

**BCCL**



**Bharat Coking Coal Limited**

(A Subsidiary of Coal India Limited)

**Contract Management Cell(CMC)**

**Koyla Bhawan:Koyla Nagar**

**Dhanbad.**

Tel.No.& FAX No.(0326)2230206

Ref.No: BCCL/GM(CMC)/F-GL/Global Bid-Kapurja/2009/1828

Date: 09.12.09

**NOTICE OF EXTENSION OF TENDER**

**Name of Work: Development of Kapuria block and extraction of coal from Kapuria block, Western Jharia Area by mass production technology package for a minimum guaranteed production of 2.0 Mty on turnkey basis. Work includes additional exploration (if desired so by the contractor); preparation of mining plan, detailed Project Report & EMP; obtaining approvals from concerned authorities.**

NIT Ref No.:BCCL/GM(CMC)/F-GL/GLOBAL BID-Kapurja/2009/896 dt. 06.07.09 & Extension Notice No.: BCCL/GM(CMC)/F-GL/GLOBAL BID-Kapurja/2009/1800 dt. 04.12.09

The date of sale, receipt and opening of the tender for the subject work is hereby extended as under:

Sale period of Tender Document: upto 04.01.10

Date of Receipt of tender: On 11.01.10 up to 3.30 PM

Place of Receipt of tender: (i) Office of General Manager(CMC), BCCL, Dhanbad  
(ii) BCCL Sale's office, Kolkata

Date of opening of Tender: On 14.01.10 at 4.00PM

All other terms and conditions as contained in the original NIT and Tender Document will remain unchanged.

This may be treated as an integral part of tender document.

**Our Aim- QUALITY COAL TO CONSUMERS**

General Manager  
Contract Management Cell

Contd... Page-2

- CC: Shri D. Bandopadhyay, IAS(Retd), GD-69, Sector-III, Salt Lake, Kolkata-700016
- CC: PRO – With an advice to publish the abridged Notice of extension as enclosed in the same local as well as National dailies in which the original Tender Notice was published as per norms of the Company and also arrange to send the paper cutting to the Contract Management Cell.
- CC: D(P)/ D(T)OP/ D(T)P&P /D(F)/ CVO
- CC: CGM(Cordn)/CGM(S&M)/GM(P&P)/CGM(M&M)/CGM(Finance)/  
CGM(E&M)/GM(IE)/GM, WJ Area /RD, CMPDIL, RI-II
- CC: GM(System) with a request to display this extension notice and also reactivate the original Tender Document uploaded for downloading during 09.07.09 to 03.08.09 (original NIT No. 896 dt.06.07.09) which shall remain open up to 04.01.10 for downloading from BCCL Website.
- CC: Sr.ES to CMD for kind information of CMD
- CC: HOD (Admn) with a request to display this NIT in Koyla Bhawan Notice Boards.
- CC: All CGMs/GMs in the Areas including Washery Zones for wide circulation through display in the Notice Boards.
- CC: Inspector, CISF- with a request to deploy security personnel at the office of GM(CMC), Level-V Koyla Bhawan on 11.01.10 from 9.30AM to 4.00PM and on 14.01.10 from 3.30 PM till completion of the meeting.
- CC: Chief Sales Manager, Sales & Marketing Deptt.,BCCL, 6, Lyons Range, Kolkata.
- CC: CGM (Production), CIL, Kolkata.
- CC: CGM/GM(Contract Management Cell),WCL/SECL/NCL/MCL/ECL/CCL

General Manager  
Contract Management Cell

## INDEX

|   |           |
|---|-----------|
| <b>1. TENDER NOTICE .....</b>                           | <b>03</b> |
| 1.1 EARNEST MONEY .....                                 | 05        |
| 1.2 APPLICATION FEE FOR TENDER DOCUMENT .....           | 05        |
| 1.4 GENERAL INSTRUCTIONS FOR SUBMISSION OF TENDER ..... | 06        |
| 1.5 VALIDITY PERIOD OF OFFER .....                      | 07        |
| 1.6 RECEIPT OF TENDERS .....                            | 07        |
| 1.7 OPENING OF THE TENDERS .....                        | 07        |
| 1.8 DEPUTATION OF REPRESENTATIVES FOR NEGOTIATION ..... | 07        |
| 1.9 NOTE .....  | 07        |
| <b>2. INSTRUCTIONS TO BIDDERS.....</b>                  | <b>09</b> |
| 2.1 SCOPE OF TENDER .....                               | 09        |
| 2.2 ELIGIBLE TENDERER.....                              | 09        |
| 2.3 QUALIFICATION OF THE TENDERER.....                  | 11        |
| 2.4 ONE BID PER BIDDER .....                            | 13        |
| 2.5 COST OF BIDDING .....                               | 13        |
| 2.6 SITE VISIT .....                                    | 13        |
| 2.7 CONTENT OF BIDDING DOCUMENTS .....                  | 14        |
| 2.8 CLARIFICATION OF BIDDING DOCUMENTS .....            | 14        |
| 2.9 AMENDMENT OF BIDDING DOCUMENTS.....                 | 15        |
| 2.10 LANGUAGE OF BID .....                              | 15        |
| 2.11 DOCUMENTS COMPRISING THE BID .....                 | 15        |
| 2.12 BID PRICES .....                                   | 17        |
| 2.13 CURRENCIES OF BID AND PAYMENT.....                 | 17        |
| 2.14 BID VALIDITY.....                                  | 18        |
| 2.15 BID SECURITY/ EARNEST MONEY DEPOSIT .....          | 18        |
| 2.16 ALTERNATIVE PROPOSALS BY BIDDERS .....             | 19        |
| 2.17 FORMAT AND SIGNING OF BID .....                    | 19        |
| 2.18 SEALING, MARKING AND SUBMISSION OF BIDS .....      | 20        |
| 2.19 DEADLINE FOR SUBMISSION OF BIDS .....              | 21        |
| 2.20 LATE BIDS .....                                    | 21        |
| 2.21 MODIFICATION AND WITHDRAWAL OF BIDS .....          | 21        |
| 2.22 BID OPENING .....                                  | 22        |
| 2.23 PROCESS TO BE CONFIDENTIAL .....                   | 22        |
| 2.24 CLARIFICATION OF BIDS.....                         | 23        |

|           |   |            |
|-----------|---|------------|
| 2.25      | EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS.....              | 23         |
| 2.26      | CORRECTION OF ERRORS .....  | 24         |
| 2.27      | EVALUATION AND COMPARISON OF BIDS .....                                   | 24         |
| 2.28      | AWARD CRITERIA .....  | 25         |
| 2.29      | EMPLOYER’S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS.....     | 28         |
| 2.30      | NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT .....                      | 28         |
| 2.31      | SECURITY DEPOSIT/ PERFORMANCE GUARANTEE .....                             | 29         |
| 2.32      | EMPLOYMENT OF LOCAL LABOUR.....   | 31         |
| 2.33      | LEGAL JURISDICTION .....  | 31         |
| 2.34      | DEEMED EXPORTS .....  | 31         |
| 2.35      | CONSULTANTS NOT TO BID & VICE-VERSA .....                                 | 32         |
| 2.36      | SUB-CONTRACTOR/ SUB-VENDOR .....  | 32         |
| 2.37      | NIT AND TENDER DOCUMENTS IN THE WEBSITE .....                             | 32         |
| <b>3.</b> | <b>FORMS OF BID AND QUALIFICATION INFORMATION .....</b>                   | <b>34</b>  |
| <b>4.</b> | <b>CONDITIONS OF CONTRACT .....</b>                                       | <b>46</b>  |
| 4.1       | GENERAL TERMS AND CONDITIONS .....  | 46         |
| 4.2       | ADDITIONAL TERMS AND CONDITIONS .....                                     | 89         |
| 4.3       | SPECIAL TERMS AND CONDITIONS.....   | 122        |
| <b>5.</b> | <b>MINE PROFILE.....</b>  | <b>124</b> |
| 5.1       | GENERAL MINE INFORMATION.....   | 124        |
| 5.2       | GEOLOGY .....   | 126        |
| 5.3       | RESERVE OF COAL.....  | 138        |
| 5.4       | PRESENT MINE STATUS.....  | 139        |
| <b>6.</b> | <b>TENDER DRAWINGS (20 PLATES) .....</b>                                  | <b>142</b> |
| 6.1       | LIST OF DRAWINGS : .....  | 142        |
| <b>7.</b> | <b>SCOPE OF WORK, TIME SCHEDULE AND FORMS OF PRICE BID (PART-II).....</b> | <b>2</b>   |
| 7.1       | SCOPE OF WORK.....  | 2          |
| 7.2       | MINE HAND OVER.....   | 8          |
| 7.3       | TIME SCHEDULE .....   | 8          |
| 7.4       | PROFORMA FOR PRICE BID.....   | 9          |
| <b>8.</b> | <b>FORMATS &amp; ANNEXURES .....</b>                                      | <b>143</b> |
| 8.1       | BANK GUARANTEE PROFORMA FOR.....  | 143        |
| 8.2       | BANK GUARANTEE PROFORMA FOR.....  | 145        |
| 8.3       | PROFORMA FOR INTEGRITY PACT .....   | 147        |
| 8.4       | FORMAT FOR CONTRACT AGREEMENT .....                                       | 154        |

**Bharat Coking Coal Limited**  
**( A Subsidiary of Coal India Limited )**  
**Office of the General Manager (CMC)**  
**Koyla Bhawan , Koyla Nagar , Dhanbad 826005**

**PART-I-TECHNICAL & COMMERCIAL BID**

1. Name of Work : Development of Kapuria block and extraction of coal from Kapuria block, Western Jharia Area by mass production technology package for a minimum guaranteed production of 2.0 MTy on turnkey basis. Work includes additional exploration (if desired so by the contractor); preparation of mining plan, detailed Project Report & EMP; obtaining approvals from concerned authorities.
2. Place of Work : Kapuria Block, Western Jharia Area, BCCL
3. Tender Notice No. & Date : BCCL/ GM(CMC)/ F- GL/ GLOBAL BID-Kapuria / 2009/ Dated 06/07/2009
4. Earnest Money : Rs.50.0 Lacs or equivalent USD
5. Date & Time of submission of tender (i.e. Part-I & Part-II ) : On or before 02.12.2009 up to 3.30PM
6. Date & Time of Opening of Part-I Tender : **16.00 Hrs. on 04.12.2009**
7. Date & Time of opening of Price bid (Part-II) : Shall be communicated in due course after evaluation of Part-I tender.
8. Date of Issue of Tender Document :
9. Money Receipt No/Bank draft : no. towards cost of Tender Document.
10. Approved for sale :

TO-----

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**General Manager (CMC)**



**Bharat Coking Coal Limited**  
**(A Subsidiary of Coal India Ltd)**  
Office of the General Manager (C.M.C)  
Koyla Bhawan, Koyla Nagar, Dhanbad-826005(India)

**Tender Notice No.**

**Contains 7 (seven) marked pages)**

**For Pre-qualified Tenderers shortlisted by CIL against EOI no. CIL/NI-1B/Eol/208 Dated 8/4/08**

**REF NO.- BCCL/ GM(CMC)/ F- GL/ GLOBAL BID-Kapuria / 2009/ Dated 06/07/2009**

**Name and Place of work**

Development of Kapuria block and extraction of coal from Kapuria block, Western Jharia Area by mass production technology package for a minimum guaranteed production of 2.0MTy on turnkey basis. Work includes additional exploration (if desired so by the contractor); preparation of mining plan, detailed Project Report & EMP; obtaining approvals from concerned authorities.

## 1. TENDER NOTICE

(FOR PREQUALIFIED TENDERERS ONLY)

| COMPANY                    | PROJECT /<br>AREA                        | TENDER              | NOTICE | No |
|----------------------------|--|---------------------|--------|----|
| Bharat Coking Coal Limited | Kapuria Block/<br>Western Jharia<br>Area | .....<br>Date ..... |        |    |

Sealed turn-key tenders are invited from following pre-qualified Tenderers short listed by CIL against **EOI no. CIL/NI-1B/Eol/208 Dated 8/4/08** for the following work:

**1. Walter South East Asia Pvt. Ltd.**  
P.O. Box. 2462, Fortitude Valley,  
BC QLD-4006  
Australia  
Fax no: +61 7 3852 7299  
[p.allonby@walter.com.au](mailto:p.allonby@walter.com.au)

**2. Essel Mining and Industries Ltd.**  
A-1, Adiya Birla Centre. S K. Ahire Marg, Off.  
Annie Besant Road, Worli,  
Mumbai-400030, India  
Fax no: +91-22-66525627  
[anil.mehta@adityabirla.com](mailto:anil.mehta@adityabirla.com)

**3. Anglo American Services (India) Pvt. Ltd.**  
Anglo American Services(India) Pvt. Ltd.,  
2nd Floor, Tha Grand, Nelson Mandela Road,  
Vasant Kunj, New Delhi-1100070  
Fax no: +91-11-40533741  
[Rahuja@angloamerican.co.uk](mailto:Rahuja@angloamerican.co.uk)

**4. Reliance Infrastructure Limited**  
1 Block, II Floor, Dhirubhai Ambani Knowledge City,  
Thane, Belapur Road, Kopar, Khairane,  
Navi Mumbai-400710  
Fax no: +91-22-30386999  
[jayarama.chalasani@relianceada.com](mailto:jayarama.chalasani@relianceada.com)

**5. Zhengzhou Coal Mining Machineries Group Company Ltd.**  
No. 105, Huashan Road,  
Zhengzhou,  
China-450013  
Fax no: +86-371-67891164  
[zmjdwmyc@yahoo.com.cn](mailto:zmjdwmyc@yahoo.com.cn)  
[milanparkeria@hotmail.com](mailto:milanparkeria@hotmail.com)

**6. Essar Mineral Resource Limited**

A-5, Sector-3,  
Noida-201301, India  
Fax no: +91-120-6626690  
[mkagarwal@essar.com](mailto:mkagarwal@essar.com)

**7. Tiandi Science and Technology Company Ltd.**

Tiandi Science and Technology Company Ltd.,  
No. 5, Qingniangou East Road,  
Chaoyang, District Beijing,  
P.R. China  
[liujh@tdtec.com](mailto:liujh@tdtec.com)  
Fax no: +86-10-84264941  
Mr G C Paul  
03324543727/28/29 Fax No.03324543528 e-mail - [cbbfcl@vsnl.com](mailto:cbbfcl@vsnl.com)

**8. European Ventures Ltd.**

Mabledon, London Road, Tunbridge Wells,  
Kent-TN40UH, UK  
Fax no: +44-1732-367890  
[intoff@aol.com](mailto:intoff@aol.com)

**9. M/s Bucyrus DBT Europe GmbH**

IT Park Saarland, Innovationsring 7, 66115,  
Saarbrücken, Germany  
Fax no: +49-681-9678 064 9586  
[Reiner.Schuster@de.bucyrus.com](mailto:Reiner.Schuster@de.bucyrus.com)  
[amukerjee@bucyrus.com](mailto:amukerjee@bucyrus.com)

**No tenderer other than as mentioned above will be entertained.**

| Name and Description of Work  | Location                                 | Expected Date of Commencement | Contract period   |
|---|--|-------------------------------|---|
| Development of Kapuria block and extraction of coal from Kapuria block by mass production technology package for a minimum guaranteed production of 2.0MTy on turnkey basis. Work includes additional exploration (if desired so by the contractor); preparation of mining plan, detailed Project Report & EMP; obtaining approvals from concerned authorities. | Kapuria Block/<br>Western Jharia<br>Area |                               | Commercial production period shall be minimum <b>NINE</b> production years. |



## 1.1 EARNEST MONEY

**Rs. 50,00,000 (fifty lakh) or equivalent USD** as Earnest Money / Bid Security is to be deposited in the form of irrevocable Bank guarantee (from Scheduled Bank) with validity 28 days beyond the validity of the Bid in the format given in the Bid Document. Certified Cheques and demand drafts will also be acceptable as Earnest Money / Bid Security drawn in favour of **M/S BHARAT COKING COAL LIMITED** on any scheduled bank payable at its branch at **DHANBAD** Earnest Money / Bid Security of the unsuccessful bidders shall be refundable within 30 days of submission of Performance security by the successful bidder and shall bear no interest.

## 1.2 APPLICATION FEE FOR TENDER DOCUMENT

The price of a tender document will be INR 5000/- (five thousand only) or US Dollar \$100 (One hundred) payable either in cash or by bank draft drawn in favour of **M/S BHARAT COKING COAL LIMITED** on any scheduled bank payable at its branch at **DHANBAD**.

## 1.3 AVAILABILITY OF TENDER DOCUMENTS

Tender documents including terms and conditions of work, shall be available on payment, from the following places, during the period as stated below:  
from 09.07.2009 to 03.08.2009.

### **Place:**

Office of the General Manager(CMC), **Bharat Coking Coal Limited**, Level –V, Koyla Bhawan, Dhanbad-826005, Jharkhand, India

Office of Chief Sales Manager, 6, Lyons Range, Kolkata-700001, India

Tender document is also available on our website <http://www.bccl.cmpdi.co.in>. The tenderers who download the tender documents will have to enclose a Bank Draft towards cost of tender document along with their tenders in a separate envelope with part –I superscribing “COST OF TENDER DOCUMENT”. The bank draft should be payable in favour of **M/S BHARAT COKING COAL LIMITED** drawn on any scheduled bank payable at its branch at **DHANBAD**.

## 1.4 GENERAL INSTRUCTIONS FOR SUBMISSION OF TENDER

A tenderer should strictly comply with the following instructions:

- a. A tenderer is required to submit his offers in sealed covers giving reference to this Tender Notice No. and Date, containing offers in two parts prominently superscribed as Part I and Part II respectively.
- b. The two parts of the offers shall contain details as follows:

### Part I –

- i) Full details of the firms (bidder), documentary evidences in support of qualification criteria, details of the projects handled, testimonials and documentary evidences in support of satisfactory performance, financial capabilities and any other relevant information and the Earnest Money Deposit.
- ii) Technical offer along with detailed technical specifications of the Mass production technology package / equipments, know-how offered, drawings, pamphlets etc. strictly in terms of tender enquiry.
- iii) A **scheme having details of ‘Development activities’ with time schedule**, mine entries & their duties, mine panel layouts indicating main trunk roadways, intake & return , traveling roadways, detailed description of method of development of the panels and the extraction of coal including scheme of support, ventilation, dewatering, transportation along with required safety measures, lighting and communication.
- iv) Documentary evidence of similar scheme(s) have been successfully implemented in part or full.
- v) Complete time schedule / PERT network for the entire scope of work.
- vi) The envelope containing cost of tender document (if downloaded), EMD and part I of tender document is to be placed in an outer sealed envelope superscribing Part-I containing “**Cost of tender document, EMD and part I**”.  
Then the envelope containing Part-II and the Part-I envelopes should be put in another sealed envelope superscribing Tender No, Date and Job description etc

**Part II –** Price bid only in the format given in the tender document.

## **1.5 VALIDITY PERIOD OF OFFER**

The rates offered in Part II should be valid for six calendar months from the date of opening of Part I of the tender.

## **1.6 RECEIPT OF TENDERS**

Tenders are to be received in sealed covers up to **3.30 PM on 02.12.2009** at the following offices:

- (i) Office of the General Manager(CMC), **Bharat Coking Coal Limited**, Level – V, Koyla Bhawan, Dhanbad-826005, Jharkhand, India
- (ii) Office of Chief Sales Manager, **Bharat Coking Coal Limited** 6, Lyons Range, Kolkata-700001, India

## **1.7 OPENING OF THE TENDERS**

Tenders will be opened at **4 PM on 04.12.2009** at the office of the Director (Technical), P & P, BCCL, Level-II, Koyla Bhawan, Dhanbad-826005

**Part II** of the offer shall be opened only in respect of such tenders as are found valid after scrutiny of Part I.

## **1.8 DEPUTATION OF REPRESENTATIVES FOR NEGOTIATION**

After opening of the tender, if the company decides to negotiate, the tenderers should be in a position to depute their representatives, at short notice, with full authority for negotiating on the technical as well as commercial terms and conditions of the contract.

## **1.9 NOTE**

The company is not under any obligation to accept the lowest tender/ tenders and reserves the right to reject any or all the tenders without assigning any reason whatsoever and also to distribute the work and allot the work / works to more than one tenderer, at its sole discretion.

The bidders are required to sign the Integrity Pact as per format given in the Tender document Part-I

| Sl No | Name                              | Address                                      |
|-------|-----------------------------------|--|
| 1     | Shri D. Bandopadhyay, IAS (Retd.) | GD-89, Sector-III, Salt Lake, Kolkata-700016 |

General Manager (CMC)

Bharat Coking Coal Limited

**Distribution:**

CC: Shri D. Bandopadhyay, IAS (Retd.), GD-89, Sector-III, Salt Lake, Kolkata-700016

CC: PRO – with a request to publish the abridged NIT as enclosed in local as well as National dailies as per norms of the Company and also arrange to send the paper cutting to the Contract Management Cell.

CC: D(T) OP /D(T) P&P /D(F) /D(P) /CVO.

CC: CGM (Cordn) /CGM(F) /GM (P&P)/CGM(MM)/CGM(E&M)/GM(WJ)

CC: Shri B N Sahay, SE (Excn.), CMC, with a request to display this NIT in BCCL Website. The downloading facilities should be available during the period of sale of Tender document only and also to send the NIT via e-mail to the listed nine tenderers

CC: Sr. ES to CMD for kind information of CMD.

CC: HOD (Admn) with a request to display this NIT in Koyla Bhawan Notice Boards.

CC: All CGMs/GMs in the Areas including Washery Zones for wide circulation through display in the Notice Boards.

CC: Inspector, CISF- with a request to deploy security personnel at the office of Director (Technical), P &P, level-II from 9.30 AM to 3.30 PM on 02.12.2009 and on 04.12.2009 from 4.00 PM till completion of meeting.

CC: Chief Sales Manager, Sales & Marketing Deptt, BCCL 6, Lyons Range, Kolkata

CC: CGM/GM (Contract Management Cell), ECL/WCL/CCL/SECL/NCL/MCL

## **2. INSTRUCTIONS TO BIDDERS**

### **2.1 SCOPE OF TENDER**

The BHARAT COKING COAL LIMITED (referred to as Employer in this document) invites bids for the work on turnkey basis (as defined in this document and referred to as “the works”) detailed in NIT and Scope of Work. The Tenderers will submit tenders for all the works (package) detailed in the NIT and Scope of Work (Chapter 7).

The successful Bidder will be expected to complete the Works as per the time schedule given in the accepted DPR as specified in the Contract.

### **2.2 ELIGIBLE TENDERER**

2.2.1 The invitation of Bid is open to all prequalified Bidders eligible to participate. Bidders who have pre-qualified conditionally can participate in the bid on fulfilling the conditions. Their qualifications will be evaluated before opening of their bids. If on evaluation, the bidder is found to have qualified, his bid will be opened, otherwise his bid will be rejected.

2.2.2 All bidders shall provide in Part I, Forms of Bid and Qualification Information, a statement that the Bidder (including all members of a joint venture company or consortium and subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications and other documents for the Project or being proposed as Engineer for the Contract. A firm that has been engaged by the Employer to provide consulting services for the preparation or supervision of the Works shall not be eligible to Bid.

2.2.3 CMPDIL, (a subsidiary of Coal India Limited) with its registered office at Gondwana place, Kanke road, Ranchi, India are the consultant of the owner for this work.

2.2.4 Joint Venture: A joint venture company may undertake the contract. Each member / entity of the joint venture company will be responsible for completing the task as per the contract.

Joint Venture Company shall comply with the following:

- i) Documentary evidence of formation of the joint venture company must be included with the bid.
- ii) The bid shall include all the information regarding capability, experience as required for a bidder for each partner. For the purpose of eligibility criteria, credentials of the members of a joint venture company will be considered collectively.
- iii) A party can be a member in only one Joint Venture company. Bids submitted by other Joint Venture companies including the same party as member will be rejected.
- iv) Separate bid by a member of a Joint Venture company will not be accepted.

2.2.5 **Consortium:** Two or more companies / parties, as responded in the EoI for this work, may jointly undertake contract. Each member will be jointly and severally responsible for completing the task as per the contract.

The consortium shall comply with the following requirements:

- i) One of the partners responsible for performing a key component of the contract (i.e. extraction of coal by his own Mass production technology package) shall be designated as Lead member. Authorisation in favour of leader of the Consortium shall be evidenced by submitting with the bid a Power of Attorney signed by legally authorised signatories of each Consortium member.

- ii) The bid shall include all the information regarding capability, experience as required for a bidder for each Consortium member.
- iii) The leader shall be authorised to incur liabilities and receive instructions for and on behalf of any & all members of the consortium, and the entire execution of Contract, including payment, shall be done exclusively with the leader.
- iv) Leader of the consortium shall be overall responsible for the execution of the Contract. The Leader and other members of the Consortium shall be jointly and severally responsible for execution of the Contract but will be liable for damages in proportion to the respective scope of work.
- v) A copy of the Memorandum of Understanding (MOU) entered into by the consortium members shall be submitted with the bid containing division of work of each member, their joint and several responsibilities which shall be followed by firm agreement on becoming a successful bidder and to be submitted along with security deposit. Bids received without MOU shall be treated as sole bidder & assessed accordingly.
- vi) A party can be a member in only one consortium. Bids submitted by other consortia including the same party as member will be rejected.
- vii) Separate bid by a consortium member will not be accepted.

2.2.6 The Company reserves the right to allow Public Enterprises purchase reference facility as admissible under prevailing policy.

## **2.3 QUALIFICATION OF THE TENDERER**

2.3.1 All bidders shall provide in Part I, Forms of Bid and Qualification Information, a preliminary description of the proposed work, method and schedule, including drawings and charts, as necessary; and if the bidder a consortium a certified copy of MOU as per clause no. 2.2.5 also.

2.3.2 Bids from pre-qualified bidders will only be considered for award of Contract. These qualified bidders should submit with their Bids any information updating

their original prequalification applications or, alternatively, confirm in their Bids that the originally submitted prequalification information remains essentially correct as of the date of Bid submission. The update or confirmation should be provided in Part I

2.3.3 All bidders shall include the following information and documents with their bids (copies of all documentary evidences are to be duly authenticated by the tenderers/ constituted attorney of the tenderer with full signature and seal. All signed declarations are to be made in the tenderer's letter head.)

- a. Copies of original documents defining the constitution or legal status, place of registration and principle place of business; written power of attorney of signatory of the Bid to commit the Bidder.
- b. Total monetary value of contractual work performed for each of the last five years.
- c. List of major items of equipment proposed to carry out the contract.
- d. Qualifications and experience of key site management and technical personnel proposed for the contract.
- e. Evidence of adequacy of working capital for this Contract (access to lines of credit and availability of other financial resources).
- f. Authority to seek references from the Bidder's bankers.
- g. Permanent Income Tax Account No. (PAN), wherever applicable.
- h. The bidders would give a declaration that they have not been banned or delisted by any Govt. or Quasi-Govt. agencies or PSU's. If a bidder has been banned by any Govt. or Quasi-Govt. agencies or PSU's that fact must be clearly stated and it may not necessarily be a cause for disqualifying him. If this declaration is not given, the bid will be rejected as non-responsive.



- i. The short listed bidder who participated as consortium must submit certified copy of MOU for the formation of consortium. Any bid by a consortium without it is likely to be rejected.

**Note:** The intending tenderer will have to submit a declaration in support of the authenticity of the credential submitted by them alongwith the tender in the form of an affidavit as per the format provided in the bid document.

2.3.4 Even though the bidders meet the qualifying criteria of EoI, they are subject to be disqualified if they have:

- a. made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- b. record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

## **2.4 ONE BID PER BIDDER**

2.4.1 Each short listed bidder is eligible for submitting one Bid, in the same legal capacity (company or consortium) in which they have participated in the EOI.

## **2.5 COST OF BIDDING**

2.5.1 The Bidder shall bear all costs associated with the pre-NIT / post NIT meetings, site/mine visit, the preparation and submission of his Bid, and the Employer will in no case be responsible or liable for those costs.

## **2.6 SITE VISIT**

2.6.1 The Bidder at the Bidder's own responsibility, cost and risk, is encouraged to visit and examine the block/ mine/ Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a

contract for the Works. The cost of visiting the Site shall be at the Bidder's own expense.

- 2.6.2 It shall be deemed that the Bidder has visited the mine/ site/area and got fully acquainted with the working conditions and other prevalent conditions and fluctuations thereto whether he actually visits the site/area or not and has taken all the factors into account while quoting his rates and prices.

## **2.7 CONTENT OF BIDDING DOCUMENTS**

- 2.7.1 The set of bidding documents comprises the chapters listed below and addenda issued in accordance with Clause 2.9:

|           |   |
|-----------|---|
| Chapter 1 | Notice Inviting Tender:   |
| Chapter 2 | Instructions to Bidders   |
| Chapter 3 | Forms of Bid and Qualification Information  |
| Chapter 4 | Conditions of Contract  |
| Chapter 5 | Mine Profile & Geo-mining information   |
| Chapter 6 | Tender Drawing  |
| Chapter 7 | Scope of work, Time schedule and Form of price bid  |
| Chapter 8 | Forms of Bank Guarantees for Bid security & Performance security and Form of Article of Agreement |

## **2.8 CLARIFICATION OF BIDDING DOCUMENTS**

- 2.8.1 A prospective bidder requiring any clarification of the bidding documents may notify the Employer in writing or by fax at the Employer's address indicated in the Notice Inviting Tender. The Employer will respond to any request for clarification received earlier than 15 days prior to the deadline for the submission of Bids. Copies of the Employer's response will be forwarded to all purchasers of the bidding documents, including a description of the inquiry but without identifying its source.

- 2.8.2 Pre-bid meeting: A pre-bid meeting, if required, will be held on 09.09.2009, 11hrs. in the office of the GM (CMC), Level –V, Koyla Bhawan, BCCL, Dhanbad, to

clarify the issue and to answer questions on any matter that may be raised at that stage.

## **2.9 AMENDMENT OF BIDDING DOCUMENTS**

2.9.1 Before the deadline for the submission of Bids, the Employer may modify the bidding documents by issuing addenda.

2.9.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated in writing or by fax to all purchasers of the bidding documents. Prospective Bidders shall acknowledge receipt of each addendum by fax to the Employer.

2.9.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer shall extend, as necessary, the deadline for submission of Bids, in accordance with Sub-clause 2.19.2. And the same is also to be communicated simultaneously to all the purchaser of the bidding document.

## **2.10 LANGUAGE OF BID**

2.10.1 All documents relating to the Bid shall be in the English language. In case any printed literature furnished by the Bidder, is written in another language and accompanied by a translation of all its pertinent passages in the English language, for the purposes of interpretation of the bid, such translation shall govern.

## **2.11 DOCUMENTS COMPRISING THE BID**

2.11.1 The Bid, comprising of three parts, will be submitted by the bidder in the following manner:

- a. **Part I** of the bid to be submitted in 1<sup>st</sup> inner sealed envelope comprising of –
  - i) bid security/earnest money deposit,

- ii) letter of the bidder submitting the bid in the form as stipulated in 'Contractor's bid' of the bid document and
  - iii) qualification information as indicated in Clause 2.3 hereof including certified copy of MOU for formation of the consortium and documents as required in accordance with stipulations of bid document and any other materials required to be completed and submitted by bidder in accordance with these instructions.
  - iv) Technical offer along with detailed technical specifications of all the P&M / equipments, know-how offered, drawings, pamphlets etc. strictly in terms of tender document.
  - v) **A scheme having details of 'Development activities' with time schedule, mine entries & their duties, mine panel layouts indicating main trunk roadways, intake & return , travelling roadways, detailed description of method of development of the panels and the extraction of coal including scheme of support, ventilation, dewatering, transportation along with required safety measures, lighting and communication.**
  - vi) Documentary evidence of similar scheme(s) / mass production technology package has been successfully implemented in part or full.
  - vii) Complete time schedule / PERT network for the entire scope of work
  - viii) Tender Document duly signed by authorized signatory of the bidder on all pages as proof of accepting the conditions of contract (excluding the Price bid).
- b. **Part II** of the bid, to be submitted in 2<sup>nd</sup> inner sealed envelope, shall comprise of Price Bid only in the format as indicated in Chapter 7 of the tender document.

- c. All the inner sealed envelopes will then be placed in one outer envelope, sealed and marked properly as per Clause 2.18 and submitted to the Employer at its address before the dead line for submission of the bid as described in Clause 2.19.

## **2.12 BID PRICES**

- 2.12.1 The contract shall be for the whole Work as described in Tender Notice, based on the scope of work as detailed in Chapter 7 of the tender document.
- 2.12.2 The Bidder shall submit rates and prices for all items of the Work described in the scope of works (Chapter 7). Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
- 2.12.3 The contractor will give break-up of his price in its components including all applicable taxes, levies and duties and the rates thereof as per the format.
  - a. All variation in rates thereof shall be on owner's account and shall be reimbursed on production of documentary evidence.
  - b. Rate prevailing as on the date of opening of price bid shall be considered and the bid price shall be adjusted if any for the purpose of evaluation.
  - c. For the purpose of payment the rate prevailing as on the date of execution of the activity shall be adopted.
  - d. For the purpose of evaluation, the rate applicable on the date of opening of price bid, shall be considered.

- 2.12.4** Clause no.4.1.39. Escalation on the rates and prices quoted by the Bidder shall be subject to variations in accordance with the price variation

## **2.13 CURRENCIES OF BID AND PAYMENT**

- 2.13.1 The Bidder is to quote either in Euro, USD or INR for any or all the items in price bid. Any conversion from one currency to another by the bidder later on will not be allowed. Payments will be made in the same currency in which price is quoted.**

## **2.14 BID VALIDITY**

2.14.1 Bid shall remain valid for a period not less than six calendar months from the date of opening of the part-I of the bid. A bid valid for a shorter period shall be rejected by the Employer.

2.14.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidder's responses shall be made in writing or by fax. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his bid security for a period of the extension and in compliance with Clause 2.15 in all respects.

## **2.15 BID SECURITY/ EARNEST MONEY DEPOSIT**

2.15.1 The bidder shall furnish, as part of his bid, a Bid Security/ Earnest Money of the amount as shown in NIT for this particular work. Bid security/ Earnest Money will be required to be deposited in the form of irrevocable Bank Guarantee (from Scheduled Bank/ Branch acceptable to the owner) with validity 28 days beyond the validity of the Bid, in the format given in the chapter 8 of the Bid document. Certified cheques and Demand Drafts will also be acceptable as Bid Security/ Earnest Money drawn in favour of M/S Bharat Coking Coal Limited on any Scheduled Bank payable at its branch at Dhanbad.

2.15.2 Any bid not accompanied by an acceptable Bid Security / Earnest Money Deposit shall be rejected by the Employer as non-responsive.

2.15.3 The Bid Security / Earnest Money Deposit of the unsuccessful Bidder shall be refunded within 30 days of submission of Performance security by the successful bidder.

The Bid Security/ Earnest Money Deposit of the successful bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security/ Security Deposit.

The Bid Security/Earnest Money may be forfeited:

- a. if the Bidder withdraws the Bid after Bid opening during the period of Bid validity; or
- b. in the case of a successful Bidder, if the Bidder fails within the specified time limit to:
  - (i) sign the Agreement; or
  - (ii) furnish the required Performance Security/ Security Deposit.
- c. if the Bidder does not accept the correction of the Bid price pursuant to Clause 2.26.

The Bid Security/ Earnest Money Deposit with the Employer will not carry any interest.

