

NOTICE INVITING TENDER / INVITATION FOR BIDS (SECTION-I)

**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**

**“Ash Utilization in Low Laying area from Plant site”
(Domestic Competitive Bidding)**

NIT/ Enquiry No.: JPL/Ash/0001/23-24; Dated: 28.04.2023

Employer invites Bids on SINGLE STAGE-THREE ENVELOPE bidding basis Envelope-I: Techno-Commercial Bid, Envelope-II: Price Bid from eligible bidders for “Ash Utilization in Low Laying area from Plant site” as per the BOQ mentioned hereinafter and Envelope-III: DD/Banker’s cheque/Bank advice for E-transfer towards EMD & Tender fee.

1. BRIEF SCOPE OF WORK:

The brief scope of work under this package shall include the following: **“Ash Utilization in Low Laying area from Plant site” Brief Description of NIT:**

Tender Ref No / Tender ID	JPL/Ash/0001/23-24; Dated: 28.04.2023
Document Download / Sale Start Date	As per Notification of News paper
Source of IFB/NIT	Not Applicable
Form of Contract/Tender Category	Services*
Type Of Bidding	SINGLE STAGE-THREE ENVELOPE
Clarification Start Date	01.05.2023
Clarification End Date	18.05.2023
Bid Submission End Date	20.05.2023 (17.30 Hrs.)
Bid Opening Date	22.05.2023
Price Bid opening date	Shall be intimated to qualified bidders
Cost of Bidding Documents in INR(Non-Refundable)	Rs. 9000/- +18% GST
EMD amount	Rs..20,00,000/- (Rs. Twenty Lakh only)
* MSME benefit is Not Applicable	
Date for submission of bid will not be extended.	

3.0 Qualifying requirements:

- A. Bidder should have executed the similar work(s) during last seven (07) years as on the date of techno commercial bid opening for either of the following values:
Single work costing not less than **12 Crs** excluding service tax / GST.

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OR

Two works each costing not less than **7.5 Crs** excluding service tax / GST.

OR

Three works each costing not less than **6 Crs** excluding Service tax/GST.

- B. Average annual turnover of the bidder in the preceding Three (03) financial years as on the date of techno commercial bid opening should not be less than **₹15 Crs**.
- C. The Bidding Company must be registered under GST for Transportation Services.
- D. Proof of payment of Tender fees to be given in Envelope. This can be copy of the DD, UTR number in case of Bank Transfer.
- E. Interest free refundable EMD of Rs 20 lacs in form of DD / E fund transfer in favor of Jhabua Power Limited, payable at Jabalpur is required to be submitted along with the Bid, failing which the bid will be disqualified.

Note:

- i. Similar work(s) shall comprise of the works of civil construction/ transportation of Coal/ash.
- 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.

Case II: The work is started earlier (prior to the period stipulated in QR) and was under execution beyond the stipulated period, in such cases, executed value of the relevant work vide that work order shall be considered for evaluation

Case III: The work is started and completed within the stipulated period, in such cases, entire value of the relevant work vide that work order shall be considered for evaluation.

Case IV: The work is started within the stipulated period but not completed as on the last date of stipulated period. In such case, the "in progress" executed value of relevant work vide that work order as on the last date of stipulated period shall be considered for evaluation.

- iii. Any of the above cases shall be supported by the documentary evidence of having executed the work / appropriate documentary evidence of delivery directly under contract with the owner company of the project.

Here owner means the entity which has the original requirement of the work referred and is not a contractor to any other contractor for the reference work.

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1. ATTACHMENTS:

Attachments to be submitted by Bidder accompanied with Techno-Commercial Bids (As per Section-VII:

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	Applicable
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

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S. No.	Attachment	Description	Applicable / Not 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 **Rs..20,00,000/- (Rs. Twenty Lakh only)** and cost of Tender document as Rs. 9000.00/- (Nine thousand only) + 18% 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 at Bidder's option, be in form of a Crossed Demand Draft or Banker's Cheque in favor of Jhabua Power Limited payable at Gurgaon of section-VII Forms and Procedures.
- 4.2 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:

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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 under the technical cover.

3. Clarification on bidding documents:

Bidder should strictly follow the pre-bid clarification schedule mentioned in point-2 of the Bidding Document. 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 Deptt.

Jhabua Power Ltd(A JV of NTPC Ltd.)

At/Po-Barela, Tehsil-Ghansore, District-Seoni,

State - Madhya Pradesh, India, Pin – 480997

e-mail: Pankaj Mishra Pankaj.Mishra@jhabuapower.co.in

**** Please superscript the NIT No. And Name of work on each envelop and subject of E- Mail**

7. URL Address for downloading Bid Documents in PDF form

www.jhabuapower.co.in

8. JPL reserves the right to reject any or all bids or cancel/withdraw the Invitation for Bids (IFB) for the subject package without assigning any reason whatsoever and in such case no bidder/intending bidder shall have any claim arising out of such action.



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(A Joint Venture of NTPC Ltd)

SECTION – II INSTRUCTION TO BIDDERS (ITB)

INSTRUCTIONS TO BIDDERS
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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 – Sec. VI BOQ	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 Jhabua Power Ltd., (here in after called “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 | Spacial 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**

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).- Applicable

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 or consortium 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 authorization 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 5 financial years or Balance Sheet and Profit & Loss account statement of preceding 5 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: 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 clause16**.

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 bids at

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 INTEGRITY PACT

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 ALL BIDS

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. - JPL/Ash/23-24; Dated: 28.04.2023

NAME OF PACKAGE: "Ash Utilization in Low Laying area from Plant site"

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: Shri. Pankaj Mishra, DGM C&M Department Jhabua Power Ltd. (A Joint Venture of NTPC Ltd.) Village - Barela, Tehsil - Ghansore, District - Seoni (Madhya Pradesh) Pin - 480997 e-mail : pankaj.mishra@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.
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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, etc. excluding fuel prices only
8.1	Price Variation pertaining to Revision in Minimum Wage Notification (As per Minimum Wages Act)	Not Applicable
8.2.	Contract Price Adjustment	Diesel escalation: Base price of Diesel (HSD) for contract award will be considered as Rs 95.11 per litre as on 22.04.2023 at Ghansore (M.P). No escalation/de-escalation is applicable for a price variance upto 5% (+ or-) on this price. If price variance is above 5% from 18.03.2023 HSD price, then escalation/de-escalation will be applicable as per following formula. For every Rs 1/- increase or decrease in HSD price beyond 5% of Base price, the rate for transportation will be revised by Rs 1/- per Cum. i.e. No escalation/de-escalation will be applicable for HSD price between Rs 90.35/- & Rs 99.86/- per litre. b) HSD price for escalation/de-escalation will be calculated on monthly average price basis and will be settled at the time of contract closure.
8.3	Quantity Adjustment	Quantity of BOQ may be shifted from line item No. B1 and B2 to A1&A2 as per JPL requirement. And price shall be applicable as per line item. However the total qty. of contract shall be limited to 5lacs cubic meter (+/_ 25%) as per scope of work.
9	Methodology of Execution & (GCC Clause 32)	As per SOW (Section – V)

10.	Materials for the performance of the Contract (GCC Clause 34)	As per SOW (Section – V)
11.	Total value of owner issue material	Not Applicable

12.	Security Deposit Mode	BG
13.	Power & Water Supply and boarding and lodging of employees/ labour / staff (GCC Clause 41 & SOW)	Boarding and lodging of employees/labor / staff etc. of contractor shall be arranged by them at their own cost.
14.	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.
15.	Defects Liability / Warranty Period (GCC Clause 45)	Defects Liability Period shall be 24 Months from the date of work completion.
16.	Employer's and Contractor's Risks and Insurance (GCC Clause 46)	As per GCC
17.	Mobilization Advance (GCC Clause 23)	Not applicable
18.	Contract Performance Security (GCC Clause 22)	Successful Bidder shall submit a Contract Performance Bank Guarantee (CPBG) in JPL approved format within 30 days of award of contract/LOI for a value equal to 10% of total basic contract value which shall remain valid till completion of warranty period + additional 3 months against the specific contract.
19.	Liquidated Damages (GCC Clause 29.6)	Failure to complete the work in the stipulated time shall attract LD for any delay attributable to vendor @ 0.5% of contract value for per week delay & part thereof and maximum up to 5% of the total contract value.
20.	Payment Schedule (GCC Clause 24)	<ol style="list-style-type: none"> 1. 5% payment of contract price shall be released within 30 Day from submission of Completion Certificate of civil work of the SOW. 2. balance shall be released on submission of Progressive monthly payment along with taxes shall

		<p>be done within 30 days from the date submission of certified monthly RA bills, tax invoice along with all mandatory/ statutory documents at JPL. Work shall be certified as per quality parameters of SOW (Sec.V.)</p> <p>Monthly RA Bills shall be accompanied by all HR, IR, Safety etc. related documents.</p>
21.	Retention	<p>14% against total basic billed value of each certified 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. Break up of 14% retention is detailed below;</p> <p>1) 5% on submission of land owner affidavit duly notarised on Rs. 500 stamp paper.</p> <p>2) 5% on submission of PMGSY NOC.</p> <p>3) 4% for Maintenance for two years (@2% each year).</p>
22.	Contract Category	Services
23.	Integrity Pact	Not Applicable

24.	Address Correspondence for (ITB Sub-Clause 17)	Shri. Pankaj Mishra, DGM C&M Department Jhabua Power Ltd. (A Joint Venture of NTPC Ltd.) Village - Barela, Tehsil - Ghansore, District - Seoni (Madhya Pradesh) Pin - 480997 e-mail : pankaj.mishra@jhabuapower.co.in
25.	Evaluation Criteria	As per NIT
26.	Preference to Make In India and granting of purchase preference to local suppliers	<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 <i>to be added with Price Bid</i> 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</p> <p>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)

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GENERAL CONDITIONS OF CONTRACT (GCC)

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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:

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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:

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**

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- 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

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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.

SEC.-V
NTPC-JHABUA POWER LTD (JV)



Village –Barela
Tehsil-Ghansore
Dist-Seoni

**TECHNICAL BID DOCUMENTS FOR DISPOSAL OF ASH TO
LOW LYING AREA**

NEAR

Location of low-lying area:

Village-Rajghadi Ryt., Panhayat-Chari, Tehsil-Ghansore, Dist.-Seoni

Content

Location-Rajgadhi

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3	Drawing for Construction of an earthen embankment/toe on/peripheral wall of cross section.	Annexure-2
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5	Drawing of six nos of compartments/internal partition wall within low lying area prior to ash disposal.	Annexure-2
6	Format for Affidavit for compliance of CPCB guideline of ash disposal to low-lying area.	Annexure-3
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Ash Disposal –Low Lying area

Location –Village: Rajghadi
Road Distance approx.14 Km from NTPC-JPL

A. SCOPE OF WORK:

1. Disposal of 5,00,000 M³ +/- 25% unutilised Ash (Pond ash/Fly ash / Bottom Ash or all) from ash dyke/Silo/Dewatering bin of NTPC-Jhabua Power Ltd (NTPC-JPL) to Low lying area near village Rajghadi (Filling site) including loading, transportation, unloading, spreading, covering, levelling, plantation, area cleaning, earthen embankment, Runoff outlet/retaining wall & boring for water sampling as per the norms mentioned in the CTE & CTO issued by MPPCB, Bhopal (All the general & Additional conditions) and the "Guideline for disposal/utilization of Fly Ash for reclamation of low lying area" issued by Central Pollution Control Board, on March 2019. Copy of CTE and CPCB guideline is enclosed as **Annexure -1.**
2. The creation of necessary infrastructure like motorable road construction for transportation of ash to the filling site, de-vegetation, and construction of peripheral drain at Filling Site etc. will be in the scope of Vendor.
3. Vendor will do the maintenance of the entire route from NTPC-JPL to Filling Site as and when required during the currency of the contract.
4. The construction of road inside and outside the pond for evacuation of ash will be in the scope of Vendor.
5. The Construction of Earthen Embankment with material obtained from approved Filling site with all lifts and leads, spreading, grading to required slope and compacting to meet requirement of table 300-1, 300-2 and as per relevant clauses of section- 300 or complete as per direction of EIC will be in the scope of Vendor.
6. Construction of an earthen embankment/toe protection/peripheral wall of the cross-section as given in **Annexure-2** for protection of nallah/water body exists within/adjoining the low-lying area from spilling of ash or ingress of surface runoff into it.
7. Construction of two number of RCC retaining wall at downstream as well as middle of the low lying area as per attached drawing as **Annexure -2.**
8. Construction of drain around the peripheral wall.
9. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion. Putting of pipeline outside and connect it with outer drain and extend it up to ground level.
10. Six compartments/internal partition wall of not more than one-hectare size each are to be made of earth (as per attached drawing as **Annexure -2**) and ash to be filled one by one in these compartments.

11. Prior to start the ash disposal from ash pond all the civil work has to be completed. No ash transportation will be allowed without civil work completion and receiving of permission for ash transportation from local administration.
12. Boulder pitching with proper pointing as directed by EIC of NTPC-JPL.
13. The soil required for soil cover shall be excavated from landfill site itself and kept separately before taking for ash filling.
14. The entire area meant to receive the ash and earth filling shall be stripped by minimum 300 mm.
15. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site.
16. All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash having requisite moisture content. The ash thus filled shall be compacted with the help of vibratory rollers to achieve dry density of not less 95% as per I.S-2720 (Part-VII). This would result in a levelled surface upon which layer wise filling of compacted ash can be done.
17. The compaction of each layer shall be carried out so as to achieve maximum in-situ dry density 95% of maximum dry density (MDD) of the material found out as per I.S 2720 (Part VII). To achieve maximum compaction level use of vibratory rollers shall be made. Required number of passes shall be made so as to achieve desired compaction. Number of passes required shall be verified through trials tests before actual execution of work. The broad specifications of vibratory rollers required for the purpose is as follows:
 - a) Static Weight = 8 to 10 t
 - b) Static Linear Load = 20 - 35 kg/cm
 - c) Frequency = 18 - 30 Hz (1100 to 1800 vibrations/ minute)
 - d) Amplitude of vibrations = 0.5 mm to 1.5 mm
18. Earth cover shall be laid simultaneously with the laying of compacted ash layers and on side slopes. As in the case of ash layers, compacted thickness of earth layers shall not be exceeding 300 mm. As far as top cover of earth is concerned, after the area has been covered with compacted ash up to 500 mm below the required finished level of the area, a compacted layer of 300-500 mm thickness of suitable earth shall be placed over ash surface. This cover shall be placed in layers, each layer shall be of 300 mm in compacted thickness.
19. The sufficient man-power with suitable supervisor (Experienced Engineer, QA/QC and surveyor team) shall be made available at site full time with proper testing and surveying instruments.

