3M 32,dB	
4	Ear muff	Leslico / Karam /3M Hard hat mounted 1450 ear muff- NRR 23 dB	
		Helmet attachable ear muff EP 23, NRR 27 dB, EN 352- 1; 2002	
5	safety spectacles (shaded/clear)	Karam / 3M™ Virtua™ / UVEX Protective Eyewear, 11326-00000-100 Clear Temples Clear Hard Coat Lens 100 ea/case 3M™ Virtua™ Protective Eyewear, 11327-00000-20 Gray Hard Coat Lens, Gray Temple 20 ea/case Karam/3M™ Virtua™ / UVEX Protective Eyewear, 11329-00000-20 Clear Anti-Fog Lens, Clear Temple 20 ea/case Kara / 3M™ Virtua™ / UVEX Protective Eyewear AP, 11815-00000-20 Gray Hard Coat Lenses 20 ea/cs' & 3M™ Virtua™ Protective Eyewear AP, 11819-00000-20, Clear Hard Coat Lenses 20 ea/cs'	
6	Goggles (for chemical handling)	Karam make / UVEX/ 3M etc. ES 009 clear, Confirms to EN 166:2001 Karam / UVEX / 3M 1621 safety goggles for splashes (can be worn over prescription lens). ANSI Z87.1-2003	
7	Respirators (dust mask)	3M / Leslico / Venus 8210 dust respirator, N 95 , NIOSH approved, ISI Approved.	
8	Welding Respirators	3M / Leslico / Venus welding respirator 8512, NIOSH approved	
9	Half face mask	3M / Venus half face piece reusable respirator 6200 series (medium size)(to be used with cartridges),NIOSH approved	

		Honeywell / 'Saviour' Electrex Model No.– ELECTREX-33, ERDA Approved-Tested as per IS: 4770, 1991 (marketed by Suresafety), Provides protection from 33 KV Test voltage Electrical operations	
		Honeywell / 'Saviour' Electrex Model No.– ELECTREX-11, ERDA Approved-Tested as per IS: 4770, 1991 (marketed by Suresafety), Provides protection from 11 KV Test voltage Electrical operations	
17	Full Body Safety harness	Karam / Unicare / Udyogi brand full body harness model: Rhino PN 23 with PN 351 Double Lanyard Scaffolding hook and energy absorber. Conforms to EN 361: 2002, CE approved.	
18	Retractable wire rope fall arrester	Karam / Unicare/ Udyogi brand, PCGS 15, PCGS 20, PCGS 25. EN 360	
19	Fall arrester with energy absorber	Karam / Unicare / Udyogi PN 2000 B. EN 353	
20	Anchorage webbing slings	Karam / Unicare / Udyogi brand Concrete anchor strap PN 805 and PN 806 (lengths 1.0m, 1.5 m, 2.0 m). EN 795	
21	Anchorage SS wire rope	Anchorage SS wire rope Karam PN 814. EN 795 or Unicare / Udyogi	
22	Safety net	Karam / Garware/ Udyogi / Safetech make Safety net made from Polypropylene ropes. Mesh size:- 25 mm & 100 mm, Size:- 10 m X 5 m, mesh rope:- 2mm/4mm double cord, with overlay net	
23	Temporary horizontal lifeline	Karam / Unicare / Udyogi PN 3000, EN 795 Class B, made up of 30 mm polyester webbing and ratchet tensioner. Both ends fitted with auto locking steel karabiners.	
24	Vertical lifeline	Karam / Unicare / Udyogi, 3 strand polyamide twisted rope of dia 14 mm, one end loop and other end stop knot. 10 m to 200 m (PN 910 to PN 9200)	