## **2.16 ALTERNATIVE PROPOSALS BY BIDDERS**

Bidders shall submit offers that comply with the requirements of the Bidding documents, including the scheme as detailed in clause 2.11 hereof.

**Alternative Offer will not be considered**

## **2.17 FORMAT AND SIGNING OF BID**

2.17.1 The Bidder shall prepare the Bid comprising the documents as described in Clause 2.11.

2.17.2 All documents of the Bid shall be typed or computer printed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-clause 2.3.3(a) All pages of the Bid document shall be signed by the Bidder.

2.17.3 The Bid shall contain no alterations, or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be signed by the Bidder. Erasing or overwriting in the bid document may disqualify the Bidder.

## 2.18 SEALING, MARKING AND SUBMISSION OF BIDS

2.18.1 The Bidder shall seal the Bid in two inner sealed envelopes and one outer sealed envelope, duly marking the inner envelopes in the following manner:

- a. 1<sup>st</sup> inner sealed envelope will be marked “**Part I** – Bid for development of Kapuria block and extraction of coal from Kapuria block by mass production technology package on turnkey basis” comprising of Bid Security / Earnest Money Deposit, qualification information, Technical and Commercial Part”.
- b. 2<sup>nd</sup> inner sealed envelope will be marked “**Part II** – Price Bid for development of Kapuria block and extraction of coal from Kapuria block by mass production technology package on turnkey basis.”
- c. Outer Sealed envelope will be marked as “Bid for development of Kapuria block and extraction of coal from Kapuria block by mass production technology package on turnkey basis”

2.18.2 The outer envelope and inner envelopes placed in outer envelope shall:

- a. be addressed to the Employer at the following address and submitted accordingly before the deadline for submission of bid as indicated in Clause 2.19:

THE GENERAL MANAGER (CMC)  
Bharat Coking Coal Limited  
Level-V, Koyla Bhawan Dhanbad-826005

inner and outer envelopes will bear the following additional identification:

- Tender Notice No. \_\_\_\_\_ - Date- DO NOT OPEN  
BEFORE.....HRS on.....

2.18.3 In addition to the identification required in Sub-clause 2.18.2 the inner and outer envelopes shall indicate the name and address of the Bidder.

2.18.4 If the outer as well as inner envelopes are not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.



## **2.19 DEADLINE FOR SUBMISSION OF BIDS**

2.19.1 Bids shall be delivered to the Employer at the address specified above not later than 3.30PM on 02.12.2009. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be received up to the appointed time on the next working day.

2.19.2 The Employer may extend the deadline for submission of Bids by issuing an amendment in accordance with Clause 2.9, in which case all rights and obligations of the Employer and the Bidders, previously subject to the original deadline, will then be subject to the new deadline.

## **2.20 LATE BIDS**

Any Bid received by the Employer after the deadline prescribed in Clause 2.19 due to any reason whatsoever will not be accepted.

## **2.21 MODIFICATION AND WITHDRAWAL OF BIDS**

2.21.1 Bidders may modify or withdraw their Bids by giving notice in writing before the deadline prescribed in Clause 2.19, in case the bidder has submitted the bid well before the deadline or extended deadline.

2.21.2 Bidder's modification shall be prepared in line with the original, but withdrawal shall be a plain paper letter with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate.

2.21.3 No Bid may be modified after the deadline / extended deadline for submission of Bids.

2.21.4 Withdrawal of a Bid between the deadline/ extended deadline for submission of Bids and the expiration of the period of Bid validity specified in the Bid document or as extended pursuant to Sub-clause 2.14.2 may result in the forfeiture of the Bid Security pursuant to Clause 2.15.

## **2.22 BID OPENING**

2.22.1 The Employer will open Part- I of the bids first, including modifications made pursuant to Clause 2.21 in the presence of the bidders or their representatives who choose to attend at the time and in the place specified in Clause 1.7 of NIT (Chapter 1). In the event of the specified date of Bid opening being declared a holiday for the Employer the Bids will be opened at the appointed time and location on the next working day.

2.22.2 After examination and evaluation of Part -I of the bids in accordance with Clause 2.25 of these instructions, Part - II of the bids which are technically and commercially at par and substantially responsive in accordance with specifications, scope, terms and conditions and fulfilling the requirements of the instructions to the bidders, shall be opened. In case of delay in opening of Part- II i.e. Price bid within stipulated six calendar months from the date of opening of Part I of the tender, the Bidders shall be allowed to submit the revised Price bid.

2.22.3 Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 2.21 shall not be opened.

2.22.4 The Bidder's names, Bid modifications and withdrawals, the presence or absence of Bid Security and other details as the Employer may consider appropriate, will be announced by the Employer at the opening.

## **2.23 PROCESS TO BE CONFIDENTIAL**

2.23.1 Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of Bids or award decisions may result in the rejection of his Bid.

## **2.24 CLARIFICATION OF BIDS**

- 2.24.1 To assist in the examination, evaluation and comparison of Bids, the Employer may, at the Employer's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakups of unit rates. The request for clarification and the response shall be in writing or by fax.

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

- 2.25.1 Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:

- a. meets the eligibility criteria defined in Clause 2.3;
- b. has been properly signed;
- c. is accompanied by the required securities; and
- d. is substantially responsive to the requirements of the Bidding documents.

- 2.25.2 A substantially responsive Bid is one which confirms to all the terms, conditions & specifications of the Bidding documents without material deviation or reservation. A material deviation or reservation is one:

- a. which affects in any substantial way the scope, quality or performance of the works;
- b. which limits in any substantial way, inconsistent with the Bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or
- c. whose rectification would affect unfairly the competitive position of other Bidder's presenting substantially responsive Bids.

- 2.25.3 Technical evaluation of the scheme submitted by the Bidder with their Bid will be done by the Employer by evaluating the adequacy of the infrastructure and specification of P&M with minimum production guaranteed by the Bidder. The Bidder will submit documentary evidence to prove that the mining method, infrastructure and P&M proposed is a proven Technology and is working / has worked successfully.

2.25.4 If a Bid is not substantially responsive, it may be rejected by the Employer at its sole discretion.

## **2.26 CORRECTION OF ERRORS**

2.26.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetical errors. Errors will be corrected by the Employer as follows:

- a. where there is a discrepancy between the amounts in figures and in words, the amounts in words will govern; and
- b. where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern,
- c. discrepancy in totaling or carry forward in the amount quoted by the contractor shall be corrected.

The tendered sum so corrected and altered shall be substituted for the sum originally tendered and considered for evaluation instead of the original sum quoted by the tenderer along with other tender/tenders. Rounding off to the nearest rupee should be done in the final summary of the amount instead of in totals of various sections of the offer.

2.26.2 The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the Bidder.

## **2.27 EVALUATION AND COMPARISON OF BIDS**

2.27.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause 2.25.

2.27.2 In evaluating the Bids, the Employer will determine for each Bid, the evaluated Bid Price, by adjusting the Bid Price as follows:

- a. making any correction for errors pursuant to Clause 2.26
- b. making up appropriate adjustment for any other quantifiable acceptable variations, deviations.

- c. making appropriate adjustments to reflect discounts or other price modifications offered in accordance with Clause 2.21.

2.27.3 The Employer reserves the right to accept or reject any variation, deviation or other factors that are in excess of the requirements of the Bidding documents or otherwise result in unsolicited benefits for the employer shall not be taken into account in Bid evaluation.

2.27.4 If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work, if any, the Employer may require the Bidder to produce detailed price analysis for any or all items of the work, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed.

## **2.28 AWARD CRITERIA**

2.28.1 Subject to Clause 2.29, the Employer will award the Contract to the best qualified Bidder whose Bid has been determined to be substantially responsive to the Bidding documents and who has offered the lowest cost of coal production evaluated on the basis of long range marginal costing based on discounted cash flows. The discount rates for different currencies shall be as per the procedure are given below. The employer shall be sole judge in determining the evaluated bid:

- a) All cash flows will be discounted at appropriate discount rate for that currency component.
- b) The discounted values of components of different currencies will then be converted into INR as per the clauses given below .

### **2.28.2 Conversion to Single Currency**

3 days of asking clarification. To facilitate evaluation and comparison, Employer will convert all bid prices to Indian Rupees at the bill selling rate declared by the State Bank of India. The bids shall be converted to Indian currency at the bill-selling rate on the date of opening of the Price Bid to establish ranking. The tentative date for opening of price bids will be 70 days from the last date of submission of bids. However, the bidders are advised to

submit the bids strictly as per the NIT without any deviation so that there is no need for any further clarification. Additionally if any clarification is sought by the owner, the bidders should respond within

#### 2.28.3 Evaluation and Comparison of Bids

The Employer will evaluate and compare the Bids, previously determined to be substantially responsive, pursuant to Clause 2.25 of this Section.

The financial evaluation of bid shall be made on LRMC (Long-Range Marginal Cost) basis using DCF (discounted cash flow) technique. In order to calculate LRMC the time stream of cash outflow for entire contract period including mine & associated infrastructure development period and commercial production period of nine years shall be considered. LRMC will comprise Cash outflows on account of the followings:

All payments (both in foreign exchange and INR) to the successful bidder to be made by the employer towards the cost of preparation of all reports including mining plan, DPR, EMP and any other scientific study to be made by the contractor as quoted in the price bid.

All payments (both in foreign exchange and INR) to the successful bidder to be made by the employer towards the cost of construction of deliverable mine and associated infrastructure including shaft sinking, incline drive, drift drive or any development work in coal before starting of commercial production period as quoted in the price bid.

All payments (both in foreign exchange and INR) to the successful bidder to be made by the employer towards the cost of supply, installation and commissioning for all deliverable P&M as quoted in the price bid. All payments (both in foreign exchange and INR) to the successful bidder to be made by the employer towards the cost of producing coal during commercial production period.

- a) Ocean Freight, Ocean Insurance, Port Clearance, Loading & Unloading charges, Inland Freight & Insurance etc as per the formats of Chapter 7.
- b) Cost towards the requirement of the Employer's manpower as indicated by the Bidder.
- c) All applicable statutory taxes & duties leviable on the Employer's account in India.

2.28.4 The discounting rate for calculation of present value of the above outflow shall be as follows:-

- a) In case of cash outflows in FC, the rate of discount will be five (5) years SWAP offer rates for USD or EURO (as the case may be) LIBOR plus 150 basis points for such purpose. The present value of the time stream of FC thus calculated is to be converted into equivalent INR amount at bill selling rate of State Bank of India as on the date of opening of price bid.
- b) In case of INR component of the cash outflow, the discounting rate will be the Yield to maturity (YTM) of Govt. of India bonds with balance tenure of around five (5) years prevailing on the date of opening of the price bid plus 150 basis points.
- c) To calculate the present value of the time stream of coal production the discounting rate will be as per the INR component of cash outflow (Clause b above).

The formula of such LRMC is given below: -

**[Present value of aggregate cash outflow as per Clause (a) & (b) above] /  
[Present value of the time stream of coal production as per clause (c) above]**

- d) Sample calculation is shown in Enclosure 1 of this chapter.

2.28.5 The bidder with the lowest LRMC in terms of overall cost/tonne will be selected as the successful bidder subject to the provision that such discounted cost of production of that bidder (L-1) is less than the ruling declared selling price of the coal/tonne and is fulfilling other criteria as per NIT. However, Company reserves the right to reject even the lowest bid under the following two conditions:-

- a) In the event LRMC renders the project un-viable and/or
- b) Where the technical details & safety records furnished by the bidder are found insufficient and considered unsatisfactory.

2.28.6 Bidders may like to note that economic evaluation of the bid will consider the total cost of the Project along with all other payment to be made to the bidder in accordance with the various terms and conditions as envisaged under terms of payment along with guaranteed production during commercial production period.

2.28.7 In case it is found that the rate and the amount of taxes included in the bid are in variation with the actual rate of taxes, duties, levies etc., The owner shall have the right to change taxes/ levies and other statutory payment as per prevailing rate on the date of opening bid with an objective to ensure uniformity as applicable to all bidders. The above-adjusted rate will be used for bid evaluation as well as for payment.

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

2.29.1 Notwithstanding Clause 2.28, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all Bids, at any time prior to the 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.

## **2.30 NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT**

2.30.1 The Bidder, whose Bid has been accepted, will be notified of the award by the Employer prior to expiration of the Bid validity period by fax & confirmed by registered letter. This letter (hereinafter and in the Conditions of the Contract called the "Letter of Acceptance") will include payment schedule according to which payment is to be made to the Contractor in consideration of the execution of the Works by the Contractor as prescribed by the Contract.



2.30.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a Performance Security / Security Deposit in accordance with Clause 2.31.

2.30.3 The Agreement will incorporate all agreements between the Employer and the successful Bidder within 28 days following the notification of award along with the letter of Acceptance.

2.30.4 Upon the furnishing by the successful Bidder of the Performance Security/Security Deposit, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful and refund the Bid Security / Earnest Money Deposit within 30 days of submission of Performance security by the successful bidder.

**2.30.5 The successful Bidder will have to sign an integrity pact as per the Format given in Chapter-8.**

## **2.31 SECURITY DEPOSIT/ PERFORMANCE GUARANTEE**

**2.31.1 Security Deposit** is the guarantee kept with the Company during the contract period. Security deposit / Performance Guarantee is intended to secure the performance of the entire Contract

Security Deposit shall consist of two parts;

- a) Performance Security to be submitted at award of work and
- b) Retention Money.

The security deposit shall bear no interest.

**Performance security** shall be 1% of contract value and shall be submitted within 30 days of signing of contract agreement by the successful bidders in the form a Bank Guarantee after which bid security / earnest money will be refunded to the contractor. Thereafter performance security will be in the form of rolling Bank Guarantee and will be for an amount equal to 1% of the remaining contract value and is to be submitted every year.

Bank Guarantee to be provided by the successful bidder as Performance security shall be issued either-

- a) at Bidder's option by a Scheduled Indian Bank or
- b) by a foreign bank located in India and acceptable to the employer.

Bank Guarantee is to be submitted in the format prescribed by the Company in Chapter 8 of the bid document. Bank Guarantee shall be irrevocable.

#### **2.31.2 Retention Money:**

Retention money for mine and associated infrastructure and Deliverable P&M will be equal to 5% of the price quoted for the individual items/ activities/ P&M and it will be deducted from the bills.

Retention money for deliverable mine & associated infrastructure items required to sustain coal production during commercial production period will be released after successful completion of first year of commercial production period.

Retention money for deliverable P&M items will be released after successful completion of second year of commercial production period.

2.31.3 The Security deposit shall be payable to the Employer without any condition whatsoever. Failure of the successful Bidder to comply with the requirements of Sub-Clause 2.31.2 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

2.31.4 The Performance Guarantee shall cover, additionally, the following guarantees to the Employer:

- a) The successful bidder guarantees the successful and satisfactory operation of the P&M furnished and installed under the contract, as per the specifications quoted and documented.
- b) The successful bidder further guarantees that the equipment provided and installed by him shall be, new not refurbished, free from all defects in design, material and workmanship.

2.31.5 The Company shall be at liberty to deduct / appropriate from the Performance Guarantee / Security Deposit such sums as are due and payable by

the contractor to the Company as may be determined in terms of the contract, and the amount appropriated from the Performance Guarantee / Security Deposit shall have to be restored by Contractor subsequently.

2.31.6 The remaining Security deposit (i.e. 1% performance security in the form of remaining rolling Bank Guarantee) will be returned to the Contractor, if no deduction is made as per the provision given above, without any interest at the end of the Contract Period.

## **2.32 EMPLOYMENT OF LOCAL LABOUR**

Contractors may employ, to the extent possible, only local project affected people. The contractor will pay minimum wages which must not be less than as provided by the applicable statute.

## **2.33 LEGAL JURISDICTION**

Matter relating to any dispute or difference arising out of this tender and subsequent contract awarded based on the bid shall be subject to the jurisdiction of Dhanbad court only.

All disputes shall be resolved as per the provisions of clause 4.1.40.

## **2.34 DEEMED EXPORTS**

If the bidder has quoted any item/items under the deemed exports then it will be the responsibility of the Bidder to get all the benefits under deemed exports from the Government. The Company's responsibility shall only be limited to the issuance of required certificates. The quotation of the Bidder will be unconditional and phrases like "Subject to availability of deemed exports benefit" will not find place in it.

## **2.35 CONSULTANTS NOT TO BID & VICE-VERSA**

A firm which has been engaged by the Company to provide Goods or Works for a project or any of its affiliates will be barred from providing consultancy services for the same project. Conversely, a firm hired to provide consultancy services for the preparation or implementation of a project and any of its affiliates will be barred from subsequently providing Goods or Works or services related to the initial assignment for the same project.

## **2.36 SUB-CONTRACTOR/ SUB-VENDOR**

2.36.1 The contract agreement will specify major items of supply or of services for which the contractor proposes to engage Sub-Contractor/Sub-Vendor. The contractor may from time to time propose any addition or deletion from any such list and will submit the proposals in this regard to the Engineer in Charge/Designated Officer in Charge for approval well in advance so as not to impede the progress of work. Such approval of the Engineer in Charge/Designated Officer will not relieve the contractor from any of his obligation, duties and responsibilities under the contract.

2.36.2 If a contractor submits his bid, qualifies and does not get the contract because of his not being the lowest, he will be prohibited from working as a sub-contractor for the contractor who is executing the work.

## **2.37 NIT AND TENDER DOCUMENTS IN THE WEBSITE**

2.37.1 The complete bid documents shall be available on the Company's website <http://www.bccl.cmpdi.co.in> for the purpose of downloading and tender submitted on such downloaded bid documents shall be considered valid for participating in the tender process.

2.37.2 The company shall not be responsible for any delay / difficulties / inaccessibility of the downloading facility for any reason whatsoever. The downloading facility shall be available during the period of sale of tender paper.

The bidders, who will download the tender documents from the website of the company, will be required to pay the cost of tender documents (Application Fee) by Bank Draft as per NIT at the time of submission of tenders.

The bidders will be required to submit an undertaking that they will accept the tender documents as available in the website and their tender shall be rejected if any tampering in the tender document is found to be done at the time of opening of tender.

The Bank Draft towards the cost of tender documents ( Application Fee ) and the undertaking of the tenderer (as per clause 2.37.4) shall be submitted in a separate envelope marked “Cost of Tender Documents and the Undertaking” and not with Part-I / EMD.

In case of any discrepancy between the tender documents downloaded from the web site and the master copy available in the office, the latter shall prevail and will be binding on the tenderers. No claim on this account will be entertained.

### 3. FORM OF BIDS AND QUALIFICATION INFORMATION

#### FORMAT FOR DISCOUNTED CASH FLOW ANALYSIS (FOR FINANCIAL EVALUATION OF THE PRICE BID)

ENCLOSURE – 1

##### A. Foreign component of the price

|                        |       |            |
|------------------------|-------|------------|
| LIBOR Rate for FC      | 6.65% | (Assuming) |
| bps                    | 1.50% |            |
| Total Rate of Discount | 8.15% |            |

|  | Financial Year | Mine & associated infrastructure construction price* | Price P&M*                      | Cost per metric tonne*                                | Total Outflow | Discount Table | Present Value  |
|--|----------------|--|---------------------------------|---|---------------|----------------|----------------|
|  |                | All figures in Foreign Currency Components           |                                 |   |               |                |                |
| 0  | 1              | 2  | 3                               | 4   | 5=<br>(2+3+4) | 6              | 7 =<br>(5 * 6) |
| Mine & associated infrastructure construction period | I              | Firm Price quoted by the bidder                      | Firm Price quoted by the bidder | Nil   |               | 1.00000        |                |
|  | II             |  |                                 |   |               | 0.92464        |                |
|  | III            |  |                                 |   |               | 0.85496        |                |
|  | IV             |  |                                 |   |               | 0.79053        |                |
| Commercial production period                         | V              |  |                                 | Firm price  |               | 0.73096        |                |
|  | VI             |  |                                 | To be Projected using applicable Index for escalation |               | 0.67588        |                |
|  | VII            |  |                                 |   |               | 0.62494        |                |
|  | VIII           |  |                                 |   |               | 0.57785        |                |
|  | IX             |  |                                 |   |               | 0.53430        |                |
|  | X              |  |                                 |   |               | 0.49404        |                |
|  | XI             |  |                                 |   |               | 0.45681        |                |
|  | XII            |  |                                 |   |               | 0.42238        |                |
|  | XIII           |  |                                 |   |               | 0.39055        |                |
|  | XIV            |  |                                 |   | 0.36112       |                |                |
| Total  |                |  |                                 |   |               |                | A              |

\* The price will be taken from the formats of price bid (Chapter- 7)

Conversion of “A” to INR at prevailing exchange rate = “B”

##### **Notes:**

- The money to be paid to the contractor in each year will be calculated on the basis of progress shown for shaft sinking, incline drivage, drift drivage and for the item which are shown to be completed in that particular year.
- The outflow for supply of plant and machinery will be considered as per the schedule of supply, installation and commissioning of the plant and machinery given in the schedule in the scheme supply with the bidder.
- The Evaluation will be done for Mine & associated construction period as specified in the approved scheme and nine (9) years of Commercial production period.
- No mobilization advance will be paid.

## ENCLOSURE – 1 (contd.)

### B. INR component of the price

YTM rate for GoI Bond

7.47% (Assuming)

bps

1.50%

Total Rate of Discount

8.97%

|  | Financial Year | Mine & associated infrastructure construction price including electricity charges* | Price P&M*                      | Cost per metric tonne including electricity charges*  | Total Outflow | Discount Table | Present Value  |
|--|----------------|--|---------------------------------|---|---------------|----------------|----------------|
| All figures in INR Currency Components               |                |  |                                 |   |               |                |                |
| 0  | 1              | 2  | 3                               | 4   | 5=<br>(2+3+4) | 6              | 7 =<br>(5 * 6) |
| Mine & associated infrastructure construction period | I              | Firm Price quoted by the bidder  | Firm Price quoted by the bidder | Nil   |               | 1.00000        |                |
|  | II             |  |                                 |   |               | 0.91768        |                |
|  | III            |  |                                 |   |               | 0.84214        |                |
|  | IV             |  |                                 |   |               | 0.77282        |                |
| Commercial production period                         | V              |  |                                 | Firm price  |               | 0.70921        |                |
|  | VI             |  |                                 | To be Projected using applicable Index for escalation |               | 0.65083        |                |
|  | VII            |  |                                 |   |               | 0.59725        |                |
|  | VIII           |  |                                 |   |               | 0.54809        |                |
|  | IX             |  |                                 |   |               | 0.50297        |                |
|  | X              |  |                                 |   |               | 0.46157        |                |
|  | XI             |  |                                 |   |               | 0.42358        |                |
|  | XII            |  |                                 |   |               | 0.38871        |                |
|  | XIII           |  |                                 |   |               | 0.35671        |                |
|  | XIV            |  |                                 |   |               | 0.32735        |                |
| Total  |                |  |                                 |   |               |                | "C"            |

\* The price will be taken from the formats of price bid (Chapter- 7)

### **Notes:**

- e) The money to be paid to the contractor in each year will be calculated on the basis of progress shown for shaft sinking, incline drivage, drift drivage and for the item which are shown to be completed in that particular year.
- f) The outflow for supply of plant and machinery will be considered as per the schedule of supply, installation and commissioning of the plant and machinery given in the schedule in the scheme supply with the bidder.
- g) The Evaluation will be done for Mine & associated construction period as specified in the approved scheme and nine (9) years of Commercial production period.
- h) No mobilization advance will be paid.

## ENCLOSURE – 1 (contd.)

### **B. Guaranteed coal production table**

**Rate of Discount** 8.97% (equal to the INR discount rate)

|  | Financial Year | Guaranteed coal production (Mty) | Discount Table | Discounted production |
|--|----------------|----------------------------------|----------------|-----------------------|
| 0  | 1              | 2                                | 3              | 2*3                   |
| Mine & associated infrastructure construction period | I              | 0                                | 1.00000        |                       |
|  | II             | 0                                | 0.91768        |                       |
|  | III            | 0                                | 0.84214        |                       |
|  | IV             | 0                                | 0.77282        |                       |
|  | V              | 0                                | 0.70921        |                       |
| Commercial production                                | VI             |                                  | 0.65083        |                       |
|  | VII            |                                  | 0.59725        |                       |
|  | VIII           |                                  | 0.54809        |                       |
|  | IX             |                                  | 0.50297        |                       |
|  | X              |                                  | 0.46157        |                       |
|  | XI             |                                  | 0.42358        |                       |
|  | XII            |                                  | 0.38871        |                       |
|  | XIII           |                                  | 0.35671        |                       |
|  | XIV            |                                  | 0.32735        |                       |
| Total  |                |                                  |                | “D”                   |

**Total Cash Outflow (TCO) for Each Bidder will be as under:**

1        Item “B”  
 2        Item “C”  
  
 TOTAL        “ Y”

Total discounted coal production – “D” (same discount rate as applicable for INR component)  
 Long range Marginal cost of coal production = “Y”/“D” = “Z”

Party having the least value of “Z” will be considered as L1 Party.



## FORMS OF BID AND QUALIFICATION INFORMATION

### SECTION : 1

#### CONTRACTOR'S BID

Name of the work : -----  
-----

To

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

Dear Sir,

We offer to execute the Works described above in accordance with the Conditions of Contract accompanying the Tender document issued to us. The Bid Security/Earnest Money in accordance with the Tender document amounting to Rs..... (in figures) ..... (in words) in the form as stipulated in Clause 2.15 (Chapter 2) is enclosed herewith (to be filled in by the Bidder).

The Bid and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Bid security required by the Bidding documents. We also confirm that E.M.D. and other required documentary evidences related to this part of the Bid are enclosed (as listed below) herewith either in original / copies attested by Gazetted officer / copies duly authenticated by us with signature and seal alongwith affidavit as per the format provided in the bid document.

Yours faithfully,

Authorised Signature.....

Name and Title of the Signatory.....

Name of the Bidder.....(the contractor)

Address.....

Date..... (To be filled in by the Bidder)

Enclo:

- i) E.M.D of Rs. ....vide.....dt.....
- ii) .....
- iii) .....
- iv) .....
- v) .....
- vi) .....

## SECTION: 2

### QUALIFICATION INFORMATION

(The information to be submitted by all the Bidders)

### INDIVIDUAL BIDDERS      OR INDIVIDUAL MEMBERS OF JOINT VENTURE COMPANY / CONSORTIUM

#### Constitution or Legal status of Bidder (attach copy)

Place of registration.....

Principal place of business .....

Power of Attorney of signatory Bid:                      (attach)

#### Details of the turnover during the last 3 (three) years:

| Annual Turnover Data |                    |         |
|----------------------|--------------------|---------|
| Year                 | Turnover<br>in Rs. | Remarks |
|                      |                    |         |
|                      |                    |         |
|                      |                    |         |

#### Joint Venture Company / Consortium details:

| Name & Role of all members of a joint venture company / consortium |      |      |
|--|------|------|
|  | Name | Role |
| 1. Lead Member   |      |      |
| 2. Member  |      |      |
| 3. Member  |      |      |

**1.4 Details of experience for similar nature and complexity of work in last 7(seven) years :**

Use a separate sheet for each contract (Attach performance certificates from concerned customer)

|    |   |
|----|---|
| 1. | Number of contract:   |
|    | Name of contract:   |
| 2  | Name & address of the employer:   |
| 3. | Name & address of the mine / project:   |
|    | Capacity of u/g mine (in MTy) :   |
| 4  | Nature / description of work performed and special features if any:   |
| 5  | Contract role (tick one)<br>1. Sole contractor<br>2. Member in Consortium<br>3. Member in Joint venture company |
| 6  | Value of the total contract:  |
| 7  | Date of award:  |
| 8  | Date of completion with original schedule and slippage, if any:   |
| 9  | Type of 'mass production technology package' deployed:  |

**1.5 Subcontractors/Consultants and firms proposed to be involved:**

(Attach performance credentials including Bio-data of key personnel)

| Section of work | Approx. value of subcontract | Sub-contractor (name & address) | Experience in similar works |
|-----------------|------------------------------|---------------------------------|-----------------------------|
|                 |                              |                                 |                             |
|                 |                              |                                 |                             |

**1.6 Information on Bid Capacity.** (Works for which bids have been submitted and work which are yet to be completed) as on the date of this bid:

- a. Total value of work executed in last five years (yearwise).

- b. Details of existing commitments and ongoing works.
- c. Details of Works for which bids already submitted.

**1.7 Financial reports of the last five years: balance sheets, profit and loss statement, auditors report etc.** (copies to be submitted and the following format be filled up)

| Financial information in Rs. | Actual:<br>Previous five years |   |   |   |   |
|------------------------------|--------------------------------|---|---|---|---|
|                              | 1                              | 2 | 3 | 4 | 5 |
| 1.Total assets               |                                |   |   |   |   |
| 2.Current assets             |                                |   |   |   |   |
| 3.Total liabilities          |                                |   |   |   |   |
| 4.Current liabilities        |                                |   |   |   |   |
| 5.Profit before tax          |                                |   |   |   |   |
| 6.Profit after tax           |                                |   |   |   |   |

**1.8 Evidence of access to financial resources to meet the qualification requirements:**

Cash in hand, liquid assets, unencumbered real assets, lines of credit and other financial means etc. sufficient to meet the construction cash flow (the copies to be submitted and the following format to be filled-up).

| Source of financing | Amount in Rs. |
|---------------------|---------------|
| 1.                  |               |
| 2.                  |               |

**1.9 Details of bankers:**

|        |                       |                        |
|--------|-----------------------|------------------------|
| Banker | Name of the banker    |                        |
|        | Address of the banker |                        |
|        | Telephone             | Contact name and title |
|        | Fax                   | Telex                  |

**1.10 Information about litigations, if any, in which bidder is involved:**

| Year | Award FOR or AGAINST applicant | Name of the client, Cause of Litigation and Matter of dispute | Disputed amount in Rs. |
|------|--------------------------------|---|------------------------|
|      |                                |   |                        |
|      |                                |   |                        |

**1.11 Details of the P&M to be used for the work:-**

| Sl. No. | Equipment type and capacity | Make and model | Minimum number |
|---------|-----------------------------|----------------|----------------|
|         |                             |                |                |
|         |                             |                |                |

Detailed specification of all the P&M is to be included with the Technical offer

**1.12 Details of mine development/construction equipments to be used for the project, in the form given below:**

| Sl. No. | Equipment - type and capacity | Make and model | Number |
|---------|-------------------------------|----------------|--------|
|         |                               |                |        |
|         |                               |                |        |

### 1.13 Personnel capabilities:

The applicant must have suitably qualified personnel to fill the following key positions for the project. The applicant will supply information on a prime candidate and an alternate for each positions both of whom, wherever possible meet the experience requirements as specified in format below:

| Position   | Name | Total post qualification experience (years) | In similar Works (years) | As Manager or Section leader of Similar Works (years) |
|--|------|---|--------------------------|---|
| Project Manager/ Colliery Manager<br>Alternative name          |      |   |                          |   |
| Site engineers of respective discipline.<br>Alternative names  |      |   |                          |   |
| Finance personnel<br>Alternative name                          |      |   |                          |   |
| Quality assurance Engineer<br>Alternative name                 |      |   |                          |   |
| Site supervisors of respective discipline<br>Alternative names |      |   |                          |   |

However the Contractor may change these personnel with personnel of equivalent qualification and experience during the contract period with advanced intimation to the Owner.

**1.14** The bidder should list transport available for personnel, construction, plant, stores and machinery. Where transport is to be subcontracted the proposed arrangements should be clearly demonstrated.

**1.15** The bidder should provide full details of his plant and maintenance facilities together with the full details of laboratory personnel, workshop personnel including fitters, mechanics, machinists etc.

**1.16** Permanent Income Tax Account No. (PAN), wherever applicable.

### 1.17 DETAILS OF EARNEST MONEY / BID SECURITY

Deposit of Earnest Money by:

Draft No.: Bank Guarantee (BG) Details:

Drawn on: Name of the Bank:

Amount (Rs): Amount of BG: Bank Guarantee valid up to :

### 1.18 OTHER DETAILS

- (a) Details of registration/ enlistment with Government organizations/ PSUs/ Subsidiaries of Coal India Limited.
- (b) Certificate of registration as per statutory requirements under Sales Tax, Contract Labour Laws etc. as may be applicable

-----Signature of the Tenderer

- NOTE: 1. Separate sheets may be attached to furnish details, if necessary
- 2. In case of Joint Venture Company or Consortium, Separate information for each member should be submitted.
  - 3. Documentary evidence of qualifications of the bidder (as per qualification criteria) is to be submitted.



## SECTION: 3

**FORMAT FOR AFFIDAVIT****Non-Judicial Stamp Paper****AFFIDAVIT**

I, ....., Partner/Legal Attorney/ Accredited  
Representative of M/S. ...., solemnly declare that:

1. We are submitting Tender for the Work .....  
..... against Tender Notice No. ....  
..... dated .....
2. None of the Partners of our firm is relative of employee of .....  
.....(Name of the Company)
3. All information furnished by us in respect of fulfillment of eligibility criteria and qualification information of this Tender is complete, correct and true.
4. All documents / credentials submitted along with this Tender are genuine, authentic, true and valid.
5. If any information and document submitted is found to be false/ incorrect at any time, department may cancel my Tender and action as deemed fit may be taken against us, including termination of the contract, forfeiture of all dues including Earnest Money and banning/ delisting of our firm and all partners of the firm etc.

**Signature of the Bidder,**

Dated .....

**Seal of Notary**

## 4. CONDITIONS OF CONTRACT

### 4.1 GENERAL TERMS AND CONDITIONS

#### 4.1.1 DEFINITIONS

- i. 'Accepting Authority' shall mean the management of the Company and includes an authorized representative of the Company or any other person or body of persons empowered in this behalf by the Company.
- ii. When the words "Approved", "Subject to Approval", "Satisfactory", "Equal to", "Proper", "Requested", "As directed", "Where directed", "When directed", "Determined by", "Accepted", "Permitted", or words and phrases of like import are used, the approval, judgment, direction etc. is understood to be a function of the Owner/Engineer/Engineer-in-charge.
- iii. "Bank Guarantee" shall mean the Bank Guarantee to be provided by the contractor to the Owner.
- iv. "Codes" shall mean the following, including the latest amendments, and/or replacements, if any:
  - (a) Standards of Bureau of Indian Standards relevant to the works under the contract and their specifications.
  - (b) Other internationally approved Standards and/or rules and regulations touching the subject matter of the contract.
    - i) A.S.M.E. Test codes.
    - ii) A.I.E.E. Test codes.
    - iii) American Society of Materials Testing Codes.
    - iv) Indian Electricity Act and Rules and Regulations made thereunder.
    - v) Indian Explosive Act and Rules and Regulations made thereunder.
    - vi) Indian Petroleum Act and Rules and Regulations made thereunder.
    - vii) Indian Mines Act and Rules and Regulations made thereunder.
  - (c) Any other laws, rules, regulations and Acts applicable in the country with respect to labour, safety, compensation, insurance etc.
- v. "Commercial Production Period" means coal production period of minimum <nine> 'Production years' starting from the date of commencement of this period and

excluding the time taken in shifting of Mass production technology package from one panel/seam to another.