20. Boring for water sample drawing and plantation after covering of final layer of soil.
21. In no case, ash shall be transported without covering of trucks/hyvas with tarpaulin.
22. Quality test for Soil & ash disposed in low-lying area shall be in scope of vender. Sample will be collected by external laboratory and collected sample will be divided in two parts. 1st part of sample will be tested by external agency whereas 2nd part of sample will be preserved for one month for cross check, if required.
23. During start of ash disposal activities and transportation of ash, Air quality and Noise level monitoring will be carried out twice in a month at transportation route and ash disposal area. Whereas, ground and surface water quality will be monitored on monthly basis and ground water level on quarterly basis.
24. No spillage of ash on the road while transportation of ash. Deployed sufficient man-power and mechanised road sweeper. In addition, adequate arrangements for water sprinkling should be made to suppress fugitive dust emission, if any.
25. In case of any spillage enroute during transportation of fly ash, the agency shall ensure that spilled ash is collected and transported to the disposal/usage site immediately.
26. Pond ash to be transported should be conditioned with water to maintain minimum of 15% moisture at the disposal point so that ash does not get air borne and cause fugitive emission.
27. Adequate free board in trucks should be kept to avoid overflow/spillage during transportation.
28. Create curtain or barrier around the site to avoid any nuisance in area.
29. The area of filling will be specially earmarked by making on munare with reduced level in presence of area Patwari and a certificate of earmarked shall be taken from Patwari.
30. 100 meters distance between dump & working faces of low-lying area shall be maintained. The ash shall be dumped in alternate layers of height not exceeding 5.0 meters. A row of minimum 15 meters width having 5.0 meters height will be made for ash dumping.
31. Necessary equipment, vehicles, man-power etc. required for handling and transportation of ash from ash pond to filling site will be arranged by Vendor at their cost.
32. After complete reclaiming the Filling site, signboards shall be put up showing that the land was reclaimed by filling fly ash in a low-lying area. That will help in sending the message of fly ash utilization in reclaiming low-lying areas.
33. Any compensation for crop and environmental damage shall be the liabilities of vender.

34. Vender shall take the NOC from local administration prior to start the filling of fly ash in low-lying area.
35. Vender to NTPC-JPL for execution of work as per CPCB guideline and conditioned mentioned under CTE & CTO of MPPCB, Bhopal, shall submit an affidavit.
36. Any Environmental compensation impose by Madhya Pradesh Pollution Control Board for spillages of ash on road and into the water bodies/nalla and dispersion in environment shall be the liabilities of vender.
37. Vendor has to carry out the required liaisoning with villagers, concerned Sarpanch, landowner, Mining & forest department and any other statutory authority for completion of work.
38. Vender shall be responsible for any compensation to land owner to start the disposal of ash to low-lying area. Vender may visit the site prior to bidding for the assessment of compensation to the landowner. This shall be included in the quoted price. JPL-NTPC will be liable for any other cost.
39. Two years maintenance of the ash disposal site as per CPCB guidelines of "March 2019" for reclamation of low-lying area. For this 2.0 % / year amount (total 4.0%) of total tender value will be released after two years of completion of work.
40. Vendor shall be responsible for dewatering of rainwater, if any, before commencement of ash filling in filling site.
41. Vendor has to follow the prescribed route inside plant for ash evacuation. Outside plant, the route is through Village Binaiki-Munda-Rajghadi filling site. The distance is approx. 14 Km from NTPC-JPL to filling site.
42. Vendor shall hand over the public Road used during ash transportation in good condition (same as before start of work) to the concerned Govt. Authorities after completion of entire work. Required maintenance & repair shall be under the scope of vendor without any commercial impact to NTPC-JPL.
43. Vendor to submit proper NOC from respective dept. i.e. PMGSY, PWD, owner of the land/Gram panchayat after completion of entire work.
44. Any penalty imposed by statutory any authority during the work shall be in vender scope.
45. **Date of completion of work:** 7.0 months (210 days) + 10 days for the mobilization from date of issue of LOI. A Delay due to force majors shall be considered as per GCC.
46. NTPC-JPL will not be responsible for any act of violation of statutory requirements on the part of the Vendor during execution of the job. An affidavit shall be submitted by the Vendor to NTPC-JPL for completion of work as per CPCB Guideline " March 2019" for ash disposal in low-lying area. Format of Affidavit is enclosed as **Annexure -3**.

B- SAFETY

1. The bidder will deploy adequate no. of qualified Safety stewards round the clock for safe operation of work including ensuring road safety while transportation of ash. Bidder will submit the name of competent safety supervisor for round the clock for ash dyke, filling site and transportation route.
2. The bidder will ensure Safety compliances as per the attached safety guideline and equipment/machinery checklist **(Annexure-4)**. Non-compliance will either attract penalty or cancellation of contract.
3. Proper Patrolling & supervision of complete activity to avoid any deviation and to take timely action i.e. road cleaning & traffic control etc.

C- HUMAN RESOURCE

4. The bidder will ensure compliance of relevant provisions under Contract Labour Management/Motor Vehicle Act and other applicable Act.
5. That WC policy for their employees is available before the start of work/ safety compliance of NTPC-JPL.

D- GENERAL TERMS AND CONDITION

- i. All the vehicle drivers shall have required valid driving license issued by appropriate authority.
- ii. Speed limits shall be strictly enforced. Inside plant, the max. Speed limit is 20 km/h. The Vendor has to follow speed limits of public routes.
- iii. Appropriate measures shall be taken to prevent any entry of cattle/livestock inside the disposal area during working period.
- iv. Attempt shall be made to avoid any kind of nuisance to the public due to proposed activities
- v. Water sprinkling for dust suppression during handling of ash shall be ensured from being air borne.
- vi. The Vender has to deploy sufficient water tankers round the clock at ash dyke to ensure suppression of fugitive emission. ETP treated water will be provided by NTPC-JPL for the same.
- vii. Loading, unloading & transportation of ash shall be as per RTO/Govt. rules & regulations.

-----End -----



Consent Order

ANNEXURE-1, CTE MPPCB

M.P. Pollution Control Board
E-5, Arera Colony
Paryavaran Parisar, Bhopal - 16 MP
Tele : 0755-2466191, Fax-0755-2463742

GREEN-MEDIUM

CTE-Fresh
Validity(A/W): 29.02.2028

CONSENT NO: ***

PCB ID: 153169

Outward No:117843,12/04/2023

Consent No:CTE-58007

To,

The Occupier,
M/s. NTPC-JPL Joint Venture
(Flyash filling in Low lying area)
Village:- Barela, Tal : Ghansaur,
Dist : Seoni (M.P.)- 480997

Subject: Grant of Consent to Establish under section 25 of the Water (Prevention & Control of Pollution) Act,1974 & under section 21 of the Air (Prevention & Control of Pollution) Act,1981

Ref: Your Consent to Establish Application Receipt No. 1260569 Dt. 10/03/2023 and last communication received on Dt.20/03/2023

Without prejudice to the powers of this Board under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and without reducing your responsibilities under the said Acts in any way, this is to inform you that this Board grants Consent to Establish for filling of fly ash in low lying area at Khasra no. 116/2,113/2,115/3,116/1/1, 115/1, 115/2,116/1/3, Village: Rajgadi Rty, Panchayat: Chari, Tal : Ghansaur, Dist : Seoni (M.P.)- 480997

SUBJECT TO THE FOLLOWING CONDITIONS :-

- Location:** Khasra no. 116/2,113/2,115/3,116/1/1, 115/1, 115/2,116/1/3, Village: Rajgadi Rty, Panchayat: Chari, Tal : Ghansaur, Dist : Seoni (M.P.)- 480997
Latitude : 22.7462 Longitude : 79.8565
- The capital investment:** Rs. 30.16 Crs
- Product & Production Capacity:**

Product	Qty of Ash to be filled
Fly Ash filling in low lying area Ash disposal from operational ash pond (Pond Ash/Bottom Ash or both)	13.0 Lacs M.T

Note:-

- For any change in above, the occupier shall obtain fresh consent from the Board.
- Guidelines issued by Central Pollution Control Board in March, 2019 for disposal/utilization of fly ash for reclamation of low lying areas and in stowing of abandoned mines/quarries shall be complied with.
- The issuance of this Consent to establish does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.
- The management shall make all necessary arrangements as proposed and submitted to this office vide dated 04.04.2023, before starting the ash filling in low lying area.

The consent (for operation) as required shall be granted to your industry after fulfillment of all the conditions mentioned above. For this purpose you shall have to make an application to this Board in the prescribed proforma at least two months before the expected date of commissioning of ash filling activities. The applicant shall not start any ash disposal operation at site without obtaining consent for operation from the Board and shall not bring in to use any out let for the discharge of effluent and gaseous emission.

Enclosures:-

- * Conditions under Water Act
- * Conditions under Air Act
- * General conditions

By the order of Chairman, MPPCB



Signature Not Verified
Digitally Signed by : Chandra
Mohan Thakur,IAS
Date: 12/04/2023 03:33:40 PM

CHANDRA MOHAN THAKUR
Member Secretary

(Organic Authentication on AADHAR from UIDAI Server)
TPAV # 874X15NK2P



Consent Order

M.P. Pollution Control Board
E-5, Arera Colony
Paryavaran Parisar, Bhopal - 16 MP
Tele : 0755-2466191, Fax-0755-2463742

CONDITIONS PERTAINING TO WATER (PREVENTION & CONTROL OF POLLUTION) ACT 1974 :-

1. The daily quantity of trade effluent and sewage shall be Nil.

2. Trade Effluent Treatment(If any):-

The applicant shall provide comprehensive effluent treatment system as per the proposal submitted to the Board and maintain the same properly to achieve following standards-

pH	Between	5.5 – 9.0	TDS	Not exceed	2100 mg/l.
Suspended Solids	Not exceed	100 mg/l.	Chlorides	Not exceed	1000 mg/l.
BOD 3 Days 270C	Not exceed	30 mg/l.			
COD	Not exceed	250 mg/l.			
Oil and grease	Not exceed	10 mg/l.			

For other parameters general standards of discharge as notified under EP Act 1986 and notified by MPPCB from time to time shall be applicable.

3. **Sewage Treatment (If any) :-** The applicant shall provide comprehensive sewage treatment system as per the proposal submitted to the Board and maintain the same properly to achieve following standards-

pH	Between	6.5 – 9.0
Suspended Solids	Not exceed	100 mg/l.
BOD ₃ Days 27 °C	Not exceed	30 mg/l.
COD	Not exceed	250 mg/l.
Oil and grease	Not exceed	10 mg/l.
Fecal Coliform (MPN/100ml)	Not exceed	1000

4. The effluent shall be treated up to prescribed Standards and reuse in the process, for cooling and for green belt devolvement/gardening within premises. Hence **zero discharge condition** shall be practiced. In no case treated effluent shall be discharged outside of industry/unit premises.

5. Water meter preferably electromagnetic/ultrasonic type with digital flow recording facilities shall be installed separately for category wise consumption of water for mine spray, process & domestic purposes and data shall be submitted online through XGN monthly patrak/statements. The industry/unit shall also monitor the treated wastewater flow and report the same online through monthly patrak/statements.

Sr	Water Code (Qty in KLD)	WC : 100.0	WWG : 0.0	Water Source
1	Dust Suppression	100.0	0.0	Recycled

6. Any change in production capacity, process, raw material used etc. and for any enhancement of the above prior permission of the Board shall be obtained. All authorized discharges shall be consistent with terms and conditions of this consent. Facility expansions, production increases or process modifications which result new or increased discharges of pollutants must be reported by submission of a fresh consent application for prior permission of the Board.

7. All treatment/control facilities/systems installed or used by the applicant shall be regularly maintained in good working order and operate effectively/efficiently to achieve compliance of the terms and conditions of this consent

8. The Consent does not authorize or approve the Construction of any physical structures or facilities or the undertaking of any work in any

- i. water course or within its high flood level (HFL) area /Ecologically Sensitive Areas
- ii. Agriculture land / area.
- iii. Reclamation of Forest land / area is permissible only if clearance from MoEF&CC as per Forest Conservation Act, 1980 is available.
- iv. Gochar Kisan Land.

9. The specific effluent limitations and pollution control systems applicable to the discharge permitted herein are set forth as above conditions.

10. Compilation of Monitoring data-

- i. Samples and measurements taken to meet the monitoring requirements specified above shall be representative of the volume and nature of monitored discharge.
- ii. Following promulgation of guidelines establishing test procedures for the analysis of pollutants, all sampling and

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analytical methods used to meet the monitoring requirements specified above shall conform to such guidelines unless otherwise specified sampling and analytical methods shall conform to the latest edition of the Indian Standard specifications and where it is not specified the guidelines as per standard methods for the examination of Water and Waste latest edition of the American Public Health Association, New York U.S.A. shall be used.

iii. The applicant shall take samples and measurement to meet the monthly requirements specified above and report online through XGN the same to the Board.

11. Recording of Monitoring Activities & Results-

i. The applicant shall make and maintain online records of all information resulting from monitoring activities by this Consent.

ii. The applicant shall record for each measurement of samples taken pursuant to the requirements of this Consent as follows:

- (i) The date, exact place and time of sampling
- (ii) The dates on which analysis were performed
- (iii) Who performed the analysis?
- (iv) The analytical techniques or methods used and
- (v) The result of all required analysis

iii. If the applicant monitors any Pollutant more frequently as is by this Consent he shall include the results of such monitoring in the calculation and reporting of values required in the discharge monitoring reports which may be prescribed by the Board. Such increased frequency shall be indicated on the Discharge Monitoring Report Form.

iv. The applicant shall retain for a minimum of 3 years all records of monitoring activities including all records of Calibration and maintenance of instrumentation and original strip chart regarding continuous monitoring instrumentation. The period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the applicant or when requested by Central or State Board or the court.

12. Reporting of Monitoring Results:-

Monitoring Information required by this Consent shall be summarized and reported by submitting a Discharge Monitoring report on line to the Board.

13. Limitation of discharge of oil Hazardous Substance in harmful quantities:-

The applicant shall not discharge oil or other hazardous substances in quantities defined as harmful in relevant regulations into natural water course. Nothing in this Consent shall be deemed to preclude the institution of any legal action nor relieve the applicant from any responsibilities, liabilities, or penalties to which the applicant is or may be subject to clauses.

14. Limitation of visible floating solids and foam:

During the period beginning date of issuance the applicant shall not discharge floating solids or visible foam.

15. Disposal of Collected Solid waste/sludge-

All hazardous waste/sludge shall be disposed of as per the Authorization issued under Hazardous & other waste (M&TM) Rules 2016. And/other Solids Sludges, dirt, silt or other pollutant separated from or resulting from treatment shall be disposed of in such a manner as to prevent any pollutant from such materials from entering any such water Any live fish, Shall fish or other animal collected or trapped as a result of intake water screening or treatment may be returned to eaters body habitat.

16. Provision for Electric Power Failure-

The applicant shall assure to the consent issuing authority that the applicant has installed or provided for an alternative electric power source sufficient to operate all facilities utilized by the applicant to maintain compliance with the terms and conditions of the Consent.

17. Prohibition of By pass system of treatment facilities-

The diversion or by-pass of any discharge from facilities utilized by the applicant to maintain compliance with the terms and conditions of this Consent is prohibited except :

- i. where unavoidable to prevent loss of life or severe property damage, or
- ii. Where excessive storm drainage or run off would damage any facilities necessary for compliance with the terms and conditions of this Consent. The applicant shall immediately notify the consent issuing authorities in writing of each such diversion or by-pass in accordance with the procedure specified above for reporting non-compliance.