25	Work positioning lanyard	Karam / Unicare / Udyogi make work positioning lanyard with ring type adjuster PN 241 . Made of 14 mm dia polyamide 3 strand twisted rope. Steel karabiner PN 112 at both ends. Manual ring type adjuster. EN 358	
26	Fire blankets	Udyogi/ Karam etc. make Fire blanket compact, wall mounted, easy to use made of asbestos free Material in size : 1.2mtr X 1.8mtr	
27	Gas welder's glass	Karam ES 003 / Honeywell/ Unicare fitted with IR 5 lens. EN 166	 ES 003 (IR 5)
28	Arc welder's glass	Karam / Honeywell / Unicare ES 004 fitted with IR 11 lens. EN 166	 ES 004
29	Helmet attachable welding shield	Karam / Honeywell make ES 71. It fits standard helmet with 30 mm slot. Confirms to EN 175 and ANSI Z 87.1. (To be fitted with IR 5 / IR 11 lens, sandwiched between two polycarbonate lens, confirming to EN 166 and ANSI Z 87.1)	 Ref. ES 71
30	Helmet attachable grinding shield	Karam ES 51 (02)/ Honeywell or Joseph Leslico/ equivalent. CE certified	 Ref. ES 51
31	Eye Wash Bottle	Unicare make UEWB 12 / Udyogi EW/ equivalent – 500 ML	
32	Barricading tape	Made up of virgin quality pvc material tubing pattern. Roll red & white colour with "DANGER/STOP & CAUTION/WORK IN PROGRESS" letters in Hindi &English Size : 3" Make : SAFE-T-PLUS / PRIMA or equivalent	
33	Life buoy	Unicare or equivalent The Life Buoy is manufactured in durable high visibility orange synthetic material and requires no maintenance. Moisture proof and non-inflammable. The H-Glow reflective material fixed in the indentations identifies victims in distress. Approved by the Mercantile Marine Department to SOLAS spec.	

34	Life jacket	Unicare or equivalent •MMD approved to Solas Specifications •With Solas Reflective Tape, Signaling Whistle and Light Quick turning time and high free board in water •Buoyancy : 17.5 Kg •Light that is automatically activated when in contact with sea water/ petroleum products. •Size : 80 X 37 X 10cms. Approved by the Mercantile Marine Department to SOLAS spec.	
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12.0 ELECTRICAL SAFETY

- Qualified Person – A designated worker who has the skills and knowledge related to operation of the electrical equipment and installations to be employed who should have received training to recognize and avoid the electrical hazards involved. Usually, this is a licensed electrician or someone with certain equivalent experience and training. A person can be “qualified” to work with certain equipment and methods and still be “unqualified” for other work.
- Contractor shall perform all electrical Work in accordance with the current editions of applicable central, state and local laws, rules, regulations, and standards.
- Installation of electrical systems or modifications to electrical systems shall be done under the supervision or direction of a licensed electrician.
- Contractor shall ensure that workers near overhead power lines know the voltage of the line and the safe approach distance.
- Contractor shall be aware of, and take precautions to prevent, the build-up of static electricity in areas with a potential Hazardous Atmosphere.
- Only qualified Person shall discharge all stored electrical energy and shall verify that equipment is de-energized and proper Lockout/ Tagout (LO/TO) procedures have been implemented prior to beginning electrical Work.
- All power lines shall be considered energized unless proper measures have been taken to de-energize.

13.0 LOCKOUT/TAGOUT (LOTO)

- Contractor shall ensure compliance with all requirements of company LOTO procedure.
- Contractor shall ensure that its workers are adequately trained in LOTO and applicable energy control procedures.
- LOTO energy control procedures shall be followed prior to work on any equipment or process where stored energy or the unexpected energizing of equipment could cause injury to a worker. Potential energy sources include electrical, mechanical, pneumatic, hydraulic, thermal, chemical, natural gas, and all forms of potential and stored energy.
- Repairs, maintenance, or alterations shall not be made on equipment in operation. All equipment shall be shut down and a LOTO device placed in a manner that the equipment cannot be accidentally started.

- Contractor shall ensure that a briefing is conducted with all workers affected by a LOTO operation before each shift, and more frequently if warranted by personnel changes or changes in the scope of Work. The briefing should include the following items:
 - i. The specific equipment or process involved, along with any related equipment;
 - ii. The estimated length of time required to complete the task;
 - iii. The hazards involved in performing repairs or maintenance, including the potential hazards to workers if the equipment or process is prematurely energized; and
 - iv. A review of the site-specific energy control procedure.
- To ensure the machine or equipment has been properly locked out of service prior to starting any Work, a Qualified Person shall attempt to turn on the power source to verify that the machine or equipment does not become energized.