- vi. "Commissioning" the 'mass production technology package' shall mean complete installation of the system in all respects and ready for commercial production.
- vii. The word "Company" or "Employer" or "Owner" or "<.....Ltd>" wherever occurs in the tender document, means the Bharat Coking Coal Limited, Dhanbad represented at head quarter of the company by the (Chief) General Manager (P&P), BCCL or his authorized representative or any other officer specially deputed for the purpose.
- viii. The 'Contract' shall mean the notice inviting tender, the tender as accepted by the company and the formal agreement executed between the company and the Contractor together with the documents referred to therein including conditions of contract, special conditions, if any, specifications, designs & drawings including those to be submitted during progress of work, scope of work, billing schedule/schedule of quantities with rates and amounts.
- ix. "Contract Value": All components of currencies proposed to be paid to the contractor will be discounted at the appropriate discount rate for each currency and thereafter will be converted into INR at the prevailing foreign exchange rates. The sum of these values is termed as contract value.
- x. The word "Contractor"/"Contractors" wherever occurs means the successful Bidder/Bidders who has/have deposited the necessary Earnest Money and has/have been given written intimation about the acceptance of tender and shall include legal representative of such individual or persons composing a firm or a company or the successors and permitted assignees of such individual, firm or company, as the case may be.
- xi. "Contractor's Works" shall mean the place of work used by the Manufacturer, the Contractor, their collaborators or sub-contractors for the performance of the works.
- xii. "Consulting Engineer"/"Consultant" shall mean any firm or person duly appointed as such from time to time by the owner.
- xiii. A 'Day' shall mean a day of 24 hours from midnight to midnight.
- xiv. "Date of Contract" shall mean the date on which both the parties have signed the Contract agreement or 30th day from the issue of the 'Letter of Acceptance' whichever is earlier.
- xv. "Deliverable P&M" means plant and machinery which are required to sustain coal production during commercial production period. Tools and tackles, spares and

equipments used for completion of construction activities shall not be included in 'Deliverable P&M'. For example sinking winder, winches etc. used for shaft sinking will NOT be a Deliverable P&M but permanent winder, if any, used for vertical transportation during commercial production period will be a Deliverable P&M.

- xvi. 'Deliverable mine & associated infrastructure construction items' means items which are required to sustain coal production during commercial production period. Any temporary construction required for construction of Deliverable mine & associated infrastructure construction items shall not be included in 'Deliverable mine & associated infrastructure construction items'. For example temporary hutment, sinking head frame, scaffolding etc. will not be a Deliverable mine & associated infrastructure construction item.
- xvii. "DGMS" means Directorate General of Mines Safety, the Indian Government Regulatory agency for safety in mines and oil-fields.
- xviii. "Drawings"/ "Plans" shall mean all:
  - a) drawings furnished by the owner/consultant as a basis for proposals,
  - b) supplementary drawings furnished by the Owner/Consultant to clarify and to define in greater detail the intent of the contract,
  - c) drawings submitted by the contractor with his proposal provided such drawings are acceptable to the Owner/Consultant,
  - d) drawings furnished by the Owner/Consultant to the Contractor during the progress of the work, if any and
  - e) engineering data and drawings submitted by the Contractor during the progress of the work provided such drawings are acceptable to the Engineer.
- xix. "DRC" means dispute resolution committee constituted and headed by area GM/CGM for resolution of any dispute arising out of difference of opinions between the Engineer and the Contractor. The decision of DRC should not be at variance with the express provisions of this contract.
- xx. The word "Engineer" or "Engineer in-charge" or "Designated Officer-in-charge" wherever occurs, means the authorized representative or any other officer specially deputed by the Company for the purpose of Contract. He will be responsible for supervising and administering the contract, certifying payment due to the contractor, valuing variations to the contract, awarding extension of time and valuing compensation events. Engineer/ Engineer-in-charge/ Designated Officer-in-charge may further appoint his representatives i.e. another person or any other competent person and notify to the contractor who is directly responsible for supervising the

work being executed at the site, on his behalf under the delegation of powers of the company. However, overall responsibility, as far as the contract is concerned will be that of the Engineer/Engineer-in-charge/ Designated Officer-in-charge.

- xxi. "Final Acceptance" shall mean the owner's written acceptance of the works performed under the contract, after successful completion of respective works such as Preparation of Detailed Project Report & EMP, development activities, etc.
- xxii. "Government Approval" shall mean all permits, licenses, authorizations, consents, clearances, decrees, waivers, privileges, approval from and filling with government instrumentalities necessary for the mining plan, DPR, EMP, development, construction and operation of the mine /project.
- xxiii. "Initial operation" shall mean the first integral operation of the complete equipment covered under the contract with sub-systems and supporting equipment in service.
- xxiv. "Inspector" shall mean the Owner or any person nominated by the Owner from time to time, to inspect the equipments, stores or Works under the contract and/or the duly authorised representative of the owner.
- xxv. "Letter of Acceptance" of the tender shall mean the official notice issued by the company notifying the contractor that his tender has been accepted.
- xxvi. "Mass production technology" means technology with coal production system, which is continuous in nature and without deploying drilling and blasting as a major means of getting coal, including use of CM and PSLW is defined as mass production technology. However in case of seams with average thickness more than 6 meters, any proven suitable technology with drilling and blasting will be included in Mass production technology for this bid.
- xxvii. "Mass production Technology package" means equipment, machinery and things of all kinds to be supplied by the Contractor under the Contract specifically for extraction of coal of required quantity from the mine.
- xxviii. "Mine and associated infrastructure construction period" is the time period from the starting of the contract and till the commercial production period starts.
- xxix. "The mine or Site" shall mean the underground mine or site of the contract work including land and any building and erections thereon and any other land allotted by the company for contractor's use in the performance of the contract.
- xxx. "Month" shall mean a calendar month according to the Gregorian calendar.
- xxxi. Words importing "Person" shall include firms, companies, corporations, and associations or bodies of individuals, whether incorporated or not.

- xxxii. "Production Year" shall mean 5490 production hours spread over one calendar year having normally 305 working days starting from the first day of the succeeding month immediately following commissioning of bidder's underground equipment and the date of commencement of 'Commercial production period'. In case of stoppages for which Employer is responsible, working on Sundays and public holidays will be allowed to compensate such stoppages. Stoppages of less than half an hour shall be disregarded entirely for the purpose of accumulation. "One day of additional work shall be allowed for every 18 hours of stoppages accumulated. The actual hours worked on any Sunday or a public holiday will reduce the accumulated hours of stoppages on 'hour by hour' basis. No additional hours will be permitted for any such stoppage on a Sunday or a public holiday. First Production Year therefore shall last for 305 working days from commencement plus any extensions as provided in this sub clause. Each of the subsequent Production Years shall commence on the expiry of the previous Production Year and shall last for 305 working days plus any extension as provided in this sub-clause. Where accumulated hours could not be covered by working on Sundays and holidays as mentioned above, the Production Year shall be extended (week-days and Sundays) to reduce the accumulated hours as quickly as practicable before the commencement of the next Production Year.
- xxxiii. "Scope of Work" means the work specified in Chapter 7, and includes Preparation of Detailed Project Report & EMP, Development and Extraction of the mine for the commercial production period of 9 production years to be carried out by the Contractor under the Contract.
- xxxiv. "Specification" shall mean the technical specifications forming a part of the contract and such other schedules and drawings as may be mutually agreed upon.
- xxxv. "Start-up time" shall mean the time period required to bring the equipment / system covered under the Contract from an inactive condition, when installation is essentially complete, to the state ready for trial operation. The start-up shall include preliminary inspection and check up of equipment and supporting sub-systems; initial operation of the complete equipment covered under the Contract to obtain necessary pre-trial operation data, perform calibration and corrective action; shut down inspection and adjustment prior to the trial operation period.
- xxxvi. The term "sub-contractor", means any person to whom execution of any part of the work including supply of any Equipment, is sub-Contracted directly or indirectly by the Contractor, and includes his legal successors or permitted assigns.

- xxxvii. "Trial operation", "Reliability test", "Trial Run", "Complete Test", shall mean the operation after "Start-up" during which the whole system under the contract is checked under the full load condition or in real working situation. The length of the Trial Operation shall be as determined by the Engineer, unless otherwise specified elsewhere in the Contract.
- xxxviii. The 'work' shall mean Development of mine/ block/ seam(s) and extraction of mine/ block/ seam(s) including additional exploration (if desired so by the contractor); preparation of necessary reports including mining plan, detailed Project report & EMP etc. and obtaining necessary approvals from the concerned authorities for the above. The 'works' shall mean and include supply and installation of 'mass production technology package' and other plant and machinery; construction of all infrastructures underground as well as on the surface; the furnishing of equipment, labour and the services in accordance with the contract or parts thereof as the case may be and shall also include all extra or additional, altered or substituted works or any work of emergent nature, which in the opinion of the Engineer, become necessary during the progress of the works to obviate any risk or accident or failure or become necessary for security.
- xxxix. 'Written Notice' shall mean a notice or communication in writing and shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an office of the contractor /Company for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives the notice.
- xl. Words importing singular only shall also include the plural and vice-versa where the context so requires.
- xli. Terms and expressions, not defined herein, shall have the same meaning as are assigned to them in the Indian Contract Act, failing that in the Indian Sale of Goods Act, and failing that in the General Clauses Act.

#### 4.1.2 CONTRACT DOCUMENTS

The following documents shall constitute the contract documents:

- i) Articles of Agreement
- ii) Notice Inviting Tender
- iii) Letter of Acceptance of Tender indicating deviations, if any, from the conditions of contract incorporated in the Tender document issued to the bidder and/or the Bid submitted by the bidder.
- iv) Conditions of contract, including general terms and conditions, technical terms and conditions, erection terms and conditions, special conditions, if any etc. forming part of the Agreement
- v) Specifications
- vi) Scope of works /schedule of works
- vii) Contract Drawings/ finalised work programme.
- viii) Any other relevant documents

4.1.2.1 After acceptance of tender the Contractor shall be deemed to have carefully examined all Contract Document to his satisfaction. If he shall have any doubt as to the meaning of any portion of the Contract Documents, he shall before signing the Contract, set forth the particulars thereof, and submit them to the Owner in writing in order that such doubt may be removed. The Owner will provide such clarifications as may be necessary in writing to the Contractor. Any information otherwise obtained from the Owner or the Engineer shall not in any way relieve the Contractor of his responsibility to fulfill his obligations under the Contract.

4.1.2.2 The Contractor shall enter into a Contract Agreement with the Owner within 60 (sixty) days from the date of 'letter of acceptance of tender' or within such extended time as may be granted by the owner. If the successful bidder is a consortium / Joint Venture company, the contract agreement should be signed jointly by each member of consortium / Joint Venture Company. The performance Bank Guarantee for the proper fulfillment of the contract shall be furnished by the contractor in the prescribed form within 30 (thirty) days of signing of contract agreement. The performance guarantee shall be as per terms prescribed in clause 2.31 (Chapter-2).

4.1.2.3 The owner, after the issue of the letter of Acceptance of Tender, will send one copy of the final agreement to the contractor for his scrutiny and approval.



4.1.2.4 The agreement, unless otherwise agreed to, shall be signed within 60 days of the issue of the letter of Acceptance of tender, at the office of the owner on a date and time to be mutually agreed. The contractor shall provide for signing of the contract, performance guarantee in copies as required, appropriate power of attorney and other requisite materials. In case it is agreed mutually that the contract is to be signed beyond the stipulated time, the bid security submitted with the tender will have to be extended accordingly.

4.1.2.5 The agreement will be signed in six originals and the contractor shall be provided with one signed original and the rest will be retained by the owner. None of these documents shall be used by the contractor for any purpose other than this contract and the contractor shall ensure that all persons employed for this contract strictly adhere to this and maintain secrecy, as required of such documents.

4.1.2.6 The contractor shall provide free of cost to the owner all the engineering data, drawings and descriptive materials submitted with the bid, in at least six (6) copies to form a part of the contract immediately after issue of letter of acceptance.

4.1.2.7 Subsequent to signing of the contract, the contractor at his own cost shall provide the owner with at least six (6) true copies of agreement within thirty (30) days after the signing of the contract.

4.1.2.8 The contract shall be considered as having come into force from the date of signing the contract agreement or 30th day from the issue of the 'Letter of Acceptance' whichever is earlier.

4.1.2.9 The laws applicable to this contract shall be the laws in force in India. Court of Dhanbad shall have exclusive jurisdiction in all matters arising under this contract.

#### **4.1.3 SECURITY DEPOSIT/ PERFORMANCE GUARANTEE**

**4.1.3.1 Security Deposit** is the guarantee kept with the Company during the contract period. Security deposit / Performance Guarantee is intended to secure the performance of the entire Contract

Security Deposit shall consist of two parts;

- i) Performance Security to be submitted at award of work and

ii) **Retention Money.**

The security deposit shall bear no interest.

- (a) **Performance security** shall be 1% of contract value and shall be submitted within 30 days of signing of contract agreement by the successful bidders in the form a Bank Guarantee after which bid security / earnest money will be refunded to the contractor. Thereafter performance security will be in the form of rolling Bank Guarantee and will be for an amount equal to 1% of the remaining contract value and is to be submitted every year.

Bank Guarantee to be provided by the successful bidder as Performance security shall be issued either-

- 1) at Bidder's option by a Scheduled Indian Bank or
- 2) by a foreign bank located in India and acceptable to the employer.

Bank Guarantee is to be submitted in the format prescribed by the Company in Chapter 8 of the bid document. Bank Guarantee shall be irrevocable

**Retention Money:** Retention money for mine and associated infrastructure and Deliverable P&M will be equal to 5% of the price quoted for the individual items/ activities/ P&M and it will be deducted from the bills.

Retention money for deliverable mine & associated infrastructure items required to sustain coal production during commercial production period will be released after successful completion of first year of commercial production period.

Retention money for deliverable P&M items will be released after successful completion of second year of commercial production period.

4.1.3.2 The Security deposit shall be payable to the Employer without any condition whatsoever. Failure of the successful Bidder to comply with the requirements of Sub-Clause 4.1.3.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

4.1.3.3 The Performance Guarantee shall cover, additionally, the following guarantees to the Employer:

- i) The successful bidder guarantees the successful and satisfactory operation of the P&M furnished and installed under the contract, as per the specifications quoted and documented.

- ii) The successful bidder further guarantees that the equipment provided and installed by him shall be, new not refurbished, free from all defects in design, material and workmanship.

4.1.3.4 The Company shall be at liberty to deduct / appropriate from the Performance Guarantee / Security Deposit such sums as are due and payable by the contractor to the Company as may be determined in terms of the contract, and the amount appropriated from the Performance Guarantee / Security Deposit shall have to be restored by Contractor subsequently.

4.1.3.5 Remaining Security deposit (i.e 1% performance security in the form of remaining rolling Bank Guarantee) will be returned to the Contractor, if no deduction is made as per the provision given above, without any interest at the end of the Contract Period.

#### **4.1.4 ASSIGNMENT AND SUBLETTING OF CONTRACT**

4.1.4.1 The contractor may, after informing the engineer and getting his written approval, assign or sub-let the contract or any part thereof other than for raw materials, minor detail or any part of the plant for which makes are identified in the contract. Supplies of the equipment not identified in the contract or any change in the identified supplier shall be subject to approval by the engineer. The experience list of the equipment vendors under consideration by the contractor for this contract shall be furnished to the engineer for approval prior to procurement of all such items/equipments. Such assignment sub-letting shall not relieve the contractor from any obligation, duty or responsibility under the contract. Any assignment as above without prior written approval of engineer shall be void. Approvals required for subletting, inspection and testing will be given by the Engineer within 7 days of the request made for the above. In case of delay/ dispute in giving approval, the successful bidder can take the issue to the dispute resolution committee (DRC) constituted by area GM/CGM for this purpose.

4.1.4.2 For components/ equipments procured by the contractors for the purposes of the contract, after obtaining the written approval of the owner, the contractor's purchase specification and enquiries shall call for quality plans to be submitted by the suppliers alongwith their proposals. The quality plans called for from the vendors shall set out, during the various stages of manufacture and installation, the quality practices and procedures followed by the vendor's quality control organization, the relevant reference documents/standards used, acceptance level, inspection documentation raised etc. Such quality plans of the successful vendor shall be discussed and finalized in consultation with the engineer and shall form a part of the purchase order/ contract between the contractor and the vendor. Within 3 weeks of the release of the

same purchase order/contracts for such bought out items/components, a copy of the same without price details but together with detailed purchase specifications, quality plans and delivery conditions shall be furnished to the engineer by the contractor.

#### **4.1.5 PATENT RIGHTS AND ROYALTIES**

4.1.5.1 Royalties and fees for patent covering materials, articles, apparatus, devices, equipment or processes used in the works shall be deemed to have been included in the contract price. The contractor shall satisfy all demands that may be made at any time for such royalties or fees and he alone shall be liable for any damages or claims for patent infringements and shall keep the owner indemnified in that regard. The contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted for alleged infringement of any patent involved in the works, and in case of an award of damages, the contractor shall pay for such award. In the event of any suit or other proceedings instituted against the owner, the same shall be defended at the cost and expenses of the contractor who shall also satisfy/comply any decree, order or award made against the owner. But it shall be understood that no such machine, plant, work, material or thing has been used by the owner for any purpose or any manner other than that for which they have been furnished and installed by the contractor and specified under these specifications. Final payment to the contractor by the owner will not be made while any such suit or claim remains unsettled. In the event any apparatus or equipment, or any other matter thereof furnished by the contractor, is in such suit or proceedings held to constitute infringement, and its use is enjoined, the contractor shall at his option and at his own expense, either procure for the owner, the right to continue use of said apparatus, equipment or part thereof, replace it with non-infringing apparatus or equipment or modify it, so it becomes non-infringing.

#### **4.1.6 TIME – THE ESSENCE OF CONTRACT**

4.1.6.1 Time schedule shall be given with the scheme submitted with the bid and this scheme after approval by the Company, shall be incorporated in the DPR. The time for completion of the works as stipulated in the contractor's proposals i.e in the scheme submitted with the bid and accepted by the owner without or with modifications, if any and so incorporated in the award letter and DPR later on shall be deemed to be the essence of the contract. The contractor shall so organize his resources and perform his work as to complete it not later than the date agreed to.

4.1.6.2 The contractor shall submit a detailed PERT network within the time frame agreed above consisting of adequate number of activities covering various key phases of the works, such as development of mine; construction of infrastructure for underground as well as surface facilities; supply, installation and commissioning of all P&M including mass production technology package; extraction of coal seam etc. This network shall be included in the DPR.

4.1.6.3 The PERT network in DPR shall be reviewed and periodic review reports shall be submitted by the contractor as directed by the engineer.

4.1.6.4 In-ordinate delays in completion of activities as given in the agreed scheme or in DPR as applicable may result in termination of the contract and encashment of Bank guarantees without prejudice to any other remedies available in the contract or under the law available to the company.

#### **4.1.7 CONTRACT PRICE**

4.1.7.1 The lump sum prices quoted by the contractor in his bid with additions and deletions as may be agreed before signing of the contract, for the entire scope of the work shall be treated as the contract price.

#### **4.1.8 DEDUCTIONS FROM CONTRACT PRICE**

4.1.8.1 All costs, damages or expenses which the owner may have paid, for which under the contract the contractor is liable, will be claimed by the owner. All such claims shall be billed by the owner to the contractor regularly as and when they fall due. Such bills shall be supported by appropriate and certified vouchers or explanations, to enable the contractor to properly identify such claims. Such claims shall be paid by the contractor within fifteen (15) days of the receipt of the corresponding bills and if not paid by the contractor within the said period, the owner may then deduct the amount, from any moneys due or becoming due by him to the contractor under the contract or may be recovered by actions of law or otherwise, if the contractor fails to satisfy the owner of such claims.

#### **4.1.9 CONTRACT PRICE ADJUSTMENT**

4.1.9.1 All adjustments in the contract price shall be computed in accordance with the conditions and formulae prescribed in the 'price variation clause no.4.1.39' and further satisfying the requirements specified herein.

4.1.9.2 The contract price stated in the contract agreement is the base price. 20% of the base price shall not be subject to any price adjustment. The balance 80% shall only be subject to price adjustment.

#### **4.1.10 PACKING, FORWARDING AND SHIPMENT**

4.1.10.1 The contractor, wherever applicable, shall after proper painting, pack and crate all equipments in such a manner as to protect them from deterioration and damage during transportation to the site and storage at the site till the time of erection installation. The contractor shall be held responsible for all damages due to improper packing and transportation.

4.1.10.2 The contractor shall notify the owner of the date of each shipment from his works, and the expected date of arrival at the site for the information of the owner.

4.1.10.3 The contractor shall also give all shipping information concerning the weight, size and content of each packing including any other information the owner may require.

The following documents shall be sent by registered post to the owner within 7 days from the date of shipment

- a) Invoice (3 copies)
- b) Packing list (3 copies)
- c) Pre-despatch clearance certificate, if any (3 copies)
- d) Test certificate, wherever applicable (3 copies)

4.1.10.4 The contract shall prepare detailed packing list of all packages and containers, bundles and loose material forming each and every consignment despatched to site. The contractor shall further be responsible for making all necessary arrangements for loading, unloading and other handling right from his works upto the site and also during Contract period. He shall be solely responsible for proper storage and safe custody of all equipment.

#### **4.1.11 DEMURRAGE, WHARFAGE, ETC.**

All demurrage, wharfage and other expenses incurred due to delayed clearance of the material or any other reason shall be to the account of the contractor.

#### **4.1.12 INSURANCE**

4.1.12.1 The contractor shall arrange, secure and maintain insurance as may be necessary and for all such amounts to protect his interests and the interests of the owner, against all risks as detailed herein in the joint names of the Owner and the Contractor with the condition that payments against all claims shall be payable by insurers to the owner as elaborated at clause 0. All premiums and other charges of the said insurance policies shall be paid by the contractor. The form and the limit of such insurance, together with the under-writer thereof in each case should be acceptable to the owner. However irrespective of such acceptance, the responsibility to maintain adequate insurance coverage on comprehensive all risks basis at all time during the period of contract shall be that of the contractor alone. The contractor's failure in this regard shall not relieve him of any of his contractual responsibilities and obligations.

4.1.12.2 Any loss of damage to the equipment, during handling, transporting, storage and erection, shall be to the account of the contractor. The contractor shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and /or replacement of the portion of the works damaged or lost. The contractor shall provide the owner with a copy of all insurance policies and documents taken out by him in pursuance of the contract. Such copies of document shall be submitted to the owner immediately after such insurance coverage. The contractor shall also inform the owner in writing at least sixty (60) days in advance regarding the expiry, cancellation and/or change in any of such documents and ensure revalidation/renewal, etc. as may be necessary well in time.

4.1.12.3 The risk that are to be covered under the insurance shall include, but not be limited to, the loss or damage in transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire etc. The scope of such insurance shall cover the entire value of the works from time to time.

4.1.12.4 All costs on account of insurance liabilities covered under the contract will be on contractor's account. The amount of insurance shall be separately indicated.

4.1.12.5 All insurance claims, payable by the insurers, shall be paid to the Owner which shall be released to the contractor in installments as may be certified by the Engineer for the purpose of rebuilding or replacement or repair of the works and/or goods destroyed or damaged for which payment was received from the insurers.

4.1.12.6 In addition to the insurance covered above, the following provisions will also apply to the portion of the works to be done beyond the contractor's own or his sub-contractor's works

a) Workmen's compensation insurance:

This insurance shall protect the contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the contractor against claims for injury, disability, disease or death of his or his sub-contractor's employees, which for any reasons are not covered under the Workmen Compensation Act, 1948. The liabilities shall not be less than

|                        |                             |
|------------------------|-----------------------------|
| Workmen's compensation | As per statutory provisions |
| Employer's liability   | As per statutory provisions |

b) Comprehensive Automobile Insurance

This insurance shall be in such a form to protect the contractor against all claims for injuries, disability, disease and death to members of public including the owner's men and damage to the property of others arising from the use of motor vehicles during on or off the site operations, irrespective of the ownership of such vehicles.

c) Comprehensive General Liability Insurance

This insurance shall protect the contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act or omission on the part of the contractor, his agents, his employees, his representatives and sub-contractors or from riots, strikes and civil commotion. The insurance shall also cover all the liabilities of the contractor arising out of the clause entitled defense of suits under clause 4.1.33. The hazards to be covered will pertain to all the works which and areas where the contractor, his sub-contractor's, his agents and his employees have to perform work pursuant to the contract.

d) The above are only illustrative list of insurance covers normally required and it will be the responsibility of the contractor to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect, in pursuance of the contract.



#### **4.1.13 LIABILITY FOR ACCIDENTS AND DAMAGES**

4.1.13.1 The Company will not be responsible for any accident during work to any workman / staff or any one who is assigned job by the Contractor.

4.1.13.2 Under the contract, the contractor shall be responsible for loss or damage to the development works, equipments etc. during entire Contract period.

#### **4.1.14 LIQUIDATED DAMAGES FOR DELAY IN COMPLETION**

4.1.14.1 If the contractor fails to maintain the required progress in terms of the agreed time and progress chart or to complete the activities on or before the date of completion of the activities or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the company on account of such breach, pay as compensation/Liquidated Damages @ half percent (1/2 %) of the quoted & accepted price for that activity per week of delay. The aggregate of such compensation / compensations shall not exceed ten percent (10%) of total quoted & accepted price for that activity. This will also apply to items or group of items for which separate period of completion has been specified. The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the company.

- a) The company, if, satisfied that the works can be completed by the contractor within a reasonable time after the specified time of completion, may allow further extension of time as its discretion with or without the levy of L.D. In the event of extension granted being with L.D, the company will be entitled without prejudice to any other right or remedy available in that behalf, to recover from the contractor as agreed damages equivalent to half percent (1/2%) of the contract value of the activity for each week or part of the week subject to a ceiling of ten percent (10%) of the quoted & accepted price for that activity.
- b) The company, if not satisfied that the development and construction works can be completed by the contractor and in the event of failure on the part of the contractor to complete work within further extension of time allowed as aforesaid, shall be entitled, without prejudice to any other right, or remedy available in that behalf, to rescind the contract.
- c) The company, if not satisfied with the progress of the contract and in the event of the failure of the contractor to recoup the delays in the mutually agreed time frame, shall be entitled to terminate the contract.

d) In the event of such termination of the contract as described in clauses 4.1.14.1(b) or 4.1.14.1(c) or both, the company, shall be entitled to recover L.D up to ten percent (10%) of the quoted & accepted value of the activity and forfeit the security deposit made by the contractor besides getting the work completed by other means at the risk and cost of the contractor.

4.1.14.2 The company may waive the payment of compensation (liquidated damages), depending upon merit of the case, on request received from the contractor if the entire work is completed within the date as specified in the contract or as validly extended without stipulating any penalty.

4.1.14.3 The liquidated damages (LD) recovered as per the clause No. 4.1.14 of the bid will be refunded in total to the contractor, in case if he is able to start commercial production as per schedule.

No liquidated damages (LD) recovered will be refunded to the contractor if he is not able to start commercial production within 180 days of scheduled date of commencement of commercial production.

If the commercial production period starts after scheduled date to within 180 days from the scheduled date of commencement of commercial production, the refund of liquidated damages (LD) recovered as per the clause No. 4.1.14 of the bid will be as follows.

Within 30 days from the scheduled date of commencement of commercial production- 86%

From 31 days to within 60 days from the scheduled date of commencement of commercial production- 72%

From 61 days to within 90 days from the scheduled date of commencement of commercial production- 58%

From 91 days to within 120 days from the scheduled date of commencement of commercial production- 44%

From 121 days to within 150 days from the scheduled date of commencement of commercial production- 30%

From 151 days to within 180 days from the scheduled date of commencement of commercial production- 16%.

#### **4.1.15 CONTRACTOR'S DEFAULT**

4.1.15.1 If the contractor shall neglect to execute the works with the diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him, in writing by the engineer in connection with the works or shall contravene the provisions of the contract, the owner may give notice in writing to the contractor to make good the failure, neglect or contravention complained of. Should the contractor fail to comply with the notice within thirty (30) days from the date of service thereof, then and in such case the owner shall be at liberty to employ other workmen and forthwith execute such part of the works as the contractor may have neglected to do or if the owner shall think fit, it shall be lawful for him, without prejudice to any other right he may have under the contract, to take the works wholly or in part thereof and in that event the owner shall have free use of all contractor's equipment that may have been at the time on the site in connection with the works without being responsible to the contractor for fair wear and tear thereof and to the exclusion of any right of the contractor over the same, and the owner shall be entitled to retain and apply any balance which may otherwise be due on the contract by him to the contractor, or such part thereof as may be necessary, the payment of the cost of executing the said part of the works or of completing the works as the case may be. If the cost of completing the works or executing a part thereof as aforesaid shall exceed the balance due to the contractor, the contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay which the contractor shall have to pay if the completion of work is delayed.

4.1.15.2 In addition, such action by the owner as aforesaid shall not relieve the contractor of his liability to pay liquidated damages for delay in completion of works as defined in clause 4.1.14 of this section.

4.1.15.3 The termination of the contract under this clause shall not entitle the contractor to reduce the value of the performance bank guarantee nor the time thereof.

The value and the validity of the Performance Security will remain in accordance with Clause 4.1.3.

4.1.15.4 If the contractor fails to complete the work and the order is cancelled, the amount due to him on account of work executed by him, if payable, shall be paid to him only after due recoveries as per the provisions of the contract and that too after alternative arrangements to complete the work has been made.

#### 4.1.16 FORCE MAJEURE

4.1.16.1 Force majeure is herein defined as any cause which is beyond the control of the contractor or the owner as the case may be 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, such as:

- a) Natural phenomena, including but not limited to floods, draughts, earthquakes and epidemics.
- b) Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot insurrection, civil commotion, priorities, quarantines, act of terrorism or sabotage, in each case occurring inside or indirectly involving India.
- c) Strikes, lockouts or other difficulties, which are politically motivated (rather than motivated primarily by a desire to improve compensation or working conditions of those involved) or are caused in whole or part by another event of Political Force Majeure or are part of a nationwide or regional strike, or other generalized labour action occurring within India; (excluding such events which are Site specific and attributable to the Contractor);

Provided either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such causes.

4.1.16.2 a) The Contractor will advise, in the event of his having resort to this clause by a registered letter duly certified by the local chamber of commerce or statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition. In the event of delay, lasting over two months, if arising out of Force Majeure, the contract may be terminated at the discretion of the company.

b) For delays arising out of Force Majeure, the bidder/ contractor will not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither company nor the bidder shall be liable to pay any extra cost (like increase in rates, remobilization advance, idle charges for labour and machinery etc.). Provided it is mutually established that the Fore Majeure conditions did actually exist.

c) If any of the Force Majeure conditions exists in the place of operation of the bidder even at the time of submission of bid he will categorically specify them in his bid and state whether they have been taken into consideration in their quotations.

4.1.16.3 The contractor or the owner shall not be liable for delays in performing his obligations resulting from any Force Majeure cause as referred to and/or defined above. The date of

completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after contractor's performance of his obligations has been delayed for other causes.

#### 4.1.17 DELAY BY OWNER OR HIS AUTHORISED AGENT

4.1.17.1 In case the contractor's performance is delayed due to any act of omission on the part of the owner or his authorised agents, then the contractor shall be given due extension of time for the completion of the works, to the extent such omission on the part of the owner 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 / DRC (dispute resolution committee) as the case may be shall be final.

For other delays extension of time period and subsequent escalation only are admissible. The Contractor shall be entitled to claim escalation on the quoted & accepted price as per the escalation clause 4.1.39. A buffer of 60 days is kept for making good of any loss of production during commercial production period. Any consequential losses to the contractor due to any act of omission on the part of the owner or his authorised agents are not admissible.

4.1.17.2 Any delay in finalisation of mutual agreement in regard to any of the contractor's claim/compensation against any act of omission on the part of the owners or his authorised agents should not result in any work stoppage/further delay on the part of the contractor.

#### 4.1.18 EXTENSION OF DATE OF COMPLETION FOR MINE AND ASSOCIATED INFRASTRUCTURE CONSTRUCTION

4.1.18.1 On happening of any events, causing delay, as stated hereinafter, the contractor shall intimate immediately in writing the Engineer,

- a) due to delay on account of the owner in handing over the site & required land
- b) due to any reasons defined as Force Majeure
- c) of non-availability of stores which are the responsibility of the owner to supply
- d) of non-availability or breakdown of tools and plant to be made available or made available by the owner
- e) on the part of the contractors or tradesmen engaged by the owner not forming part of the contract, holding up further progress of the work
- f) of non-availability of working drawings / work programme in time, which are to be made available by the company during progress of the work

or

any other causes for which company is responsible.

- 4.1.18.2 A “Hindrance Register” shall be maintained by both the Company and the Contractor at site to record the various hindrances, as mentioned above encountered during the course of execution.
- 4.1.18.3 The contractor may request the company in writing for extension of time within 14 days of happening of such event causing delay stating also, if practicable, the period for which extension is desired. The company may, considering the eligibility of the request, give a fair and reasonable extension of time for completion of the work. Such extension shall be communicated to the contractor in writing by the company through the Engineer-in-charge within 1 month of the date of receipt of such request. The contractor shall however use his best efforts to prevent or make good the delay by putting his endeavors constantly as may be reasonably required of him to the satisfaction of the Engineer-in-charge.
- 4.1.18.4 Provisional extension of time may also be granted by the Engineer-in-charge during the course of execution, on written request for extension of time within 15 (fifteen) days of happening of such events as stated above, reserving the company’s right to impose/waive liquidated damages at the time of granting final extension of time as per contract agreement.
- 4.1.18.5 When the period fixed for the completion of the development or construction works is about to expire, the question of extension of the time schedule of that activity may be considered at the instance of the Contractor or the Company or both. The extension will have to be by party’s expressed agreement.
- 4.1.18.6 In case the Contractor does not apply for grant of extension of time within 15 (fifteen) days of hindrance occurring in execution of the work and the Company wants to continue with the work beyond the stipulated date of completion for reason of the work having been hindered, the Engineer-in-charge at his sole discretion can grant provisional extension of time even in the absence of application from the Contractor. Such extension of time granted by the Engineer-in-charge is valid provided the Contractor accepts the same either expressly or implied by actions before and subsequent to the date of completion. Such extension of time shall be without prejudice to Company’s right to levy compensation under the relevant clause of contract.

#### **4.1.19 TERMINATION, SUSPENSION, CANCELLATION & FORECLOSURE OF CONTRACT**

4.1.19.1 The owner shall, in addition to other remedial steps to be taken as provided in the conditions of contract, be entitled to cancel the contract in full or in part, if the contractor

- a. makes default in proceeding with the works with due diligence and continues to do so even after a notice in writing from the Engineer-in-charge, then on the expiry of the period as specified in the notice

or

- b. commits default/breach in complying with any of the terms and conditions of the contract and does not remedy it or fails to take effective steps for the remedy to the satisfaction of the Engineer-in-charge, then on the expiry of the period as may be specified by the Engineer-in-charge in a notice in writing

or

- c. fails to complete the work or items of work with individual dates of completion, on or before the date/dates of completion or as extended by the company, then on the expiry of the period as may be specified by the Engineer-in-charge in a notice in writing

or

- d. shall offer or give or agree to give any person in the service of the company or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for act/acts of favour in relation to the obtaining or execution of this or any other contract for the company.

or

- e. shall try to obtain a contract with the company by way of ring tendering or other non-bonafide method of competitive tendering.

or

- f. Transfers, sublets, assigns the entire work or any portion there of without the prior approval in writing from the Engineer-in-charge. The Engineer-in-charge may be giving a written notice, cancel the whole contract or portion of it in default.

4.1.19.2 The owner shall in such an event give fifteen (15) days notice in writing to the contractor of his decision to do so.