18. Unit management shall submit the information online through XGN in reference to compliance of consent conditions.

Additional Water condition:-

1. The management shall arrange the mobile toilets for the labours/employees during project implementation phase.
2. No sewage shall be allowed to disposed of without treatment.

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3. PP shall make compartment wall with proper designed bundh.
4. The peripheral wall shall be made to avoid the entering of rain water inside the proposed low lying area.
5. Construction of drain around the peripheral wall.
6. Construction of two number of RCC retaining wall at downstream as well as in the middle of the low lying area.
7. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion.
- Putting of pipe line outside and connect it with outer drain and extend it up to ground level.

CONDITIONS PERTAINING TO AIR (PREVENTION & CONTROL OF POLLUTION) ACT 1981 :-

1. The applicant shall provide comprehensive air pollution control system consisting of control equipments as per the proposal submitted to the Board with reference to generation of emission and same shall be operated & maintained continuously so as to achieve the level of pollutants to the following standards:-

Name of section	Control equipment to be installed	P.M, SO _x , NO _x (mg/NM ³)
Material Handling	Water Sprinkler	As per NAAQS
Transportation	Tarpaulin covered dumber	
Vehicular Movement	Water Sprinkler	

2. Ambient air quality at the boundary of the industry/unit premises shall be monitored and reported to the Board regularly on quarterly basis: The Ambient air quality norms are prescribed in MoEF gazette notification no. GSR/826(E), dated: 16/11/09. Some of the parameters are as follows:

- a. Particulate Matter (less than 10 micron) - 100 µg/m³ (PM10 µg/m³ 24 hrs. basis)
- b. Particulate Matter (less than 2.5 micron) - 60 µg/m³ (PM2.5 µg/m³ 24 hrs. basis)
- c. Sulphur Dioxide [SO₂] (24 hrs. Basis) - 80 µg/m³
- d. Nitrogen Oxides [NO_x] (24 hrs. Basis) - 80 µg/m³
- e. Carbon Monoxide [CO] (8 hrs. Basis) - 2000 µg/m³

3. The industry shall take adequate measures for control of noise level generated from industrial activities within the premises less than 75 dB(A) during day time and 70 dB(A) during night time.

4. The industry/unit shall make the necessary arrangements for control of the fugitive emission from any source of emission/section/activities.

5. All other fugitive emission sources such as leakages, seepages, spillages etc shall be ensured to be plugged or sealed or made airtight to avoid the public nuisance.

6. The industry/ unit shall ensure all necessary arrangements for control of odour nuisance from the industrial activities or process within premises

7. All the internal roads shall be made pucca to control the fugitive emissions of particulate matter generated due to transportation and internal movements. Good housekeeping practices shall be adopted to avoid leakages, seepages, spillages etc.

8. Industry shall take effective steps for extensive tree plantation of the local tree species within or around the industry/unit premises for general improvement of environmental conditions.

Additional Air condition:-

1. Management shall strictly follow the guidelines namely "Guidelines for disposal/utilization of Fly Ash for reclamation of Low-Lying area and in stowing of Abandoned mines/ Quarries" issued by Central Pollution Control board on March 2019.
2. The company shall make the air pollution control arrangements like water sprinkling system at site.
3. Create curtain or barrier around the site to avoid any nuisance in area.
4. The ash to be filled shall be handled in moist condition only.

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GENERAL CONDITIONS:

1. The non hazardous solid waste arising in the industry/unit/unit premises sweeping, etc. be disposed off scientifically so as not to cause any nuisance/pollution. The applicant shall take necessary permission from civic authorities for disposal to dumping site. If required.

Non Hazardous Solid wastes:-

Type of waste	Quantity	Disposal
Scrap/ Plastic packing material wood, card board, gunny begs etc	Record should be maintained	Sale to authorized party/As Per CPCB. MoEF Guide lines / Others.

2. The applicant shall allow the staff of Madhya Pradesh Pollution Control Board and/or their authorized representative, upon the representation of credentials:

- To inspect raw material stock, manufacturing processes, reactors, premises etc to perform the functions of the Board.
- To enter upon the applicant's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this Consent.
- To have access at reasonable times to any records required to be kept under the terms and conditions of this Consent.
- To inspect at reasonable times any monitoring equipment or monitoring method required in this Consent: or,
- To sample at reasonable times any discharge or pollutants.

3. This consent is transferable in nature, in case of any change in ownership / management, the new owner / partner / directors / proprietor shall immediately apply for the consent with new requisite information.

4. The issuance of this Consent does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorise any invasion of personal rights, nor any infringement of Central, State or local laws or regulations.

5. Industry shall install separate electric metering arrangement for running of pollution control devices and this arrangement shall be made in such fashion that any non functioning of pollution control devices shall immediately stop electric supply to the production and shall remain tripped till such time unless the pollution control device/devices are made functional. The record of electricity consumption for running of pollution control equipment shall be maintained and submitted to the Board every month

6. This consent is granted in respect of Water pollution control Act 1974 or Air Pollution Control act, 1981 only and does not relate to any other Department/Agencies. License required from other Department/Agencies have to be obtained by the unit separately and have to comply separately as per there Act / Rules.

7. Balance consent fee, if any shall be recoverable by the Board even at a later date.

8. The applicant shall submit such information, forms and fees as required by the board not later than 180 day prior to the date of expiration of this consent.

9. The industry/unit shall establish a separate environmental cell, headed by senior officer of the unit for reporting the environmental compliances. The industry/ Unit shall submit environmental statement for the previous year ending 31st March on or before 30th September every year to the Board.

10. Industry shall obtain membership of Emergency Response Center of the Board if needed.

11. Knowingly making any false statement for obtaining consent or compliance of consent conditions shall result in the imposition of criminal penalties as provided under the section 42(g) of the Water Act or section 38 (g) of the Air Act.

12. After notice and opportunity for the hearing, this consent may be modified, suspended or revoked by the Board in whole or in part during its term for cause including, but not limited to, the following:

- Violation of any terms and conditions of this Consent.
- Obtaining this Consent by misrepresentation of failure to disclose fully all relevant facts.
- A change in any condition that requires temporary or permanent reduction or elimination of the authorized discharge.

13. On violation of any of the above-mentioned conditions the consent granted will automatically be taken as canceled and necessary action will be initiated against the industry.

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Additional condition:- (if any) :-

1. The site selected for reclamation of land shall be provided with bench markings on munare (मुनारे) with reduced levels. Photographs of these shall be submitted with application for CTO.
2. The site selected for reclamation of land shall be suitably stripped to collect the soil so that no external soil shall be necessitated. Details of soil available shall be submitted with application for CTO.
3. As per the MOEF&CC gazette notification of ash utilization dated 14-09-1999 and as amendment on dated 27- 08-2003 and 03-11-2009, the soil required for soil cover shall be excavated from land fill site itself and kept separately before taking for ash filling. Details of this area shall be submitted with application for CTO.
4. Soil required for top or side covers shall be excavated from the site and if it is not possible to do so, only the minimum quantity of soil required for the purpose shall be excavated from soil borrow area. In either case, the topsoil should be kept or stored separately. Voids created at soil borrow area shall be filled up with ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of project.
5. All existing undulations, holes, cavities and excavations made for plate load tests and other soil investigations, etc. shall be reported to the Board and in start of operation shall be filled with pond ash having requisite moisture content. The ash thus filled shall be compacted with the help of vibratory rollers so as to achieve dry density of not less 95% as per I.S-2720 (Part-VII). This would result in a leveled surface upon which layer wise filling of compacted ash can be done.
6. The stripped site shall be suitably leveled so that required compaction all around the ash filling area could be achieved. Photographs of these shall be submitted with application for CTO.
7. For reclamation of water logged or slushy ash filling area, dewatering shall be done first, followed by removal of slushy layer of soil and/ or filling and compacting the area with gravel and boulders.
8. The soil used for the bunds/cover shall neither be granular nor black cotton soil. It shall be of good quality for geo-technical application and shall be compacted to 95% proctor by Vibratory Roller of 15 T minimum capacity, in the layers of 25-30 cm and the optimum moisture content determined before execution of work. Quality report of soil submitted with application for CTO.
9. The company shall make the protection arrangements to prevent entry of cattle/livestock inside the disposal area during execution period.
10. Care shall be taken to avoid any kind of nuisance / inconvenience to the public due to such dumping / filling activities. Curtain shall be created around the unloading site so that no fugitive emission could be generated.
11. Arrangements like water storage tank, pumps, pipes for water sprinkling for dust suppression shall be in place prior to application for CTO.
12. A sign board shall be put up prior to application for CTO showing reclamation site details to propagate the message of land reclamation by use of ash.
13. Monitoring of ground water quality in a radius of 0.5 km shall be carried out and reported at the time of CTO prior to execution of work and at quarterly interval up to one year post closure of the site.
14. Arrangements for dumping of ash in Ash filling/low-lying area shall be done mechanically in moist (15%) condition so that ash does not get air borne and pose fugitive dust problem.
15. Arrangements of transportation of fly ash for filling of low lying area shall be done through Tankers/ bulkers or mechanically designed covered Trucks only and in wet condition.
16. In no case, flyash or bottom ash shall be transported by open trucks / trollies and the company shall ensure that fly ash or bottom ash is transported in environmentally sound manner by as per the CPCB guidelines.
17. Arrangements shall be made by agency to ensure collection of spilled ash and transported to the disposal/usage site immediately.
18. All the bulkers and trucks responsible for carrying fly ash shall be with valid Pollution Under Control certificates.

Consent No:CTE-58007



Consent Order

M.P. Pollution Control Board
E-5, Arera Colony
Paryavaran Parisar, Bhopal - 16 MP
Tele : 0755-2466191, Fax-0755-2463742

19. The speed limit of vehicles carrying fly ash should be strictly enforced and it should not exceed 40 km per hour.
20. For protection of pond or water body exists within or adjoining the low lying area, an earthen embankment of the cross-section as given in the guidelines be constructed around the pond or water body to protect it from spilling of ash or ingress of surface runoff into it.
21. The company shall provide the natural slope details and the runoff outlet/side of the ash filled area shall be made of RCC to avoid gully formation in this area. A complete 3D (Three Dimensional) schematic view of the site shall be submitted with CTO application.
22. Firm arrangements shall be made for following the procedure, after the area has been prepared and levelled, ash excavated from Borrow areas/plant having required moisture content shall be placed in layers not exceeding 300 mm in compacts thickness. The placing operations shall be such that in strips of 10-15 m of the material when compacted in the fill will be blended sufficiently to produce specified degree of compaction and stability.
23. Arrangements for the compaction of each layer shall made to achieve maximum in-situ dry density 95% of maximum dry density (MDD) of the material found out as per IS 2720 (Part VII). To achieve maximum compaction level use of vibratory rollers shall be made.
24. The company shall submit closure plan with application for CTO, for the project along with maintenance of site for post project closure atleast for two years to develop complete green cover over the site or farm land as per the requirement.
25. The company shall keep the photographs of each level along with video clips and send regularly on monthly basis to RO & HO MPPCB and details shall be presented with CTO application.
26. Regular monitoring of ground water level shall be carried out by establishing a network of existing wells in the vicinity of ash filling site.
27. Management shall strictly follow the guidelines namely "Guidelines for disposal/utilization of Fly Ash for reclamation of Low-Lying area and in stowing of Abandoned mines/ Quarries" issued by Central Pollution Control board on March 2019.
28. Management shall obtain the statutory/ necessary permission from local administration for filling of fly ash in low-lying area prior to obtain consent to operate from the board.

Consent to establish as required under the Water (Prevention & Control of Pollution) Act, 1974 and under the Air (Prevention & Control of Pollution) Act, 1981 is granted to your unit subject to fulfillment of all the conditions mentioned above. The Project Proponent shall submit an application to this Board through XGN for obtaining the Consent for Operation before two months of the commencement of fly ash filling. The applicant without valid consent (for operation) of the Board shall not bring in to use any outlet for the discharge of effluent and gaseous emission.

For and on behalf of
M.P. Pollution Control Board

By the order of Chairman, MPPCB

CHANDRA MOHAN THAKUR
Member Secretary



(Organic Authentication on AADHAR from UIDAI Server)
TPAV # 874X15NK2P

Consent No:CTE-58007

ANNEXURE-1 CPCB GUIDELINE

F. No. 22-13/2019-IA.III

Government of India

Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi-110 003

Dated: 28th August, 2019

Office Memorandum

Sub: Change in conditions stipulated in the Environmental Clearances of Thermal Power Plants and Coal Mines in line with the Fly Ash Notification and subsequent amendments - reg.

The Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 mandates the requirement of prior environmental clearance to the projects/activities listed in the schedule to the said Notification. These projects/activities have been categorized under category A or B and require appraisal/and approval by the respective regulatory authorities (MoEF&CC/SEIAAs) at the Central/State level.

2. As per the provisions of the EIA Notification, 2006, read with subsequent amendments, mining of minerals is covered under Category A/B of the Schedule to the EIA Notification, 2006 based on their areal extent, and thus requiring prior environmental clearance from the concerned regulatory authority.

3. Based on the proposals submitted by the project proponent and recommendations of the sectoral Expert Appraisal Committee, mining projects and thermal power plants were granted Environmental Clearance by the Ministry/State Environment Impact Assessment Authorities (SEIAAs) from time to time, subject to compliance of certain terms and conditions as environmental safeguards necessitated at that stage, which also included the condition for backfilling of mines voids, use/disposal of fly ash in low lying areas, etc.

4. In order to address the environmental concerns of fly ash and to improve its utilization, MoEF&CC has issued a Notification on 14th September, 1999 and subsequent amendments issued vide Notifications dated 27th August, 2003, 3rd November, 2009 and 25th January, 2016 from time to time.

The Fly Ash Notification issued vide S.O.2804 (E) dated 3rd November, 2009 provides for mandatory use of fly ash in the external overburden dump, backfilling or stowing of mines. The main concern is poor fly ash utilization by the pithead power plants mainly because of limited potential in cement industries/road projects and non-utilization of fly ash in stowing and overburden in coal mines.

5. An Expert Committee was constituted for developing a focussed strategy for best utilization of flyash to manufacture end products. The Committee has made recommendations for enhanced utilization of flyash in various sectors viz. mines, roads, bricks manufacturing, cement manufacturing, etc. During an Inter-ministerial consultation held on 21st January, 2019 under the Chairmanship of Secretary (EF&CC), recommendations of the Expert Committee were accepted, which *inter-alia* included the following:-


- a) MoEF&CC should revisit the conditions stipulated in the existing environmental clearances of Thermal Power Plants for flyash utilization and modify them in consonance with the flyash notification.
- b) Appropriate conditions need to be incorporated in the environmental clearances for utilization of flyash in mines backfilling/stowing.