14.0 HOT WORK

- "Hot work" means riveting, welding, flame cutting or other fire or spark-producing operation. No hot work is to be performed without first obtaining an JPL Hot Work permit, except in designated locations including Workshop and facilities Maintenance areas.
- Your JPL contact will help you identify the need for and to complete required permit requirements.

15.0 COMPRESSED GAS SAFETY

- Compressed gas cylinders must be secured in an upright position and kept away from sources of heat or flame at all times.
- All compressed gas cylinders must be legibly marked with either their chemical or trade name.
- All compressed gas cylinders not in use must have their top caps securely tightened.
- Where different gases are stored, they must be grouped by types. Groupings shall separate the flammable gases from the oxidizing gases.
- All oxygen cylinders must be stored not less than 20 feet from fuel gas cylinders or other flammable gasses.
- Compressed gas cylinders may not be dropped, dragged, rolled on their side or struck violently.
- A compressed gas cylinder may only be lifted by cradles or enclosed platforms when using a crane or hoisting device.
- A frozen or ice-clogged valve shall be thawed either by warm air or use of warm water and dried before using. Boiling water or a flame shall not be used. Force shall not be applied to a valve or cap to loosen a cylinder frozen in place.

- A cylinder shall not be placed where it will become a part of the electrical circuit by accidental grounding or where it may be burned by electric welding arc. A cylinder shall not be placed so that hot slag or flame will reach it or it shall be protected by a fire resistant shield.
- Flammable gas cylinders including LPG cylinders may not be stored within 25 feet of an emergency exit.
- Flashback arrestors/preventers are required on all cylinders and torches.

16.0 CONFINED SPACES

- Confined space entry requires an JPL Confined Space Entry Permit. The Contractor is responsible for compliance with the standards for any entry by a Contractor Employee.
- Confined space entry training is also a prerequisite for any entrants or attendants as part of this program.
- Entry equipment must be provided by the Contractor and calibration information must be available upon request.
- Emergency rescue procedures, equipment and personnel are the responsibility of the Contractor.
- Entry / Exit attendance format to be filled.

17.0 LADDERS

PORTABLE LADDERS:

- Contractor shall ensure that all workers have been trained in the proper use, placement, care and maximum load carrying capacities of the ladders used.
- Contractor shall inspect all ladders before use. Any damaged or unsafe ladders shall be tagged and taken out of service.
- Portable ladders shall be set at the correct angle. The distance from the foot of the ladder to the structure should be equal to 1/4 the length of the ladder.
- Workers shall keep both hands free for climbing, descending, and performing Work on a ladder. Carrying hand tools or equipment while climbing on a ladder is prohibited unless secured in a pocket or on a belt. Articles that are too large to be carried in a pocket or on a belt shall be lifted and lowered by a hand line.
- Workers shall not rush, but shall take one step at a time and face the ladder while climbing and descending.
- Only one person at a time shall be on the ladder.
- Portable ladders shall have anti-slip safety feet and be secured at the top before work begins in order to prevent the ladder from shifting. A second person shall hold the ladder until the climber can secure it at the top.
- Ladders shall extend at least 3 feet above the point of support when gaining access to a roof or other area.
- Contractor shall use fall protection on ladders when additional significant hazards such as impalement, rotating machinery, or electrical shock are present.

- Ladders shall be maintained free of oil, grease, and other slipping hazards.
- Workers shall maintain their body's center of gravity between the side rails at all times while working from a ladder. In addition, workers shall avoid work from a ladder that involves significant pushing, pulling, or any action that may dislodge the person from the ladder.
- The top two steps of a step ladder shall not be used as steps. This requirement does not apply to step ladders with three steps or less or to step ladders with a guard rail-equipped work platform at the top.