4.1.19.3 The contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and contracts to the extent they are related to the work terminated and terms satisfactory to the

owner, stop all further sub-contracting or purchasing activity related to the work terminated, and assist the owner in maintenance, protection, and disposition of the works acquired under the contract by the owner.

4.1.19.4 The contract shall stand terminated under the following circumstances unless the owner 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 and the owner shall in any way not be liable to payment of any compensation to the estate of deceased contractor and/or to the surviving partners of the contractor's firm on account of the termination of the contract:

- a. If the contractor being an individual in the case of proprietary concern or in the case of a partnership firm any of its partners is declared insolvent under the provisions of insolvency act for the time being in force, or makes any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors amounting to proceedings for liquidation or composition under any insolvency act.
- b. In the case of the contractor being a company, its affairs are under liquidation either by a resolution passed by the company or by an order of court, not being a voluntary liquidation proceedings for the purpose of amalgamation or reorganisation, or a receiver or manager is appointed by the court on the application by the debenture holders of the company, if any.
- c. If the contractor shall suffer an execution being levied on his/their goods, estates and allow it to be continued for a period of 21 days.
- d. On the death of contractor being a proprietary concern or of any of the partners in the case of a partnership concern and the company is not satisfied that the legal representative of the deceased proprietor on the other surviving partners of the partnership concern are capable of carrying out and completing the contract. The decision of the company in this respect shall be final and binding which is to be intimated in writing to the legal representative or to the partnership concern.

4.1.19.5 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 owner 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 owner shall be entitled to cancel the



contract as to its incomplete part without being in any way liable to payment of any compensation to the estate of 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 owner that the legal representative of the deceased contractor or 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 owner shall not hold the estate of the deceased contractor and/or the surviving partners of the estate of the deceased contractor and/or the surviving partners of the contractor's firm liable to damages for not completing the contract.

4.1.19.6 On cancellation of the contract or on termination of the contract, the Engineer-in-charge shall have powers:

- a. To take possession of the site and any materials, constructional plant, implements, stores, etc. thereon.
- b. To determine the amount to be recovered from the contractor for completing the remaining work or in the event the remaining work is not to be completed the loss/damage suffered, if any, by the company after giving credit for the value of the work executed by the contractor upto the time of termination/cancellation less on a/c payments made till date and value of contractor's materials, plant, equipment, etc. taken possession of after termination/cancellation
- c. to recover the amount determined as above, if any, from any moneys due to the contractor or any account or under any other contract and in the event of any shortfall, the contractor shall be called upon to pay the same on demand.

The need for determination of the amount of recovery of any extra cost/expenditure or of any loss/damage suffered by the company shall not however arise in the case of termination of the contract for death/demise of the contractor as stated in clause 4.1.19.4(d).

4.1.19.7 Suspension of work – The company shall have power to suspend the progress of the work or any part thereof and the Engineer-in-charge may direct the contractor in writing to suspend the work, for such period and in such manner as may be specified therein, on account of any default on the part of the contractor, or for proper execution of the work for reasons other than any default on the part of the contractor, or on ground of safety of the work or part thereof, in the event of suspension for reason other than any default on the part of the contractor, extension of time shall be allowed by the company equal to the period of such suspension. Any

necessary and demonstrable costs incurred by the contractor as a result of such suspension of the works will be paid by the owner, provided such costs are substantiated to the satisfaction of the Engineer. The owner shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the contractor or his sub-contractor.

The work shall, be carried out with all due diligence on the part of the contractor. In the event of termination or suspension of the contract, on account of default on the part of the contractor, as narrated herein before, the security deposit and other dues of this work or any other work done under this company shall be forfeited and brought under the absolute disposal of the company provided, that the amount so forfeited shall not exceed 10% of the contract value.

- 4.1.19.8 Foreclosure of contract in full or in part – If at any date after acceptance of the tender, the company decides to abandon or reduce the scope of the work for any reason whatsoever the company, through its Engineer-in-charge, shall give notice in writing to that effect to the contractor. In the event of abandonment/reduction in the scope of work, the company shall be liable
- a. To pay the contractor at the contract rates full amount for works executed and measured at site upto the date of such abandonment/reduction in the work.
  - b. To pay reasonable amount assessed and certified by the Engineer of the expenditure incurred, if any, by the contractor on preliminary works at site e.g. temporary access roads, temporary construction for labour and staff quarters, office accommodation, storage of materials, water storage tanks and supply for the work including supply to labour /staff quarters, office, etc.
  - c. To pay for the materials brought to site or to be delivered at site, which the contractor is legally liable to pay, for the purpose of consumption in works carried out or were to be carried out but for the foreclosure, including the cost of purchase and transportation and cost of delivery of such materials. The materials to be taken over by the company should be in good condition and the company may allow at its discretion the contractor to retain the materials in full or part if so desired by him and to be transported by the contractor from site to his place.
  - d. To take back the materials issued by the company but remaining unused, if any, in the work on the date of abandonment/reduction in the work, at the original issued price less allowance for any deterioration or damage caused while in custody of the contractor.

- e. To pay for the transportation of tools and plants of the contractor from site to contractor's place or to any other destination, whichever is less.

The contractor shall, if required by the Engineer-in-charge, furnish to him books of accounts, papers, relevant documents as may be necessary to enable the Engineer-in-charge to assess the amount payable in terms of clause 4.1.19.8 (b), (c) and (e) above, the contractor shall not have any claim for compensation whatsoever either for abandonment or for reduction in the scope of work, other than those as specified above.

#### **4.1.20 NO WAIVER OF RIGHTS**

Neither the inspection by the owner or the engineer or any of their officials, employees or agents nor any order by the owner or the engineer for payment of money or any payment for or acceptance of, the whole or any part of the works by the owner or the engineer, nor any extension of time, nor any possession taken by the engineer shall operate as a waiver of any provision of the contract, or of any power herein reserved to the owner, or any right to damages herein provided, nor shall any waiver of any breach in the contract be held to be a waiver of any other or subsequent breach.

#### **4.1.21 CERTIFICATE NOT TO AFFECT RIGHT OF OWNER AND LIABILITY OF CONTRACTOR**

No interim payment certificate of the engineer, nor any sum paid on account, by the owner, nor any extension of time for execution of the works granted by the engineer shall affect or prejudice the rights of the owner against the contractor or relieve the contractor of his obligations for the due performance of the contract, or be interpreted as approval of the works done or of the equipment furnished and no certificate shall create liability for the owner to pay for alterations, amendments, variations or additional works not ordered, in writing, by the engineer or discharge the liability of the contractor for the payment of damages whether due, ascertained, or certified or not, or any sum against the payment of which he is bound to indemnify the owner, nor shall any such certificate nor the acceptance by him of any sum paid on account or otherwise affect or prejudice the rights of the contractor against the owner.

#### **4.1.22 GRAFTS AND COMMISSION ETC.**

Any graft, commission, gift or advantage given, promised or offered by or on behalf of the contractor or his partner, agent, officers, director, employee or servant or any one of his or their behalf in relation to the obtaining or to the execution of this or any other contract with the owner, shall, in addition to any criminal liability which it may incur, subject the contractor to the

cancellation of this and all other contracts and also to payment of any loss or damage to the owner resulting from any cancellation. The owner shall then be entitled to deduct the amount so payable from any money otherwise due to the contractor under the contract.

#### **4.1.23 LANGUAGE AND MEASURES**

All documents pertaining to the contract including specifications, schedules notices, correspondence, operating and maintenance instructions, drawings or any other writing shall be written in English language. The SI system of measurement shall be used exclusively in the contract.

#### **4.1.24 RELEASE OF INFORMATION**

The contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs or other reproduction of the works under this contract, or descriptions of the site, dimensions, quantity, quality or other information, concerning the works unless prior written permission has been obtained from the owner.

#### **4.1.25 CONSTRUCTION OF THE CONTRACT**

4.1.25.1 Notwithstanding anything stated elsewhere in the bid documents, the contract to be entered into will be a single turnkey contract executed in two phases. During the first phase i.e. 'mine and associated infrastructure construction' period, the Contractor will plan and construct the mine and all of its associated infrastructure as shaft sinking, incline drivage, service buildings, stores, workshops, roads CHP etc and arrange for electricity, water, ventilation, transport, pumping etc. All deliverable P&M including winding engine and mass production technology package will be installed and commissioned by the contractor during this period. During the second phase i.e. commercial production period of nine years, the Contractor will produce coal in accordance with the minimum guaranteed production given by him in the price bid.

4.1.25.2 The contract shall in all respects be construed and governed accordingly to Indian Laws.

#### **4.1.26 COMPLETION OF CONTRACT**

Unless otherwise terminated under the provisions of any other relevant clause, this contract shall be deemed to have been completed at the expiration of the commercial production period.

#### **4.1.27 ENFORCEMENT OF TERMS**

The failure of either party to enforce at any time of the provisions of this contract or any rights in respect thereto or to exercise any option herein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in any way to affect the validity of the contract. The exercise by either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have hereunder.

#### **4.1.28 ENGINEER'S DECISION**

4.1.28.1 In respect of all matters which are left to the decision of the engineer including the granting or withholding of the certificates, the engineer shall, if required to do so by the contractor give in writing a decision thereon.

4.1.28.2 If in the opinion of the contractor, a decision made by the engineer is not in accordance with the meaning and intent of the contract, the contractor may file with the dispute resolution committee (DRC) constituted by area GM/CGM, within fifteen (15) days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as acceptance of the engineer's decision and the decision shall become final and binding.

4.1.28.3 The engineer's decision and the filing of the written objection with the dispute resolution committee (DRC) constituted by area GM/CGM shall be a condition precedent to the right to any legal proceedings under clause 4.1.40. It is the intent of the agreement that there shall be no delay in the execution of the works and the decision of the engineer as rendered shall be promptly observed.

#### **4.1.29 TRAINING OF OWNER'S PERSONNEL**

4.1.29.1 The contractor shall undertake to train engineering personnel selected and sent by the owner in India & abroad for operation, maintenance and other services of the Equipments installed under the Contractor's scope of work. The period and the nature of training for the individual personnel shall be agreed upon mutually between the contractor and the owner. These engineering personnel shall be given special training in the shops where the equipment will be manufactured and/or their collaborator's works and where possible, in any other plant where such equipment manufactured by the contractor or his collaborator is under installation or

test, to enable these personnel to become familiar with the equipment being furnished by the contractor.

4.1.29.2 All traveling and boarding & lodging expenses for the engineering personnel to be trained during the total period of training will be borne by the owner. Other arrangements and expenses are to be done / borne by the Contractor. These engineering personnel while undergoing training shall be responsible to the contractor for discipline.

4.1.29.3 In the event of the owner, for any reason, failing to avail of the training facilities, the owner shall not be entitled for any rebate whatsoever on this account.

#### **4.1.30 POWER TO VARY OR OMIT WORK**

4.1.30.1 No alterations, amendments, omissions, suspensions or variations of the works (hereinafter referred to as 'Variation') under the contract as detailed in the contract documents, shall be made by the contractor except as directed in writing by the Engineer, but the Engineer shall have full power subject to the provision hereinafter contained from time to time during the execution of the contract, by notice in writing, to instruct the contractor to make such variation without prejudice to the contract. The contractor shall carry out such variation and be bound by the same conditions as far as applicable as though the said variation occurred in the contract documents. If any suggested variation would, in the opinion of the contractor, if carried out, prevent him from fulfilling any of his obligations or guarantees under the contract, he shall notify the Engineer thereof in writing and the Engineer shall decide forthwith, whether or not the same shall be carried out and if the Engineer confirm his instructions, contractor's obligations and guarantees shall be modified to such an extent as may be mutually agreed. Any agreed difference in cost occasioned by any such variation shall be added to or deducted from the contract price as the case may be.

4.1.30.2 In the event of the Engineer requiring any variation, such reasonable and proper notice shall be given to the contractor to enable him to work his arrangements accordingly, and in cases where goods or materials are already prepared or any design, drawings of pattern made or work done requires to be altered, a reasonable and agreed sum in respect there of shall be paid to the contractor.

4.1.30.3 In any case in which the contractor has received instructions from the engineer as to the requirement of carrying out the altered or additional substituted work which either then or later

on, will in the opinion of the contractor, involve a claim for additional payments, the contractor shall immediately and in no case later than thirty (30) days, after receipt of the instructions aforesaid and before carrying out the instructions, advise the engineer to that effect. But the Engineer shall not become liable for the payment of any charges in respect of any such variations, unless the instructions for the performance of the same shall be confirmed in writing by the Engineer.

4.1.30.4 If any variation in the works, results in reduction of contract price, the parties shall, agree, in writing, so to the extent of any change in the price, before in contractor proceeds with the change.

4.1.30.5 In all the above cases, in the event of a disagreement as to the reasonableness of the said sum, the decision of the Engineer shall prevail.

4.1.30.6 Notwithstanding anything stated above in this clause, the Engineer shall have the full power to instruct the contractor, in writing, during the execution of the contract, to vary to quantities of the items or groups of items. The contractor shall carry out such variations and be bound by the same conditions, as though the said variations occurred in the contract documents. However, the contract price shall be adjusted at the rates and the prices provided for the original quantities in the contract. In case of any dispute in this regard, the successful bidder can take the issue to the dispute resolution committee (DRC) constituted by area GM/CGM for this purpose.

#### **4.1.31 GUARANTEE**

The contractor shall warrant that the equipments / P&M will be in accordance with the specification given in the contract documents, scheme / DPR. The P&M must be new, nor refurbished or overhauled and free from any defects in material and workmanship for the entire contract period.

#### **4.1.32 REPLACEMENT OF DEFECTIVE P&M, PARTS AND MATERIALS**

4.1.32.1 As the essence of the contract is to get minimum guaranteed production of coal from the Contractor operating the mass production technology package supplied by him and using mine infrastructure planned designed and constructed by him, any expenditure incurred on account of operations, repair and maintenance of infrastructure including replacement of P&M, if required, will be borne by the contractor for the whole contract period.

4.1.32.2 No separate payment on account of repair and maintenance of the mine and associated infrastructure and P&M will be admissible.

4.1.32.3 In case there is a need to replace, over-haul any deliverable P&M item due to normal operations or due to defective construction by the Contractor or due to defective/ underrated /inadequate equipment supplied by him, the Contractor is to arrange for the same at his all own cost. No payment on account of replacement/over-hauling of any of the equipment is admissible under the contract.

#### **4.1.33 DEFENSE OF SUITS**

If any action in court is brought against the owner or engineer or an officer or agent of the owner for the failure or neglect on the part of the contractor to perform any acts, matters, covenants or things under the contract, or for damage or injury caused by the alleged omission or negligence on the part of the contractor, his agents, representatives or his sub-contractors, workmen, suppliers or employees, the contractor shall in all such cases indemnify and keep the owner, and the engineer and/or his representative, harmless from all losses, damages, expenses or decrees arising of such action.

#### **4.1.34 LIMITATIONS OF LIABILITIES**

The final payment by the owner in pursuance of the contract shall mean, the release of the contractor from all his liabilities under the contract. Such final payment shall be made only at the end of the Contract period. All other payments made under the contract shall be treated as on account payments.

#### **4.1.35 MARGINAL NOTES**

The marginal notes to any clause of the contract shall not affect or control the construction of such clause.

#### **4.1.36 LONG TERM AVAILABILITY OF SPARES**

It will be Contractor's responsibility to provide spares during the entire contract period.

#### **4.1.37 MOBILISATION ADVANCE**

No mobilization advance shall be paid to the contractor.



#### 4.1.38 PAYMENT

4.1.38.1 The Contractor will give a complete list of mine and associated infrastructure construction items such as service buildings, offices, residential buildings, roads and other construction items. These items are to be constructed as per the specifications given in annexures VI-VIII. The bidders have to quote against all the items, which are required to sustain coal production during commercial production period. Some of the major construction items are included in the annexure-I but the list is not exhaustive. The Contractor will quote with number of items to be constructed as well as area to be covered against each item giving detailed technical specification. The contractor will be paid after completion of each set of items. No payment will be made before completion of the construction item in all respect.

Payment for shaft sinking, incline/ drift drivage will be made monthly based on actual physical progress.

The Contractor will give a complete list of all plant and machinery which are required to sustain coal production during commercial production period with detailed specifications of each item. Some of the major P & M items are included in the annexure-I but the list is not exhaustive. The contractor may add or remove items from the list as per requirement in accordance with the scheme submitted. The payment against supply, installation and commissioning of each item quoted for will be made after verification against the specification provided by the contractor. The Contractor will be paid only for mine and associated infrastructure construction and P&M items, which are deliverable. No payment will be made for the temporary construction work and P&M deployed for construction of deliverable mine and associated infrastructure items or for supply, installation and commissioning of deliverable P&M. The items of work for which rates have been invited will be deemed to include thereof the provision of all labour, materials, constructional plant, temporary works and everything whether of a temporary nature required in and for such construction, completion and maintenance of the items of works. The rates for the items of work will be deemed to include thereof all the charges for any ancillary works required to be done for the execution of the items in question and no additional claims for any ancillary work will be entertained. The disposal of muck at specified areas within a radius of approximately 500 meters from the incline/shaft mouth and leveling of the dumps as per the direction of the Engineer or his representatives will be deemed to be an ancillary work. The contractor will be paid in the following way during the period of the Contract:

#### **4.1.38.2 Payments for preparation of reports:**

Payments for preparation of reports/studies will be made only after submission of approved reports.

#### **4.1.38.3 During mine and associated infrastructure construction period:**

##### **a) For construction and development of mine and associated infrastructure**

- i. The contractor will be paid on the basis of bills raised by him as per physical progress and verification of shaft sinking, incline drivage, drift drivage, /drivage in coal prior to commercial production period or any other construction such as strata bunker etc., on monthly basis. Payment for development & excavation in coal before commercial production period will also be made on the basis of price quoted per meter of drivage.
- ii. All other the associated construction works such as construction of office, development of roads, workshops, stores, etc. as given in Annexure VI-VIII will be paid on completion of the construction work. Payments will be made only after physical verification of associated infrastructure construction items.
- iii. Payment for CHP will be made separately after successful commissioning of CHP and physical verification as per the specifications submitted with the bid.
- iv. Payment of on account bills: 95% of the on account bills for shaft sinking, incline drivage or any other drivage during mine and associated infrastructure construction period will only be considered for payment and the remaining 5% will be kept as retention money as per clause 2.31.2. 75% of 95% of on account bills for shaft sinking, incline drivage or any other drivage during mine and associated infrastructure construction period will be paid within 3 days of submission of valid and certified bills and 25% of 95% of on account bills will be paid within a month. The remaining 5% of the on account bills retained as retention money will be dealt with as per clause 2.31.3.
- v. **Payment for P&M**
- vi. P&M items, which are quoted for, will be paid as per the provisions given below.
- vii. **For imported items,**
- viii. Payment will be facilitated by letter of credit
- ix. On production of proof of dispatch along the bills, 75% of FOB price (format 7.4.6- A) for deliverable P&M will be released.
- x. Taxes, duties and levies as per statute will be reimbursed at actual on production of documentary proof.
- xi. Payment for the bills for the remaining FOB price and for other expenses (format 7.4.6- A) will be made on successful commissioning of full set of equipment at site after deduction of retention

money. The retention money which will be equal to 5% of the quoted price excluding taxes, duties and levies, will be deducted at the time of above remaining payment.

xii. Retention money will be released on successful completion of two years of commercial production period.

xiii. **For indigenous items**

xiv. 75% of ex-works price (Format 7.4.6-B) will be paid on delivery of the complete equipment set at the site.

- a) Taxes, duties and levies as per statute will be reimbursed at actual on production of documentary proof.
- b) Payment for the bills for the remaining FOB price and for other expenses (format 7.4.6- A) will be made on successful commissioning of full set of equipment at site after deduction of retention money. The retention money which will be equal to 5% of the quoted price excluding taxes, duties and levies, will be deducted at the time of above remaining payment.
- c) Retention money will be released on successful completion of two years of commercial production period.

#### **4.1.38.4 During Commercial production period:**

The measurement and payment for the coal produced during commercial production period will be made as per the following

##### **A) Measurement of coal:**

Measurement of coal will be in metric tones. Net weight of coal will be derived from weighment readings of the belt weightometer(s) installed at CHP. The belt weightometer(s) shall be calibrated as per the schedule specified by the manufacturer. Wherever possible, it would be cross checked by underground survey. In case of panel extraction, cross checking by underground survey will be done, if feasible. In case of breakdown of belt weightometer(s), measurement by underground survey of face advance will be adopted.

Calibration of belt weightometer(s) and measurements shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative.

Before taking up calibration of weightometer(s) or measurements of any work, the Engineer-in-Charge or the person deputed by him for the purpose shall intimate the contractor to attend or to send his representative to attend the calibration / measurement. Every calibration / measurement thus taken shall be signed and dated by both the parties on the site on completion of the calibration / measurement. If the contractor objects to any of calibration(s) /

measurements, a note to that effect shall be made in the Measurement Book and signed and dated by both the parties.

In the event of failure on the part of contractor to attend or to send his authorized representative to attend the calibration / measurement after receiving the intimation, or to record objection within a week from the date of the calibration / measurement, the calibration / measurement taken by the Engineer-in-Charge or by his authorized representative shall be taken to be the correct measurement.

**B) Payment for coal production:**

Employer is not liable for payment of interest on the amount of bill(s). During commercial production period, payment for coal produced will be made on the basis of quoted and agreed cost per tonne of coal produced.

The contractor shall submit bill(s) for the coal produce in accordance with the contract. The Engineer shall then arrange for verification of the bill/bills with reference to the measurement taken or to be taken or any other records relevant for the purpose. However, in any case

The bill(s) will be prepared every month, i.e, for the period 1st to end of the month. Monthly payment shall be made on producing of the 'Production guarantee certificate' for the respective month after deducting the recovery of advance payment, if any.

Payment will be made monthly, the interim adjustment for bonus or penalty, if any, will be done quarterly and the final adjustment will be made on the basis of coal production in that particular production year.

Payment of on account bills: 75% of on account bills for coal production during commercial production period will be paid within 3 days of submission of valid and certified bills and the 25% will be paid within a month after thorough measurement and scrutiny of bills.

Any certificate given by the Engineer-in-Charge for the purpose of payment of bills shall not of itself be conclusive evidence that any work to which it relates is /are in accordance with the contract and may be modified or corrected by the Engineer-in-Charge by any subsequent certificate or by the final certificate.

The Company reserves the right to recover / enforce recovery of any overpayments detected after payment as a result of post-payment audit or technical examination or by any other means,

notwithstanding the fact that the amount or disputed claims, if any, of the contractor exceeds the amount of such overpayment and irrespective of the facts whether such disputed claims of the contractor are the subject matter of arbitration or not. The contractor shall pay the amount of overpayment on demand, or else the amount of such overpayments may be recovered from the subsequent bills under the contract, failing that from contractor's claim under any other contract with the Company or with other Subsidiary Companies of Coal India Limited or from the contractor's Security Deposit.

No payment shall be made to the Contractor against coal production before commencement of 'Commercial production period'

4.1.38.5 Prices are to be quoted inclusive of electricity charges. The power consumed by the contractor will be deducted from the running bills on actuals.

4.1.38.6 The payment to the contractor for the performance of the works under the contract will be made by the owner as per the guidelines and conditions specified herein. All payments made during the contract shall be on account payments only. The final payment will be made on completion of all the works and on fulfillment by the contractor of all his liabilities under the contract.

#### 4.1.38.7 CURRENCY OF PAYMENT

The Bidder is to quote either in Euro, USD or INR for any or all the items in price bid. Any conversion from one currency to another by the bidder later on will not be allowed. Payments will be made in the same currency in which price is quoted.

#### 4.1.38.8 DUE DATES FOR PAYMENT

The owner will make progressive payments as and when the payments are due. Payment will become due and payable by the owner within thirty (30) days from the date of receipt of contractor's bill/ invoice/ debit note by the owner, provided the documents submitted are complete in all respects.

#### 4.1.38.9 PAYMENT SCHEDULE

During mine and associated construction period, payment for P&M will be made on successful commissioning of the same and for shaft sinking, incline drivage or drift drivage or drivage in coal, the payment will be made monthly on the basis of actual physical progress.

During Commercial production period, payment will be made monthly on the basis of actual coal produced in that particular period. The interim adjustment for bonus or penalty will be done quarterly and the final adjustment will be made on the basis of coal production in that particular production year.

#### 4.1.38.10 APPLICATION FOR PAYMENTS

- i) The contractor shall submit application/ bills for the payments.
- ii) Each such application / bill shall state the amount claimed and shall set forth in detail, in order of the payment schedule, particulars of the works including the works executed at site and of the equipment shipped to / installed on the site pursuant to the contract upto the date mentioned in the application and for the period covered since the last preceding bill, if any.
- iii) Every interim payment certificate shall certify the contract value of the works executed upto the date mentioned in the application for the payment certificate, provided that no sum shall be included in any interim payment certificate in respect of the works that, according to the decision of the engineer, does not comply with the contract, or has been perform, at the date of certificate prematurely.

#### 4.1.38.11 MODE OF PAYMENT

The payment due on supply of equipments, accessories and their erection /installation shall be made direct to the contractor by the Employer.

#### 4.1.38.12 COMMITMENTS TOWARDS AGREED GUARANTEED PRODUCTION

The Contractor would guarantee production of coal from the mining districts and delivery of the same on the surface at the designated transfer point as per agreed annual guaranteed production.

##### (A) Commitment Charges:

In case, the Contractor fails to meet the agreed annual guaranteed production, he will pay commitment charges as indicated below.

| Actual Production in percentage of agreed annual Guaranteed production (AGP) | Penalty to be Deducted   |
|--|--|
| From 100% to 90%   | Nil  |
| From 90% to 70%  | @10% of per tonne rate charged on the difference of production from 100% of annual guaranteed production (AGP) |
| Less than 70%  | @20% of per tonne rate charged on the difference of production from 100% of annual guaranteed production (AGP) |

##### (B) Bonus Payment:

In case the Contractor is able to achieve more than 110% of scheduled annual guaranteed production, during any production year, the Contractor would get bonus at the rate mentioned below.

| Actual Production in %age of agreed annual Guaranteed production (AGP) | Bonus payable   |
|--|---|
| from 100% to 110%  | Nil   |
| More than 110%   | @ 8 % of per tonne rate payable for that production year on incremental production above 110% of Annual Guaranteed Production in that production year <u>provided that the maximum price per tonne inclusive of bonus etc. remains less than the notified selling price of the coal produced.</u> |

Payment coal production during commercial production period will be made monthly. The interim adjustment for **penalty** will be done quarterly and the final adjustment will be made on the basis of coal production in that particular production year. No interim adjustment for **bonus** part will be done. In case in any two consecutive production years, the production of coal falls below the 70 % of agreed annual Guaranteed production, the termination of the Contract will be considered by the Dispute Resolution Committee in the third year.

#### **4.1.38.13 INLAND TRANSPORTATION AND INSURANCE**

The price on account of transportation of P & M (including port handling) and insurance should be separately indicated in the price of supply items quoted which shall be paid as per the provision of clause 4.1.12.

#### **4.1.39 PRICE VARIATION CLAUSE**

4.1.39.1 The contract price shall remain firm without any price variation due to escalation for the portions of survey, geo-engineering investigations, planning, design & engineering, constructions, supply of P&M and the agreed price for coal production as per the contract except as detailed in clause 4.1.39.3 hereof and for the statutory increase/decrease in taxes and duties such as excise duty, sales tax, import duty etc.

4.1.39.2 If any work under the contract is to be extended beyond the stipulated period for completion of that work due to fault on the part of the contractor escalation on prices shall not be allowed.

#### **4.1.39.3 Escalation**

The price quoted for the items / activities of mine and associated infrastructure construction, supply of deliverable P&M and price of coal production per tonne for the first production year, shall be firm unless there is any delay in scheduled completion of these items/ activities due to the fault on part of the Employer. Incase there is a delay in completion schedule of any item or activities due to the fault on part of the Employer the following provisions shall apply:

##### **(A) Escalation for Report Preparation**

No escalation on INR as well as on the foreign exchange component of the price will be paid.



- (B) Escalation for mine and associated infrastructure construction prior to start of commercial production period and in the price of per tonne coal production during commercial production period.

In case there is any delay in starting of any activity due to the fault on the part of the Employer, Escalation as per the following will be applied.

- a) 20% of the all prices quoted in the price bid will be fixed and no escalation **shall** apply to them.
- b) The balance 80% percent of the base price shall only be subject to price adjustment.
- i) Escalation for the INR component of the quoted and accepted prices of the shaft sinking, incline drivage, drift drivage, drivage in coal, construction of strata bunker **prior to commercial production period**, and price per tonne of coal produced **during commercial production period** etc. will be calculated as below.
  - Other than the fixed component mentioned in (a), the half of remaining INR component **(50 % of balance 80%)** will be escalated in accordance with the escalation in the Wholesale Price Index (WPI) and the remaining half **(50 % of balance 80%)** with the All India Consumer Price Index (AICPI).
  - Escalation for the INR component of the quoted and accepted prices of civil construction items such as service buildings, **residential buildings**, roads, etc. will be calculated on the basis of building cost index calculated as per guidelines of Bureau of Public Enterprises.
- ii) Escalation for foreign exchange component of the quoted and accepted prices will be as follows:
  - Other than the fixed component mentioned in (a), the remaining foreign exchange component would be escalated in accordance with the escalation in the applicable indices as suggested by the Contractor for USD and EURO. In case the price component is quoted in USD, the indices suggested for USD must be for USA, in case the price component is quoted in EURO, the indices suggested for it must be for European Union. The indices so suggested must be in the public domain. The Company reserves its right to use any other suitable index for this purpose.

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(C) Escalation for deliverable P&M

- a) In case there is any delay in supply, installation and commissioning of the deliverable P&M due to the fault on the part of the Employer, Escalation as per the following will be applied.
- i) Escalation for the INR component of deliverable P&M will be given in accordance with the escalation in the Wholesale Price Index (WPI).
- ii) Foreign exchange component would be escalated in accordance with the escalation in the applicable indices as suggested by the Contractor for USD and EURO and will be limited to the maximum admissible escalation in wholesale price index (WPI) during the period for which escalation is being considered. The indices so suggested must be in the public domain. The Company reserves its right to use any other suitable index for this purpose.

(D) For escalation, increase in the applicable index corresponding to delay from the construction schedule ( all activities prior to commercial production period) as mentioned in the bid, to new construction schedule due to delay on account of the Employer, will only be considered. For escalation on deliverable P&M (required during commercial production period to sustain production) increase in the applicable index corresponding to delay from the year of the delivery schedule as mentioned in the bid to new delivery schedule due to delay on account of the Employer will only be considered.

4.1.39.4 The Employer will pay to the contractor only allowable escalation as per above clause, any other expenditure claimed by the contractor under any heads whatsoever, during mine and associated infrastructure construction period and commercial production period incurred due to normal operations or due to defective construction by the contractor or due to normal mining operations or defective/under rated/inadequate equipment supplied by the contractor, shall not be admissible.

#### **4.1.40 SETTLEMENT OF DISPUTES**

##### **4.1.40.1 Conciliation:**

Any dispute, or difference arising out of or concerning the contract between the parties shall be settled through mutual negotiation by parties and parties shall make all endeavours to settle this matter amicably. In case such amicable solution is not possible, the parties shall take recourse to the conciliation proceedings for resolving such dispute, question, claim or differences.

The parties with their mutual consent shall nominate a Conciliator, who shall conduct the conciliation proceedings in accordance with the provision of Arbitration and Conciliation Act 1996. The venue of conciliation shall be the location where the contract is executed. The settlement so arrived at during conciliation shall be binding on both parties and will not be called in question before any court or forum whatsoever. Reference to Arbitration shall be made only when the conciliation has failed.

**4.1.40.2 Arbitration :** The applicable rules for Conciliation proceedings shall be that of “SCOPE forum of Conciliation and Arbitration” (SCFA). The Arbitration Clause is to be invoked by the parties to the Contract only on failure of conciliation proceedings.

Arbitration with foreign contractor or in Consortium contracts (including foreign contractor), shall be governed by the Rules of Arbitration of International Chamber of Commerce (ICC), Paris. The venue of the arbitral proceedings shall be New Delhi or Kolkata.

It is also proposed that during the pendency of the Conciliation or Arbitration proceedings both the parties shall continue to perform their contractual obligations.

#### **4.1.41 TAXES ON WORKS**

Subject to the following, the contractor shall be liable and pay all taxes, duties, levies, lawfully assessed against the owner or the contractor in pursuance of the contract.

During mine and associated infrastructure construction activities service tax and cess will be paid by the company to the contractor for the construction activities and installation of minor P&M. All other taxes, levies, cess royalty of central, state and local etc. during this period is deemed to cover within the price quoted for these activities and will not be paid separately by the company.

All applicable taxes i.e. excise, levy etc. for supply of deliverable P&M and deliverable mine and associated infrastructure construction items will be paid by the company to the contractor on actual.

The contractor will give break-up of his price in its components including all applicable taxes, levies and duties and the rates thereof as per the formats. Any subsequent change in taxes, levies and duties will be to the owner's account

During commercial production period applicable service charge and cess will be paid to the contractor by the company for the quantity of coal produced by the contractor.

In addition the contractor shall be responsible for payment of all duties, levies and taxes lawfully assessed against the contractor for his personal income, property etc.

#### **4.1.42 VARIATION IN THE TAXES**

Statutory variation due to increase in taxes, duties, levies etc. by Govt. (Central or State or Local) as of thirty (30) days prior to the date of opening of the bid or the revised price bid, whichever is later, with the taxes, duties, levies etc. during the manufacture/works/supply, as the case may be, shall be borne by the owner. Similarly decrease in taxes, duties, levies etc. shall be returned/deducted to/by the owner.

#### **4.1.43 POACHING OF COMPANY'S MAN POWER**

The Contractor is prohibited from poaching the existing man power of the Company to explore, plan, develop and operate the mine /project/ block except for those nominated by the employer with mutual consent. He can, however, employ the person who has resigned from the Company only after written permission of the Company.

## 4.2 ADDITIONAL TERMS AND CONDITIONS

### 4.2.1 GENERAL

4.2.1.1 The following shall supplement the conditions already contained in the other parts of these documents and shall govern the work of this contract to be performed.

4.2.1.2 The contractor upon signing of the contract shall, in addition to a project co-ordinator, nominate another responsible officer as his representative at site suitably designated for the purpose of overall responsibility and co-ordination of the works to be performed at site. Such person shall function from the site office of the contractor during the pendency of contract.

### 4.2.2 REGULATION OF LOCAL AUTHORITIES AND STATUTES

4.2.2.1 The contractor shall comply with all the rules and regulations of local authorities during the performance of his field activities. He shall also comply with minimum wages act, 1948 and payment of wages act (both of the Government of India and the local state government) and the rules made thereunder in respect of any employee or workman employed or engaged by him or his sub-contractor. The Contractor will pay minimum wages which must not be less than as provided by the applicable statute. The Contractor shall make all necessary payments for Provident fund for the workmen employed by him for the works as per the laws prevailing under provisions of CMPF and allied schemes and CMPF and Miscellaneous provisions Act 1948 or Employees Provident Fund and Miscellaneous provisions Act 1952 as the case may be. The Contractor will also indemnify the Company against payment of workmen's compensation under the Workmen's Compensation Act and also litigation arising out of the above. The Contractor shall also abide by the provisions of the Contract labour and Regulation Act 1970. All registration and statutory inspection fees, if any, in respect of his work pursuant to this contract shall be to the account of the contractor.