6. The matter has been examined in the Ministry. Further, the matter has been also been referred to the EAC (Thermal Power Projects) in its meeting held on 28.5.2019 and 12.7.2019. The EAC mentioned that though the Flyash Notification, 1999 and subsequent amendments allow the unrestricted use of flyash in abandoned mines, low lying areas, soil conditioner in agriculture, there are no specific guidelines/methodology available for safe disposal of flyash so as to minimize the damage to the environment. In absence of methodology, EAC has been examining the proposals on case to case basis and recommending for disposal of flyash in abandoned mines. Further, the EAC has also expressed the concerns over the long term impacts of flyash disposal on groundwater, soil quality and impact on associated flora and fauna. Now, the guidelines for disposal of fly ash utilisation in low lying areas and mine voids have been prepared by the Central Pollution Control Board and placed before the EAC (Thermal Power and Coal Mining) in its meeting held on 12.7.2019.

7. In view of the recommendations of the EAC (Thermal Power) in its meeting held on 12.7.2019, after careful examination of the matter and to meet the objectives of the Fly Ash Notification, 1999 & its amendments, the Ministry hereby stipulates the following conditions in the existing Environmental Clearances of Thermal Power Plants and Coal mines which have valid Environmental Clearance accorded by the Ministry/SEIAA, that will replace the existing conditions (Specific & General) which prohibited the use of fly ash in abandoned mines/low lying areas/soil conditioner in agriculture:

- i. The guidelines prepared by CPCB for disposal of flyash for reclamation of low lying areas and in stowing/backfilling of abandoned mines/quarries shall be followed during disposal of ash in abandoned or working mines, as annexed.
- ii. There should at least be clearance of 500 m of safe distance be maintained from River and water body in case of ash disposal in abandoned mines to prevent embankment failures and flyash flowing into the nearby water body.
- iii. The top layer of the flyash disposal area in the abandoned mines shall be kept moist during disposal.
- iv. Top layer of the disposed area should have 70 cm overburden or gravels/stones and then 30 cm sweet soil cover. Subsequently, the vegetation shall be raised on the soil cover.
- v. Bioaccumulation and bio-magnification tests shall be conducted on surrounding flora and fauna (tree leaves, vegetation, crop yields and cattle population) during pre-monsoon and post monsoon to find out any trace metals escaped through groundwater or runoff.
- vi. Surface runoff and supernatant water, in any case shall not be let into the surrounding areas. It shall be collected by providing adequate drains around the mine. The supernatant water along with surface runoff shall be treated and re-used for mixing ash and plant operations.
- vii. To the extent possible, only decanted water from mine, make up water from treated effluents such as cooling tower blow down and treated sewage water shall be used for making ash slurry.

- viii. Flyash to be used as soil conditioner in agriculture needs and to be applied in controlled manner to limit excessive application so as to prevent soil degradation. The optimize proportion of ash to be applied which is to be certified by the State Agricultural Universities/Colleges based on the soil testing.
 - ix. Approval from DGMS shall be obtained before disposing the ash in the mine voids.
 - x. Technology for conversion of fly ash into coarse granules for stowing in the underground mines to be explored.
 - xi. All the power plants should install different silos for dry collection of flyash.
 - xii. Records pertaining to details of month-wise quantity of flyash disposed and water consumption along with nature/source of water shall be maintained and submitted to Ministry/Regional Office annually.
 - xiii. Before starting the disposal of ash into mine voids, the NOC/Permission from the mine owner is to be obtained incase the mine closure activities are not completed or State Government incase the mine has been handed over to the State Govt. after its closure. A copy of such NOC/Permission is to be submitted to the Ministry and its Regional Offices.
8. This issues with the approval of the Competent Authority.


(Dr. S. Kerketta)
Director, IA Division

To

1. The Chairman, Central Pollution Control Board (CPCB)
2. The Chairman/Member Secretaries all the Expert Appraisal Committees
3. The Chairman /Member Secretaries of all the SEIAAs/SEACs
4. The Chairman/Member Secretaries of all SPCBs/UTPCCs
5. All the Power Plant Operators/ Coal Mining Operators who were accorded Environmental Clearance.
6. All the ROs of MoEF&CC.
7. All the Officers of I.A. Division

Copy for information to:

1. PS to Hon'ble Minister for Environment, Forest and Climate Change
2. PS to Hon'ble MoS (EF&CC)
3. PPS to Secretary(EF&CC)
4. PPS to SS(AKJ) / AS (RSP)
5. Sr.PPS to JS (GM)/ JS(NK)
6. Website of MoEF&CC.
7. Guard file.

ANNEXURE-1CPCB GUIDELINE

Guidelines for disposal/utilisation of Fly Ash for reclamation of Low Lying Areas and in stowing of Abandoned mines/Quarries



**Central Pollution Control Board
March, 2019**

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References	1.Guidelines for Reclamation of Low Lying Areas and Abandoned Quarries with Ash , August 2017, Odisha Pollution control board

- 2.Guidelines for Low Lying area development using Ash, ash Policy 2015, NTPC Ltd.
- 3.Permission of DGMS to M/s JSPL & JPL for disposing ash in coal mines

Guidelines for disposal/utilisation of flyash for reclamation of Low Lying Areas and in stowing of Abandoned mines/Quarries

1.0 Introduction:

Management of huge quantity of ash (fly ash, bottom ash and pond ash) generated from coal fired Thermal Power Plants (TPPs) is a serious environmental challenge. Ash generation from coal or lignite based thermal power plants, has increased from 40 Million tonne per year in 1993-94, to more than 200 Million tonne per year in 2017-18 and is projected to increase to 275 Million Tons / year by 2032.

The ash generation in coal and lignite based thermal power plants in various forms such as dry ash, bottom ash, pond ash and mound ash that are required to be managed in such a manner that it does not affect the environment. Utilisation of ash for reclamation of low lying areas and abandoned quarries is recognised as an alternate option and therefore, MoEF&CC has issued a notification to address utilisation of ash for various purposes including these two options

The Ministry of Environment, Forest and Climate Change (MoEF&CC) issued the Fly Ash notification on 14th September, 1999, which has subsequently been amended in 2003, 2009 and 2016. The Fly Ash notification (1999) mandates the use of fly ash for the purpose of manufacturing ash-based products such as cement, concrete blocks, bricks, panels or any other material and for construction of roads, embankments, dams or for any other construction activity within a radius of 300 km from thermal power stations (TPPs). Besides, it also mandates use of fly ash in mines backfilling or stowing of mines within a distance of 50 km.

2.0 Status of fly ash utilisation:

Since 1999 when flyash utilisation was made mandatory, the utilization of fly ash has increased from 6.64 million-ton in 1996-97 to 147.7 million-ton in 2017-18. Fly ash generation and utilization in 2017-18 from 182 coal/lignite based TPPs of various power utilities in the country was 220.7 and 147.7 million-ton, respectively. The percentage of fly ash utilization during 2017-18 has been 66.9%. During 2017-18, out of total fly ash generation, 35.6 % of total fly ash was used in the cement sector, followed by 14.28 % in making bricks & tiles, 11.57 % stored in ash dyke raising,

7.99% in mine filling, 16.85 % in reclamation of low lying area, 5.43 % in roads & embankments, 1.34% in concrete making, 0.21 % in agriculture, 6.73 % in others and 33.1% remained as unutilized fly ash.

Mine reclamation represents a potential beneficial use of flyash that has been receiving increased attention in recent years. Coal mining operations have produced both open pits and deep underground mine voids that can be filled by flyash. Placement of flyash into deep mines can provide structural support to abate subsidence, and placement of flyash in surface mines or other open pits can aid in restoring mined land to beneficial use. The use of flyash as mine backfill may provide the additional benefit of limiting impacts of acid mine drainage (AMD). Mostly flyashe is alkaline material that can neutralize acidic water and/or inhibit production of acid. Placement of fly ash may also reduce the permeability of mine strata and divert water away from acid-generating materials. Although flyash possess these beneficial physical and chemical properties, there are concerns regarding potential for release of toxic chemicals in the leachates from the fly ash. Therefore, scientifically sound fly ash management is needed so that environmental concerns can be adequately and reliably identified and addressed.

3.0 Need of Guidelines:

Ministry of Environment and Forests and Climate Change (MoEF&CC) vide Notification No. S.O. 763 (E) dated 14th September 1999, last amended on 25th January, 2016 issued following directions for reclamation low lying area and stowing of mines;

- i. No agency, person or organization shall within a radius of three hundred Kilometres of a coal or lignite based thermal power plant undertake or approve or allow reclamation and compaction of low-lying areas with soil; only ash shall be used for compaction and reclamation.
- ii. Soil required for top or side covers of embankments of roads or flyovers shall be excavated from the embankment site and if it is not possible to do so, only the minimum quantity of soil required for the purpose shall be excavated from soil borrow area. In either case, the topsoil should be kept or stored separately. Voids created at soil borrow area shall be filled up with fly ash with proper compaction and covered with topsoil kept separately as above and this would be done as an integral part of embankment project.

- iii. No person or agency shall within fifty kilometers (by road) from coal or lignite based Thermal Power Plants, undertake or approve stowing of mine without using at least 25 % of fly ash on weight to weight basis, of the total stowing materials used and this shall be done under the guidance of the Director General of Mines Safety (DGMS).
- iv. No person or agency shall within fifty kilometers (by road) from coal or lignite based Thermal Power Plants, undertake or approve external dump of mining Over Burden (OB) without using at least 25 % of ash on volume to volume basis of the total materials used for external dump of overburden and same percentage in upper benches of back filling of opencast mines and this shall be done under the guidance of the Director General of Mines Safety (DGMS);
- v. All agencies undertaking construction of roads of flyover bridges and reclamation and compaction of low lying areas, including Department of Road Transport and Highways (DORTH), National Highways Authority of India (NHAI), Central Public Works Department (CPWD), State Public Works Department and other State Government Agencies, shall within a period of four months from the publication of this Notification “ make provisions in their tender documents, schedules of approved materials and rates as well as technical documents for implementation of this Notification, including those relating to soil borrow area or pit”.
- vi. The pond ash should be made available free of any charge as is as where basis to manufacturers of bricks, blocks, tiles including clay flyash bricks production manufacturer’s units, farmers, central and the state road construction agencies, Public Works Department and to agencies engaged in backfilling or stowing of mines.

Though, flyash utilisation has gained momentum progressively over the years, further efforts are required to explore new areas of ash utilisation. With suitable safeguards, mine backfilling including disposal of flyash in abandoned quarries and road construction specially in the construction of National Highways and Expressways could be the major mode of flyash utilisation in the near future as these areas have vast potential. It would perhaps be desirable that the concerned Ministries should take steps in sorting out the bottlenecks such as declaring a list of abandoned mines, making adequate provisions in respective schedules for flyash utilisation by the Indian Road Congress & construction agencies etc.

MoEF & CC vide letter dated 01.03.2019 asked CPCB to come out with guidelines based on Odisha Pollution Control Board experience for reclamation of low lying areas and abandoned quarries with ash as recommended by the Expert Committee that was constituted by Niti Aayog vide O.M. No. 25 (11)/2014-Minerals dated 12.06.2018 for developing a focus strategy for best utilisation of fly ash to manufacture end products recommended.

The scope of guidelines covers transportation and disposal of flyash in low lying areas and abandoned quarries in an environmentally friendly manner.

4.0 Loading/unloading and transportation of flyash

4.1 Current Practice for Handling & Disposal of Flyash & Bottom ash (within the power plant)

Flyash is collected in dry form from ESP hopper and disposed either in dry form or through wet slurry form. While, bottom ash collected at the bottom of boiler and is disposed in wet slurry form into the ash ponds.

Following technologies are conventionally used for handling & disposal of flyash and bottom ash collected from ESPs hoppers and boiler bottom respectively within the plant or upto the ash pond area:

- I. Dry Pneumatic conveying
- II. Dry (moist) Conveying system through belt conveyor/tube belt conveyor
- III. High concentration slurry disposal system
- IV. Medium concentration slurry disposal system
- V. Lean concentration slurry disposal system

Amongst the above technologies, Dry Pneumatic conveying, Medium concentration slurry disposal system, High concentration slurry disposal system, and Dry (moist) Conveying system through belt conveyor/tube belt conveyor are preferable as compared to Lean concentration slurry disposal system.

The dry ash is typically conveyed pneumatically from the ESP or filter fabric hoppers to storage silos where it is kept dry, pending utilization or further processing, or to a system where the dry ash is mixed with water and conveyed (sluiced) to an on-site storage pond. Fly ash is stored in silos, domes and other bulk storage facilities. Fly ash can be transferred using air

slides, bucket conveyors and screw conveyors, or it can be pneumatically conveyed through pipelines under positive or negative pressure conditions.

Dry fly ash collected is also be suitably moistened with water and wetting agents, as applicable, using specialized equipment (conditioned) and hauled in covered dump trucks for special applications such as structural fills. Water conditioned fly ash can also be suitably stockpiled at jobsites. Exposed stockpiled material must be kept moist or suitably covered to prevent fugitive emission.

The dry bottom ash removal and its transportation is certainly more environment friendly, compared to that of wet ash removal and transport system.

4.2 Guidelines for loading, unloading, storage, transportation of flyash

The power plants need to maximise dry collection of fly ash & bottom ash and also adopt adequate measures to prevent fugitive dust emission during loading, unloading, storage, transportation and various uses of dry as well as ash bottom ash and pond ash. Following guidelines are, therefore, suggested for prevention of pollution and augmentation of flyash utilisation

4.2.1 Maximise dry collection of fly ash and bottom ash

- a. Coarse fly ash from first field of ESP hoppers need to be collected and stored separately.
- b. Fine fly ash from second field onwards of ESP Hoppers should be collected separately. For some specific usage, fine fly ash may be passed through Classifier for further separation of fine fly ash and stored in separate silo.
- c. Bottom ash which is not utilised presently could also be collected in dry form and converted into a valuable resource if processed to match the end use specification. Wet collection & disposal of bottom ash should be minimised as far as possible

4.2.2 Loading, Unloading and Storage

Installation of Bag Filters with dry flyash collection and storage in Silos at loading and unloading points are standard practices at both locations i.e loading at power plant site as well as at the unloading point at user's site. Suggestions for further improvement in existing practices are as under:

- a. Current practice of loading of fly ash in Bulklers/Tankers requires improvement at the stage of loading of fly ash in Tankers. The opening of telescopic chutes at the loading end should be air tight and confined to avoid fugitive dust emission.
- b. The Pollution Control Equipment / Cascade Filters, attached with fly ash loading chute should be periodically cleaned along with regular scheduled maintenance of bag filter to avoid choking and malfunctioning of Bag Filter. It would mitigate the dust emission during loading of fly ash.
- c. Malfunctioning of level sensors can be avoided, with regular maintenance, to prevent over filling of fly ash in Tankers .
- d. The Weigh Bridge to be installed under fly ash loading chute to fill just the required quantity of fly ash in tankers so that overflow/spillage of fly ash in open areas is avoided which otherwise results in heavy fugitive emission all around.
- e. Opening of tankers need to be properly locked during transportation of fly ash. Automatic opening / closing system need to be installed without fail.
- f. Current practice of unloading of fly ash from tanker to storage hopper through pneumatic system is fairly good. Otherwise, the leakage of fly ash will occur at bends and joints of transportation pipe line. The fly ash being abrasive in nature causes damage at bends and joint locations. Fly ash should, therefore be transported through PVC coated pipes to avoid abrasion otherwise it may lead to leakage of flyash. The mechanical unloading system should be envisaged to avoid high pressure and dust leakage from unloading pipe lines. As far as possible, number of bends should be minimised.
- g. The fly ash storage silo should be of or coated with anti-abrasive or anti-corrosive material. It is better to provide concrete silo/hopper to avoid leakages.