18.0 SCAFFOLDING:

- Scaffolds or elevated platforms shall be constructed, maintained, and used in accordance with the applicable regulations and company standards.
- Contractor shall ensure that a Competent Person is assigned to supervise scaffold erection, dismantling, alteration, and movement.
- Contractor shall ensure that all scaffold materials and planking are thoroughly inspected for defects prior to use.
- Where there is a hazard to workers working below an elevated scaffold, toe boards shall be in place.
- Climbing or working from the handrail, mid-rail, or brace members of the scaffolding is prohibited.

19.0 FALL PROTECTION

- Definitions:
 - a) Fall Protection Competent Person – A person who is knowledgeable of:
 - a) The fall hazards at the worksite;
 - b) Correct procedures for assembling, maintaining, disassembling, and inspecting fall arrest equipment; and
 - c) The operation of guardrail systems, Personal Fall Arrest Systems (defined below), warning line systems, safety monitoring systems, and other protection to be used.
 - e) Personal Fall Arrest System – A system used to arrest a person in a fall from a working level at height. It consists of an anchorage, connectors, and body harness. It may include a lanyard, deceleration device, lifeline, or combination of these.
- A Personal Fall Arrest System shall be worn:
 - a) On work surfaces where potential drop is greater than 6 feet (1.8 meters).
 - b) When working on unfinished structures greater than 6 feet (1.8 meters) in height where the work surface is without guardrails, toe boards, or gated access ladders;

c) When working on areas within 6 feet (1.8 meters) of the edge of a work surface greater than 6 feet in height or within 6 feet of any unguarded opening, skylight, service duct, stairwell, or elevator shaft on a roof or unfinished level of a structure;

d) When working along unguarded locations at the edge of a well, pit, shaft, excavation, trench, or similar location 6 feet or more in depth when the excavation is not readily seen because of plant growth or other visual barrier;

e) Whenever deemed necessary by a safety officer.

- Contractor shall inspect all components of a Personal Fall Protection System before each use and replace if necessary. Fall protection equipment that has been subjected to impact loading shall be immediately removed from service and shall be inspected by the manufacturer before reuse or destroyed and replaced.
- Contractor shall ensure that components of a Personal Protection System are free from defect such as cuts, tears, abrasions, mold, undue stretching, missing or degraded stitching, alterations, or additions that might affect its efficiency. Contractor shall also inspect for damage due to chemical exposure, deterioration, distorted hooks, or faulty hook springs, loose or damaged mountings, non-functioning parts, wearing, or internal deterioration in the ropes or webbing.
- Contractor shall follow the manufacturer's recommended procedures for fitting, adjusting, using, inspecting, testing, and caring for fall protection equipment.
- A Personal Fall Arrest System shall not be used as a primary suspension device for positioning, or as a retrieval system, or for transporting materials.
- Contractor shall evaluate the compatibility of all fall arrest systems and anchorage points prior to use.
- Contractor shall calculate tie-off distances accurately to limit a fall to a maximum of 6 feet, considering lanyard elongation, Work position, proximity to fall area, and the location of fall hazards. The anchorage and tie-off points should be located to avoid obstructions in the potential

20.0 CHEMICAL SAFETY

- JPL uses a variety of chemicals that Contractors may encounter. JPL maintains MSDS's for these chemicals. Contractors may request a copy of any/all MSDS's for chemicals to which they are (or may be) exposed by contacting their JPL contact.
- Use of JPL chemicals by a Contractor for any purpose must be authorized in advance by the JPL contact.
- A current MSDS must be readily available and maintained by the Contractor for all chemicals brought onto JPL premises.

21.0 HAND TOOLS

- All hand tools, including portable electrical tools, and other equipment brought onto JPL premises must be in safe condition. JPL reserves the right to prohibit the use of defective tools, ladders, etc. and dictate the removal of defective equipment.

22.0 CRANES AND HOISTS

- JPL owned Overhead Cranes and Hoists are not to be operated by Contractors unless they receive advance authorization from the JPL contact.
- Upon authorization, only Contractor Employees for whom the Contractor has provided training sufficient to meet the standards for cranes and hoists (including applicable licensing) will be allowed to operate this equipment.
- Contractor owned Cranes and Hoists must be operated under the requirements of Safety Standards for Overhead and Gantry Cranes and Monorail Systems. This includes training/licensing requirements, equipment inspection, and safe equipment operation requirements.
- Any crane, hoist or rigging system that is not safe to operate must be tagged out of service and not operated until repaired/serviced.