### 4.2.3 OWNER'S LIEN ON EQUIPMENT

The owner shall have lien on all equipments / P&M brought to the site. The owner shall continue to hold the lien on all such equipment throughout the period of contract. No equipment /P&M brought to the site shall be removed from the site by the contractor and/or his sub-contractors without the prior written approval of the engineer.

#### **4.2.4 INSPECTION**

The engineer shall have the right to re-inspect any work, equipment after the same are completed and/or installed at site /mine. If by the above inspection, the engineer rejects any work or equipment, the contractor shall make good for such rejection either by replacement or modifications/ repairs as may be necessary, to the satisfaction of the engineer or dispute resolution committee (DRC) as the case may be. Such replacement will also include the replacement or re-execution of such of those works of other contractors and/or agencies which might have got damaged or affected by the replacements or re-work done to the contractor's work.

#### **4.2.5 ACCESS TO SITE AND WORKS ON SITE**

4.2.5.1 Suitable access to and possession of the site shall be accorded to the contractor by the owner in reasonable time.

4.2.5.2 In the execution of the works, no persons other than the contractor or his duly appointed representative, sub-contractor and workmen, shall be allowed to do work on the site, except by the special permission, in writing of the engineer or his representative.

#### **4.2.6 CONTRACTOR'S SITE OFFICE ESTABLISHMENT**

The contractor shall establish a site office at the site and keep posted an authorised representative for the purpose of the contract. Any written order or instruction of the engineer or his duly authorised representative shall be communicated to the said authorised resident representing the contractor and the same shall be deemed to have been communicated to the contractor at his legal address.

#### **4.2.7 CO-OPERATION WITH OTHER CONTRACTORS**

4.2.7.1 The contractor shall co-operate with all other contractors or tradesmen of the owner, who may be performing other works on behalf of the owner and the workmen who may be employed by the owner and doing work in the vicinity of the works under the contract. The contractor shall also so arrange to perform his work as to minimise, to the maximum extent possible, interference with the work of other contractors and his workmen. Any injury or damage that may be sustained in the employees of the other contractors and the owner, due to the contractor's work shall promptly be made good at his own expense. The engineer shall resolve any

difference or conflict that may arise between the contractor and other contractors or between the contractor and the workmen of the owner in regard to their work. If the works of the contractor is delayed because of any acts or omissions of another contractor, the contractor shall have no claim against the owner on that account other than an extension of time for completing his works.

4.2.7.2 The engineer shall be notified promptly by the contractor of any defects in the other contractor's works that could affect the contractor's works. The engineer shall determine the corrective measures if any, required to rectify this situation after inspection of the works and such decisions by the engineer shall be binding on the contractor.

4.2.7.3 The contractor shall agree to co-operate with the owner's other contractors and consultants and freely exchange with them such technical information as is necessary to obtain the most efficient and economical design and to avoid unnecessary duplication of efforts. The Engineer shall be provided with three copies of all correspondence addressed by the contractor to other sub-contractors and consultants in respect of such exchange of technical information.

#### **4.2.8 DISCIPLINE OF WORKMEN**

The contractor shall adhere to the disciplinary procedure set by the engineer in respect of his employees and workmen at site. The engineer shall be at liberty to object to the presence of any representative or employees of the contractor at the site, if in the opinion of the engineer such employee has mis-conducted himself or be incompetent or negligent or otherwise undesirable and then the contractor shall remove such a person objected to and provide in his place a competent replacement.

#### **4.2.9 CONTRACTOR'S FIELD OPERATION**

4.2.9.1 The contractor shall keep the engineer informed in advance regarding his field activity plans and schedules for carrying out each part of the works. Any review of such plan or schedules or method of work by the engineer shall not relieve the contractor of any of his responsibilities forwards the field activities. Such reviews shall also not be considered as an assumption of any risk or liability by the engineer or the owner or any of his representatives and no claim of the contractor will be entertained because of the failure or inefficiency of any such plan or schedule or method of work reviewed. The contractor shall be solely responsible for the safety, adequacy and efficiency of plant and equipment and his procedures.

4.2.9.2 The contractor shall have complete responsibility for the conditions of the work site/ mine including the safety of all persons employed by him or his sub-contractor and all the properties under his custody during the performance of the contract. This requirement shall apply continuously till the completion of the contract and shall not be limited to normal working hours. The construction review, if any, by the engineer is not intended to include review of contractor's safety measures in, on or near the work-site, and their adequacy or otherwise.

#### **4.2.10 PROGRESS REPORT AND PHOTOGRAPHS**

The contractor shall furnish monthly progress report detailing out the progress achieved on all mine and associated infrastructure construction activities as compared to the schedules. The report shall also indicate the reasons for the variance between the scheduled and actual progress and the action proposed for corrective measures wherever necessary.

The monthly progress report should include the photographs of the work done at site. Photographs shall be taken as and when indicated by the engineer. Photographs shall be adequate in size and number to indicate various stages of construction. Each photograph shall contain the date, the name of the contractor and the title of the photographs. The contractor shall furnish three (3) prints each of such photographs.

#### **4.2.11 MAN-POWER REPORT**

4.2.11.1 The contractor shall submit to the engineer, on the first day of every month, a man hour schedule for the month, detailing the man hours scheduled for the month, skill wise and area-wise.

4.2.11.2 The contractor shall also submit to the engineer on the first day of every month, a manpower report of the previous months detailing the number of persons scheduled to have been employed and actually employed, skill wise and areas of employment of such labour.

#### **4.2.12 PROTECTION WORK**

The contractor shall have total responsibility for protecting his works during entire period of contract. No claim will be entertained by the owner or the engineer for any damage or loss to the contractor's works and the contractor shall be responsible for the complete restoration of the damaged works to its original condition to comply with the specifications and drawings. Should any such damage to the contractor's works occur because of other party not under his



supervision or control, the contractor shall make his claim directly with the party concerned. If disagreement or conflict or dispute develops between the contractor and the other party or parties concerned regarding the responsibility for damage to the contractor's works the same shall be resolved as per the provisions of the clause 4.2.7. The contractor shall not cause any delay in the repair of such damaged works because of any delay in the resolution of such disputes. The contractor shall proceed to repair the work immediately and the cause thereof will be assigned pending resolution of such dispute.

#### **4.2.13 EMPLOYMENT OF LABOUR**

4.2.13.1 The contractor will be expected to employ on the work only his regular skilled employees with experience of his particular work. No female labour shall be employed after darkness and no person below the age of eighteen years shall be employed.

4.2.13.2 All traveling expenses including provisions of all necessary transport to and from site, lodging and other payments to contractor's employees shall be the sole responsibility of the contractor.

4.2.13.3 The hour of work on the site shall be decided by the owner and the contractor shall adhere to it. The work will normally be done on 3 shifts of 8 hours per day basis. Working hours per worker will normally be eight (8) hours per day.

4.2.13.4 Contractor's employees shall wear identification badges while on work on site.

4.2.13.5 The contractor will pay minimum wages which must not be less than as provided by the applicable statute. In case the owner become liable to pay any wages or dues to the labour or to any Government agency under any of the provisions of the Minimum Wages Act, Workmen compensation act, Contract Labour Regulation Abolition Act, CMPF Act/EPF Act or any other law due to act of omission or commission of the contractor, the owner may make such payments and shall recover the same from the contractor's bills.

#### **4.2.14 FACILITIES TO BE PROVIDED BY THE EMPLOYER**

The details of facilities to be provided by the Employer will be given in the 'special terms and conditions' and will be site specific. However, the following facilities subject to details given in 'special terms and conditions' will be provided.

#### 4.2.14.1 Space

Exact requirement of space for his office, mess-room, storage area, pre-assembly and fabrication areas, labour colony area, toilets, etc. shall be mentioned in the DPR. Space will be provided by the Employer as per the provision of approved DPR in a phased manner.

#### 4.2.14.2 Electricity

The Employer will supply electricity for the purposes of the contract, only at one point in the project site. The contractor shall make his own further distribution arrangement including transformer. All temporary / permanent wiring must comply with relevant regulations and will be subject to engineer's inspection and approval before connection to supply.

Prices are to be quoted inclusive of electricity charges. The power consumed by the contractor will be deducted from the running bills on actuals.

#### 4.2.14.3 Medical facilities

Medical facilities from near-by area hospital will be made available to the Contractor's employees on chargeable basis.

The owner will provide the contractor, in case of an emergency the services of an ambulance, if available for transportation to the nearest hospital.

#### 4.2.14.4 Water

It will be the owner's responsibility to identify source of water and to get required approvals of drawing water from the source from the statutory bodies.

#### 4.2.14.5 Explosives

The Employer will provide the explosives from the near by mine magazine on chargeable basis. The Contractor will make his own arrangement for transporting the explosive and detonator in accordance with applicable rules and regulations.

### 4.2.15 FACILITIES TO BE PROVIDED BY THE CONTRACTOR

#### 4.2.15.1 Tools, tackles and scaffoldings

The contractor shall provide all the construction equipment, tools, tackles and scaffoldings required for pre-assembly, erection, testing and commissioning of the equipment covered under

he contract. He shall submit a list of all such materials to the engineer before the commencement of pre-assembly at site. These tools and tackles shall not be removed from the site without the written permission of the engineer.

#### 4.2.15.2 First-aid & Medical facilities

The contractor shall provide necessary first-aid facilities for all his employees, representatives and workmen working at the site. Enough number of contractor's personnel shall be trained in administering first-aid. All medical expenses arising out of any accident or otherwise involving personnel of the contractor shall be borne by the contractor.

#### 4.2.15.3 Water

The Contractor shall make his own arrangements for bringing water up to the site and its distribution for surface and underground facilities.

#### 4.2.15.4 Cleanliness

- i) The contractor shall be responsible for keeping the entire area allotted to him clean and free from rubbish, debris etc. during the period of contract. The contractor shall employ enough number of special personnel to thoroughly clean his work area. All such rubbish and scrap material shall be stacked or disposed in a place to be identified by the engineer. Materials and stores shall be so arranged to permit easy cleaning of the area. In areas where equipment might drip oil and cause damage to the floor surface, a suitable protective cover of a flame resistant, oil proof sheet shall be provided to protect the floor from such damage.
- ii) Similarly the labour colony, the offices and the residential areas of the contractor's employees and workmen shall be kept clean and neat to the entire satisfaction of the engineer. Proper sanitary arrangement shall be provided by the contractor, in the work areas, office and residential areas of the contractor.

#### 4.2.16 LINES AND GRADES

All the works shall be performed to the lines, grades and elevations indicated on the drawings. The contractor shall be responsible to locate and layout the works. Basic horizontal and vertical control points will be established and marked by the contractor at site at suitable points. These points shall be used as datum for the works under the contract. The contractor shall inform the

engineer well in advance of the times and places at which he wishes to do work in the area allotted to him. Any work done without being properly located may be removed and/or dismantled by the engineer at contractor's expense.

#### **4.2.17 FIRE PROTECTION**

4.2.17.1 The work procedures that are to be used during the contract period shall be those which minimize fire hazards to the extent practicable. Combustible materials, Combustible waste and rubbish shall be collected and removed from the site at least once each day. Fuels, oils, and volatile or flammable materials shall be stored away from the construction and equipment and materials storage areas in safe containers. Untreated canvas, paper, plastic or other such flammable materials shall not at all be used at site for any other purpose unless otherwise specified. If any such materials are received with the equipment at the site, the same shall be removed and replaced with acceptable material before moving into the construction area or storage.

4.2.17.2 Similarly corrugated paper fabricated cartons etc. will not be permitted in the construction area either for storage or for handling of materials. All such materials used shall be water proof and flame resistant type. All the other materials such as working drawings, plans, etc. which are combustible but are essential for the works to be executed shall be protected against combustion resulting from welding sparks, cutting flames and other similar fire source.

4.2.17.3 All the contractor's supervisory personnel and sufficient number of workers shall be trained for fire-fighting and shall be assigned specific fire protection duties. Enough of such trained personnel must be available at the site during the entire period of the contract.

4.2.17.4 The contractor shall provide enough fire protection equipment of the types and the number for the warehouses, office, temporary structures, labour colony area etc. Access to such fire protection equipment, shall be easy and kept open at all times.

#### **4.2.18 SECURITY**

The contractor shall have total responsibility for all equipment and materials in his custody stored, loose, semi-assembled and/or installed by him at site. The contractor shall make suitable

security arrangements including employment of security personnel to ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss.

#### **4.2.19 CONTRACTOR'S AREA LIMITS**

The engineer will mark out the boundary limits of access roads, parking spaces, storage and construction areas for the contractor and the contractor and his personnel should ensure that their activities are not interfering adversely with the operation of owner or other contractors. In case the area or facilities not allotted to the contractor are required, the same can be used only with the written permission of the engineer.

#### **4.2.20 CONTRACTOR'S CO-OPERATION WITH THE OWNER**

In cases where the performance of the work by the contractor affects the operation of the owner, such work of the contractor shall be scheduled to be performed only in the manner stipulated by the engineer and the same shall be acceptable at all times to the contractor. The engineer may impose such restrictions on the facilities provided to the contractor such as electricity, water etc. as he may think fit in the interest of the owner and the contractor shall strictly adhere etc. such restrictions and co-operate with the engineer. It will be the responsibility of the contractor to provide all necessary instrumentation and other measuring devices required during start-up and operation of the equipment systems which are installed by him. The contractor shall also be responsible for flushing and initial filling of all the oil and lubricants required for the equipment furnished and installed by him, so as to make such equipment ready for operation. The contractor shall be responsible for supplying such flushing oil and other lubricants in addition to the requirement of fills during operation.

#### **4.2.21 PRE-COMMISSIONING TRIALS AND INITIAL OPERATIONS**

The pre-commissioning trials and initial operations of the all equipments/ P&M furnished and installed by the contractor shall be the responsibility of the contractor. The contractor shall provide, in addition, test instruments, calibrating devices etc. and the labour required for the successful performance of these trials. It is anticipated that the above test may prolong for a long time, the contractor's workmen required for the above test shall always be present at site during such trials.

#### **4.2.22 MATERIALS HANDLING AND STORAGE**

4.2.22.1 All the equipment furnished under the contract and arriving at site shall be promptly received, unloaded and transported and stored in the storage spaces by the contractor.

4.2.22.2 Contractor shall be responsible for examining all the shipment and notify the engineer immediately for any damage, shortage, discrepancy, etc. for the purpose of engineer's information only. The contractor shall submit to the engineer every week a report detailing all the receipts during the week. However, the contractor shall be solely responsible for any shortage or damage in transit, handling and/or in storage and erection of the equipment at the site. Any demurrage, wharfage and other such charges claimed by the transporters, railways etc. shall be to the account of the contractor.

4.2.22.3 The contractor shall maintain an accurate and exhaustive record detailing out the list of all equipment received by him for the purpose of mine development and keep such record open for the inspection of the engineer at any time.

4.2.22.4 All equipment shall be handled very carefully to prevent any damage or loss. The equipment stored shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at site.

4.2.22.5 All electrical panels, control gear, motors and such other devices shall be properly dried by heating before they are installed and energised. Motor bearings, slip rings, commutators and other exposed parts shall be protected against moisture ingress and corrosion during storage and periodically inspected. Heavy rotating parts in assembled condition shall be periodically rotated to prevent corrosion due to prolonged storage.

4.2.22.6 All the electrical equipment such as motors, generators, etc. shall be tested for insulation, resistance at least once in three months from the date of receipt till the date of commissioning and a record of such measured insulation values maintained by the contractor. Such records shall be open for inspection by the engineer.

4.2.22.7 The contractor shall ensure that all the packing materials and protection devices used for the various equipment during transit and storage are removed before the equipments are installed.

4.2.22.8 The consumable and other supplies likely to deteriorate due to storage must be thoroughly protected and stored in a suitable manner to prevent damage or deterioration in quantity and quality by storage.

4.2.22.9 All the materials stored in the open or duty location must be covered with suitable weather-proof and flame-proof covering materials wherever applicable.

4.2.22.10 If the materials belonging to the contractor are stored in areas other than those earmarked for him, the engineer will have the right to get it moved to the area earmarked for the contractor at the contractor's cost.

4.2.22.11 The contractor shall be responsible for making suitable indoor storage facilities to store all equipment which require indoor storage. Normally, all the electrical equipment such as motors, control gear, generators, exciters and consumables like electrodes, lubricants etc. shall be stored in the closed storage space. The engineer, in addition, may direct the contractor to move certain other materials which in his opinion will require indoor storage, to indoor storage areas which the contractor shall strictly comply with.

#### **4.2.23 CONSTRUCTION MANAGEMENT**

4.2.23.1 The field activities of the contractors working at site, will be co-ordinated by the engineer and the engineer's decision shall be final in resolving any disputes or conflicts between the contractor and other contractors and tradesman of the owner regarding scheduling and co-ordination of work. Such decision by the engineer shall not be a cause for extra compensation or extension of time for the contractor.

4.2.23.2 The engineer shall hold weekly meetings of all the contractors working at site, at a time and a place to be designated by the engineer. The contractor shall attend such meetings and take notes of discussions during the meeting and the decisions of the engineer and shall strictly adhere to those decisions in performing his works. In addition to the above weekly meetings, the engineer may call for other meetings either with individual contractors or with selected number of contractors and in such a case the contractor, if called will also attend such meetings.

4.2.23.3 Time is the essence of the contract and the contractor shall be responsible for performance this works in accordance with the schedule. If at any time, the contractor is falling behind the schedule, he shall take necessary action to make good for such delays by increasing his work force or by working overtime or otherwise accelerate the progress of the work to comply with the schedule and shall communicate such actions in writing to the engineer, satisfying that his action will compensate for the delay. The contractor shall not be allowed any extra compensation for such action.

4.2.23.4 The engineer shall however not be responsible for provision of additional labour and/or materials or supply or any other services to the contractor except for the co-ordination work between various contractors, if any, as set out earlier.

#### **4.2.24 FIELD OFFICE RECORDS**

All records required by any statute, including the requirement imposed by DGMS, are to be kept in prescribed way during the contract period. The contractor shall maintain at his site office up-to-date copies of all drawings, specifications and other contract documents and any other supplementary data complete with all the latest revisions thereto. The contractor shall also maintain in addition the continuous record of all changes to the above contract documents, drawings, specifications, supplementary data etc. effected at the field and on completion of his



total assignment under the contract shall incorporate all such changes on the drawings and other engineering data to indicate as installed condition of the equipment furnished and erected under the contract. Such drawings and engineering data shall be submitted to the engineer in required number of copies. Daily work programme with progress of the previous day and deployment of labour related to work programme and attendance of workmen deployed during the previous day shall be maintained in a register. This register shall be signed by authorized representative of the contractor which will then be checked and signed by the owner's representative. Every three months this register shall be deposited to the owner which shall then be owners' property.

Additional records need to be kept during mine operation.

#### **4.2.25 CONTRACTOR'S MATERIALS BROUGHT ON TO SITE**

4.2.25.1 The contractor shall bring to site all equipment, parts, materials, including construction equipment, tools and tackles for the purpose of the works with intimation to the engineer. All such goods shall, from the time of their being brought vest in the owner, but may be used for the purpose of the works only and shall not on any account be removed or taken away by the contractor without the written permission of the engineer. The contractor shall nevertheless be solely liable and responsible for any loss or destruction thereof and damage thereto.

4.2.25.2 The owner shall have a lien on such goods for any sum or sums which may at any time be due or owing to him by the contractor, under, in respect of or by reasons of the contract. After giving a fifteen (15) days notice in writing of his intention to do so, the owner shall be at liberty to sell and dispose of any such goods, in such manner as he shall think fit including public auction or private treaty and to apply the proceeds in or towards the satisfaction of such sum or sums due as aforesaid.

4.2.25.3 After the completion of the works, the contractor shall remove from the site under the direction of the engineer the materials such as construction equipment, erection tools and tackles, scaffolding etc. with the written permission of the engineer. If the contractor fails to remove such materials within fifteen (15) days of issue of a notice by the engineer to do so then the engineer shall have the liberty to dispose of such materials as detailed under clause 4.2.25.2 above and credit the proceeds thereto the account of the contractor.

#### **4.2.26 PROTECTION OF PROPERTY AND CONTRACTOR'S LIABILITY**

4.2.26.1 The contractor shall be responsible for any damage resulting from his operations. He shall also be responsible for protection of all persons including members of public and employees of the owner and the employees of other contractors and sub-contractors and all public and private property including structures, buildings, other plants and equipment and utilities either above or below the ground.

4.2.26.2 The contractor will ensure provision of necessary safety equipment such as fire fighting equipment, barriers, sign-boards, warning lights and alarms etc. to provide adequate protection to persons and property. The contractor shall be responsible to give reasonable notice to the engineer and the owners of public or private property and utilities when such property and utilities are likely to get damaged or injured during the performance of his works and shall make all necessary arrangements with such owners, related to removal and/or replacement or protection of such property and utilities.

#### **4.2.27 PAINTING**

All exposed metal parts of the equipment including piping, structure, railing etc. wherever applicable after installation unless otherwise surface protected, shall be first painted with at least one coat of suitable primer which matches the shop primer paint used, after thoroughly cleaning all such parts of all dirt, rust, scales, greases, oils and other foreign materials by wire brushing, scarping or sand blasting, and the same being inspected and approved by the engineer for painting. Afterwards, the above parts shall be finished with two coats of alloyed resin machinery enamel paints. The quality of the finish paint shall be as per BIS standards or equivalent and to be of the colour as approved by the engineer.

#### **4.2.28 UNFAVOURABLE WORKING CONDITIONS**

The contractor shall confine all his field operations to those works which can be performed without subjecting the equipment and materials to adverse effects, during inclement weather conditions, like monsoon, storms etc. and during other unfavorable construction conditions. No field activities shall be performed by the contractor under conditions which might adversely affect quality and efficiency thereof, unless special precautions or measures are taken by the contractor in a proper and satisfactory manner in performance of such works and with concurrence of the engineer. Such unfavorable construction conditions will in no way relieve the contractor of his responsibility to perform works as per the schedule.

#### **4.2.29 PROTECTION OF MONUMENTS AND REFERENCE POINTS**

The contractor shall ensure that any finds such as relic, antiquity, coins, fossils etc. which he might come across during the course of performance of his works either during excavation or elsewhere, are properly protected and handed over to the engineer. Similarly the contractor shall ensure that the bench marks, reference points, etc. which are marked out either with the help of engineer or by the engineer shall not be disturbed in any way during the performance of his works. If any work is to be performed which disturb such references, the same shall be done only after these are transferred to other suitable locations under the direction of the engineer. The contractor shall provide all necessary materials and assistance for such relocation of reference points etc.

#### **4.2.30 WORK AND SAFETY REGULATIONS**

4.2.30.1 The contractor shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or the Company or to others, working at or near the site. The contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislation and the Engineer-in-charge as he may deem necessary.

4.2.30.2 The contractor will notify well in advance to the Engineer-in-charge of his intention to bring to the site any container filled with liquid or gaseous fuel or explosive or petroleum substance or such chemicals which may involve hazards. The Engineer-in-charge shall have the right to prescribe the conditions, under which such container is to be stored, handled and used during the performance of the works and the contractor shall strictly adhere to and comply with such instructions. The Engineer-in-charge shall have the right at his sole discretion to inspect any such container or such construction plant/equipment for which material in the container is required to be used and if in his opinion, its use is not safe, he may forbid its use. No claim due to such prohibition shall be entertained by the owner. Nor the owner shall entertain any claim of the contractor towards additional safety provisions/conditions to be provided or constructed as per Engineer-in-charge's instructions.

Further any such decision of Engineer-in-charge shall not, in any way, absolve the contractor of his responsibilities, and in case, use of such a container or entry there of into the site area is forbidden by Engineer-in-charge, the contractor shall use alternative methods with the approval of Engineer-in-charge without any cost implication to Company or extension of work schedule.

4.2.30.3 Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosives, the contractor shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulations laid down in Petroleum Act 1934, Explosives Act 1948, and Petroleum and Carbide of Calcium Manual Published by the Chief Inspector of Explosives of India. All such storage shall have prior approval of the Engineer-in-charge. In case, any approvals are necessary from the Chief Inspector (Explosives) or any statutory authorities, the contractor shall be responsible for obtaining the same.

4.2.30.4 All equipment used in development and construction purpose by contractor shall meet Indian, Inter-national Standards and where such standards do not exist, the contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the contractor in accordance with manufacturer's operation manual and safety instructions and per Guidelines/ Rules of the Company in this regard. Provisions of Coal mine regulations and related circulars must be satisfied in this regard. Any other law, for the time being in force, connected with coal mining operation should be strictly adhered to.

4.2.30.5 Periodical Examinations and all tests for all lifting/hoisting equipment and tackles shall be carried out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 2001 and associated Laws/Rules enforced from time to time. A register of such examination and tests shall be properly maintained by the contractor and will be promptly produced as and when desired by Engineer-in-charge or by the person authorised by him.

4.2.30.6 The contractor shall be fully responsible for the safe storage of his and his sub-contractors radio-active sources, if any, in accordance with BARC/DAE Rules and other applicable provisions. All precautionary measures stipulated by BARC/DAE in connection with use, storage and handling of such material will be taken by contractor.

4.2.30.7 The contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need or as may be directed by Engineer-in-charge who will also have right to examine these safety equipment to determine their suitability, reliability, acceptability and adaptability.

4.2.30.8 Where explosives are to be used, the same shall be used under the direct control and supervision of an expert, experienced, qualified and competent person strictly in accordance with the code practices/rules framed under Indian Explosives Act pertaining to handling, storage and use of the explosives.

4.2.30.9 The contractor shall provide safe working conditions to all workmen and employees at the site including safe means of access, railings, stairs, ladders, scaffoldings etc. The scaffoldings, stairs, ladders etc. shall be erected under the control and supervision of an experienced and competent person. For erection, good and standard quality of material only shall be used by the contractor.

4.2.30.10 The contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the owner or other contractors under any circumstances, whatsoever, unless expressly permitted in writing by the Company to handle such fuses, wiring or electrical equipment.

4.2.30.11 Before the contractor connects any electrical appliances to any plug or socket belonging to the other contractor or owner, he shall:

- a. Satisfy the Engineer-in-charge that the appliances is in good working condition.
- b. Inform the Engineer-in-charge of the maximum current rating, voltage and phases of the appliances.
- c. Obtain permission of the Engineer-in-charge detailing the sockets / bus bars to which the appliances may be connected.

4.2.30.12 The Engineer-in-charge will not grant permission to connect until he is satisfied that:

- a. The appliance is in good condition and is fitted with a suitable plug.
- b. The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.

4.2.30.13 No electrical cable which is in use by the contractor/owner will be disturbed without prior permission. No weight of any amount will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.

4.2.30.14 No repair work shall be carried out on any live equipment. The equipment must be declared safe by Engineer-in-charge and a permit to work shall be issued by Engineer-in-charge before any repair work is carried out by the contractor. While working on electric lines/equipments, whether alive or dead, suitable type and sufficient quantity of tools will have to be provided by contractor to electricians/workmen/officers.

4.2.30.15 The contractor shall employ necessary number of qualified, full time electricians/electrical supervisors to maintain electrical installations.

4.2.30.16 The contractor employing more than 250 workmen whether temporary, casual, probationer, regular or permanent or on contract, shall employ at least one full time officer exclusively as safety officer to supervise safety aspects of the equipment and workmen who will co-ordinate with the project safety officer. In case of work being carried out through sub-contractor's, the sub-contractor's workmen/employees will also be considered as the contractor's employees/workmen for above purpose. The name and address of such safety officer of contractor will be promptly informed in writing to Engineer-in-charge with a copy to safety officer-in-charge before he starts work or immediately after any change of the incumbent is made during currency of the contract.

4.2.30.17 In case any accident occurs during the construction/erection or other associated activities undertaken by the contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the contractor to promptly inform the same to the company's Engineer-in-charge in prescribed form and also to all the authorities envisaged under the applicable laws.

4.2.30.18 The Engineer-in-charge shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/or property, and/or equipment. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove short comings promptly. The contractor after stopping the specific work, can, if felt necessary, appeal against the order of stoppage of work to the General Manager of the project within 3 days of such stoppage of work and decision of the project G.M. in this respect shall be conclusive and binding on the contractor.

4.2.30.19 The contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in clause 4.2.30.18 above and the period of such stoppage of work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.

4.2.30.20 The contractor shall follow and comply with all the Company safety rules relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without demur, protest or content or reservation. In case of any inconformity between statutory requirement and the Company safety rules referred above, the later shall be binding on the contractor unless the statutory provisions are more stringent.

4.2.30.21 If the contractor fails in providing safe working environment as per the Company safety rules or continues the work even after being instructed to stop work by Engineer-in-charge as provided in clause 4.2.30.18 above, the contractor shall promptly pay to the Company, on demand i.e. by the owner compensation at the rate of Rs. 5,000/- per day or part there of till the instructions are complied with and so certified by the Engineer-in-charge. However in case of accident taking place causing injury to any individual, the provisions contained in clause 4.2.30.22 shall also apply in addition to compensation mentioned in this clause.

4.2.30.22 If the contractor does not take all safety precautions and/or fails to comply with the safety rules as prescribed by the Company or under the applicable laws for the safety of the equipment and plant and for the safety of personnel and the contractor does not prevent hazardous conditions which cause injury to his own employees or employees of other contractors, or the Company employees or any other person who are at site or adjacent thereto, the contractor shall be responsible for payment of compensation under the relevant provisions of the workmen's compensation act and rules framed thereunder or any other applicable laws as applicable from time to time.

Permanent disablement shall have same meaning as indicated in workmen's compensation act. The compensation mentioned above shall be in addition to the compensation payable to the workmen / employees under the relevant provision of the workmen's compensation act and rules framed thereunder or any other applicable laws as applicable from time to time.

In case the owner is made to pay such compensation then the contractor is liable to reimburse the owner such amount.

#### **4.2.31 CODE REQUIREMENTS**

The erection requirements and procedures to be followed during the installation of the equipment shall be in accordance with the relevant Codes/ Regulations. ASME codes and accepted good engineering practice, the engineer's drawings and other applicable Indian recognized codes and the laws and regulations of the Government of India.

#### **4.2.32 FOUNDATION DRESSING AND GROUTING**

4.2.32.1 The surfaces of foundations shall be dressed to bring the top surface of the foundations to the required level, prior to placement of equipment/ equipment bases on the foundations.

4.2.32.2 All the equipment bases and structural steel base plates shall be grouted and finished as per these specifications unless otherwise recommended by the equipment manufacturer.

4.2.32.3 The concrete foundation surfaces shall be properly prepared by chipping, grinding as required to bring the type of such foundation to the required level, to provide the necessary roughness for bondage and to assure enough bearing strength. All laitance and surface film shall be removed and cleaned.

#### **4.2.33 GROUTING MIX**

The grouting mixtures shall be composed of Portland cement, sand and water. The Portland cement to be used shall conform to ISI No. 269 or equivalent, sand shall conform to ISI No. 383/ 2386 or equivalent. The grout proportions for flat based where the grouting space does not exceed 35 mm shall be 50 kg bag of cement to 75 kg of sand. Only the required quantity of water shall be added so as to make the mix quaky and flowable and the mix shall not show excess water on top when it is being puddle in place. For thicker grout beds upto 65 mm, the amount of sand shall be increased to 105 kg per bag of cement. Bases which are hollow and are to be filed full of grouting shall be filled to a level of 25 mm above the outside rim with a mortar mix in the volumetric proportions of one bag of cement and 1.5 bags sand and 1.5 part 6 mm granite gravel. An acceptable plasticiser may be added to the grout mixes in a proportion recommended by the plasticisers manufacturer. All such grouts shall be thoroughly mixed for not less than five minutes in an approved mechanical mixer and shall be used immediately after mixing.

##### **4.2.33.1 PLACING OF GROUT**

After the base has been prepared, its alignment and level has been checked and approved and before actually placing the grout a low dam shall be set around the base at a distance that will permit pouring and manipulation of the grout. The height of such dam shall be at least 25 mm above the bottom of the base. Suitable size and number of chains shall be introduced under the



base before placing the grout, so that such chains can be moved back and forth to push the grout into every part of the space under the base.

The grout shall be poured either through grout holes if provided or shall be poured at one side or at two adjacent sides giving it a pressure head to make the grout move in a solid mass under the base and out in the opposite side. Pouring shall be continued until the entire space below the base is thoroughly filled and the grout stands at least 25 mm higher all around than the bottom of the base. Enough care should be taken to avoid any air or water pockets beneath the bases.

#### 4.2.33.2 FINISHING OF THE EDGES OF THE GROUT

The poured grout should be allowed to stand undisturbed until it is well set. Immediately thereafter, the dam shall be removed and grout which extends beyond the edges of the structural or equipment base plates shall be cut off flush and removed. The edges of the grout shall then be pointed and finished with 1:2 cement mortar pressed firmly to bond with the body of the grout and smoothed with a tool to present a smooth vertical surface. The work shall be done in a clean and scientific manner and the adjacent floor spaces, exposed edges of the foundations, and structural steel and equipment base plates shall be thoroughly cleaned of any spillage of the grout.

#### 4.2.33.3 CHECKING OF EQUIPMENT AFTER GROUTING

After the grout is set and cured, the contractor shall check and verify the alignment of equipment, alignment of shafts of rotating machinery, the slopes of all bearing pedestals, centering of rotors with respect to their sealing bores, couplings, etc. as applicable and the like items to ensure that no displacement had taken place during grouting. The values recorded prior to grouting shall be used during such post grouting check-up and verifications. Such pre and post grout records of alignment details shall be maintained by the contractor in a manner acceptable to the engineer.

#### 4.2.34 SHAFT ALIGNMENTS

All the shafts of rotating equipment shall be properly aligned to those of the matching equipment to as perfect accuracy as practicable. The equipment shall be free from excessive vibration so as to avoid over-heating of bearings or other conditions which may tend to shorten the life of the

equipment. All bearings, shafts and other rotating parts shall be thoroughly cleaned and suitably lubricated before starting.

#### **4.2.35 DOWELLING**

All the motors and other equipment shall be suitably doweled after alignment of shafts with tapered machined dowels as per the direction of the engineer.

#### **4.2.36 CHECK OUT OF CONTROL SYSTEMS/ POWER SUPPLY**

After completion of wiring, cabling, the contractor shall check out the operation of all control systems for the equipment furnished and installed under these specifications and documents. The contractor shall get the drawings pertaining to the control system, power supply etc. approved from Directorate General of Mine Safety (DGMS) or any other appropriate authority as necessary, wherever required as per the rules and regulations of the Indian Mines Act governed by D.G.M.S.

#### **4.2.37 COMMISSIONING SPARES**

The contractor shall make arrangement for an adequate inventory at site of necessary commissioning spares prior to commissioning of the equipment furnished and erected so that any damage or loss during these commissioning activities necessitating the requirements of spares will not come in the way of timely completion of the works under the contract.

#### **4.2.38 CABLING**

4.2.38.1 All cables shall be supported by conduits or cable tray run in air or in cable channels. These shall be installed in exposed runs parallel or perpendicular to dominant surfaces with right angle turn made of symmetrical bends or fittings. When cables are run on cable trays, they shall be clamped at a minimum interval of 2000 mm or otherwise as directed by the engineer.

4.2.38.2 Each cable, whether power or control, shall be provided with a metallic or plastic sheath of an approved type, bearing a cable reference number indicated in the cable and conduit list (prepared by the contractor) at every 5 m run or part there of and at both ends or the cable adjacent to the terminations. Cable routing is to be done in such a way that cables are accessible for any maintenance and for easy identification.