- h. Proper functioning of all the level sensor of Storage Hopper to be ensured to avoid any possible spillage from Hopper opening.
- i. The Bag Filter made of anti-abrasive material/cloth be provided with telescopic chute.
- j. Dumping of ash in Ash pond should be done mechanically in moist condition so that ash does not get air borne and pose fugitive dust problem.
- k. The bottom ash discharged from boiler bed, may be transported pneumatically in dry form / in slurry form to the ash pond

4.2.3 Transportation

Fly ash transportation has many challenges like distance to be transported, form of ash i.e. dry or wet ash, user's requirement, economic feasibility, requirement of surrounding vicinity and many other site specific issues. In any case, control of dust emission during transportation is prime concern and more challenging being a non-point source of pollution and larger area coverage due to movement from one place to other passing through various receptors. As flyash is used by different users for different purposes such as cement manufacturing, brick manufacturing, mine back filling, road construction and filling of low lying area, the handling and transportation have to accordingly decided. Following modes of transportation and precautions are suggested for mine back filling and development of low lying areas by disposal of flyash or bottom ash to avoid fugitive dust emission:

a. Transportation for abandoned mine back filling

- I. Pipe conveyors, wherever feasible, based on the topography of the area should be used.
- II. Tankers/ railway wagons/ bulkers or mechanically designed covered trucks need to be used
- III. Thermal Power Plants using wet ash disposal, if permitted can transport ash slurry directly to abandoned mine through ash slurry pipe line.

b. Transportation for filling of low lying area

- I. Tankers/ bulkers or mechanically designed covered Trucks need to be used.

In no case, flyash or bottom ash shall be transported by open trucks / trollies irrespective of distance or end use. Thermal power plants and fly ash user agency shall collectively ensure that fly ash or bottom ash is transported in environmentally sound manner by following the guidelines mentioned in para 4.2.3 & 4.2.4.

4.2.4 General Code of Practices for Maintenance of roads, vehicles and conditioning of flyash

- a. Roads inside power plant and that of flyash user agency should be paved and plantation of adequate width should be done at both sides. Mechanised road sweepers should be deployed. In addition, adequate arrangements for water sprinkling should be made to suppress fugitive dust emission, if any.
- b. Thermal power plants and user agencies should make arrangements (two stages) for washing of wheels of the vehicles (bulkiers/trucks) before deployed for fly ash transportation.
- c. Fly ash to be transported should be conditioned with water to maintain minimum of 15% moisture at the disposal point so that ash does not get air borne and cause fugitive emission.
- d. Adequate free board in trucks should be kept to avoid overflow/spillage during transportation.
- e. In case of any spillage enroute during transportation of fly ash, the agency shall ensure that spilled ash is collected and transported to the disposal/usage site immediately.
- f. All the bulkiers and trucks responsible for carrying fly ash should be with valid Pollution Under Control certificates.
- g. Provision should be preferably made for weighing of fly ash loaded into tankers/ railway wagons/bulkiers etc under the silo.
- h. The speed limit of vehicles carrying flyash should be strictly enforced and it should not exceed 40 km per hour.

- i. State Pollution Control Boards shall clearly indicate mode of transportation and method of loading and unloading while granting the consent.
- j. Transportation of flyash through thickly populated areas should be avoided as far as possible.
- k. General awareness/ training programmes be organised regularly for tanker operating staff like drivers and cleaners on the impact of hazards of fly ash.

5.0 Reclamation of Low Lying area using Ash

Filling of Low lying areas inside the plant premises and outside within 300 km. of power plant may be taken up using ash. Low lying area reclamation with ash should be taken up adopting standard practices as per 2015 technical specification mentioned in NTPC Policy. Following steps should be taken up prior to initiate low lying area developmental activities.

5.1 Preconditions:

- 5.1.1 **Consent from land owner:** Consent/ permission should be obtained in writing from the land owner before start of work.
- 5.1.2 **Permission from Regulatory authority:** Power plant/ land owner/ agency shall obtain statutory permission from regulatory authorities such as SPCB as per the requirement.
- 5.1.3 **Prevention of pollution:** Suitable methods should be adopted and necessary arrangement should be made to prevent pollution during excavation of pond ash at ash pond, filling area and during transportation of ash.
- 5.1.4 **Soil Cover on the top of ash fill:** As per the MOEF&CC gazette notification of ash utilization dated 14-09-1999 and as amendment on dated 27-08-2003 and 03-11-2009, the soil required for soil cover shall be excavated from land fill site itself and kept separately before taking for ash filling. If it is not possible to do so, only the minimum quantity of soil required for the purpose of cover shall be excavated from the soil borrow area. The voids so created due to removal of soil shall be filled up with ash with proper compaction and covered at top with soil cover. About 300-500 mm thick soil layer shall be placed over the ash fill area. This should be done as an integral part of low lying area development work.

5.1.6 Restrictions :

Reclamation of area by ash shall not be permitted in the following areas :

- i. Flood plain area/Ecologically Sensitive Areas.
- ii. Agriculture land / area.
- iii. Reclamation of Forest land / area is permissible only if clearance from MoEF&CC as per Forest Conservation Act, 1980 is available.
- iv. Gochar Kisan Land.

5.2 Preparation of filling area

5.2.1 The entire area meant to receive the ash and earth filling shall be stripped by minimum 150 mm. The exact depth of stripping shall be decided by the Engineer-in-Charge depending upon nature of top soil and the vegetation present. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site. The stripping material and other unsuitable materials as referred above shall be kept away from the area to be filled up so that these do not get mixed up with filling material and disposed off to a place as decided by the Engineer-in-Charge.

5.2.2 Levelling

All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash having requisite moisture content. The ash thus filled shall be compacted with the help of vibratory rollers so as to achieve dry density of not less 95% as per I.S-2720 (Part-VII). This would result in a levelled surface upon which layer wise filling of compacted ash can be done.

5.2.3 Protection of pond or water body adjoining or within the working site: If any pond or water body exists within or adjoining the low lying area /quarry then an earthen embankment of the cross-section as given in the Figure below be constructed around the pond or water body to protect it from
spilling of ash or ingress of surface runoff into it.



Cross- section of water body protection embankment

The soil used for the embankment should neither be granular nor black cotton soil. It should be of good quality for geo-technical application. Soil should be compacted to 95% proctor by Vibratory Roller of 15 T minimum capacity, in the layers of 25-30 cm and the optimum moisture content determined before execution of work. After attaining the desired height, the disposal area should be thoroughly compacted, graded followed by soil cover at least 15 cm thickness for proper reclamation of the land by grass turfing or appropriate plantation.

5.3 Excavation of pond ash from borrow area

5.3.1 Borrow Area-location

The location and permissible depth of excavation of the Borrow areas for pond ash shall be got specifically approved from concerned Thermal Power Station. The boundaries and permissible depth of excavation so approved shall be strictly followed and no deviation shall be allowed. Similarly, routes for movement of all ash transportation vehicles, water tankers, equipment, etc. shall be got approved from Thermal Power Station. These shall be strictly followed and no deviation shall be allowed.

The excavation surfaces and surface of waste materials shall be left in a reasonably smooth and even condition. All the excavations within the ash pond shall be at a minimum slope of 4 (Horizontal): 1(Vertical)

5.3.2 Site Clearance

All areas required for borrowing shall be cleared of all trees and stumps, roots, bushes, rubbish and other objectionable material. Particular care shall be taken to exclude all organic matter from the ash to be placed in the fill. The cleared areas shall be maintained free of vegetation growth during the progress of the work.

5.3.3 Stripping

Borrow area shall be stripped of top layer by a depth of minimum 150 mm. The exact depth of stripping shall be decided by the Engineer-in-charge depending upon nature of top layer and the vegetation present.

5.3.4 Borrow area watering & dewatering

The natural moisture content of material in the borrow areas as well as the optimum moisture corresponding to the Proctor's maximum dry density for the material in the particular borrow area shall be obtained from laboratory tests. Additional moisture, if required, shall be introduced into the borrow area by watering well in advance of excavation to ensure uniformity of moisture content. If in any borrow area before or during excavation there is excess moisture, steps shall be taken to reduce the moisture by the selective excavation to secure the materials of required moisture content by excavating drainage ditches, by allowing adequate time for drying or by other means. To avoid formation of pools in the borrow areas during excavation operations, drainage ditches from borrow areas to the nearest outlets shall be excavated so as to obtain homogeneous mix. In general, all materials from a particular borrow area shall be mixture of materials obtained for the full depth of cut.

5.3.5 Earth cover in Borrow Area

It shall be the responsibility of Thermal Power plant to arrange sweet soil from approved external borrows areas. The earth cover material shall consist of sandy loam free of admixture of stiff clay, refuse, stumps, roots, rock, bushes, weeds or any other material which would be detrimental to the proper development of vegetation growth. It shall not contain stone of size 25 mm and over . The loamy top soil shall be of healthy crops, grass or other plant growth, that is of good quality and reasonably free draining. Other specifications for Borrow area e.g. site clearance, stripping, Borrow area watering/De-watering etc. shall be as per relevant clauses of Borrow area for ash as outlined above i.e clause nos. 5.3.1 to 5.3.4.

5.4 Filling with pond ash

5.4.1 Placement

After the area has been prepared and levelled, pond ash excavated from Borrow areas having required moisture content shall be placed in layers not exceeding 300 mm in compacted thickness. The placing operations shall be such that in strips of 10-15 m of the material when compacted in the fill will be blended sufficiently to produce specified degree of compaction and stability. No stones, cobbles or rock fragments, having maximum dimensions more than 100 mm shall be placed in the fill. Stones and

cobbles shall be removed either at the borrow pit site before it is used as soil cover.

5.4.2 Procedure

The material shall be placed in the fill in continuous horizontal layers, stretching right across the whole section, not more than 300 mm in compacted thickness and rolled as herein specified. The length of one layer shall not exceed 150 meters at one stretch. The layers shall be compacted in strips overlapping not less than 600 mm, if the rolled surface of any fill is found to be too wet for proper compaction, it shall be raked up, allowed to dry, or shall be worked with a harrow or any other approved equipment to reduce the moisture content to the required amount and then it shall be re-compacted before the next layer of ash is placed. Ash surfaces are likely to become dry in short intervals especially during hot and dry weather and hence enough moisture shall be added between difference passes to ensure proper compaction

5.4.3 Compaction

The compaction of each layer shall be carried out so as to achieve maximum in-situ dry density 95% of maximum dry density (MDD) of the material found out as per I.S 2720 (Part VII). To achieve maximum compaction level use of vibratory rollers shall be made. Required number of passes shall be made so as to achieve desired compaction. Number of passes required shall be verified through trials tests before actual execution of work. The broad specifications of vibratory rollers required for the purpose is as follows:

- a) Static Weight = 6 to 10 t
- b) Static Linear Load = 20 – 35 kg/cm
- c) Frequency = 18 – 30 Hz (1100 to 1800 vibrations/ minute)
- d) Amplitude of vibrations = 0.5 mm to 1.5 mm

5.4.4 Moisture control

So far as practicable, the materials shall be brought to the proper moisture content in the borrow area before excavation. If additional moisture is required, it shall be added at the fill site by sprinkling water before rolling the layer. Thermal Power Plant shall make arrangements for supply of water to the borrow areas as well as to the fill area. If the moisture content is more than requirement, the material shall be spread and allowed to dry

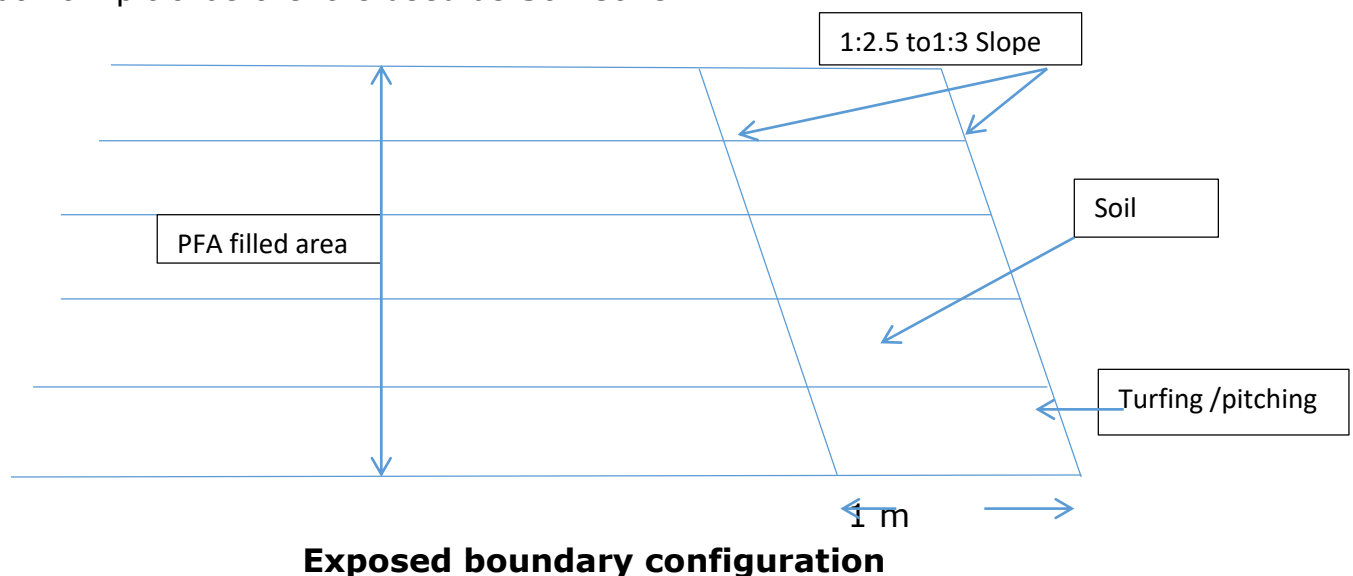
before rolling. The moisture content shall be at most uniform throughout the layer of material and ploughing or other methods of mixing to obtain uniform distribution. If the moisture content is more or less than the range of the required moisture content, or if it is not uniformly distributed throughout the layer, rolling shall be stopped, and shall be started again only when the above conditions are met with.

Fill materials shall be placed only when the weather conditions are satisfactory to permit accurate control of the moisture content in the materials.

5.4.5 Placement of earth cover in filing area

Earth cover shall be laid simultaneously with the laying of compacted ash layers and on side slopes. As in the case of ash layers, compacted thickness of earth layers shall not be exceeding 300 mm. As far as top cover of earth is concerned, after the area has been covered with compacted ash up to 500 mm below the required finished level of the area, a compacted layer of 500 mm thickness of suitable earth shall be placed over ash surface. This cover shall be placed in layers, each layer shall be of 250 mm in compacted thickness.