23.0 HOUSEKEEPING

- Job site housekeeping is the contractor's responsibility and the job site must be as clean and orderly as possible while work is being performed. Good housekeeping practices are of utmost importance in preventing injuries.
- DO NOT LITTER. Contractors are responsible to keep the work area(s) in a neat and orderly condition at all times. All material must be cleaned up as the job progresses.
- All roadways, passageways, and operating areas must be kept clear at all times

24.0 WASTE DISPOSAL

- Proper identification of waste generated during work on-site is critical. All wastes must be segregated and managed according to applicable regulatory requirements.
- The Contractor is responsible for the removal of any waste generated.
- It is the responsibility of the Contractor to ensure proper waste management practices while performing services for JPL. Prior to any work, the Contractor will assess what wastes will be generated and communicate to the JPL contact any hazardous, non-hazardous, universal or construction wastes that will be generated and the methods that will be used to collect, manage, and dispose of these wastes.
- Discharge of any material onto the ground is strictly prohibited by State/National Laws and JPL HSE policy. If any spill/discharge occurs, report it immediately to your JPL Contact (i.e. leak from truck of oil, gas, or product being transported).
- Any questions regarding proper classification and/or disposal of wastes generated must to be brought to the attention of your JPL contact.

25.0 ROOF WORK

- The portion of a roof where Contractors are working must be kept free of slippery conditions.
- All roof work performed on JPL premises must be conducted in accordance with Safety Standard for Fall Protection.

26.0 RIGGING

- All rigging must be done in accordance with applicable regulations.

27.0 OVERHEAD WORK

- Contractor shall ensure that workers are trained to recognize the hazards of working around overhead utility lines and how to minimize the chance of contact.
- Contractor shall take precautions to ensure the safety of workers and ensure the integrity of the existing overhead utility lines.
- Contractor shall conduct a hazard assessment to identify and mitigate hazards prior to working around overhead utility lines. The hazard assessment shall include the following:
 - Identifying all overhead utility lines (on or off the worksite) that may be impacted by the Work;
 - Verifying that appropriate signage and visual warning devices are installed to alert workers to the hazards;
 - Clearly marking or otherwise restraining all lifting or boom-type equipment to show the maximum height or extension possible as measured from ground level or to limit the maximum limit of extension, respectively; and
 - Using adequately trained and dedicated spotters at locations where equipment and vehicles pass or work under or around utility lines.
- Physical barriers: Non-conductive, highly visible devices (e.g., goal posts, barricade tape) set outside the limits of approach (limits shall vary by jurisdiction, land restriction, and voltages) on both the coming and going away sides.
- Site-specific controls prescribed and authorized for use by the utility owner (e.g., shielding, de-energizing, bonding, insulating).
- Keep all equipment attachments in the lowest possible position when traveling under overhead utilities.
- Use dry tag lines made of a nonconductive type material when working near energized lines.
- All ladders used around power lines shall be made of non-conductive materials;
- Use only non-conductive chokers, slings, and lifting devices during material handling activities;
- Keep materials bonded at all times when transporting conductive loads, (e.g., pipe, air compressor, pumps) in the proximity of high voltage lines.

- All overhead work must be conspicuously barricaded or otherwise marked to prevent anyone from walking or driving under the work area.
- Overhead work creating sparks requires a Hot Work Permit.
- Overhead work creating falling debris requires additional protection for personnel and equipment that may be affected by the falling debris
- All scaffolds must have full flooring within the frame, with cleats, toe boards, and railings and meet BIS requirements.

28.0 ELEVATED WORK

- General: When working overhead, Contractor shall protect people below. Contractor shall ensure that tools, materials, and equipment subject to falling from height are adequately secured before Work is performed. Tools and materials shall be handed up or down, but never thrown. When it is necessary to hoist tools with a rope, exercise care to ensure the tools are securely attached to the line or loaded into a container and there is no danger of them being dropped.