4.2.38.3 Sharp bending and kinking of cables shall be avoided. The minimum radii for PVC insulated cables 1100 V grade shall be  $15D$ , where  $D$  is the over all diameter of the cable. Installation of other cables like high voltage, coaxial, screened, compensating, mineral insulated shall be in accordance with the cable manufacturer's recommendations. Wherever cables cross roads and water, oil, sewage or gas lines, special care should be taken for the protection of the cables in designing the cable channels.

4.2.38.4 In each cable run some extra length shall be kept at a suitable point to enable one to two straight through joints to be made should the cable develop fault at a later date.

4.2.38.5 Control cable terminations shall be made in accordance with wiring diagrams, using identifying codes subject to engineer's approval. Multi-core control cable jackets shall be removed as required to train and terminate the conductors. The cable jacket shall be left on the cable, as far as possible, to the point of the first conductor branch. The insulated conductors from which the jacket is removed shall be neatly twined in bundles and terminated. The bundles shall be firmly but not tightly tied utilizing plastic or nylon ties or specially treated fungus protected cord made for this purpose. Control cable conductor insulation shall be securely and evenly cut.

4.2.38.6 The connectors for control cables shall be covered with a transport insulating sleeve so as to prevent from accidental ground fault or short circuiting between the adjacent terminals and shall preferably terminate at the terminals and washers. The insulating sleeve shall be fire resistant and shall be long enough to over-pass the conductor insulation. All control cables shall be fanned out and connection made to terminal blocks and test equipment for proper operation before cables are corded together.

#### **4.2.39 INSTRUCTION MANUALS**

The contractor shall submit to the owner, preliminary instruction manuals for all the, P&M covered under the contract within the time agreed upon between the owner & the contractor. The final instruction manuals complete in all respects shall be submitted by the contractor thirty (30) days before the first shipment of the equipment. The instruction manuals shall contain full details and drawings of all the equipment furnished, the installation procedures, testing procedures, operation and maintenance procedures of the equipment. Six copies of instruction manuals shall be submitted.

The contractor shall furnish to the owner, six (6) sets of spare parts catalogue.

#### **4.2.40 REFERENCE STANDARDS**

4.2.40.1 The codes and/or standards referred to in these specifications shall govern, in all cases wherever such references are made. In case of a conflict between such codes and/or standards and the specifications, the latter shall govern. Such codes and/or standards referred to shall mean the latest revisions, amendments/changes adopted and published by the relevant agencies. In case of any further conflict in this matter, the same shall be referred to the engineer whose decision shall be final and binding.

4.2.40.2 Other internationally acceptable standards, which ensure equal or higher performance than those specified shall also be accepted.

#### **4.2.41 DESIGN IMPROVEMENT**

4.2.41.1 The engineer or the contractor may propose changes in the specification of the equipment or quality thereof and if the parties agree upon any such changes the specifications shall be modified accordingly.

4.2.41.2 If any such agreed upon change is such that it affects the price and schedule of completion, the parties shall agree in writing as to the extent of any change in the price and/or schedule of completion before the contractor proceeds with the change. Following such agreement the provision thereof, shall be deemed to have been amended accordingly.

#### **4.2.42 QUALITY ASSURANCE**

##### **4.2.42.1 Quality Assurance Programme**

To ensure that the equipment and services under the scope of the contract whether manufactured or performed within the contractor's works or at his sub-contractor's premises or at the owner's site or at any other place of work are in accordance with the specifications, the contractor shall adopt suitable quality assurance programme to control such activities at all points necessary. Such programme shall be outlined by the contractor and shall be finally accepted by the Engineer after discussions before the issue of letter of acceptance of tender. A quality assurance programme of the contractor shall generally cover the following:

a. his organisation structure for the management and implementation of the proposed quality assurance programme:

- b. documentation control system:
- c. qualification data for bidder's key personnel:
- d. the procedure for purchase of materials, parts components and selection of sub-contractor's services including vendor analysis, source inspection, incoming raw-materials inspection, verification of materials purchased etc.:
- e. system for shop manufacturing and site installation control including process control and fabrication and assembly controls:
- f. control of non-conforming items and system for corrective actions:
- g. inspection and test procedure both for manufacture and field activities:
- h. control of calibration and testing of measuring and testing equipment:
- i. system for indication and appraisal of inspection status:
- j. system for quality audits:
- k. systems for authorizing release of manufactured product to the owner:
- l. system for maintenance of records:
- m. system for handling storage and delivery: and
- n. a quality plan detailing out the specific quality control procedure adopted for controlling the quality characteristics relevant to each item of equipment furnished and each work at different stages executed at work site.

#### 4.2.42.2 Quality Assurance Documents

The contractor shall be required to submit the following Quality Assurance Documents within three weeks after despatch of the equipment:

- i) all non-destructive examination procedures stress relief and weld repair procedure actually used during fabrication.
- ii) welder and welding operator qualification certificates

- iii) welder identification list, listing welder's and welding operator's qualification procedure and welding identification symbols.
- iv) material mill test reports on components
- v) the inspection plan with verification, inspection plan check points, verification sketches, if used, and methods used to verify that the inspection and testing points in the inspection plan were performed satisfactorily.
- vi) sketches and drawings used for indicating the method of traceability of the radiographs to the location on the equipment.
- vii) all non-destructive examination result reports including radiography interpretation reports.
- viii) stress relief time temperature charts.
- ix) factory test results for testing required as per applicable codes and standards.
- x) the engineer or his duly authorized representative reserves the right to carry out quality audit and quality surveillance of the systems and procedures of the contractor /his vendor's quality management and control activities.

#### **4.2.43 ENGINEER'S SUPERVISION**

4.2.43.1 To eliminate delays and avoid disputes and litigation it is agreed between the parties to the contract that all matters and questions shall be referred to the engineer or dispute resolution committee (DRC) as the case may be and their decision shall be final.

4.2.43.2 The work shall be performed under the direction and supervision of the engineer. The scope of the duties of the engineer, pursuant to the contract, will include but not be limited to the following:

- a) Interpretation of all the terms and conditions of these documents and specification.
- b) Review and interpretation of all the contractor's drawings, engineering data etc.
- c) Witness or authorize his representative to witness tests and trials either at the manufacture's works or at site, or at any place where work is performed under the contract.
- d) Inspect, accept or reject any equipment, material and work under the contract.

- e) Issue certificate of acceptance and/or progressive payment and final payment certificates.
- f) Review and suggest modifications and suggestions in completion schedules from time to time.
- g) Supervise the quality assurance programme implementation at all stages of the works.
- h) To receive and endorse the despatch documents enabling the contractor to clear the consignments.

#### **4.2.44 INSPECTION, TESTING AND INSPECTION CERTIFICATE**

4.2.44.1 The engineer, his duly authorised representative and /or outside inspection agency acting on behalf of the owner shall have at all reasonable times, access to the contractor's premises or works and shall have the power after a reasonable notice period of 2 days for inspection at local works/locations and 7 days for foreign works/locations except for surprise inspection, if required, to inspect and examine the materials and workmanship of the works during its manufacture or installation and if part of the works is being manufactured or assembled at other premises or works, the contractor shall obtain permission for the engineer to inspect as if the works were manufactured or assembled on the contractor's own premises or works.

4.2.44.2 The contractor shall give the Engineer/ Inspector fifteen (15) days written notice of any material being ready for testing. Such tests shall be to the contractor's account except for the expenses of the Inspector. The Engineer/ Inspector, unless witnessing of the tests is waived, will attend such tests within fifteen (15) days of the date on which the equipment is notified as being ready for test/inspection, failing which the contractor may proceed with the test which shall be deemed to have been made in the Engineer/ Inspector's presence and he shall forthwith forward to the Inspector duly certified copies of tests in triplicate.

4.2.44.3 The Engineer or Inspector shall within fifteen (15) days from the date of inspection as defined herein give notice in writing to the contractor, of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the contract. The contractor shall give due consideration to such objections and shall either make the modifications that may be necessary to meet the said objections or shall confirm in writing to the Engineer/Inspector giving reasons therein, that no modifications are necessary to comply with the contract.

4.2.44.4 When the factory tests have been completed at the contractor's or sub-contractor's works, the Engineer/Inspector shall issue a certificate to this effect within fifteen (15) days after completion of tests but if the tests are not witnessed by the Engineer/inspector, the certificate shall be issued within fifteen (15) days of the receipt of the contractor's test certificate by the Engineer/Inspector. Failure of the Engineer/Inspector to issue such a certificate shall not prevent the contractor from proceeding with the works. The completion of these tests or the issue of the certificate shall not bind the owner to accept the equipment should it on further tests after installation be found not to comply with the contract.

4.2.44.5 In all cases where the contract provides for tests whether at the premises or works of the contractor or of any sub-contractor, the contractor, except where otherwise specified, shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the Engineer/inspector or his duly authorized representative to carry out effectively such tests of the equipment in accordance with the contract and shall give facilities to the Engineer/inspector or his duly authorized representative to accomplish testing.

4.2.44.6 The inspection by Engineer and issue of Inspection Certificate thereon shall in no way limit the liabilities and responsibilities of the contractor in respect of the agreed quality assurance programme forming a part of the contract.

#### **4.2.45 TEST**

##### **4.2.45.1 Start-up**

i) On completion of installation of the equipment and before start-up, each item of the equipment shall be thoroughly cleaned and then inspected jointly by the Engineer and the contractor for correctness and completeness of installation and acceptability of start-up, leading to initial pre-commissioning tests at site. The list of pre-commissioning tests to be performed shall be as mutually agreed and included in the contractor's quality assurance programme. The contractor shall be responsible for carrying out all the pre-commissioning tests. Employer shall be given Notice of three (3) days, for witnessing of Pre-commissioning tests to be carried out by the contractor.

ii) The contractor shall be responsible for carrying out all the pre-commissioning tests. On completion of inspection, checking and after the pre-commissioning tests are satisfactorily over, the complete equipment shall be placed on initial operation during which period the complete



equipment shall be operated integral with sub-systems and supporting equipment as a complete plant referred hereinafter as plant.

#### 4.2.45.2 Trial Operation

i) The plant shall then be on trial operation during which period all necessary adjustments shall be made while operating over the full-load range enabling the plant to be made ready for performance and guarantee tests. Employer shall be given Notice of three (3) days, for witnessing of Trial Operation to be carried out by the contractor.

ii) The duration of trial operation of the complete equipment shall be fourteen (14) days out of which at least seventy two (72) hours shall be continuous operation on full load or any other duration as may be agreed to, between the engineer and the contractor. The trial operation shall be considered successful, provided that each item of the equipment can operate continuously at the specified operating characteristics, for the period of trial operation. For any failure, trial run should be repeated.

iii) For the period of trial operation, the time of operation with any load shall be counted. Minor interruption not exceeding one (1) hours at a time, caused during the continuous operation shall not affect the total duration of trial operation. However, if in the opinion of the engineer, the interruption is long, the trial operation shall be prolonged for the period of interruption.

iv) A trial operation report comprising of observations and recordings of various parameters to be measured in respect of the above trial operation shall be prepared by the contractor. This report, besides recording the details of the various observations during trial run, shall also include the dates of start and finish of the trial operation and shall be signed by the representatives of both the parties. The report shall have sheets, recording all the details of interruptions occurred, adjustments made and any minor repairs done during the trial operation. Based on the observations, necessary modifications/repairs to the plant shall be carried out by the contractor to the full satisfaction of the engineer to enable the later to accord permission to carry out performance and guarantee tests on the plant. However, minor defects which do not endanger the safe operation of the equipment, shall not be considered as reasons for withholding the aforesaid permission.

#### 4.2.45.3 Performance and guarantee test

i) The final test as to the performance and guarantee shall be conducted at site, by the

Contractor to be witnessed by the Employer. Such tests will be commenced within a period of two (2) months after successful completion of trial operations. Any extension of time beyond the above two (2) months shall be mutually agreed upon. Employer shall be given Notice of three (3) days, for witnessing of Trial Operation to be carried out by the contractor.

ii) These tests shall be binding on both the parties of the contract to determine compliance of the equipment with the performance guarantees.

iii) The available instrumentation and control equipment will be used during such tests and the engineer will calibrate all such measuring equipment and devices as far as practicable. However, un-measurable parameters shall be taken into account in a reasonable manner by the engineer, for the equipment of these tests. The tests will be conducted at the specified load points and as near the specified cycle condition as practicable. The engineer will apply proper corrections in calculation, to take into account conditions which do not correspond to the specified conditions.

iv) Any special equipment, tools and tackles required for the successful completion of the performance and guarantee tests shall be provided by the contractor, free of cost.

v) The guaranteed performance figures of the equipment shall be proved by the contractor during these performance and guarantee tests. Should the results of these tests show any adverse deviation from the guaranteed values, the contractor shall modify the equipment as required to enable it to meet the guarantees. In such case, performance and guarantee tests shall be repeated within one month, from the date the equipment is ready for re-tests and all cost for modifications including labour, materials and the cost of additional testing to prove that the equipment meets the guarantees, shall be borne by the contractor. Duration of performance guarantee tests will be of one month of which six(6) days continuous on load operation is the minimum requirement and in case it fails, the process of performance guarantee tests will be repeated. The contractor will be given five chances within a span of three months, to establish the performance of his deliverable P&M during performance test. In case the equipment fails to meet the test requirement in five chances, the owner *shall have the right to reject* such equipment.

vi) The specific tests to be conducted on equipment should include those given in the

technical specifications.

vii) Performance and guarantee test shall make allowance for instrumentation errors, which shall be based on applicable internationally acceptable standards.

#### **4.2.46 TEST CODES**

The provisions outlined in the ASME performance test codes or other international and Indian approved equivalents shall generally be used as a guide for all the above test procedures.

#### **4.2.47 PACKING**

i) All the equipments shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at site till the time of installation. While packing all the materials, the limitations from the point of view of availability of railway wagon sizes in India should be taken into account. The contractor shall be fully responsible for any loss or damage during transportation, handling and storage due to improper packing.

#### **4.2.48 PROTECTION**

All coated surfaces shall be protected against abrasions, impact, discoloration and any other damages. All exposed threaded portions shall be suitably protected with either a metallic or a non-metallic protecting device. All ends of all valves and piping and conduit equipment connections shall be properly sealed with suitable devices to protect them from damage. The parts which are likely to get rusted, due to exposure to weather, should also be properly treated and protected in a suitable manner.

#### **4.2.49 PRESERVATIVE SHOP COATING**

4.2.49.1 All exposed metallic surfaces subject to corrosion shall be protected by shop application of suitable coatings. All surfaces which will not be easily accessible after the shop assembly, shall before hand be treated and protected for the life of the equipment. All surfaces shall be thoroughly cleaned of all mill scale, oxide and other coatings and prepared in the shop. The surfaces that are to be finish painted after installation or require corrosion protection until installation, shall be shop painted with at least two-coats of primer. Electrical equipments shall be shop finished with one or more coats of primer and two coats of high grade resistance enamel. The finished colours shall be as per manufacturer's standards to be selected by the engineer.

4.2.49.2 Shop primer for all steel surfaces which will be exposed to operating temperature below 95°C shall be selected by the contractor, after obtaining specific approval of the engineer

regarding the quality of primer proposed to be applied. Special high temperature primer shall be used on surfaces exposed to temperatures higher than 95<sup>0</sup>C and such primers shall also be subject to the approval of the engineer.

4.2.49.3 All other steel surfaces which are not to be painted shall be coated with suitable dust preventive compound subject to the approval of the engineer.

#### **4.2.50 PROTECTIVE GUARDS**

Suitable guards shall be provided for protection of personnel on all exposed rotating and/or moving machine parts. All such guards with accessories shall be designed for easy installation and removal for maintenance purposes.

#### **4.2.51 DESIGN CO-ORDINATION**

The contractor shall be responsible for the selection and design of appropriate equipment to provide the best coordinated performance of the entire system. The design of various components, sub-assemblies and assemblies shall be so done so that it facilitates easy field assembly and maintenance. All the rotating components shall be so selected that the natural frequency of the complete unit is not critical or close to the operating range of the unit.

#### **4.2.52 CO-ORDINATION MEETING**

The contractor will be called upon to attend co-ordination meetings with the engineer, other contractors and the consultants of the owner during the period of contract. The contractor shall attend such meetings at his own cost at the office of the G.M(P&P),BCCL,Koyla Bhawan, Dhanbador at mutually agreed venue as and when required and fully co-operate with such persons and agencies involved during those discussions.

#### **4.2.53 TOOLS AND TACKLES**

The contractor shall supply with the equipment two (2) complete sets of all special tools and tackles for the installation, assembly, dis-assembly and maintenance of the equipment. However, these tools and tackles shall be separately packed and brought on to site.

#### **4.2.54 NOISE LEVEL**

The equivalent “A” weighted sound level measured at a distance of 1.5 meters above floor level in elevation and one meter horizontally from the base of any equipment furnished and installed under these specifications, expressed in decibels to a reference of 0.0002 microbar, shall not exceed 85 dBA.

#### **4.2.55 TAKING OVER /CLEARANCE CERTIFICATE OF P&M**

Upon successful completion of all the tests to be performed at site on equipment furnished and installed by the contractor, and after trial run and commissioning, the engineer shall issue to the contractor a clearance certificate of the P&M to facilitate the payment for the equipment. Such certificate shall not relieve the contractor of any of his obligations as per the terms and conditions of the contract to operate and maintain the P&M to produce guaranteed quantity of coal. The final takeover date will be on taking over the mine and associated infrastructure as well as P&M after successful completion of commercial production period of 9 years and a certificate to that effect will be issued by the Engineer.

#### **4.2.56 INDIAN STANDARDS**

Normally Indian Standards as published by BUREAU OF INDIAN STANDARDS shall be followed. Wherever relevant Indian Standard is not published by the BIS, International Standards or American Standard or German Standard or British Standard as decided by the Engineer in consultations with the consultants employed by the owner, shall be followed.

#### **4.2.57 WELDING**

If the manufacturer has special requirements relating to the welding procedures for welds at the terminals of the equipment to be procured by the owner under separate specifications, the requirements shall be submitted to the engineer in advance of commencement of installation work.

#### **4.2.58 LUBRICATION**

Equipment shall be lubricated by systems designed for continuous operation. Lubricant level indicators shall be furnished and marked to indicate proper levels under both standstill and operating conditions.

#### **4.2.59 EQUIPMENT BASES**

A cast iron or welded steel base plate shall be provided for all rotating equipment which is to be installed on a concrete/structural steel base unless otherwise agreed to by the engineer. Each base plate shall be of proper design to support the unit and/or its drive. There should be provisions for proper anchoring and pads. Base plate shall have a raised lip all around and shall have proper drain connection.

#### **4.2.60 RATING PLATES, NAME PLATES AND LABELS**

4.2.60.1 Each main and auxiliary items of plant is to have permanently attached to it in a conspicuous position a rating plate of non-corrosive material upon which is to be engraved the manufacturer's name, equipment, type or serial number, together with details of the loading conditions etc. under which the item of plant in question have been designed to operate, and such diagram plates as may be required by the engineer.

4.2.60.2 Each item of plant is to be provided with a nameplate or label designating the service of the particular equipment. The inscriptions are to be approved by the engineer.

4.2.60.3 Such nameplates or labels are preferably to be of white non-hygroscopic material with engraved black lettering or, alternatively, in the case of indoor circuit breakers, starters etc. of transparent plastic material with suitably coloured lettering engraved on the back.

4.2.60.4 Items of plant, which are subject to handling, are to be provided preferably with an engraved chromium plated nameplate or level with engraving filled with enamel.

4.2.60.5 All such name plates, instruction plates, lubrication charts etc. shall be bilingual with Hindi inscription first, followed by English. Alternatively two separate plates one with Hindi and the other with English inscriptions may be provided.

#### **4.2.61 COLOUR CODE FOR PIPE SERVICES**

All pipe services wherever applicable are to be painted in accordance with the owner's standard colour scheme, if any, by the contractor.

### **4.3 SPECIAL TERMS AND CONDITIONS**

(Mine/ block specific information about status of exploration, available infrastructure, availability of land, status of available reports, location of coal delivery point, electricity point, water

resources, etc. will be provided by the employer)

#### 4.3.1 STATUS OF EXPLORATION

The status of exploration of the project is as below :

Total Area : 6.4 Sq. Km.

No. of Boreholes : 23 (MECL) + 22 (NCDC) + 05 (GSI)  
= 50 Bhs

- i) 15,116.00 m in 23 BHs by MECL (KP Series)
- ii) 15,215.00 m in 22 BHs by NCDC (NCDC Series)
- iii) 4,470.93 m in 5 BHs GSI (JKP-1, 3A,5,6 & 7)

Average Density of BH : 8 BH/Sq.Km.

#### 4.3.2 AVAILABLE INFRASTRUCTURE

At present entire Kapuria Block is virgin and there is no infrastructure available at the project site.

#### 4.3.3 AVAILABILITY OF LAND

The mining lease is proposed to be acquired under CBA (Acquisition and Development) Act 1957 and notification under Section 9 was published and being pursued further for :

Mining Right for 748.85 Ha. and all right for 60.75 Ha.

#### 4.3.4 STATUS OF AVAILABLE REPORTS

A Conceptual Report for Exploitation of Kapuria UG Block, prepared by CMPDI, RI-II in February, 2006 and submitted to Bharat Coking Coal Limited is available.

#### 4.3.5 LOCATION OF COAL DELIVERY POINTS, ELECTRICITY POINT, WATER RESOURCES ETC.

##### COAL DELIVERY POINT

On surface, at discharge point of CHP to be constructed by bidder.

##### ELECTRICITY POINT

The nearest power point is available at 132KV/33KV at Pootki sub-station.

##### WATER RESOURCES

Katri and Khudia Jores pass through the property. Water from these jores may be utilized for the project after suitable treatment of the same. Additionally, pumping water from the mine workings at later stage may also be used after suitable treatment at the surface.

## 5.0 MINE PROFILE

### 5.1 GENERAL MINE INFORMATION

#### MINE / PROJECT

Kapuria geological Block, covering an area of about 6.4 Sq.Km is located in north-central part of Jharia Coalfield. It is included in the Survey of India Toposheet No. 731/586. Geographically, the block is bounded as follows :

North: Bhelatand Colliery in the east and Malkera Colliery in the west (TISCO).  
 East : Western edge of Jarian Nala (Moonidih).  
 South: Underground position of fault F1-F1 in seam XV.  
 West: Eastern edge of Khudia Nala.

The southern boundary of the block has been kept at underground position of major fault F1-F1 in XV seam for the purpose of exploration. However, the area south of this fault is unexplored and has not been included in any exploration block. It is therefore, considered that the southern boundary of this block should be kept upto Moonidih siding line for the purpose of surface rights.

The area is well connected by road and rail. The district town Dhanbad is about 15 Kms South-east of the block.

#### BLOCK LOCATION

Kapuria Block is situated in Dhanbad district of Jharkhand. At present no mining activity exists and the block is completely virgin. The nearest railway station is Dhanbad Junction of East Central Railway, which is about 15 kms away from block. The block is bounded by:

Latitude : 23°44'30" N to 23°46'25" N,  
 Longitude : 86°16'50" E to 86°19'55" E,

#### ACCESSIBILITY

|                         |   |                          |
|-------------------------|---|--------------------------|
| Nearest Airport         | : | Ranchi (about 165 Kms)   |
| Nearest Railway Station | : | Dhanbad (15 Kms)         |
| Approach by Road        | : | Dhanbad-Ranchi (NH-32)   |
| Nearest Seaport         | : | Kolkata (about 290 Kms.) |

#### COMMUNICATION



Dhanbad-Ranchi (NH-32) passes across the property. The block can be approached through this road.

### **MINING BLOCK**

Kapuria Block is identified as underground block-20 of Jharia Reconstruction plan which covers an area of about 6.4 Sq.Km

### **MINING LEASE**

The mining lease is proposed to be acquired under CBA (Acquisition and Development) Act 1957 and notification under Section 9 was published and being pursued further for :

**Mining Right for 748.85 Ha.** and all right for 60.75 Ha.

### **STATUS OF PROJECT APPROVAL**

A Conceptual Report for Exploitation of Kapuria UG Block was prepared by CMPDI, RI-II in February, 2006 and submitted to Bharat Coking Coal Limited. The BCCL Board has approved the proposal and sent the same to CIL for mining the property through a joint venture with SAIL.

### **LAND ACQUISITION STATUS**

The mining lease is proposed to be acquired under CBA (Acquisition and Development) Act 1957 and notification under Section 9 was published and being pursued further for :

Mining Right for 748.85 Ha. and **all right for 60.75 Ha.**

### **CLIMATE**

The coalfield lies in the sub-humid belt of Jharkhand and the climate is extreme in the region. The overall temperature during the summer (April to mid June) rises upto 44<sup>0</sup> C while during winter (late November to February) the temperature drop below 10<sup>0</sup> C. The average annual rain fall of the area is about 1380 mm with maximum precipitation during June to October.

### **TOPOGRAPHY AND DRAINAGE**

The area, in general, presents a flat to undulating topography. The Katri Nala, which joins Damodar river in the south, together with its two tributaries, Khudia and bansjora, constitutes the main drainage Channel in the area. Large part of Khudia and Katri Nalas flow across the strike of the formation.

## 5.2 GEOLOGY

### GEOLOGICAL BOUNDARY OF THE MINE / PROJECT

Geographically, the block is bounded as follows :

- North: Bhelatand Colliery in the east and Malkera Colliery in the west (TISCO).  
 East : Western edge of Jarian Nala (Moonidih).  
 South: Underground position of fault F1-F1 in seam XV.  
 West: Eastern edge of Khudia Nala.

### DRILLING DETAILS

- Total Area : 6.4 Sq. Km.
- No. of Boreholes : 23 (MECL) + 22 (NCDC) + 05 (GSI)  
 = 50 Bhs
- i) 15,116.00 m in 23 BHs by MECL (KP Series)
  - ii) 15,215.00 m in 22 BHs by NCDC (NCDC Series)
  - iii) 4,470.93 m in 5 BHs GSI (JKP-1, 3A,5,6 & 7)

Average Density of BH : 8 BH/Sq.Km.

However, additional drilling have been proposed and drilling is in progress for supplementing Geological Information.

### GEOLOGY OF THE COAL FIELD

Kapuria Block (Assessment area – 6.4 Sq.Km is part of Jharia Coalfield (453 Sq.Km) which is one of the major coalfield of Damodar Valley Coal belt. The Coalfield is sickle shaped syncline with an E-W alignment. Rocks of Talchir Formation are exposed almost all along the northern, north-western and western boundaries of the basin and lie uncomfortably over the Archean Basement. In the central part of the basin Barren Measures and Raniganj Formation are deposited.

### GEOLOGY OF THE MINING BLOCK

Kapuria exploration block located in the north-central part of the Jharia Coalfield occupies by rocks of Barren Measure Formation which overlie the coal bearing Barakars of Gondwana Super Group and Post Gondwana intrusives, apart from soil and alluvium of recent era. The area is mostly under soil cover and good rock exposures are rare. Most of the outcrops,

wherever exposed, are sandstone and arenaceous shales. Prominent outcrops are noticed along Khudia, Katri and Jarian Nalas.

The generalized stratigraphic sequence of rock formations in Kapuria block is given below.

### GEOLOGICAL SUCCESSION IN KAPURIA BLOCK

| Recent/Sub-recent |       | Unconformity |        | Soil / Alluvium  |
|-------------------|-------|--------------|--------|--|
| Post Gondwana     | Super | Lower        | Damuda | Basic<br>Intrusives<br>Barren<br>Measures<br>Formation<br>Barakar<br>Formation<br>Talchir<br>Formation |
| Gondwana Group    |       | Gondwana     | Group  |  |
|                   |       | Unconformity |        |  |
| Metamorphics      |       |              |        |  |

#### Dip and strike

The general strike of the area is WNW-ESE which gradually changes to NW-SE towards the SE part of the block. The beds dip gently at 5° to 12° towards SSW which turn SW in the eastern part of the block. The dip appears to have steepened at depth. However in case of fault zones, the dips are as high as 50°.

#### Incrop / Outcrop of coal seam(s)

All the workable seams proposed for mining in the project are deep seated and hence not outcropping within project boundary.

**Coal seam(s)**

The generalised sequence and thickness of existing coal seam(s) and intervening partings in descending order are shown in the table below.

| Seam/<br>Parting | Depth<br>Range of<br>seam (m) | Thickness<br>Range (m) | Quality/<br>Grade of<br>seam |
|------------------|-------------------------------|------------------------|------------------------------|
| L-14             |                               | 0.05-0.56              |                              |
| Parting          |                               | 15.27-35.73            |                              |
| L-13             |                               | 0.04-1.62              |                              |
| Parting          |                               | 25.10-47.72            |                              |
| L-12             |                               | 0.50-1.55              |                              |
| Parting          |                               | 13.76-29.81            |                              |
| L-11             |                               | 0.07-1.17              |                              |
| Parting          |                               | 12.49-32.14            |                              |
| XVIIID           |                               | 0.15-1.18              |                              |
| Parting          |                               | 5.37-14.53             |                              |
| KPL-5            |                               | 0.08-1.29              |                              |
| Parting          |                               | 6.24-15.12             |                              |
| XVIIIC           |                               | 0.08-1.06              |                              |
| Parting          |                               | 4.51-11.50             |                              |
| KPL-4            |                               | 0.05-0.89              |                              |
| Parting          |                               | 2.51-20.19             |                              |
| XVIIIB           |                               | 0.03-0.54              |                              |
| Parting          |                               | 0.82-9.12              |                              |
| XVIIIA           | 235-480                       | 0.53-3.74              | ST-I to W-II                 |
| Parting          |                               | 2.08-7.30              |                              |
| KPL-3            |                               | 0.09-0.87              |                              |
| Parting          |                               | 1.80-11.97             |                              |
| XVIII            |                               | 0.15-1.60              |                              |
| Parting          |                               | 18.18-31.35            |                              |
| KPL-2            |                               | 0.04-0.80              |                              |
| Parting          |                               | 4.96-17.62             |                              |
| L-10             |                               | 0.10-2.07              |                              |
| Parting          |                               | 9.20-17.73             |                              |
| L-9              |                               | 0.05-0.58              |                              |
| Parting          |                               | 8.13-26.81             |                              |
| XVIIA            |                               | 0.06-1.60              |                              |
| Parting          |                               | 8.26-34.19             |                              |
| L-8              |                               | 0.09-1.05              |                              |
| Parting          |                               | 14.43-29.97            |                              |
| XVII             |                               | 0.14-0.95              |                              |
| Parting          |                               | 9.92-20.84             |                              |
| L-7              |                               | 0.05-0.35              |                              |
| Parting          |                               | 24.41-39.72            |                              |
| L-6              | 315-650                       | 0.79-4.50              | ST-II to W-IV                |

| Seam/<br>Parting | Depth<br>Range of<br>seam (m) | Thickness<br>Range (m)  | Quality/<br>Grade of<br>seam |
|------------------|-------------------------------|-------------------------|------------------------------|
| Parting          |                               | 1.20-17.99              |                              |
| L-5              | 325-660                       | 0.05-3.22               | ST-I to W-III                |
| Parting          |                               | 6.13-20.71              |                              |
| L-4              |                               | 0.06-1.17               |                              |
| Parting          |                               | 8.62-23.10              |                              |
| KPL-1            |                               | 0.06-1.36               |                              |
| Parting          |                               | 7.60-39.57              |                              |
| XVIE             |                               | 0.11-2.00               |                              |
| Parting          |                               | 14.37-27.80             |                              |
| XVIC             | 385-760                       | 1.42-4.25               | ST-I to W-II                 |
| Parting          |                               | 0.71-9.05               |                              |
| XVIB             | 395-770                       | 0.31-3.76               | ST-I to W-III                |
| Parting          |                               | 49.26-79.38             |                              |
| XVIA             | 455-850                       | 4.55-8.38               | ST-I to W-III                |
| Parting<br>XV    | 475-860                       | 2.46-17.42<br>2.18-5.41 | ST-I to W-III                |

The extractable coal seams are XVIII A, L-6, L-5, XVIC, XVIB, XVIA and XV.

## Faults

9 normal faults have been deciphered based on surface and sub-surface data. Out of the 9 faults, 8 are strike faults and one is an oblique fault. 7 faults dipping southerly and two are dipping towards north. The throw of the faults varies from 10 m to 290 m.

Based on the borehole data, the dip of the faults are generally 55 to 60°. Hence, in case of faults where positive data are not available, it has been assumed to range between 55° to 60°.