The combined excavation and placing operations shall be such that the materials when compacted in the fill will be blended sufficiently to produce specified degree of compaction on stability. No stones, cobbles or rock fragments, having maximum dimensions more than 25 mm shall be placed in the earth cover. Such stones or cobbles shall be removed either at the borrow pit or before it is used as Soil Cover.



Other requirements of earth cover laying shall be similar to those of ash laying i.e. as outlined in 5.4.1 to 5.4.4 above.

5.5 Prevention of Pollution

It shall be responsibility of thermal power plant or his contractor that no air borne and water borne pollution shall occur during all stages of operations such as in Borrow areas, during transportation of ash/ earth, during placement of fill material etc. All measures such as water sprinkling covering moist ash/ earth with tarpaulins in open trucks, etc., shall be taken to done care of above.

6.0 Disposal of flyash in voids of abandoned mines

As per notifications 1999 and 2009, power plant shall undertake or approve stowing of mines without using at least 25% of fly ash on weight to weight basis, of the total stowing materials used. Mine void filling on pilot basis is being carried out at the power plants of NTPC Ltd., Bhushan Steel and NALCO in Odisha with prior permission from MoEF & CC and OSPCB. Based on their experience and study conducted by CMPDIL, Ranchi for NTPC Talcher, following methodology is suggested for filling of mine voids with flyash.

6.1 The power plant authority shall carry out following study prior to taking up ash disposal activities in mine void to ensure no change/damage/deterioration in water quality and hydrology in and around the proposed area:

- Ash Characterisation and Leachate Study (Table 1.1)
- Techno-Economic Feasibility Study for disposal of ash into the Quarry
- Topographical Survey of Pipeline Corridor & Mine Void area
- Feasibility of transportation of ash to mine void
- Geotechnical study of the Pipeline Corridor & Mine Void area
- Pre and post filling mine water quality including leachability of metals (Table 1.1)

6.2 Mode of ash transportation to mine void area

One of flowing mode of transport actions of flyash shall be used depending upon the topography of the area:

1. Pipeline using pneumatic conveying system

2. Dumpers/ Trucks
3. Merry Go Round (MGR) System
4. Belt Conveyors in case of dry ash disposal
5. Wet ash (lean slurry or high concentration slurry) through pipeline

6.3 Monitoring:

6.3.1 Regular environmental monitoring to be undertaken during the period of disposal of ash into mine void as well as after the reclamation of mine void. The detailed monitoring programme is given in Tables below:

Table 1.1 : Proposed Monitoring Programme during Disposal of Ash

Samples	Parameters to be Analysed	Frequency
Ash Samples	Chemical Parameters (%): SiO ₂ , Al ₂ O ₃ , Fe ₂ O ₃ , K ₂ O, TiO ₂ , CaO, MgO, Na ₂ O, P ₂ O ₅ , SO ₃ Trace Elements (mg/kg, using TCLP Test): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn Radio-activity (Bq/kg): ²³⁸ U, ²³⁶ Ra, ²³² Th, ²²⁸ Ra, ²³⁰ Pb, ⁴⁰ K, ¹³⁷ Cs	Once before initiation of filling
Ash Leachate Analysis	Trace Elements (mg/kg, using TCLP Test): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Once a year
Piezometer Water Samples	Chemical Parameters (mg/l, except, pH and EC): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO ₄ , NO ₃ , PO ₄ , Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Monthly
Mine Water Sample	Same as above	Monthly
Ground Water	Same as above	Twice a year - Pre-monsoon and Post-monsoon
Surface Water Samples	Same as above	Twice a year - Pre-monsoon and Post-monsoon
Soil Samples	Texture, type, pH & cation exchange capacity. Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Once a year

Survey of Flora and Fauna	<ul style="list-style-type: none"> • Listing of Flora (herbs, shrubs and trees) and Fauna (soil invertebrates and other animals) based on field observations and review of information available • Analysis of trace elements in plants (herbs, shrubs and trees), the invertebrates • Analysis of trace elements in aquatic fauna from the mine void filled with fly ash • Bio-accumulation and Bio-magnification tests 	Once in two years
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Table 1.2: Proposed Monitoring Programme After Reclamation of Mine void

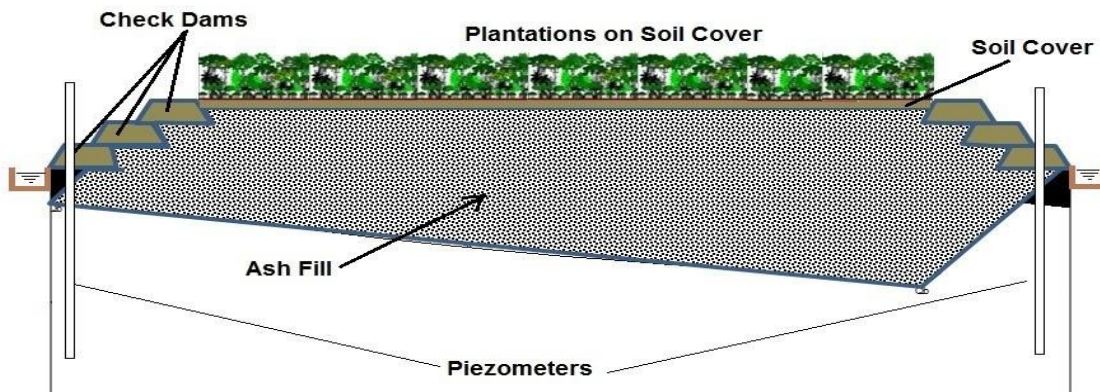
Samples	Parameters to be Analysed	Frequency
Piezometer Water Samples	Chemical Parameters (mg/l, except, pH and EC): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO ₄ , NO ₃ , PO ₄ , Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn	Twice a year - Pre-monsoon and Post-monsoon
Ground Water Samples	Same as above	Once a year - Pre-monsoon
Surface Water Samples	Same as above	Once a year - Pre-monsoon
Survey of Flora and Fauna	<ul style="list-style-type: none"> • Listing of Flora (herbs, shrubs and trees) and Fauna (soil invertebrates and other animals) based on field observations and review of information available • Analysis of trace elements in plants (herbs, shrubs and trees), the invertebrates • Analysis of trace elements in aquatic fauna from the mine void filled with fly ash • Bio-accumulation and Bio-magnification tests 	Once in five years

In the event of deterioration of environmental quality, the same will be reported to concerned SPCB immediately and suitable preventive/corrective action will be undertaken.

6.4 Reclamation of Land filled site

After the quarry is filled to the permitted height as per DGMS, the same shall be provided with a soil cover and plantation shall be done with local fast growing species (preferably trees), to make it a part of the overall

post-mining land use pattern envisaged in the mine closure plan. The design of surface contours and land profile will be in consonance with the surrounding features. A three tier plantation approach (consisting of large trees, smaller trees and shrubs) will be followed for overall eco-restoration of the area. This will also help in checking the surface run-off, preventing the water from percolation and maintaining the aesthetics beauty of the surrounding in general. A conceptual diagram of the reclaimed mine void is presented below.



**Conceptual Plan for Reclamation of Mine Void
(Drawing not to Scale)**

During the mine void reclamation, the following measures are to be undertaken:

- i. Storm water drains shall be constructed for channelizing the run-off water away from the disposal site.
- ii. A 30 cm thick soil cover shall be provided to promote vegetation growth.
- iii. For plantation purpose, preference shall be given to both native species and mixed culture. The species will be selected carefully from the following groups for quick reclamation under the guidance of a taxonomist:
 - Tree species for fuel wood and timber
 - Forestry type tree species.
 - Tree species with dense foliage for shade.
 - Native species.
- iv. However, fruit bearing species shall be avoided.

7.0 Precaution

The following precautionary measures are required for safe working during the reclamation activity:

- (i) Appropriate measures should be taken to prevent entry of cattle/livestock inside the disposal area during execution period.
- (ii) Care shall be taken to avoid any kind of nuisance / inconvenience to the public due to such dumping / filling activities.
- (iii) Water sprinkling for dust suppression during handling of Ash shall be ensured from being air borne.
- (iv) After complete reclamation of the site, sign board shall be kept indicating the low lying land / abandoned quarry has been reclaimed with ash. This will help to propagate the message of mine void using ash.

8.0 Regulatory Procedure for Processing the Application for consideration of grant of permission for Reclamation of Low Lying Areas / Abandoned Quarries :

8.1 The activity of reclamation of Low Lying Areas / Abandoned Quarries will be regulated under the provisions of Water (Prevention and Control of Pollution) Act, 1974 and Air Water (Prevention and Control of Pollution) Act, 1981. The stipulations specified in this guideline is consistent with the provisions of Fly Ash Notification, 1999 and amended thereafter which should be a special condition mentioned in consent order issued under the Water (Water (Prevention and Control of Pollution) Act, 1974 and the Air Water (Prevention and Control of Pollution) Act, 1981. Thereafter any deviations from the guidelines shall be treated as violation of both Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 and action as deemed proper shall be taken under Consent Administration by the Board.

8.2 Necessary clearances shall be obtained from the concerned agencies such as DGMS, SPCB, IBM, MoC, etc .

Guidelines for disposal of flyash in open cast mines along with Over Burden (OB)

As per notifications 1999 and 2009, "No person or agency shall within fifty kilometres (by road) from coal or lignite based Thermal Power Plants, undertake or approve without using at least 25 % of ash on volume to volume basis of the total materials used for external dump of overburden (OB) and same percentage in upper benches of back filling of opencast mines and this ***shall be done under the guidance of the Director General of Mines Safety (DGMS).***

The methodology as approved by Directorate General of Mine Safety (DGMS) in case of M/s JSPL & JPL (RGR/JPL/P-98(1) &(3)/Flyash/18/2014/1518 dated 31.07.2014) may be referred for filling ash in coal mines. **However, for each case separate approval of methodology from DGMS shall be sought.** Following methodology for disposal of flyash in open cast mines along with Over Burden in case of JSPL was approved by DGMS.

- 1.1 Distance of the internal/overburden dump area from the working faces of mine shall not be less than 100 m.
- 1.2 The area of filling ash shall be specifically earmarked and the same shall be marked on the plan and dumping fly ash shall be carried out accordingly.
- 1.3 Height of each deck shall not be more than 30 m and the total height of the dump shall not exceed 90 m.
- 1.4 The road leading to the dump site for transportation of fly ash shall be independent from the main haul road for transporting OB to the dump site from the mine.

1.5 Method of dumping fly ash

- 1.5.1 The fly ash shall be dumped in alternate layers/stages, of height not exceeding 5.0 m in each layer/stage.

1.5.2 Initially a row of OB dumps not less than 15.0 m width shall be dumped having height of 5.0 m all around the area proposed for ash dump over a deck (of 30.0 m height) of only overburden dump adequately compacted. A number of such areas shall be formed in a layer/stage wherein the fly ash shall be dumped so that one dump of fly ash is separated by another with 15 m wide over burden dump.

1.5.3 Thereafter, fly ash (25%) and overburden shall be dumped within the area surrounded by such OB dumps. In this manner, the dumping shall be laid in the section/layer of 5.0 m height containing both over burden as well as fly ash so as to form a deck of height not more than 30.0 m , distance between two consecutive decks shall not be less than 30.0 m.

1.5.4 In the next section i.e. immediately above bottom section/stage, only OB dumping shall be made to ensure that the Ash is totally covered and protected from the OB dumps all around.

1.5.5 In the same manner as explained above the alternate layer/section of the over burden and over burden with fly ash shall be dumped. Each layer/stage shall be adequately compacted by dozing.

1.5.6 At the top of the dump i.e. at the final stage, the dump shall be covered with 2.0 m thick soil and adequately compacted by dozing. Adequate precaution against rain fall shall be taken by way of plantation, geo-synthetic, or jute/coir reinforcement and formation of gully drains along the slope of the dump and formation of toe walls and peripheral drains as suggested by the scientific agency conducting geo-technical study. The precaution measures shall periodically be checked for its efficacy.

1.5.7 Plan and section in suitable scale (1:2000) shall be maintained showing the details of the dump both external and interval, height of each deck and dump, distance between the dumps containing fly ash and also the distance from the active working faces, plantation done, gully drains, peripheral drains, toe walls, etc. Such plan shall be signed by the Surveyor and countersigned by the Manager as prescribed in the statute.

1.5.8 Code of practices for transportation, dumping compaction of fly ash as mentioned in para 5(4.2.3 & 5.4.3 of main guidelines), shall be implemented.

1.5.9 **1.6 Dump slope management**

1.6.1 The sides of the OB dumps shall be kept benched and height thereof shall not exceed 30.0 m at an angle of slope not exceeding the angle of repose of the dumped material or 28° whichever is less.

1.6.2 Width of the OB dump shall not be less than 40.0 m which shall also be compacted. The benches shall be laid in such a manner that the overall slope of the dump shall not exceed 21° from horizontal.

1.6.3 The toe of the OB dumps shall be protected or armored in such a manner that the sludge does not flow down into the working faces.

1.6.4 A geotechnical study shall be conducted to assess the stability of the dump and the monitoring of various parameters during the course of dumping and also thereafter till the mine is closed permanently.

1.7 Dust control measures: The fly ash dumping including the OB dumps shall be kept moist all the time to prevent ash getting airborne. The quality of the Ash shall be chemically and physically tested at least once in every quarter.

1.8 Surface and ground water quality monitoring

1.8.1 The surface and ground water measurement (Chemical Parameters (mg/l): pH, EC, TDS, Total Alkalinity, Ca, Mg, Na, K, Cl, SO₄, NO₃, PO₄, Trace Elements (mg/l): As, Ba, Cd, Co, Cr, Cu, F, Fe, Hg, Mn, Ni, Pb, Zn) shall be carried out once in a year (post monsoon) in consultation with the State Pollution Control Board in order to ensure that no harmful heavy metals or any other chemicals pollute the surface or ground water sources or any other water sources present in the area.

1.9 Provision of check drains Proper Check Drains/garland drains having width of adequate size and section shall be made around the OB dumps to ensure that the sludge or waste materials along with the ash does not go into any river, nullah, water streams or any other surface water bodies.

1.10 Impact assessment of flora, fauna, aquatic lives and habitat, water & air quality:

1.10.1 A scientific study shall be carried out by an independent scientific organization to study the impact of Ash filling on Flora, Fauna, Aquatic Life and Habitation (once during the filling and at the end of filling).

1.10.2 The Monitoring of all the aforementioned parameters shall be carried out through any accredited institute/organization/Labs and monitoring report shall be submitted to SPCB and DGMS.

1.10.3 A dedicated team of qualified persons headed by senior officer at the level of General Manager shall be established in the mine level, who shall be responsible for the entire ash filling operation, conducting different studies and shall maintain all records as prescribed.