29.0 WORK ZONE TRAFFIC CONTROL

- If a Work activity is conducted on or near a road, Contractor shall comply with all applicable regulations.
- Contractor shall provide all signs, barriers, flaggers, and other notification necessary to protect its workers and the public from damage, injury, or loss. Barricades at public areas (e.g., road crossings) shall have flashing lights/ reflective during hours of darkness.
- All work conducted in on or near a road at night requires the use of high visibility traffic vests.

30.0 PENALTY SYSTEM

- On non-compliance of PPEs and other safety instructions, following penalties will be imposed on the contracting agency as per below mentioned violations. The amount towards the violation shall be deducted from monthly bill of the contracting agency.

S.No.	Violation	Penalties
1	Non-use of any of PPE like Safety Helmet with chin strap, Safety shoes by individuals	Lapses & non-compliance in safety related issues in repetitive manner will be viewed very seriously by JPL Management and further a monetary amount as deemed fit by JPL's Management will be debited from your Bill without any consideration.
2	Non-use of Full body Harness at height	
3	Repetition of violation by employees of same contractor within a week	
4.	Over speeding or wrong side driving	
5.	Non reporting of accident	
6.	Working without work permit	

7.	Non-use of proper tools & tackles i.e. Cutting torch without Flash back arrestor at both ends, grinder without Guard, Lifting tools and tackles without certification etc.	
8	Allow to work on visitor pass	
9	Overloading during material handling	
10	Smoking at workplace	
11	Non-use of PPE's as per the job requirement.	

IN CASE AGENCY OR INDIVIDUAL IS A FREQUENT DEFAULTER, A RED MARK SHALL BE RECORDED IN HIS PERFORMANCE RECORD & THE AGENCY SHALL BE BARRED AND BLACK LISTED FOR REPETITIVE NON COMPLIANCES ON FRONT OF SAFETY.

31.0 ACCIDENT REPORTING AND INVESTIGATION

- The Contractor must immediately report any injury, illness, or near miss that occurs at JPL premises to the JPL contact.
- The information related to the incident must be provided to JPL contact as per the JPL Incident reporting and investigation Procedure.

32.0 GENERAL RULES TO FOLLOW

- Always store materials in a safe manner. Tie down or support piles if necessary to prevent falling, rolling, or shifting.
- Dust scraps, oil or grease should not be allowed to accumulate. Good housekeeping is a part of the job.
- Trash piles must be removed as soon as possible. Trash is a safety and fire hazard.
- Remove or bend over the nails in lumber that has been used or removed from a structure.
- Immediately remove all loose materials from stairs, walkways, ramps, platforms, etc.
- Do not block aisles, traffic lanes, fire exits, gangways, or stairs.
- Avoid shortcuts – use ramps, stairs, walkways, ladders, etc.
- Standard guardrails must be erected around all floor openings and excavations must be barricaded. Contact your supervisor for the correct specifications.
- Do not remove, deface or destroy any warning, danger sign, or barricade, or interfere with any form of protective device or practice provided for your use or that is being used by other workers.
- Get help with heavy or bulky materials to avoid injury to yourself or damage to material.
- Keep all tools away from the edges of scaffolding, platforms, shaft openings, etc.
- Do not use tools with split, broken, or loose handles, or burred or mushroomed heads. Keep cutting tools sharp and carry all tools in a container.
- Know the correct use of hand and power tools. Use the right tool for the job.
- Know the location and use of fire extinguishing equipment and the procedure for sounding a fire alarm.
- Proper guards or shields must be installed on all power tools before use. Do not use any tools without the guards in their proper working condition. No “homemade” handles or extensions (cheaters) will be used!
- All electrical power tools (unless double insulated), extension cords, and equipment must be properly

grounded.

- All electrical power tools and extension cords must be properly insulated. Damaged cords must be replaced.
- Do not operate any power tool or equipment unless you are trained in its operation and authorized by your firm to do so.
- All electrical power equipment and tools must be grounded or double insulated.
- Use tools only for their designed purpose.