The details of the faults are enclosed as ANNEXURE- I

### ANNEXURE – I

#### DETAILED DESCRIPTION OF FAULTS IN KAPURIA BLOCK, JHARIA COALFIELD

| Sl. No. | Fault No. | Location/Linear Extent of fault  | Trend & Dip of fault   | Throw of fault  | Nature/Evidence of Fault  |
|---------|-----------|--|--|---|---|
| 1       | F1-F1     | This fault enters into Kapuria block from the adjoining Moonidih block in the east and passes 100 m north of NCJA-21, 175 m north of KP-10, 280 m North of NCJA-19, 20 m North of KP-16, 255 m North of NCJA-8, 145 m North of KP-15, 155 m North of JCJA-15, 16 m north of KP-6, 40 m South of KP-11, 15 m south of KP-3 and 40 m south of KP-6 and further extends westward beyond Khudia Nala and enters into adjoining Dharmaband Extension block in the west. This fault marks the southern boundary of the block | NNW-SSE in the eastern part swerves to NW-SE in the central part and becomes almost east-west in the western part near Khudia Nala. The fault dips 55 degree - 60 degree due south | 30m near NCJA-21 and the throw increases up to 290 m in the west ward near Khudia Nala. | A) Strike fault, slightly curvilinear in the middle.<br>B) i) The strata of Barren Measures faulted in NCJA-21.<br>ii) Omission of seams XVIII D, KPL-6, XVIII C, KPL-4, XVIII B, XVIII A, KPL-3, XVIII, and KPL-2 in NCJA-19.<br>iii) Omission of seams XVIII A, L-8, XVII, L-7, L-6, L-5, L-4 and KPL-1 in KP-22.<br>iv) Omission of seams L-12, L-11, XVIII D, KPL-5, XVIII C, KPL-4, XVIII A, KPL-3, XVIII and KPL-2 in NCJA-6. |

|   |       |   |   |              |   |
|---|-------|---|---|--------------|---|
| 2 | F2-F2 | Fault F2-F2 splits from Fault F1-F1 at 100 m south of NCJA-7 and 324 m west of KP-5 and passes 146 m north of KP-5, 175 m NW of NCJA-13, 100 m south of NCJA-12, and 115 m north of KP-8. The fault F2-F2 further extends north-east ward beyond the block boundary and enters into TATA's leasehold Bhelatand colliery area. | NE-SW. Fault F2-F2 swings westward to the south of NCJA-7 when it merges with fault F1-F1. The fault dips 60 degree due south | 10 m to 40 m | A) Oblique Fault<br>B) i) Reduction of parting between L-12 and XVIIIID and omission of seam L-11 in KP-5   |
| 3 | F3-F3 | Fault F3-F3 splits from fault F1-F1 at 60 m east of KP-5 and passes 200 m north of NCJA-15, 36 m south of JKP-1 and 225 m north of KP-15 and dies out at about 120 m SW of NCJA-16.   | SE-NW and swings east ward near KP-5 when it merges with Fault F1-F1. 60 degree due south.                                    | 10 m         | A) Strike fault<br>B) i) Omission of seams XVIIIA, KPL-3, and XVIII in NCJA-15<br>ii) Omission of seams XVIIIIC, KPL-4, XVIIIIB and XVIIIA in KP-15.  |
| 4 | F4-F4 | Located in the south-central part of the block. Fault F4-F4 originates at about 45 m north of NCJA-16 and passes 60 m south of NCJA6 and 24 m south of KP-17 where it dies out after about 260 m east of KP-17  | Almost east west, dipping 60 degree due north   | 15 m to 40 m | A) Strike fault<br>B) i) Omission of seams XVIC and XVIB in KP-14<br>ii) The strata of Barren Measures sequence faulted in NCJA-6 and KP-17.<br>iii) Omission of seams L-7, L-6 and L-5 in NCJA-20. |
| 5 | F5-F5 | Located in the eastern part of the block, the fault F5-F5 originates at about 150 m south of NCJA-14 and passes 240 m north of KP-18 and dies out at about 240 m. SE of KP-13   | Almost east west, dipping 60 degree due South   | 15 m         | A) Strike fault<br>B) i) Omission of seams L-6 and L-5 in KP-18.  |

|   |       |   |   |  |  |
|---|-------|---|---|--|--|
| 6 | F6-F6 | Located in the north-eastern part of the block, the fault F6-F6 originates at about 240 m west of NCJA-1 in the Katri Nala north of the village Kanchanpur and passes 150 m south of NCJA-1, NCJA-22, NCJA-14 and KP-13 and the fault extends up to Parasia village in the east and enters in to the adjoining Moonidih block in the east ward.   | Almost east west which swings NW-SE in the middle Dipping 60 degree due north                       | 25 m to 110 m                                  | A) Strike Fault<br>B) i) Omission of strata in NCJA-1, 28 and 14 between seam L-14 and Barren Measure sequence   |
| 7 | F7-F7 | Located north-west of the block. The fault F7-F7 passes beyond the northern block boundary of Kapuria block in the north-western corner and it enters from the Dharmaband block where it originates at about 200 m west of DB-31, the fault passes 260 m north of JK-12 and 300 m north of NCJA-5 beyond the northern block boundary fault F7-F7 extends further east in TATA's leasehold Malkera colliery area.  | Almost east-west dips 60 degree to 65 degree due south  | Maximum 120 m in the eastern part of the block | A) Oblique fault<br>B) i) Omission of seams XVIC, XVIB, XVIA, XV, XIV and L-3 in JK-12 ii) Omission of seams XIV, L-3 and XIII in NCJA-5                                       |
| 8 | F8-F8 | Located north-east of the block, the fault F8-F8 passes beyond the northern block boundary of Kapuria Block in the TATA's leasehold Bhelatand area. The fault F8-F8 originates at about 280 m NE of KP-8 in the Katri Nala and passes 330 m north of NCJA-1, 280 m north of NCJA-22, 340 m north of NCJA-14, and 300 m north of KP-13 beyond the northern block boundary, the fault gradually swings to SE in the Jarian Nala to the north of NCJA-6 and enters into the adjoining Moonidih block in the east | NW-SE, which gradually swings to NNW-SSE to the north of NCJA-1 and 22, dipping 60 degree due south | 20 m to 30 m                                   | A) Strike Fault, slightly curvilinear<br>B) i) Reduction of parting between seams XVIB and XVIA and roof of seam XVIA faulted in NCJA-1. ii) Omission of seam XVIC in NCJA-22. |



|   |       |   |  |              |   |
|---|-------|---|--|--------------|---|
| 9 | F9-F9 | Located north of the block, this fault passes 260 m north of NCJA-17 beyond the northern block boundary in the TATA's leasehold Bhelatand area. | Almost east-west dips 60 degree to 60 degree due south | 40 m to 50 m | A) Strike fault<br>B) Omission of seam XV in NCJA-17. |
|---|-------|---|--|--------------|---|

## **Other geological disturbances**

Seven coal seams in Kapuria block are found to be affected by igneous intrusives resulting in formation of pyrolitised coal (Jhama) within the seam. These seams are local (L-12), Local (KPL-4), XVIIIA, Local (KPL-3), Local (L-7), XVIA and XV. Out of these seams, XVIIIA, XVIA and XV seams are highly affected by igneous intrusives resulting in pyrolitisation of these seams in larger area.

## **Immediate roof and floor of coal seam(s)**

The immediate roof and floor of extractable coal seams ( upto a height of 2 m from the seam) are as follows :

XVIII A : The roof of the seam is generally shale or carbonaceous shale. The floor is mainly carb shale or shale.

L-6 : The roof of the seam is generally intercalation of shale & sandstone or shale while the floor is generally shale except at few places where it is argillaceous sandstone.

L-5 : The roof of the seam is generally gritty sandstone or intercalation of shale & sandstone while the floor of the seam is either intercalation of shale and sandstone or shale.

XVIC : The roof & floor of the seam is generally carbonaceous shale except at a few places where sandy shale or shale forms the roof and argillaceous sandstone forms the floor of the seam.

XVIB : The roof & floor of the seam is generally carbonaceous shale except at a few places where the floor is either shale or intercalation of shale and sandstone.

XVIA : The roof of the seam is generally shale except at a few places where it is coarse grained sandstone. The floor of the seam is either carbonaceous shale or shale.

XV : The roof & floor of the seam is generally carbonaceous shale except at a few places where the floor is shale.

**Physico-mechanical properties**

Summarised results of physico-mechanical tests of samples of roof and floor rocks and the coal seams within the concerned mining block at BH No KP-18 is enclosed as Annexure-II .

**ANNEXURE-II****SUMMARISED STATEMENT OF PHYSICO-MECHANICAL PROPERTY OF PROPOSED COAL SEAMS AND ROOF ROCKS ( UPTO 10 TIMES THE EXTRACTION THICKNESS) ( AS PER THE LITHLOGY OF BORE HOLE KP-18)**

| Sl. No. | Particulars   | Seams                          |         |         |               |               |               |               | Remarks   |
|---------|---|--------------------------------|---------|---------|---------------|---------------|---------------|---------------|---|
|         |   | XVIII A                        | L-6     | L-5     | XVIC          | XVIB          | XVIA          | XV            |   |
|         | <b>Seam</b>   |                                |         |         |               |               |               |               |   |
| 1       | Thickness (m)   | 3.55 (1.86m coal & 1.69m J+MP) | Faulted | Faulted | 2.91          | 2.85          | 8.11          | 4.82          |   |
| 2       | Depth range (m)                                       | 245.10-248.65                  |         |         | 502.14-505.50 | 506.80-509.65 | 579.42-587.53 | 595.99-600.81 |   |
| 3       | Bulk Density ( dry) (kg/m <sup>3</sup> )              | 1425-2528                      |         |         | 1390          | 1432          | 1352-2385     | 1350-2038     |   |
| 4       | Uniaxial Compresive Strength (N/mm <sup>2</sup> )     | 53.03                          |         |         | NA            | NA            | 19.88         | NA            |   |
| 5       | Tensile Strength (N/mm <sup>2</sup> )                 | 1.25-7.39                      |         |         | NA            | 3.28          | 5.6           | 0.73-1.66     |   |
| 6       | Shear Strength (N/mm <sup>2</sup> )                   | 1.28-6.85                      |         |         | NA            | 3.53          | 0.55-1.67     | NA            |   |
| 7       | Protodynakov Index                                    | 0.64-3.92                      |         |         | 0.86          | 0.79          | 0.79-1.16     | 0.73-1.77     |   |
| 8       | Impact strength Index                                 | NA                             |         |         | NA            | NA            | NA            | NA            |   |
|         |   |                                |         |         |               |               |               |               |   |
|         | <b>Roof ( Upto 10 times the extraction thickness)</b> |                                |         |         |               |               |               |               |   |
| 1       | 10 times of extraction thickness (m)                  | 35.5                           |         |         | 29            | 28.5          | 50            | 48            | Only 5m section of the seam has been considered extractable for XVIA for the purpose of roof rock assessment. |

|   |   |   |  |  |  |  |   |  |  |
|---|---|---|--|--|--|--|---|--|--|
| 2 | Depth range (m)                                   | 210-245   |  |  | 473-502.14   | Same as XVIC as the parting between XVIC and XVIB seams is only 1.75m in BH No. KP-18. | 530-579.42  | 587-595.99   |  |
| 3 | Predominant rock type                             | Mainly medium grained to coarse grained Sand Stone, intercalation of shale& sand stone and argellaceous sand stone/sandy shale at places. |  |  | Mainly intercalation of shale & sand stone , shale, carb. Shale, medium grained sand stone to gritty sand stone at places. |  | Mainly coarse grained to gritty Sand Stone, intercalation of argillaceous to sand stone and carb.shale/shale at places. | Mainly sandy shale, carb. Shale and argillaceous to gtitty sand stone. |  |
| 4 | Bulk Density ( dry) (kg/m <sup>3</sup> )          | 1546-2685   |  |  | 2117-2635  |  | 2260-2861   | 1341-2641  |  |
| 5 | Uniaxial Compresive Strength (N/mm <sup>2</sup> ) | 25.76-100.64  |  |  | 33.56-92.09  |  | 31.92-115.50  | 34.92-53.00  |  |
| 6 | Tensile Strength (N/mm <sup>2</sup> )             | 3.30-16.37  |  |  | 4.29-18.32   |  | 1.59-12.77  | 4.09-6.23  |  |
| 7 | Shear Strength (N/mm <sup>2</sup> )               | 1.28-15.43  |  |  | 0.37-11.57   |  | 1.43-19.93  | 1.47-15.30   |  |
| 8 | Protodynokov Index                                | 0.65-6.27   |  |  | 1.75-6.73  |  | 2.47-10.11  | 0.77-5.87  |  |
| 9 | Impact strength Index                             | NA  |  |  | NA   | NA   | NA  | NA   |  |

## Gassiness of coal seams

All the seams in Kapuria block are virgin. The degree of gassiness of the seams has not been examined. However, in the adjoining Moonidih mine the coal seams are of degree-III gassiness.

## Incubation period of coal seams

All the seams in Kapuria block are virgin. The incubation period of the seams are not known. However, in the adjoining Moonidih mine the incubation period of coal seams is about nine to ten months.

## 5.3 RESERVES OF COAL

### Geological Reserves

The sector wise, thickness wise, grade wise geological reserve as per the geological report for Kapuria block are enclosed as Annexure-III.

ANNEXURE - III

### SEAMWISE, SECTORWISE & THICKNESSWISE RESERVES

| Seam as per geological nomenclature   | GEOLOGICAL RESERVES IN MILLION TONNE |                      |        |                          |        |             |        |                         |       |        |        |                          |        |                      |        |        |  |        |  |
|---|--------------------------------------|----------------------|--------|--------------------------|--------|-------------|--------|-------------------------|-------|--------|--------|--------------------------|--------|----------------------|--------|--------|--|--------|--|
|   | SECTOR - I                           |                      |        |                          |        | SECTOR - II |        |                         |       |        | TOTAL  |                          |        |                      |        |        |  |        |  |
| SEAMWISE, GRADWISE AND THICKNESSWISE GEOLOGICAL RESERVES IN KAPURIA BLOCK (IN MILLION TONNES) |                                      |                      |        |                          |        |             |        |                         |       |        |        |                          |        |                      |        |        |  |        |  |
| SECTOR - I  |                                      |                      |        |                          |        |             |        | SECTOR - II             |       |        |        |                          |        |                      |        |        |  |        |  |
| Thickness 1.2 m to 2 m.   |                                      |                      |        | Thickness more than 2 m. |        |             |        | Thickness 1.2 m to 2 m. |       |        |        | Thickness more than 2 m. |        |                      |        |        |  |        |  |
| P.C.  | M.C.                                 | N.C.                 | Total  | P.C.                     | M.C.   | N.C.        | Total  | P.C.                    | M.C.  | N.C.   | Total  | P.C.                     | M.C.   | N.C.                 | Total  |        |  |        |  |
| 3.948   |                                      |                      | 3.948  | 1.437                    |        |             | 1.437  | 2.566                   |       |        | 2.566  | 1.891                    |        |                      | 1.891  |        |  |        |  |
| 3.943   | 0.072                                |                      | 4.015  |                          |        |             |        | 5.118                   |       |        | 5.118  | 4.669                    |        |                      | 4.669  |        |  |        |  |
| 2.832   | 0.238                                |                      | 3.07   | 4.212                    | 0.113  |             | 4.325  | 2.108                   | 0.028 |        | 2.136  | 5.948                    | 0.007  |                      | 5.955  |        |  |        |  |
| 0.013   | 0.23                                 |                      | 0.243  | 9.105                    | 0.864  |             | 9.969  | 0.046                   | 0.064 |        | 0.11   | 7.863                    | 3.713  | 0.308                | 11.884 |        |  |        |  |
| 1.514   | 2.115                                |                      | 3.629  | 0.958                    | 0.552  |             | 1.51   | 0.896                   | 0.772 | 0.061  | 1.729  | 6.725                    | 2.745  | 0.74                 | 10.21  |        |  |        |  |
| 0.129   |                                      |                      | 0.129  | 3.156                    | 16.982 | 3.481       | 23.619 | 0.077                   | 0.534 | 0.248  | 0.859  | 2.761                    | 5.792  | 3.493                | 12.046 |        |  |        |  |
|   |                                      |                      |        | 2.239                    | 9.925  | 3.613       | 15.777 | 0.05                    | 0.24  | 0.327  | 0.617  | 0.898                    | 9.248  | 4.568                | 14.714 |        |  |        |  |
| 12.379  | 2.655                                |                      | 15.034 | 21.107                   | 28.436 | 7.094       | 56.637 | 10.861                  | 1.638 | 0.636  | 13.135 | 30.755                   | 21.505 | 9.109                | 61.369 |        |  |        |  |
|   |                                      | Thickness 1.2m - 2m. |        | > 2 m                    |        | Sub-Total   |        | Thickness 1.2m - 2m.    |       | > 2 m  |        | Sub-Total                |        | Thickness 1.2m - 2m. |        | > 2 m  |  | Total  |  |
| PRIME COKING COAL   |                                      |                      |        |                          |        |             |        |                         |       |        |        |                          |        |                      |        |        |  |        |  |
| XVIII A   |                                      | 3.948                |        | 1.437                    |        | 5.385       |        | 2.566                   |       | 1.891  |        | 4.457                    |        | 6.514                |        | 3.328  |  | 9.842  |  |
| L-6   |                                      | 3.943                |        |                          |        | 3.943       |        | 5.118                   |       | 4.669  |        | 9.787                    |        | 9.061                |        | 4.669  |  | 13.73  |  |
| L-5   |                                      | 2.832                |        | 4.212                    |        | 7.044       |        | 2.108                   |       | 5.948  |        | 8.056                    |        | 4.940                |        | 10.16  |  | 15.1   |  |
| XVIC  |                                      | 0.013                |        | 9.105                    |        | 9.118       |        | 0.046                   |       | 7.863  |        | 7.909                    |        | 0.059                |        | 16.968 |  | 17.027 |  |
| XVIB  |                                      | 1.514                |        | 0.958                    |        | 2.472       |        | 0.896                   |       | 6.725  |        | 7.621                    |        | 2.410                |        | 7.683  |  | 10.093 |  |
| XVIA  |                                      | 0.129                |        | 3.156                    |        | 3.285       |        | 0.077                   |       | 2.761  |        | 2.838                    |        | 0.206                |        | 5.917  |  | 6.123  |  |
| XV  |                                      |                      |        | 2.239                    |        | 2.239       |        | 0.05                    |       | 0.898  |        | 0.948                    |        | 0.050                |        | 3.137  |  | 3.187  |  |
| TOTAL   |                                      | 12.379               |        | 21.107                   |        | 33.486      |        | 10.861                  |       | 30.755 |        | 41.616                   |        | 23.24                |        | 51.862 |  | 75.102 |  |
| MEDIUM COKING COAL  |                                      |                      |        |                          |        |             |        |                         |       |        |        |                          |        |                      |        |        |  |        |  |
| XVIII A   |                                      |                      |        |                          |        |             |        |                         |       |        |        |                          |        |                      |        |        |  |        |  |
| L-6   |                                      | 0.072                |        |                          |        | 0.072       |        |                         |       |        |        |                          |        | 0.072                |        |        |  | 0.072  |  |
| L-5   |                                      | 0.238                |        | 0.113                    |        | 0.351       |        | 0.028                   |       | 0.007  |        | 0.035                    |        | 0.266                |        | 0.12   |  | 0.386  |  |
| XVIC  |                                      | 0.23                 |        | 0.864                    |        | 1.094       |        | 0.064                   |       | 3.713  |        | 3.777                    |        | 0.294                |        | 4.577  |  | 4.871  |  |

|                        |               |               |               |               |               |               |               |                |                |
|------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| XVIB                   | 2.115         | 0.552         | 2.667         | 0.772         | 2.745         | 3.517         | 2.887         | 3.297          | 6.184          |
| XVIA                   |               | 16.982        | 16.982        | 0.534         | 5.792         | 6.326         | 0.534         | 22.774         | 23.308         |
| XV                     |               | 9.925         | 9.925         | 0.24          | 9.248         | 9.488         | 0.240         | 19.173         | 19.413         |
| <b>TOTAL</b>           | <b>2.655</b>  | <b>28.436</b> | <b>31.091</b> | <b>1.638</b>  | <b>21.505</b> | <b>23.143</b> | <b>4.293</b>  | <b>49.941</b>  | <b>54.234</b>  |
| <b>NON-COKING COAL</b> |               |               |               |               |               |               |               |                |                |
| XVIII A                |               |               |               |               |               |               |               |                |                |
| L-6                    |               |               |               |               |               |               |               |                |                |
| L-5                    |               |               |               |               |               |               |               |                |                |
| XVIC                   |               |               |               |               | 0.308         | 0.308         |               | 0.308          | 0.308          |
| XVIB                   |               |               |               | 0.061         | 0.74          | 0.801         | 0.061         | 0.74           | 0.801          |
| XVIA                   |               | 3.481         | 3.481         | 0.248         | 3.493         | 3.741         | 0.248         | 6.974          | 7.222          |
| XV                     |               | 3.613         | 3.613         | 0.327         | 4.568         | 4.895         | 0.327         | 8.181          | 8.508          |
| <b>TOTAL</b>           |               | <b>7.094</b>  | <b>7.094</b>  | <b>0.636</b>  | <b>9.109</b>  | <b>9.745</b>  | <b>0.636</b>  | <b>16.203</b>  | <b>16.839</b>  |
| <b>GRAND TOTAL</b>     | <b>15.034</b> | <b>56.637</b> | <b>71.671</b> | <b>13.135</b> | <b>61.369</b> | <b>74.504</b> | <b>28.169</b> | <b>118.006</b> | <b>146.175</b> |

### Mineable Reserve

It will depend on the method of mining proposed by bidders which has to be submitted in the DPR of the bidders

### Water regime

No Hydrology and Hydro-geological assessment has been done in the Geological Report for Kapuria Block.

## 5.4 PRESENT MINE STATUS

### MINE ENTRIES

At present there is no mine entry available in the proposed Kapuria Block .

### MINING METHOD

As explained in earlier Chapter, Kapuria Block is virgin at present and no mining activity is going on. Mining method shall be proposed by bidder.

### STATUS OF MINING -SEAM WISE

All seams are virgin. Seven seams, namely, XVIII A, L-6, L-5, XVIC, XVIB, XVIA and XV are found to occur consistently with workable thickness range in the Kapuria block. However the bidder can explore the possibility of working other seams for increasing percentage extraction and conservation.

The brief description of the above seams are as below :-

**XVIII A**

It is the topmost workable and persistent coal horizon in the area. The in-band thickness of the seam varies from 0.53 m – 3.74 m. It is totally/partially pyrolitised in patches in different parts of the area as depicted in the seam folio plan . The geological in-band grade varies from S-I to W-III .

**L-6**

The seam underlies L-7 seam at a parting of 24.41 m to 39.72 m. The in-band thickness of the seam varies from 0.79 m to 4.50 m. The seam is completely free from pyrolitisation in the entire Kapuria block. The geological grade (in-band) varies from S-II to W-IV.

**L-5**

The seam underlies L-6 seam at a parting of 1.20m to 17.99m. The in-band thickness of the seam varies from 0.05 m to 3.22 m. The seam is completely free from pyrolitisation. The geological in-band grade varies from S-I to W-III.

**XVIC**

The seam underlies XVII E seam at a parting of 14.37 m to 27.80 m. The in-band thickness of the seam varies from 1.42 m to 4.25 m. The seam is completely free from pyrolitisation. The geological in-band grade varies from S-I to W-II.

**XVIB**

The seam underlies XVIC seam. The parting with the overlying seam XVIC varies from 0.71 m to 9.50 m. The seam is found to be completely free from pyrolitisation in Kapuria block. The in-band thickness of the seam varies from 0.31 m to 3.76 m. The in-band grade varies from S-I to W-III.

**XVIA**

The seam lies below XVIA seam. The parting between seam XVIA and overlying seam XVIB varies from 49.26 m to 79.38 m. The seam is found to be affected by pyrolitisation from central to eastern part of Kapuria block. The in-band thickness of the seam (including C+J zone) varies from 4.55 m to 8.38 m. The in-band grade of the seam varies from S-I to W-III.

**XV**

The seam lies below XVIA seam. The parting between seam XV and overlying seam varies from 2.46m to 17.42m. The seam is found to be completely pyrolitised in the south-eastern corner of the block whereas it is partially pyrolitised in the east and east-central part of Kapuria block. The in-band thickness of the seam varies from 2.18 m to 5.41 m. The in-band grade of the seam varies from S-I to W-III.

**POWER SUPPLY AND DISTRIBUTION**

At present there is no power supply arrangement available to mine site.

The nearest power point is available at 132KV/33KV at Pootki sub-station.



**COAL HANDLING PLANT**

The coal handling plant has to be constructed by the bidder on the surface

**CIVIL AMENITIES FOR MINING**

The civil amenities as considered necessary for project shall be constructed by the bidder.

## 6. TENDER DRAWINGS

### 1.0 LIST OF DRAWINGS :

1. Location Plan: ..... 1 Plate
2. Geological Plan: ..... 1 Plate
3. Surface Plan: ..... 1 Plate
4. Litho logs of Representative Boreholes: ..... 3 Plates
5. Floor Contour Plan(s) of the seam(s) concerned: ..... 7 Plates
6. Seam Folio Plan(s) of the seam(s) concerned: ..... 7 Plates

NOTE:- As the file size of the drawings are very large ( approx 490 MB), there is difficulty in uploading the same on the website. It is requested to collect the drawings from the Office of General Manager (CMC) , BCCL, Koyla Bhawan, Dhanbad, India.

## 8. FORMATS & ANNEXURES

### 8.1 BANK GUARANTEE PROFORMA FOR

#### EARNEST MONEY DEPOSIT/ BID SECURITY

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

(TO BE ISSUED BY ANY SCHEDULED BANK

AUTHORISED BY RBI TO ISSUE A BANK GUARANTEE)

To:

<.....> Limited,

.....

.....

WHEREAS \_\_\_\_\_ [name and address of Bidder] (hereinafter called "the Bidder") shall be submitting its Bid dated \_\_\_\_\_ [date of the Bid] for the work. \_\_\_\_\_ [name of the work] (hereinafter called "the Bid").

KNOW ALL MEN by these present that we, \_\_\_\_\_ [name of the bank] of \_\_\_\_\_ [name of the country] \_\_\_\_\_ having our registered office at . . . . . [address of the bank] (hereinafter called "the bank"), are bound unto the <..... Limited>, <.....address .....> (hereinafter called "the Employer") for the sum of . . . . . [amount of the Guarantee in words and figures] for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

We, \_\_\_\_\_ [name of the bank] undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand. The employer has to only mention that the amount claimed by it is due to the

occurrence of any one or both the conditions mentioned in 1 and 2, given hereafter, specifying the occurred condition or conditions.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of Bid Validity specified by the Employer on the bid form .
2. If the Bidder withdraws, having been notified of the acceptance of its bid by the Employer during the period of Bid Validity ,
  - a) by failing or refusing to execute the Contract Agreement when required
  - or
  - b) by failing or refusing to furnish the Performance Security in accordance with the Bid conditions.

This guarantee will remain in full force up to and including the date \_\_\_\_\_ and any demand in respect thereof should reach the Bank not later than the date of expiry of this guarantee.

For and on behalf of the Bank.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

Common Seal of Bank \_\_\_\_\_

## 8.2 BANK GUARANTEE PROFORMA FOR

### SECURITY DEPOSIT / PERFORMANCE GUARANTEE

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

(TO BE ISSUED BY ANY NATIONALISED / SCHEDULED BANK

AUTHORISED BY RBI TO ISSUE A BANK GUARANTEE)

To:

<.....> Limited,

.....

In consideration of the <..... Limited>, having its Registered office at <.....  
.....> (hereinafter called to as the “Employer” which expression shall unless repugnant  
to the context or meaning thereof, include all successors, administrators and assigns) having  
awarded to \_\_\_\_\_ [Name & Address of the Contractor] (hereinafter called to as  
“Contractor” which expression shall unless repugnant to the context of meaning thereof include  
its successors, administrators, executors and assigns) the work \_\_\_\_\_ [Name of  
the Work] by issue of Letter of Award No. \_\_\_\_\_ [Work Order/Letter of Intent No.] and the  
same having been unequivocally accepted by the Contractor resulting into a Contract  
Agreement dated \_\_\_\_\_ valued \_\_\_\_\_ [value of Work Order] (hereinafter  
called ‘the Contract’) and the Employer having agreed to accept Performance Bank Guarantee  
of \_\_\_\_ [indicate figure]% of the Contract Value \_\_\_\_\_ [amount in figures and words)  
from a Nationalised/Scheduled Bank for due performance of the work executed by the  
Contractor as per the terms & conditions contained in the said Contract.

We, \_\_\_\_\_ [name of the Bank], of \_\_\_\_\_ [address of the Bank]  
(hereinafter called to as “Bank” which expression shall unless repugnant to the context or  
meaning thereof, include its successors, administrators, executors and assigns) do hereby  
guarantee and undertake to pay the Employer immediately on demand and or, all money  
payable by the Contractor to the extent of \_\_\_\_\_ [amount of guarantee in  
figures and words ], at any time from \_\_\_\_\_ to \_\_\_\_\_ without any demur, reservation,  
recourse, contest or protest and/or without any reference to the Contractor. Any such demand  
made by the Employer on the Bank shall be conclusive and binding notwithstanding any  
difference between the Employer and the Contractor or any dispute pending before any Court,

Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrecoverable and shall continue to be enforceable as per the terms & conditions contained in the said Contract.

The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time, to extend the validity of time of Performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting this Guarantee, to postpone, from time to time, the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forebear or to enforce any covenants contained or implied in the Contract, between the Employer and the Contractor or any other course or remedy or security available to the Employer. The Bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to matter aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor in first instance, without proceeding against the Contractor and notwithstanding any security or other Guarantee that the Employer may have in relation to the Contractor's liabilities.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at \_\_\_\_\_

For and on behalf of the Bank.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

Common Seal of Bank \_\_\_\_\_

### 8.3 PROFORMA FOR INTEGRITY PACT

**(To be submitted along with Part -II: Techno-Commercial Bid)**

#### INTEGRITY PACT

Between

<.....Limited> hereinafter referred to as “The Principal”

and

<.....> hereinafter referred to as “The Bidder / Contractor”

#### Preamble

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

In order to achieve these goals, the Principal cooperates with the international Non Governmental Organisation Transparency International” (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

#### **Section 1 – Commitments of the Principal**

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1. No employee of the Principal, personally or through family members or any other person acting on his/her behalf, with in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.

2. The Principal will, during the tender process, treat all Bidders with equity and reason, The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/ additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.

3. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Chief Vigilance Office and in addition can initiate disciplinary actions.

## **Section 2 – Commitments of the Bidder/Contractor**

(1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He/she commits himself/herself to observe the following principles during his/her participation in the tender process and during the contract execution.

1. The Bidder/Contractor will not, directly or through any other persons or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2. The Bidder/Contractor will not enter with other Bidders into any agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission in the bidding process.

3. The Bidder/Contractor will not commit any offence under the relevant Anti-Corruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship regarding plans, technical proposals and business details including information contained or transmitted electronically.



4. The Bidder/Contractor will, when presenting his/her bid, disclose any and all payments he/she has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

5. The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

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

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his/her reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder//Contractor has committed a transgression through a violation of Section 2 such as to put his/her reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression. The severity will be determined by the facts and circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.

2. The Bidder accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

3. If the Bidder/Contractor can prove that he/she has restored/recouped the damage caused by him/her and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

4. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

#### **Section 4 – Compensation for Damages**

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3% of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.
  
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.
  
3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

#### **Section 5 – Previous transgression**

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the T1 approach or with any other Public Sector Enterprise in India that could justify his/her exclusion from the tender process.
  
2. If the Bidder makes incorrect statement on this subject, he/she can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### **Section 6 – Equal treatment of all Bidders/Contractors/Subcontractors**

1. The Bidder/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

### **Section 7 – Criminal charges against violating Bidders/Contractors/Subcontractors**

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

### **Section 8 – External Independent Monitor/ Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal)**

1. The Principal will appoint competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligation under this agreement.
2. The Monitor is not subject to instruction by the representatives of the parties and performs his/her function neutrally and independently. He/she reports to the chairperson of the Board of the Principal.
3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his/her project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual-relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other suitable relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him/her by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

7. Monitor shall be entitled to compensation on the same terms as being extended to/provided to independent directors/ Chairman as prevailing with Principal.

8. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

9. The word 'Monitor' would include both singular and plural.

## **Section 9 – Pact Duration**

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

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

## Section 10 – Other provisions

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e. <.....>.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

-----  
For the Principal

-----  
For the Bidder / Contractor

Place

Witness 1

Date.....

Witness 2

## 8.4 FORMAT FOR CONTRACT AGREEMENT

(On Non- Judicial Stamp Paper)

Agreement No.

Dated:

THIS AGREEMENT made on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_ between <..... Limited>, a Subsidiary of Coal India Limited, Govt. of India Undertaking, an Employer registered under the Indian Companies Act. 1956 with its registered office at <.....> and (hereinafter referred to as the Employer which expression where the context so admit shall include its successors in interest and assign) of the one Part and \_\_\_\_\_ (hereinafter referred to as "the Contractor" which expression where the context so admit shall include its heirs, executors, administrators legal representatives, successors in business and assign) of the other part.

WHEREAS, the Employer invited bid for the Work "\_\_\_\_\_" and the bid of the Contractor has been accepted by the Employer vide their Letter No \_\_\_\_\_ dt. \_\_\_\_\_ for a Contract value of \_\_\_\_\_ [Contract value in figure & words]

WHEREAS the Contractor has agreed to execute the works on the terms & conditions as stipulated in the Bid and subsequent amendments thereto for a Contract value of \_\_\_\_\_ [Contract value in figure & words] for successful completion of the work.

**NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AS FOLLOWS:**

1. In pursuance of the Agreement aforesaid and in consideration for the payment of the Contract value of \_\_\_\_\_ [Contract value in figure & words] in accordance with the terms & conditions of this contract and/or such sum as may be payable to the contractor, the Contractor shall upon and subject to the said terms & conditions execute and complete the work as described in the 'Scope of work'.

2. The time shall be considered as one of the essence of the contract. The duration of the contract and the time schedule for completion of various activities shall be as per the agreed scheme / approved DPR.

3. The parties hereto shall respectively and faithfully abide by and submit themselves to the terms & conditions and stipulations contained in this agreement and perform and discharge their part of contract accordingly.

4. This final agreement has been arrived at between the parties after due consideration of the correspondences, documents, meetings and negotiations held from time to time. The following documents shall constitute the Contract between the Employer and the Contractor. And each shall be read and construed as an integral part of the Contract

Part Description of Documents

- 01. Article of Agreement.
- 02. Notice Inviting Tender:
- 03 Instructions to Bidders
- 04 Forms of Bid and Qualification Information
- 05 Conditions of Contract
- 06 Scope of work
- 07 Mine profile
- 09 Any other relevant Documents

5. The Contract shall be executed within the purview of the Indian Laws.

In witness whereof the parties hereto have hereunder affixed their signatures at <.....> on the day, month and year written as above.

SIGNED, SEALED AND DELIVERED

Signed on behalf of the Contractor

Signed on behalf of the Employer

Designation

Designation

In the presence of :

WITNESS - 1

WITNESS - 2

(Signature)

(Signature)

(Name in Block Letters)

(Name in Block Letters)

Official Address:

Official Address:

## ANNEXURE-I

### SAMPLE LIST OF PLANT & MACHINERY

(Other than face equipment)

#### A. Sample List of Ventilation and Safety Equipment

1. Main mechanical ventilators
2. Auxiliary fans
3. Ventilation ducting
4. Ventilation survey equipment
5. Fire fighting and other safety equipment
6. Cap lamps and battery charger
7. Self rescuers with rack
8. Survey equipment
9. UG safety boring machine
10. Anchorage testing machine
- ... ..

#### B. Sample List of Underground Transport Equipment

##### Gate Transport

1. Gate-belt conveyors with drive-head, tail-end, structures, rollers, idlers, etc.
2. Direct, endless and/or tugger haulage with electrical and required accessories
3. Rails
4. Sleepers, dog-nails, fish-plates, etc.
5. Haulage ropes
6. Transfer points, chutes, etc.
- ... ..

##### Trunk Transport

1. Trunk-belt conveyors with drive-head, tail-end, structures, rollers, idlers, etc.
2. Direct, endless and/or tugger haulage with electrical and required accessories
3. Rails
4. Sleepers, dog-nails, fish-plates, etc.
5. Haulage ropes
6. Transfer points, chutes, etc.
- ... ..



**C. Sample List of Electrical and Communication Equipment**

1. Equipment at main sub-station
2. Equipment for UG power distribution
3. Equipment and fittings for illumination
4. Testing and maintenance equipment
5. Overhead lines and cables
6. Township electrification
7. Communication and EDP System
8. Other miscellaneous electrical items
- ... ..

**D. Sample List of Workshop Equipment**

1. Lathe
2. Shaper
3. Grinder
4. Drill machine
5. Welding machine
6. Hydraulic press
7. Hydraulic test bench set
8. Electric hoist
9. Tools and tackles
- ... ..

**E. Sample List of Equipment for Pumping System**

1. Pump-sets with drive, discharge and head
2. Pipes of various types, sizes, etc.
3. Pump and pipe fittings
- ... ..

**F. Sample List of Equipment for Coal Handling Plant**

1. Belt conveyors with drive-head, tail-end, structures, rollers, idlers, etc.
2. Feeders
3. Vibratory screens
4. Dust suppression system
5. Road weighbridge
6. Fire fighting system
7. Transfer, truck/ rack loading system
- ... ..

## ANNEXURE – II

### INFORMATION REQUIRED FROM BIDDER FOR ELECTRICAL WINDING ENGINE

The information required from the bidder is shown below which the bidders have to submit. This information will form part of documents for technical evaluation of bids submitted.