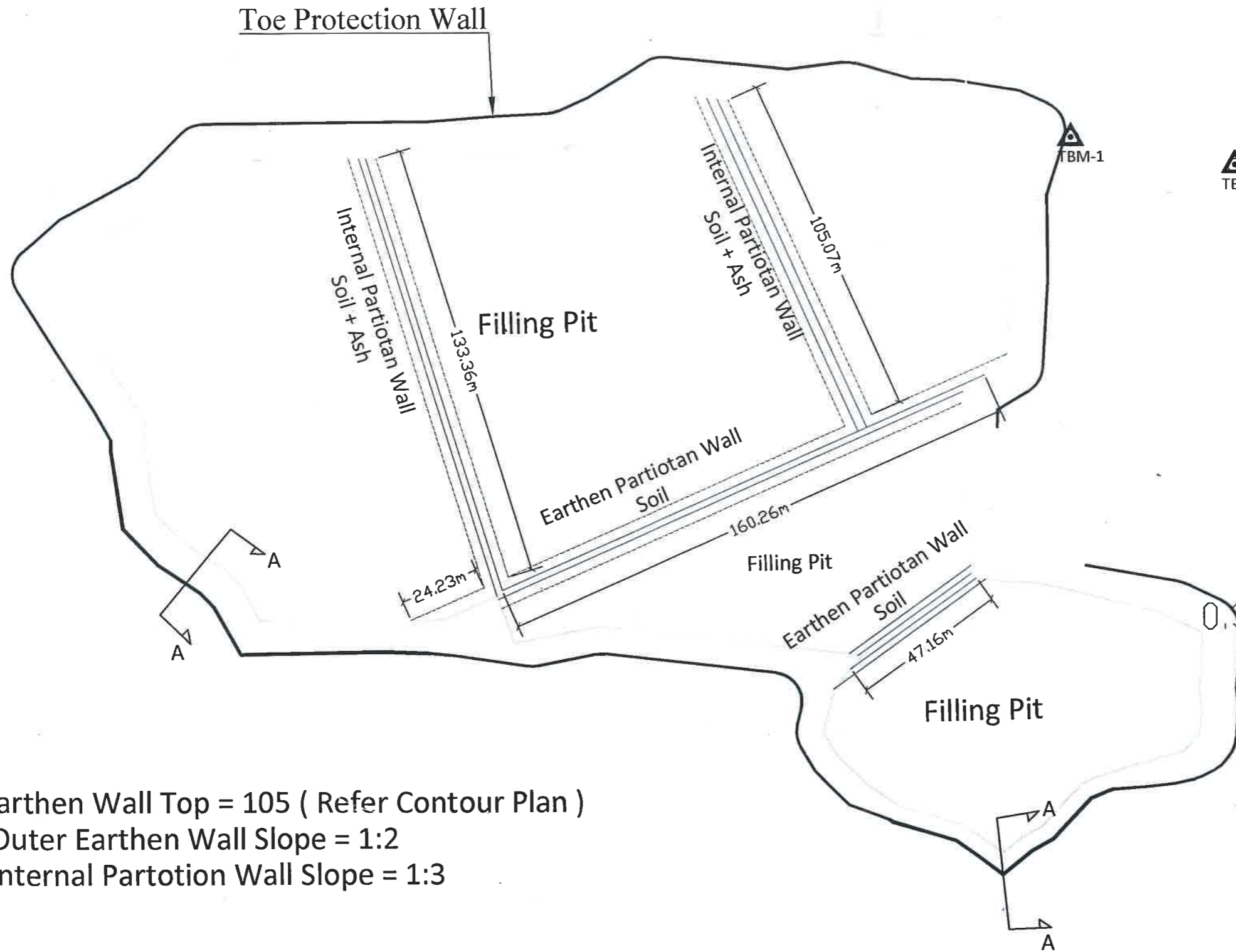
1.10.4 Record of every analysis and study shall be maintained in a bound page register kept for the purpose and the same shall be signed by the person in-charge of the operation and countersigned by the manager of the mine. Records shall also be maintained showing the details about the slope of each dump, quantity of ash filled, quantity of overburden removed, etc.

1.10.5 Risk Analysis about the risk arising out of ash filling operation shall specifically be conducted at regular intervals and Safety Management Plan including the control mechanism shall be prepared as per the guideline contained in DGMS(Tech)(S&T) Circular No.13 of 2002 dated 31.12.2002 and implemented and the same shall be reviewed time to time

1.10.6 In case, any adverse impact is observed, it should be brought to the notice of the DGMS and also to the State Pollution Control Board including the Environment and Forest Ministries of the State and Central Government. No further use of fly ash shall be done in the mine till permitted in writing afresh from DGMS.

PLAN SHOWING TOE WALL & PARTIOTAN WALL FOR FILLING PIT AT VILLAGE RAJGANDHI (DIST. - GHANSORE)

ANNEXURE - 2

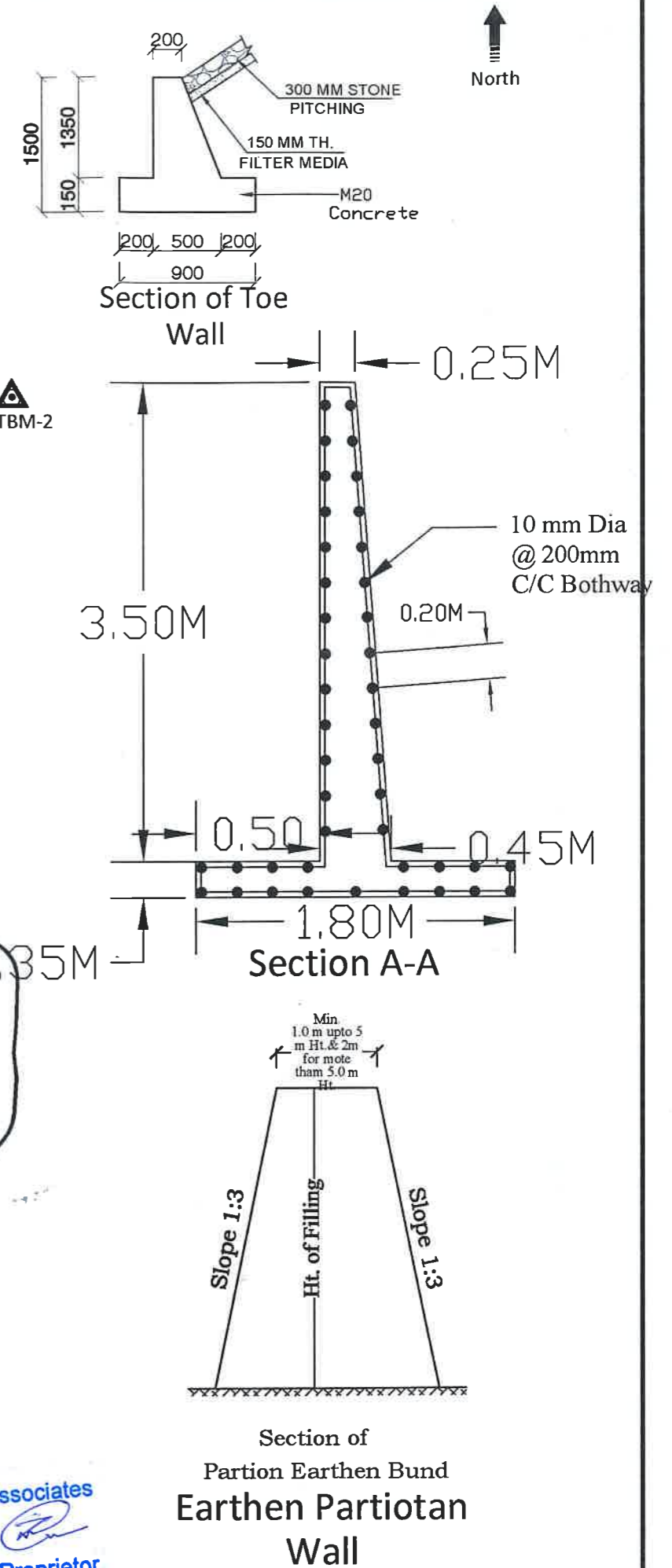


- 1 Earthen Wall Top = 105 (Refer Contour Plan)
2. Outer Earthen Wall Slope = 1:2
Internal Partiotan Wall Slope = 1:3

Reconmondation

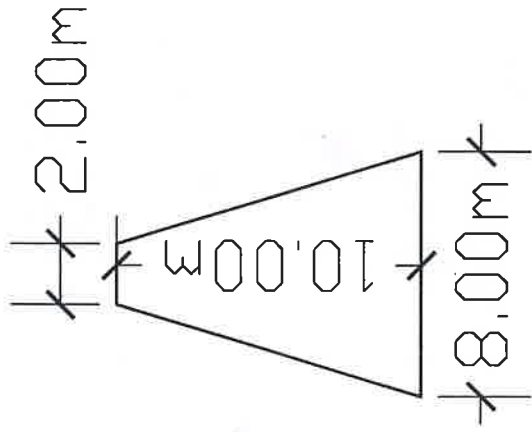
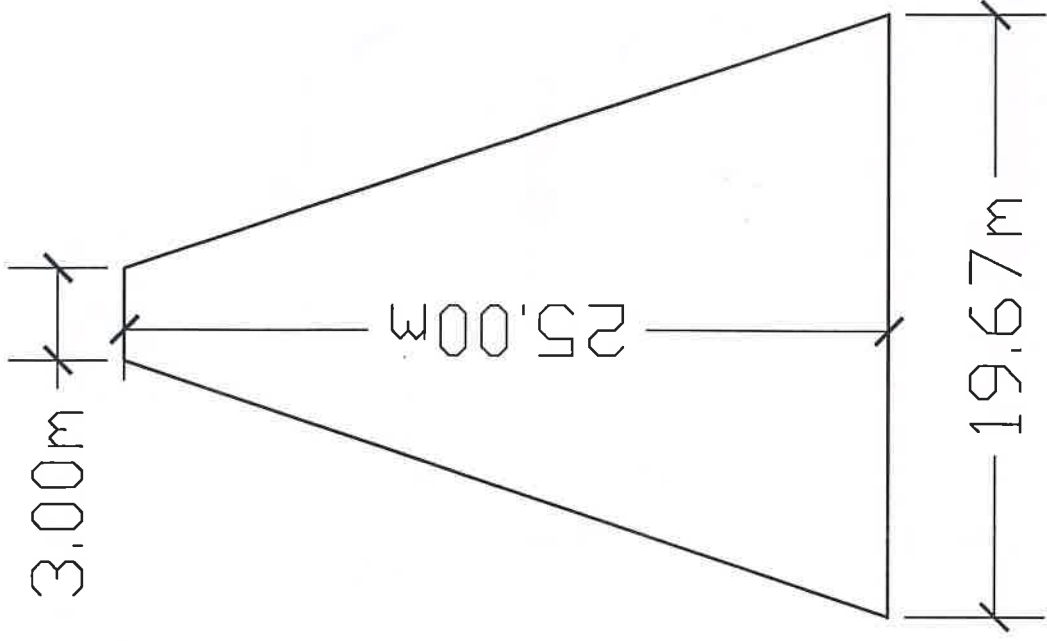
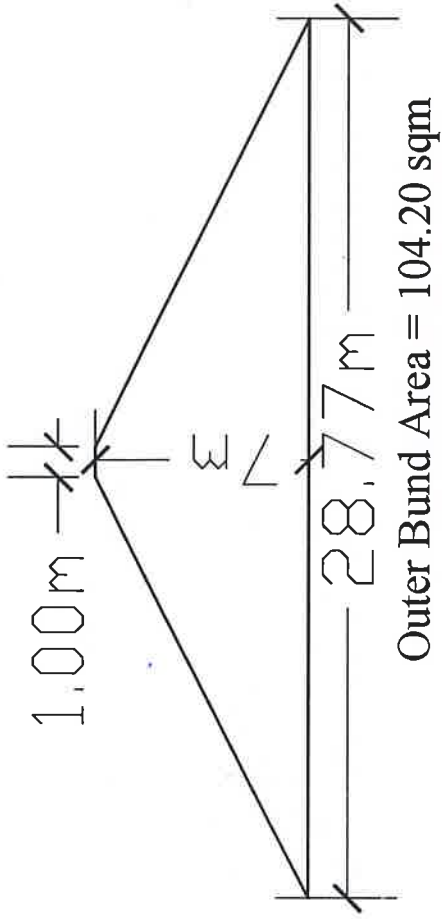
- 1 Construction of Outer & Inner Compartment Wall complete as phasewise before filling starts
- 2 Earthen Bund Wall Construct With Good Quality of Soil
- 3 Partitonn Wall construct with Soil + Ash Mix

For-CNS Associates
Proprietor



Section of Partion Earthen Bund Earthen Partiotan Wall

Bund Wall Section Detail



Internal Bund Area = 50 sqm
Shallow Section

Internal Bund Area = 283.33 sqm
Deeper Section

For-CNS Associates



Proprietor

Rajgarhi Site Aproximate Qty

Internal Bund Qty				
No	Length	Area		Qty
1	238	283.33		67432.54
1	228	50		11400
Total				78832.54

Take 50 % For Soil i.e. =

Soil = 39416.27 cum

Take 50 % For Ash i.e. =

Ash Qty = 39416.27 cum

Outer Bund Qty				
No	Length	Area		Qty
1	1200	104.2		125040
Total				125040

Pitching

1	1200	12	0.23	3312	cum
---	------	----	------	------	-----

Ret Wall = 137+83 = 220 m

1	220	1.8	0.35	138.6	cum
1	220	0.375	3.5	288.75	cum
Total				427.35	cum

Steel @ 90 kg / cum	38.4615 MT
---------------------	------------

Toe Wall = 600 m

1	600	0.15	0.9	81	cum
1	600	0.35	1.35	283.5	cum
Total				364.5	cum

For-CNS Associates


 Proprietor

AFFIDAVIT

Affidavit by M/s ----- to comply with the provisions under CPCB's Guidelines for disposal /utilization of Fly Ash for reclamation of Low Lying Area and in stowing of Abandoned mines/Quarries" March 2019 and conditions mention under CTE & CTO issued by MPPCB, Bhopal.

I, ----- S/o Shri -----, aged ----- years is owner of M/s----- the deponent herein do solemnly affirm and state on oath as under-

1. That I am owner & Authorized Signatory of M/s -----, and I am competent to swear the present affidavit.
2. That M/s ----- is taking up the work of low lying area filling from M/s Jhabua Power Ltd using pond ash & bottom ash in the following location;

Location	Khasra No	Type of Land	Expected Quantity
Village- Rajgadhi Post- Chari Tehsil- Ghansore District- Seoni, M.P.	116/2 113/2 116/1/1 115/1	Low lying area	5.0 lacs M3+- 25%

3. That Low lying area filling will be done in an environmentally sound manner following the guidelines of CPCB namely "Guidelines for disposal/utilization of Fly Ash for reclamation of Low Lying Areas and in stowing of abandoned mines/Quarries issued vide Ministry of Environment and Forest & Climate Change Office Memorandum dated 28th August 2019.
4. That Low lying area filling will be done as per conditions mention under CTE & CTO issued by MPPCB, Bhopal.

DEPONENT

Name-----

Address

VERIFICATION

Verified at Ghansore on this the ----- day of ----- that the contents of this Affidavit are correct to my knowledge and belief. No. part of it is false and nothing has been concealed there from.

DEPONENT

DEPONENT

Name-----

Address

Date:-----

Place: -----

**JHABUA POWER LIMITED****Inspection of Excavator**

Name of Agency :

Make / Model :

Identification No:

Date :

Sl. No.	Check Points	Observation	Remarks
1	Engine condition		
2	Clutch		
3	Brake		
3	Hydraulic System		
4	Any Leakage		
5	Guards		
6	Doors Condition		
7	Fastener lock pins / Keys.		
8	Horn		
9	Swing Alarm		
10	Swing Light		
11	Indicators		
12	Head light		
13	Wiper Blades		
14	Fog light		
15	Chain Condition		
16	Condition of Battery and Lamps		
17	Operating levers		
18	Gauges & warning devices		
19	Operators fitness		
20	Experience Certificate		
21	Fire extinguisher Provided		
22	First Aid Box		
23	Insurance certificate		

This Excavator has been checked for the above points
Inspected by:-



JHABUA POWER LIMITED

Inspection of Hywa

Name of Agency :

Make / Model :

Identification/Reg:

Date :

Sl. No.	Check Points	Observation	Remarks
1	Engine condition		
2	Clutch		
3	Brake		
3	Hydraulic System		
4	Guards		
5	Doors Condition		
6	Fastener lock pins / Keys.		
7	Horn		
8	Reverse Horn		
9	Reverse Light		
10	Indicators		
11	Head light		
12	Wiper Blades		
13	Fog light		
14	Tyre pressure		
15	Condition of Battery and Lamps		
16	Operating levers		
17	Steering condition		
18	Gauges & warning devices		
19	Operators fitness/DL		
20	Fire extinguisher Provided		
21	First Aid Box		
22	Pollution control Certificate Available		
23	Insurance certificate		
24	Fitness certificate		

This Hywa has been checked for the above points
Inspected by:-



JHABUA POWER LIMITED

Inspection of Loader

Name of Agency : Make / Model :
 Identification/Reg: Date :

Sl. No.	Check Points	Observation	Remarks
1	Engine condition		
2	Clutch		
3	Brake		
3	Hydraulic System		
4	Guards		
5	Cabin Doors Condition		
6	Fastener lock pins / Keys.		
7	Horn		
8	Reverse Horn		
9	Reverse Light		
10	Indicators		
11	Head light		
12	Wiper Blades		
13	Fog light		
14	Tyre pressure		
15	Condition of Battery and Lamps		
16	Operating levers		
17	Steering condition		
18	Gauges & warning devices		
19	Operators fitness/DL		
20	Fire extinguisher Provided		
21	First Aid Box		
22	Pollution control Certificate Available		
23	Insurance certificate		
24	Fitness certificate		

This Hywa has been checked for the above points
 Inspected by:-



JHABUA POWER LIMITED

Inspection of Road Roller

Name of Agency :

Make / Model :

Identification No:

Date :

Sl. No.	Check Points	Observation	Remarks
1	Engine condition		
2	Clutch		
3	Brake		
3	Hydraulic System		
4	Any Leakage		
5	Guards		
6	Side view Mirror		
7	Fastener lock pins / Keys.		
8	Delay start mechanism (Relay)		
9	Horn		
10	Reverse Horn		
11	Reverse light		
12	Indicators		
13	Head light		
14	Tyre Condition		
15	Condition of Battery and Lamps		
16	Operating levers		
17	Gauges & warning devices		
18	Operators fitness		
19	Driving License		
20	Insurance certificate		

This Excavator has been checked for the above points
Inspected by:-



JHABUA POWER LIMITED

Inspection of Tractor Trolley

Name of Agency :

Make / Model :

Identification/Reg:

Date :

Sl. No.	Check Points	Observation	Remarks
1	Engine condition		
2	Clutch		
3	Brake		
3	Hydraulic System		
4	Tyre Guards		
6	Fastener lock pins / Keys.		
7	Horn		
9	Reverse Light		
10	Indicators		
11	Head light		
13	Fog light		
14	Tyre pressure		
15	Condition of Battery and Lamps		
16	Operating levers		
17	Steering condition		
18	Gauges		
19	Operators fitness/DL		
20	Pollution Certificate		
21	Insurance certificate		
22	Fitness certificate		

This Tractor Trolley has been checked for the above points

Inspected by: -



Safety Guidelines

Considering the severity of hazards associated with the Ash transportation activities by earth moving vehicle, it urges utmost care and proactive approach of all to maintain site safety standard and to achieve “Zero Accident”. Therefore, you requested to ensure strict adherence of following safety points at your work site.

Sr. No.	Safety Points	Requirements
01	Submission of List of tools, equipment, machinery, appliances etc.	A list of equipment, machinery & appliances with details to be used at site
02	Earth moving vehicle checklist provided by JPL	As per checklist, ensure to vehicle are in good condition and maintain it and having the Vehicle gate pass.
03	Submission of Legal documents of Vehicle	RC of Vehicle, Insurance , Fitness Certificate & PUC
04	Requirements of Driver license for earth moving vehicles	Heavy Licence (HMV)
05	Requirements of Excavator Operator only	Minimum 5 years’ experience certificate regarding Excavator operator Only
06	Deployment of Qualified safety Stewards	Qualified and minimum 2 years experienced in safety field, as per guidelines of Indian Factories Act and Rules should be deployed at site. Additional for Night shift, one asst. Safety officer/ Safety Stewards to be deployed.
07	Requirement of Safety Stewards	24x7 days and one reliever during weekly off
08	Induction Training of New workmen & all level staff	Before deploying the any new person at site, they must be undergone through mandatory safety induction training both from your end & JPL end.
09	Medical Examination and Gate Pass	No person including workmen to site in-charge of contractor agency should be allowed for entry inside plant premises without undergoing the medical examination and valid gate pass.
10	Tool Box Talk(5-minutes safety talk)	Tool box talk on daily and shift basis must be conducted before assigning the jobs to the workmen. Tool box talk to be conducted by the concerned shift in charge/Engineer with concerned safety officer. A record of the same to be maintained in the prescribed form.
11	Safety Observation register	Make a one safety observation register for daily observation monitoring and compliance done as on priority basis.
12	Personal Protective Equipment	Safety helmet, Safety Shoes, ear plug, fluorescent reflective jacket, repairable dust mask, hand gloves, safety goggle etc. as appropriate for the job concerned to be provided to the workers. All PPEs shall conform to the IS or BIS Std. and must be having comfort fit .
13	Emergency preparedness	Park one emergency vehicle/Ambulance at site round the clock to handling affected person in emergency.



Jhabua power Limited

14	Competent Supervision at site.	Deploy adequate numbers of competent supervisor for close supervision the work and traffic control at site. Red and Green Baton required for signalling of vehicle movement.
15	Incident Investigation Procedure	Report all near-miss incidents, Dangerous Occurrence, First aid case and fire incidents and further investigate to find out root causes and preventive measures so as to avert such occurrence in future. Format will be given by JPL's safety Dept.
16	Compliance of all applicable Statutory requirements.	Comply with all applicable statutory requirements as prescribed under Factories Acts & Rules, BOCW Acts & Rules, Gas Cylinder Rules, Petroleum Act, Electricity Rules etc.
17	Monetary Penalty for safety Violations	Lapses & non-compliance in safety issues in repetitive manner will 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.
18	Display of safety Signage/poster and safety policy	Display safety Poster, slogans, cautionary boards and safety policy etc.
19	Housekeeping	Maintain good housekeeping all around work place/site on daily basis.

However, please be noted that the above points are not full & final, JPL has every right to amend or edit further as & when required.

Moreover, this is issued without prejudices of prescribed terms & condition of your Service Order.

Seek you kind Co- Operation.

Yours Faithfully,

For Jhabua Power Limited, Barela, Seoni, M.P

Safety Team- JPL

SEC.-VI (BOQ)

ANNEXURE-5

M/s JHABUA POWER LTD, VILLAGE-BARELA, TEHSIL-GHANSORE, DIST.-SEONI, MP

UNPRICE BID FORMAT

OPERATIONAL POND ASH AND BOTTOM ASH DISPOSAL TO LOW LYING AREA NEAR VILLAGE -RAJGADHI (approx 14 KM DISTANCE)

Disposal of ash (Operational Pond Ash / bottom ash) and Fly ash & bottom ash from Silo and dewatering bin (at allocated low lying area including loading, covering, transportation, vegetation cleaning, unloading, spreading, watering ,compaction, covering with soil and compaction complete in all respect under attached scope of work to be executed as per theCTE & CTO of MPPCB & CPCB guideline & as per direction of JPL Engineer Incharge.							
Sr. No	Description of item	Unit	Quantity	Basic Unit Rate Rs/Cum	Total (Rs)	GST Applicable %	Total With GST
		A	B	C	D = B X C	E	F = D + E
A Disposal of pond Ash & bottom ash from operational Ash dyke to low lying area (Location -Rajgadhi)							
A.1	Transportation of pond Ash, bottom ash or both from operational Ash dyke to low lying area near village-Rajgadhi (14 Km).	Cum	400000 ± 25%				
A.2	1. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site before disposal of ash. 2. All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash 3. Loading, Unloading, spreading, compaction, watering, boulder pitching, covering with soil (300-500 mm) and compaction complete, Plantation, O2 boring for water sampling. 4. The Construction of Earthen Embankment with material obtained from approved filling site. 5.Construction of an earthen embankment/toe protection/peripheral wall of the cross- section as given in Annexure-2 for protection of nallah/water body exists within/adjoining the low-lying area from spilling of ash or ingress of surface runoff into it. 6.Construction of two number of RCC retaining wall at downstream as well as middle of the low lying area as per attached drawing as Annexure -2. 7. Construction of drain around the peripheral wall & proper stone pitching. 8. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion. Putting of pipeline outside and connect it with outer drain and extend it up to ground level. 7.Six compartments/internal wall of not more than one-hectare size each are to be made of earth (as per attached drawing as Annexure -2) and ash to be filled one by one in these compartments.	Cum	400000 ± 25%				
B. Disposal of Fly Ash & bottom ash from Silo & dewatering bin to low lying area (Location -Rajgadhi)							
B.1	Transportation of Fly Ash, bottom ash or both from Silo & dewatering bin to low lying area near village-Rajgadhi (14 Km).	Cum	100000 ± 25%				
B.2	1. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site before disposal of ash. 2. All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash 3. Loading, Unloading, spreading, compaction, watering, boulder pitching, covering with soil (300-500 mm) and compaction complete, Plantation, O2 boring for water sampling. 4. The Construction of Earthen Embankment with material obtained from approved filling site. 5.Construction of an earthen embankment/toe protection/peripheral wall of the cross- section as given in Annexure-2 for protection of nallah/water body exists within/adjoining the low-lying area from spilling of ash or ingress of surface runoff into it. 6.Construction of two number of RCC retaining wall at downstream as well as middle of the low lying area as per attached drawing as Annexure -2. 7. Construction of drain around the peripheral wall & proper stone pitching. 8. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion. Putting of pipeline outside and connect it with outer drain and extend it up to ground level. 7.Six compartments/internal wall of not more than one-hectare size each are to be made of earth (as per attached drawing as Annexure -2) and ash to be filled one by one in these compartments.	Cum	100000 ± 25%				
Total Quantity in M³		Cum	500000 ± 25%				

NOTE: The quantity are only indicative and may vary depending upon availability during lifting from plant. However, total quantity shall be 5.0 lac M3 approx. ± 25%

Seal & Signature

Name

Date

Time

SEC.-VI (BOQ)

ANNEXURE-5

M/s JHABUA POWER LTD, VILLAGE-BARELA, TEHSIL-GHANSORE, DIST.-SEONI, MP

UNPRICE BID FORMAT

OPERATIONAL POND ASH AND BOTTOM ASH DISPOSAL TO LOW LYING AREA NEAR VILLAGE -RAJGADHI (approx 14 KM DISTANCE)

Disposal of ash (Operational Pond Ash / bottom ash) and Fly ash & bottom ash from Silo and dewatering bin (at allocated low lying area including loading, covering, transportation, vegetation cleaning, unloading, spreading, watering ,compaction, covering with soil and compaction complete in all respect under attached scope of work to be executed as per theCTE & CTO of MPPCB & CPCB guideline & as per direction of JPL Engineer Incharge.							
Sr. No	Description of item	Unit	Quantity	Basic Unit Rate Rs/Cum	Total (Rs)	GST Applicable %	Total With GST
		A	B	C	D = B X C	E	F = D + E
A Disposal of pond Ash & bottom ash from operational Ash dyke to low lying area (Location -Rajgadhi)							
A.1	Transportation of pond Ash, bottom ash or both from operational Ash dyke to low lying area near village-Rajgadhi (14 Km).	Cum	400000 ± 25%				
A.2	1. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site before disposal of ash. 2. All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash 3. Loading, Unloading, spreading, compaction, watering, boulder pitching, covering with soil (300-500 mm) and compaction complete, Plantation, O2 boring for water sampling. 4. The Construction of Earthen Embankment with material obtained from approved filling site. 5.Construction of an earthen embankment/toe protection/peripheral wall of the cross- section as given in Annexure-2 for protection of nallah/water body exists within/adjoining the low-lying area from spilling of ash or ingress of surface runoff into it. 6.Construction of two number of RCC retaining wall at downstream as well as middle of the low lying area as per attached drawing as Annexure -2. 7. Construction of drain around the peripheral wall & proper stone pitching. 8. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion. Putting of pipeline outside and connect it with outer drain and extend it up to ground level. 7.Six compartments/internal wall of not more than one-hectare size each are to be made of earth (as per attached drawing as Annexure -2) and ash to be filled one by one in these compartments.	Cum	400000 ± 25%				
B. Disposal of Fly Ash & bottom ash from Silo & dewatering bin to low lying area (Location -Rajgadhi)							
B.1	Transportation of Fly Ash, bottom ash or both from Silo & dewatering bin to low lying area near village-Rajgadhi (14 Km).	Cum	100000 ± 25%				
B.2	1. All organic matter, vegetation, roots, stumps, bushes, rubbish, swamp materials, etc. shall be removed from the site before disposal of ash. 2. All existing undulations, holes, cavities and excavations made for plate load rests and other soil investigations, etc. shall be filled with pond ash 3. Loading, Unloading, spreading, compaction, watering, boulder pitching, covering with soil (300-500 mm) and compaction complete, Plantation, O2 boring for water sampling. 4. The Construction of Earthen Embankment with material obtained from approved filling site. 5.Construction of an earthen embankment/toe protection/peripheral wall of the cross- section as given in Annexure-2 for protection of nallah/water body exists within/adjoining the low-lying area from spilling of ash or ingress of surface runoff into it. 6.Construction of two number of RCC retaining wall at downstream as well as middle of the low lying area as per attached drawing as Annexure -2. 7. Construction of drain around the peripheral wall & proper stone pitching. 8. Putting pipe in the retaining wall and extend it up to ground level to protect the soil erosion. Putting of pipeline outside and connect it with outer drain and extend it up to ground level. 7.Six compartments/internal wall of not more than one-hectare size each are to be made of earth (as per attached drawing as Annexure -2) and ash to be filled one by one in these compartments.	Cum	100000 ± 25%				
Total Quantity in M³		Cum	500000 ± 25%				

NOTE: The quantity are only indicative and may vary depending upon availability during lifting from plant. However, total quantity shall be 5.0 lac M3 approx. ± 25%

Seal & Signature

Name

Date

Time