1

#### A. GENERAL :

1. Type of winding :
2. Depth of wind :
3. Normal hoisting time :
4. Duty :
5. Maximum unbalanced load to be hoisted :
6. Hoisting time during which maximum unbalanced load is to be handled :
7. Conveyance to be used :
8. Winding speed:
  - i) Maximum Speed :
  - ii) Normal hoisting speed :
  - iii) Speed during hoisting of heavy material :
  - iii) Inspection speed :
9. Other hoisting situation :

#### B. WINDING ROPE

- i) Type :
- ii) Diameter :
- iii) Weight of rope per m. :
- iv) Minimum breaking strength :
- v) Suspended portion of rope when the conveyance is at its lowest point :

#### C. WINDER DRUM :

- 1 Type of winder :
- 2 Type of drum & No. of drums :
- 3 Diameter of the drum (s) :
- 4 Width of Drum(s)
- 5 Drum Axle :

**D. OTHER COMPONENTS :**

- 1 Gear Box :
- 2 Couplings :
- 3 Bearings :

**E. ELECTRICALS :**

**1. Winder drive motor :**

**2. Supply Voltage & frequency:**

**3 Motor Circuit :**

**4. Winder Control Unit :**

**Speed Control:**

**Constant Starting Current:**

**Torque Signal Inversion:**

**Drive/Brake Selection:**

**Dynamic Braking:**

**Protection:**

**6. Signalling & Communication :**

**7. Control Desk :**

**8. HT Switch Board and outgoing  
Control panel**

**9. Tests :**

**F. SAFETY FEATURES :**

- 1    Speed indicators
  - Speed recorder
  - Automatic contrivance
  - Limit switches
    - Protective arrangements to prevent the winder from being started in a wrong direction.
  - Audible signal
  - Inter-locks:
  
- 2            **Brakes:**
  - i)        Service Brakes and safety brakes
  - ii)       Emergency Brake:
  
- 3            **Other safety features**

**ANNEXURE – III****INFORMATION REQUIRED FROM BIDDER  
FOR MAN-RIDING SYSTEM**

- |     |   |
|-----|---|
| 1   | Type of man-riding                                  |
| 2.  | Length of road way                                  |
| 3.  | Maximum gradient of roadway                         |
| 4.  | Range of speed                                      |
| 5.  | Distance between stations                           |
| 6.  | System track gauge                                  |
| 7.  | Distance between two chairs, incase of chair lift   |
| 8.  | Maximum man riding capacity in one direction        |
| 9.  | sheave diameter                                     |
| 10. | Rope  |
| 11  | Rope safety factor                                  |
| 12  | Number of boarding/alighting stations required      |
| 13  | Drive power (kW)                                    |
| 14  | Electrical  |
| 15  | Safety features                                     |
| 16  | Lighting, Signaling & Telecommunication Arrangement |
| 17  | Other information                                   |

**ANNEXURE – IV****INFORMATION REQUIRED FROM BIDDER  
FOR HAULAGE**

- |     |   |
|-----|---|
| 1   | Type of Haulage                                     |
| 2.  | Haul length   |
| 3.  | Maximum gradient                                    |
| 4.  | Range of speed                                      |
| 5.  | Maximum load carrying capacity                      |
| 6.  | Rail size & gauge                                   |
| 7.  | Drum diameter & width                               |
| 8.  | Rope  |
| 9.  | Rope safety factor                                  |
| 10. | Drive power (kW)                                    |
| 11  | Electrical  |
| 12  | Safety features                                     |
| 13  | Lighting, Signaling & Telecommunication Arrangement |
| 14  | Other information                                   |

## **ANNEXURE - V**

### **INFORMATION REQUIRED FROM BIDDER FOR MASS PRODUCTION TECHNOLOGY PACKAGE**

The information required from the bidder is shown below which the bidders have to submit. This information will form part of documents for technical evaluation of bids submitted.

#### **1. Furnish list of equipment/ machinery offered with 'Mass production technology package'**

- (a) Make and Model No. of equipment/ machinery;
- (b) Dimensional drawings;
- (c) Detailed specifications;
- (d) Leaflets and literatures;
- (e) Name of country where manufactured;
- (f) Standards followed during manufacturing of electrical and mechanical parts of equipment/ machinery;
- (g) Certificates of inspections/ tests;
- (h) Item-wise list of initial as well as maintenance spares and consumables, their quantities, and whether imported or procured indigenously; and
- (i) Status of DGMS approval for use in Indian underground coal mines.

2. Furnish details of the proposed technology substantiated with plans, sketches, drawings, etc.

3. Furnish details of scheme for strata management for face as well as for gate-roads showing detailed calculations.

4. Furnish the following requirements for deployment of 'mass production technology package':

- (a) Minimum size of the mine entries and/ or roadways for transporting the equipment/ machinery to the designated location;
- (b) Maximum electrical power demand, with voltage and frequency of supply desired, at the position of the load centre in the panel;
- (c) Requirement of minimum air quantity at the last ventilation connection of the active panel;
- (d) Quantity, quality, and pressure of water required at the tail-end of gate-belt conveyor;
- (e) Minimum capacity of gate-belt conveyor in terms of tonnes per hour required for out- bye transport of coal;

- (f) Indicate whether surface stores provided/ proposed to be provided by <Name of mine> is adequate? If not, additional space required should be indicated;
- (g) Indicate whether the workshop facility and equipment provided/ proposed to be provided therein is sufficient? If not, indicate details of additional facility and equipment required; and
- (h) Any other item with details.

5. Indicate whether

- (a) the size and capacity of gate-belt conveyor and trunk belt conveyor provided/ proposed to be provided by <Name of company> would be compatible with the equipment/ machinery package of the bidder? If no, give reasons and suggest desired modifications.
- (b) The material transport system provided/ proposed to be provided from surface to active workings in the mine is adequate? If no, give reasons and suggest desired modifications.

6. Indicate whether the surface communication system provided/ proposed to be provided by <Name of company> for the mine is adequate for safe and efficient functioning of the system proposed to be offered by the bidder. If no, give reasons and suggest desired modifications.

7. Indicate potential hazards, if any, associated with the proposed technology and the proposed measures in order to mitigate them for ensuring safety to men, equipment, and the project.

8. Furnish details for the following.

- (a) Details of supply of similar equipment made, if any, during the last five years with the corresponding production performance and safety records of the same;
- (b) Details of any accident and/ or equipment failure with precise cause(s) as experienced by the bidder during the last five years in executing similar contract and corresponding corrective measures taken with respect to each of them;
- (c) Brief details of cases, if any, in respect of the clause (b) above pending sub-judice in any International/ Indian Court of Law;
- (d) Brief details of past legal cases, if any, in respect of the clause (b) above; and
- (e) Attested copies of the certificate from the appropriate authority to the effect that there is no embargo upon using the proposed equipment/ technology proposed to be supplied by the bidder under this contract.



## **ANNEXURE-VI**

### **BUILDING TYPES AND PROVISIONS FOR UNDERGROUND COAL MINE PROJECT**

Manager's Office (Big) and/or Manager's Office (Small)- depending on project size

Workshop:

Machine Shop, Electrical repair Shop

U.G Equipment repair shop, Height

(i) 4.5m

Carpentry shop (open on sides)

(ii) Height 3m

Smithy shop (open on sides) Height\

(iii) 3m

(iv) Washing platform

Bituminous pavement

Compound wall with gate (in m)

Lavatories & Urinals

Light vehicle shop, 4.5 m height

Washing ramp for light vehicles

Office / Store

Security Room

Scooter / Cycle shed

Unit Stores

Store shed, 6 m height

Hard stand

Boundary wall with gate

Sub-station (Height 4 m)

For Project

For Colony

Barbed wire fencing

Service Magazine (not reqd)

First Aid centre

Cap lamp Room (600 Lamps with 500 self Rescuer)

Lavatories & Urinals (10 Seater)

Canteen (50 Seater)

Training Centre

Rest Shelter

Security Room

CDS Control Room

Garage : 18 Sq.m of plinth area is to be provided for D – type quarters

Scooter / Cycle Shed

Bus Stand

Haulage Engineer House (110 kW x 2)

Fan House 300 kW

Civil Maintenance office

Type quarters including all type of staff & executive quarters

Dispensary

Officers Club

Workers Institute

Primary School, Parks, play ground and convenient shopping – as per norms according to township size and population

Shopping Center

Boundary wall with gate (for mine)

Boundary wall with gate (for colony)

Soil investigation, land development,

Drainage etc.

(N B provisions of buildings and infrastructure shall be as per norms according to township size and population – relevant norms to refer)

#### **UNIT DETAIL OF TYPE QUARTERS BASED ON COST INDEX 100**

|          |                                   |       |     |
|----------|-----------------------------------|-------|-----|
| <b>1</b> | <b>Type 'A' (double storeyed)</b> |       |     |
|          | Plinth area                       | 36    | sqm |
|          | Add 4% for using 10" brick        | 1.44  | sqm |
|          | Add for external circulation area | 5     | sqm |
|          | Add for sleeping out balconies    | 5.6   | sqm |
|          | Total plinth area                 | 43.04 | sqm |
|          | Building area                     | 48.04 | sqm |

|          |                                   |              |     |
|----------|-----------------------------------|--------------|-----|
| <b>2</b> | <b>Type 'B' (double storeyed)</b> |              |     |
|          | Plinth area                       | 56           | sqm |
|          | Add 4% for using 10" brick        | 2.24         | sqm |
|          | Add for external circulation area | 5            | sqm |
|          | Add for sleeping out balconies    | 5.6          | sqm |
|          | Total plinth area                 | 63.84        | sqm |
|          | Building area                     | 68.84        | sqm |
| <b>3</b> | <b>Type 'C' (double storeyed)</b> |              |     |
|          | Plinth area                       | 84           | sqm |
|          | Add 2% for using 10" brick        | 1.68         | sqm |
|          | Add for external circulation area | 5            | sqm |
|          | Add for sleeping out balconies    | 7.8          | sqm |
|          | Total plinth area                 | 93.48        | sqm |
|          | Building area                     | 98.48        | sqm |
| <b>4</b> | <b>Type 'D' (double storeyed)</b> |              |     |
|          | (A) Plinth area                   | 139          | sqm |
|          | Add 2% for using 10" brick        | 2.78         | sqm |
|          | Add for external circulation area | 6            | sqm |
|          | Add for sleeping out balconies    | 9.9          | sqm |
|          | Total plinth area                 | 151.68       | sqm |
|          | Building area                     | 157.68       | sqm |
|          | (B) Garage                        |              |     |
|          | Plinth area                       | 18           | sqm |
|          | Add 2% for using 10" brick        | 0.36         | sqm |
|          | Total plinth area                 | 18.36        | sqm |
|          | (C) Servant's quarter             |              |     |
|          | Plinth area                       | 19           | sqm |
|          | Add 2% for using 10" brick        | 0.38         | sqm |
|          | Total plinth area                 | 19.38        | sqm |
| <b>5</b> | <b>Miners' quarter</b>            |              |     |
|          | Building area                     | 46.4         | sqm |
| <b>6</b> | <b>Hostel</b>                     |              |     |
|          | Plinth area                       | 21           | sqm |
|          | Add 4% for using 10" brick        | 0.84         | sqm |
|          | Add for external circulation area | 5            | sqm |
|          | Add for sleeping out balconies    | 5.6          | sqm |
|          | Total plinth area                 | 27.44        | sqm |
|          | Building area                     | 32.44        | sqm |
| <b>7</b> | <b>Office Building</b>            |              |     |
|          | Building area                     | As per Norms | sqm |

|   |   |
|---|---|
| 8 | <b>Time &amp; Security Office</b><br>Building area 56 sqm |
|---|---|

**Specification for type quarters:**

A- type and B- type: RCC framed structure building, IPS flooring and skirting, non decorative flush door with pressed steel frame, steel glazed window, kota stone floor & glazed tile dado in toilet, white wash on interior surfaces and Snow-cem on exterior walls.

C- type: RCC framed structure building, precast terrazzo tiles flooring and skirting, non decorative flush door with pressed steel frame, steel glazed window, cast in situ marble chips floor & glazed tile dado in toilet, plaster of paris and oil bound distemper on interior surfaces and Snow-cem on exterior walls.

D- type: Load bearing wall/RCC framed structure building, precast terrazzo tiles flooring and skirting, non decorative flush door with pressed steel frame, steel glazed window, ceramic tiles floor & glazed tile dado in toilet, plaster of paris and plastic emulsion/oil bound distemper on interior surfaces and Snow-cem on exterior walls.

## ANNEXURE – VII

### SPECIFICATIONS FOR RESIDENTIAL BUILDINGS

The following statements show the specifications which are recommended to be generally used for residential buildings. These specifications are only indicative and a judicious choice has to be made depending on local conditions and requirements. These specifications are by no means exhaustive and any other locally available materials which are equally effective and economical may also be used. Some of the local specifications like Ekra walling in Assam or sloping roofs with Mangalore tiles or A.C./ C.G.I sheets in coastal areas and in Assam and other hilly area would be appropriate considering the local climatic and seismic conditions and they would also result in substantial saving in cost. It is also advisable in some situations, in the interest of economy in construction to use some of the innovations in place of traditional specifications. For example, where brick walls thicker than 9" or stone masonry walls are required to be used due to poor quality of bricks or due to their non-availability, possibilities of use of 20 cm thick precast masonry blocks should be explored as they are usually more cost effective.

Specification for residential buildings

| Item                          | Specifications  |
|-------------------------------|---|
| <b>Foundations and plinth</b> | 1) 15 cm to 20 cm. thick cement concrete (1:5:10) or lime concrete (with stone or brick aggregate) with 40% (1:2 to 3) mortar |
| 2)                            | Brickwork or R.R. stone masonry in cement mortar (1:8) or lime mortar (1:2 to 3)  |

#### Notes:

- Higher contents of cement or lime to be used only when required under local conditions.
- Anti-termite treatment of foundation as per IS: 6313 be provided in termite infested areas.
- Under-reamed piles are recommended in block cotton soil, being effective and economical.
- Depth of foundations will depend upon local conditions. National Building Code provides for a minimum foundation depth of 50 cms which would be adequate in normal conditions.
- Plinth height will depend on local conditions like flooring, sub-soil water level etc. In well-drained area, the plinth height need not be more than 30 cm.

|              |   |
|--------------|---|
| <b>Walls</b> | i) Brick work                                     |
| ii)          | R.R. Stone masonry                                |
| iii)         | Present stone block masonry (usually 20 cm thick) |

- iv) Timber posts and Ekra-walling (with reeds, spilt bamboo or expanded metal)
- v) Timber posts and planks
- vi) Precast R.C.C. posts and 4 ½" brick nogging

**Note:**

- a) Whenever stone masonry is required due to non-availability of bricks or whenever bricks wall thicker than 9" becomes necessary due to poor quality of bricks, use of Precast Stone blocks (items No. iii) is recommended as they would be usually found more economical.
- b) Item (iv) to (vi) are more appropriate in areas lik Assam, Arunachal Pradesh, Kashmir, Himachal Pradesh etc. from the point of locally available materials, climatic and seismic conditions and are also more economical.
- c) In brick work and R.R. masonry, mortar mixes usually used are cement mortar (1:8) for one and two storeyed construction and (1:6) in construction higher than two storeyes for cement lime mortar (1:2;9) or (iii) lime mortar (1:2 to 3). However, the mortar to be actually used will depend on locally available materials and the mortar should match the strength of bricks. Thickness of walls and mortar mixes (or strength design of walls) should be worked out as per provisions of National Building Code.
- d) For earthquake resistant construction of load bearing wall structures in seismic zones III,IV and V, IS:4326 should be referred to.

**Floor & slabs and roofs**

- i) R.C.C. slab M-15 (which is usually 1:2:4)
- ii) Precast roofing systems like cored units channel units, doubly curved shells etc.
- iii) Reinforced Brick concrete
- iv) Brick tiles over timber joists
- v) Brick jack arches with precast RCC joists
- vi) Stone putty slabs (10 to 15 cm thick)
- vii) 40 to 50 mm stone flags (like Agra stone) over precast RCC or wooden joists
- viii) Masdras terrace flooring over timber joists
- ix) Sloping roof with A.C./C.G.I sheets, Mangalore tiles, slates, Shingle etc.

**Note:**

For economy, RCC slabs should be designed as per ultimate load theory or yield line method and high strength deformed bars should be preferably used as reinforcement. Where RCC roofs are used in heavy rainfall regions they may be preferably laid in a sloping position.

Use of item No. (ii) results in saving of cement and steel and leads to faster work.

Item (iii) to (v) can be used where bricks of a good quality are available

Item (vi) to (vii) can be used in Delhi/ Rajasthan areas where suitable stone slabs are available.

Item no. (viii) is used in certain areas of Karnataka, Kerala and Tamilnadu.

Item no. (ix) is appropriate in heavy rainfall region like Assam, Kashmir, Himachal Pradesh, Eastern and Western Coastal regions

Saving in cement and steel can be effected through adoption of items (ii) to (ix)

**Flooring**

- i) 30 to 35 mm thick 1:2:4 cement concrete flooring to be used generally. Better specifications like mosaic flooring should be confined only to baths and WCs of all type of quarters and living and dining room of D-type quarters.
- ii) In ground floor, use 75-80 mm thick lean concrete base with lime concrete or c.c. 1:5:10.

**Doors and Windows****A. Frames**

- i) Wooden frames-Generally a size of 100 x 60mm is adequate for door frames (This may be increased to 120mm x 60 mm where fly proof shatters are also provided). The size of the frames could be reduced upto 75mm x 60mm in the case of windows.
- ii) M.S. Angle Iron Sections (sizes generally used are 40x40x6mm or T. Section or (45x30x5mm)
- iii) Precast RCC frame (100x75mm size)

**Note:**

a) For wooden frames locally available seasoned timber as Deodar, Sal, Bijasal, Kail, Pillamarudu, Karimarudu, Hollock etc. and other secondary species as per IS-399-1964 may be used.

**B. Shutters:**

- i) Paneled or battened and braced shutters for doors and partly or fully glazed shutters for windows made of deodar, kail or other locally available secondary species of timber.
- ii) Commercial type block board flush shutters.
- iii) Wood particle board paneled or flush shutters
- iv) Kitchens may be provided with fly-proof shutters
- v) External windows to be provided with simple grills made of M.S. rounds and flats.
- vi) Oxidized iron fittings to be generally used. Only in Type D quarters anodized aluminum fittings may be used.

**Note:**

- a) Shutters thickness :- 35mm is usually adequate for shutters of over 800mm width, Thickness could be reduced to 30mm for shutters of less width
- b) For secondary species of timber please refer to IS-399-1964
- c) Windows opening area - 10-12% in hot and dry regions  
16-18% in hot and humid regions.

**Wall finishes****A. Internal Surfaces**

- i) 12mm thick plaster with cement mortar (1:6) or cement lime mortar (1:2:9) finished with white wash.

**B. External Surfaces**

- i) Same as above (finished with colour wash).
- ii) Cement/lime pointing.



**Note:**

- a) The thickness of plaster on rough surface of brick work may be increased to 16 mm.
- b) The thickness may be reduced to 10 mm for plastering precast masonry blocks.
- c) Plastering on external surfaces need not be done in case of R.R. stone masonry and precast masonry blocks.

**Terracing over flat roofs****A- Hot and Dry Regions**

- i) The top of roof slab shall be painted with bitumen
- ii) On the bitumen painted roof shall be laid 10 cm thick mud gobi plaster to be overlaid by flat brick tiles. If earth suitable for mudphuska is not available use lime concrete terracing 7.5 cm average thickness. Where quality of lime concrete is not satisfactory, it needs to be overlaid by a layer of pressed clay tiles or two layers of country flat tiles or 30 to 35 cm thick 1:2:4 cement concrete panels.

**B. Heavy Rainfall Areas**

- i) Over the bitumen painted roof lay lime concrete terracing of 7.5cm average thickness overlaid by on layer of pressed clay tiles or two layers of country flat tiles or 30 to 35 cm thick 1:2:4 cement concrete panels.

**Note:**

- i) If RCC slabs are used in heavy rainfall areas preferably lay them in a slope.

**Cost Behaviour of Residential Quarters with Variation in the Number of Storeys and the Cost of land including Development:**

The question of adopting multi-storeyed construction for industrial housing in the public sector undertakings consistent with economy, better space utilisation and functional utility has been under consideration of the Bureau for some time. A detailed study was, therefore made to determine the cost behaviour of residential quarters with increase in the number of storeys and the cost of land including development. For this purpose the revised township densities recommended by the Central Building Research Institute, Roorkee, on the basis of their recent detailed investigations of various industrial townships were adopted. The object of this study

was to determine the type of construction and the number of storeys of residential buildings which work out to be most economical so that the cost per dwelling was least. The conclusions arrived at on the basis of this detailed study are indicated below and it has been decided that the future townships or expansions of existing townships of the public sector undertakings shall be planned in conformity with these conclusions:-

1. Depending upon the ultimate size of the townships and its distance from the factory a decision has first to be taken regarding the desirable densities of population that should be adopted for the township.
2. In order to conserve land there should be no single storeyed construction except under exceptional circumstances.
3. The overall township densities for 2,3 and 4 storeyed construction should not be less than 15,20 and 25 dwelling per acre respectively. Land should be utilised most economically by adopting the highest densities consistent with economy.
4. Where good quality bricks are available the residential buildings should be of load-bearing type with 9" (22.8 cm) thick brick walls and the number of storeys should be 2,3 and 4 depending upon the densities to be achieved. Where good quality bricks are not available the construction may be restricted to three storeyed blocks. In smaller townships two-storeyed construction may be adopted.
5. RCC framed construction is considerably costlier than load-bearing construction. It should be adopted only for more than four-storeyed dwelling to achieve higher densities of population where the cost of land is exceptionally high so that the overall cost per dwelling is the cheapest. In most of the common cases where the average sector density for mixed categories of quarters is not required to exceed 40 dwellings per acre and where the cost of land including development is not very high it will not be necessary to construct more than four-storeyed residential blocks. As mentioned earlier, upto 4 storeys load-bearing construction using 9" thick walls is the most economical construction.
6. For more than two storeyed buildings balconies should be provided in those towns where people sleep outside during summer. The area of these balconies will be in addition to permissible area as follows\*:-

|               |                                   |
|---------------|-----------------------------------|
| A type houses | - 60 sqft (5.578 m <sup>2</sup> ) |
| B type houses | - 63 sqft (5.853 m <sup>2</sup> ) |
| C type houses | - 84 sqft (7.804 m <sup>2</sup> ) |
| D type houses | - 96 sqft (8.919 m <sup>2</sup> ) |

7. Even where higher densities have to be achieved on account of very high cost of land it would be desirable to adopt load-bearing construction without lifts upto 4 storeys for lower categories of quarters i.e. types A and B and multistoreyed framed RCC construction only for higher categories i.e. types C and D. The increase in cost per dwelling due to adoption of framed construction instead of load-bearing construction and the installation of lift beyond four storeys is disproportionately high in case of lower category of houses as compared to the higher categories. Where multi-storeyed framed construction with lift installation is adopted a height of 8 to 12 storeys will be found to be most economical.

#### **Provision and planning of hostels, CISF accommodation and other amenity buildings in townships:**

Various types of buildings like hostels (married and bachelor type) for employees of the public sector enterprises, accommodation for personnel of Central Industrial Security Force and other amenity buildings like recreation centers and shops are required to be provided in the townships of public sector enterprises. For want of any guidelines, provision and planning of these buildings is being made at present somewhat tentatively. It has been seen that sometimes they are planned on an unnecessarily lavish scale and sometimes not even the minimum functional requirements are provided. To facilitate planning of these buildings on a rational basis and to provide for the essential functional requirements consistent with economy guidelines for planning these buildings have been evolved by the B.P.E. in consultation with the Standing Committee of the Construction Division. For the guidelines for planning CISF accommodation, The Ministry of Home Affairs has also been consulted. The enclosed guidelines for the buildings may be adopted whenever they are required to be constructed in the townships of public sector enterprises.

## HOSTEL ACCOMMODATION

These guidelines are for planning of different types of bachelor married hostels to be provided in the townships of Public Enterprises. Decision about the types of hostels to be provided will depend on the local requirements in each enterprise.

### 1. Bachelor Hostels

**a) Single seated and double seated accommodation with common toilets, kitchen and dining rooms:** Guidelines for planning issued under BPE's O.M. No. 1412-Adv (C) Cir-82/70 dated 19.10.1970. According to these guidelines, the carpet area of living rooms is 7.45 to 8.35 sqm (80 to 90 sft) per person in the case of single seated rooms and 6.5 to 7 sqm (70 to 75 sft) per person in the case of double seated rooms. The overall plinth area of the hostels including the circulation space is to be not more than 2-3 to 2-5 times the living room area.

**b) Single seated and double seated accommodation with common toilets but without common kitchen and dining room, cooking space being part of individual rooms:** Total plinth area of such hostels also may be the same as at (a) above.

### 2. Kitchenette Room Hostels for married employees

A) For employees entitled to A-type quarters: The accommodation to consist of a room including cooking space; and a toilet (or a bath room and a W.C. to be shared between two units)

Plinth area of 21 sq.m. per unit (In this plinth area it would be possible to provide a room and cooking space with a carpet area of 15 sqm. and a toilet). In case the hostel is higher than single storey, circulation space of 2 to 4 sq.m. per unit may be added.

B) For employees entitled to 'B' or higher type quarters,

\*Plinth area of 25 sq.m. per unit (In this plinth area it would be possible to have a room and kitchen with a floor area of 17 sq.m. and a toilet).

The accommodation to consist of a self-contained one-roomed suite with attached toilet.

C) For employees entitled to  
'C' or higher type quarters.

\* Plinth area of 36 sq.m. per unit

The accommodation to consist of  
self-contained two-roomed suite  
with kitchen and toilet.

## ANNEXURE – VIII

STANDARDS FOR DIFFERENT CATEGORIES OF ROADS IN  
TOWNSHIPS OF PUBLIC UNDERTAKINGS

| Sl. No | Category of Road              | Function  | Width of road land (Right of Way)   | Carriage-way Width  | Brief Specification  | Remarks   |
|--------|-------------------------------|---|---|---|--|---|
| 1      | 2                             | 3   | 4   | 5   | 6  | 7   |
| 1.     | Footpath Access               | Made for use by pedestrians & include the footpaths serving as access to  | 6-8 ft (1.83 – 2.44 m)  | 6-8 ft (1.83 – 2.44 m)                                      | (a) 3" (7.6cm) over burnt brick/stone aggregates (1 ½" or 3.8cm in size) rolled and blinded with earth/moorum with 1 ½" (3.8cm) premix bituminous surfacing for all subgrade types (sandy, silty and clayey).<br>(b) Alternatively, the top course could consist of 1/4" (0.63cm) red bajari spread, watered & rolled.   | (a) In shopping areas the width of the footpath should not be less than 10 ft.<br>(b) A capacity of 10-15 pedestrians for 12" (30.5cm) width of foot-way per minute should be considered as reasonable. |
| 2.     | Residential Streets (a) Minor | These include all minor streets primarily meant to provide access to building as well as cul-de-sac and loop roads.           | Generally 30 ft. (9.14m) which could be reduced to 20 ft. (6.1m) when access to property is on one side only. | Single carriage-way having single lane 12 ft. (3.66m) wide. | (a) (i) Sandy & Silty Subgrades. 9" (22.8cm) crust composed of 6" subbase (stone soling or other alternative) and 3" (7.6 cm) water bound macadam covered with 3/4" (1.9cm) thick premix surfacing.<br>(ii) Clayey Subgrades. 12" (30.5cm) crust composed of 9" (22.8cm) subbase (blanket course consisting of 4" (10.16cm) sand, cinder or gritty moorum and stone soling or other alternative) & 3" (7.6cm) water bound macadam covered with 3/4" (1.9cm) thick premix surfacing.                    | (a) to start with, only 8' (2.4m) width of carriage-way need to be constructed.<br><br>In case of a cul-de-sac the distance end should not exceed 600ft. (183m), from a street open at both ends.       |
|        | (b) Main                      | These include the principal roads in a residential area giving access to a large number of dwellings & are open at both ends. | 40ft. (12.19m)  | Single carriage-way having two lanes (24ft. or 7.3m wide).  | (b)(i) Sandy & Silty Subgrades. 9" (22.8cm) crust composed of 6" (15.24cm) sub-base (Stone soling or other alternatives) and 3" (7.6cm) water bound macadam covered with 3/4" (1.9cm) thick premix surfacing.<br><br>(ii) Clayey Subgrades 12" (30.5cm) thick crust composed of 9" (22.8cm) sub-base (blanket course consisting of 4" (10.16cm) sand, cinder or gritty moorum and stone soling or other alternatives) 3" (7.6cm) water bound macadam covered with 3/4" (1.9cm) thick premix surfacing. | (b) In the initial stages only 12 ft. (3.66m) width of carriage-way need to be constructed.   |
| 3.     | Sector Roads                  | These are roads which link up   | 60 ft. (18.3m)  | Single carriage-way   | (i) Sandy Subgrades. 9" (22.8cm) crust composed of 4½" (11.4cm) subbase (stone   | In the initial stages only 16' (4.88m) width of   |

| Sl. No | Category of Road | Function   | Width of road land (Right of Way) | Carriage-way Width  | Brief Specification   | Remarks  |
|--------|------------------|--|-----------------------------------|---|---|--|
|        |                  | various sectors and join up with major roads.  |                                   | having two lanes (24 ft. or 7.3m wide).   | <p>soling or other alternatives) and 4½" (11.4cm) water bound macadam (in two layers) covered with 1" (2.5cm) thick premix bituminous surfacing with seal coat.</p> <p>(ii) Silty Subgrades, 12" (30.5cm) crust composed of 6" (15.2cm) subbase (stone soling or other alternatives) and 6" (15.2cm) water bound macadam (in two layers) with 1" (2.5cm) premix surfacing with seal coat.</p> <p>(iii) Clayey Subgrades. 15" (38cm) crust composed of 9" (22.8cm) subbase (blanket course consisting of 4" (10.16 cm) sand, cinder, gritty moorum and stone soling or other alternatives) 6" (15.2cm) water bound macadam (in two layers) covered with 1" (2.5cm) premix bituminous surfacing with seal coat.</p>   | the carriage-way need to be constructed.   |
| 4.     | Major Roads      | These include all principal traffic routes within the town and to which the sector roads are also connected. | 80ft-100ft. (24.4 – 30.5m)        | <p>(a) Single carriage-way consisting of four lanes (44 ft. or 13.4m wide).</p> <p>(b) In special casels where appreciable volume of fast &amp; commercial traffic is anticipated, a dual carriage-way road could be adopted.</p> | <p>(i) Sandy Subgrades. 12" (30.5cm) crush composed of 6" (15.2cm) subbase (stone soling or other alternatives) &amp; 6" (15.2cm) water-bound macadam (in 2 layers) covered with 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> <p>(ii) Silty Subgrades. 15" (38cm) crust composed of 9" (22.8cm) subbase (stone soling or other alternatives) &amp; 6" (15.2cm) water bound macadam in 2 layers covered with 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> <p>(iii) Clayey Subgrades. 20" (50.8cm) crust composed of 10" (25.4cm) subgrade (blanket course consisting of 4" (10.16cm) sand, cinder or gritty moorum and stone soling or other alternatives) plus 4" (10.16cm) over size metalling &amp; 6" (15.2cm) water bound macadam (in 2 layers) and 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> | In the initial stages only two lanes ie. 24 ft. (7.3m) width of the carriage-way need to be constructed. |
| 5.     | Arterial Roads   | These include National & State Highways  | 200 ft. (61m)                     | Dual-carriage-way each having two lanes (24 ft. or  | (i) Sandy Subgrades. 12" (30.5cm) crust composed of 6" (15.2cm) subbase (stone soling or other alternatives) and 6" (15.2cm) water bound  | When the Arterial Road form part of National or State Highways, specifications to                        |

| Sl. No | Category of Road | Function   | Width of road land (Right of Way) | Carriage-way Width                               | Brief Specification  | Remarks                                    |
|--------|------------------|--|-----------------------------------|--|--|--|
|        |                  | and important regional roads which connect the township. |                                   | 7.3m width) on either side of the central verge. | <p>macadam (in 2 layers) covered with 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> <p>(ii) Silty Subgrades - 15" (38cm) crust composed of 9" subbase (stone soling or other alternatives) &amp; 6" (15.2cm) water bound macadam (in 2 layers) covered with 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> <p>(iii) Clayey Subgrades. 20" (50.8cm) crust composed of 10" (25.4cm) subbase (blanket course consisting of 4" (10.16cm) sand, cinder or gritty moorum and stone soling or other alternatives) plus 4" (10.16cm) over size metalling &amp; 6" (15.2cm) water bound macadam (in 2 layers and 1½" (3.8cm) premix bituminous surfacing with seal coat.</p> | be adopted would be as laid down for them. |

**Foot Note :-**

(a) The thickness of various layers indicated in column 6 are compacted thickness. For details of materials required for a given compacted thickness of Water Bound Macadam course, reference may be made to the I.R.C. specification and Code of Practice for Water Bound Macadam and surface treated Water Bound Macadam.

(b) The specifications indicated in column 6 are purely indicative. The specifications to be adopted in each case would depend upon the soil, the type and intensity of traffic and road materials available in the locality. For large scale construction, it would be advisable to consult Highways Research Organisation such as CFRI, Delhi and Highways Research Station, Madras.

(c) In the initial stages of construction of township, the roads would be subjected to numerous cuttings due to laying of various engineering services such as water supply, sewerage, power, telephone etc. It would, therefore be economical and desirable to defer the premix surfacing course indicated in column 6 to a later stage, particularly in respect of footpaths, residential streets and sector roads and adopt either bituminous painting with sand binding or surface dressing whichever is cheaper.

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**Bharat Coking Coal Limited**

**(A Subsidiary of Coal India Ltd)**

Office of the General Manager (C.M.C)

Koyla Bhawan, Koyla Nagar, Dhanbad-826005(India)

**Development of Kapuria block and extraction of coal from Kapuria block by mass production technology package for a minimum guaranteed production of 2.0MTy on turnkey basis. Work includes additional exploration (if desired so by the contractor); preparation of mining plan, detailed Project Report & EMP; obtaining approvals from concerned authorities.**

BID NO. BCCL/ GM(CMC)/ F- GL/ GLOBAL BID-Kapuria / 2009/ 896

Dated 06/07/2009

(Commercial Volume)

**BID DOCUMENT**

**PART – II (PRICE BID)**

## **7. SCOPE OF WORK, TIME SCHEDULE AND PROFORMA FOR PRICE BID**

### **7.1. SCOPE OF WORK**

The mine/ seams is to be explored (if felt necessary by the Contractor), planned, developed and operated by the Contractor for production of guaranteed quantity of coal per annum for a minimum **NINE** production years of commercial production period on turnkey basis.

The elaborated scope of work of the Contractor shall be as detailed hereunder.

#### **Preparation and approval of mining plan**

Mining plan is to be prepared as per the guidelines of Indian Bureau of Mines (IBM) and approval for it is to be taken from Ministry of Coal, Govt. of India.

#### **Geological exploration (if necessary)**

The Contractor shall do the additional exploration work (if felt necessary by him) including drilling of bore holes, geophysical logging, testing of samples etc. and preparation of a report based on the data created.

#### **Preparation and approval of Environmental Management Plan (EMP)**

The contractor shall prepare Environmental Management Plan (EMP) considering the guidelines of Ministry of Environment & Forests, Government of India in this regard and obtain necessary clearances for it.

The collection of sample, data, etc. for preparation of EMP is to be done by the Contractor.

#### **Preparation of detailed project report:**

- a) Detailed project report shall be prepared for
  - i. Planning & design for development of seams
  - ii. Planning & design for means of access and egress to seams
  - iii. Designing method of extraction of coal of guaranteed quantity from seams along with selection of equipment in accordance with the method of work.

- iv. Planning and design for the method of development and extraction, system of coal-material-man transportation, ventilation, pumping, drainage, power supplies, communication, coal handling etc.
- b) The proposals made under Detailed Project Report (DPR) should be well within the precincts of Mines Act, Mines Rules, Coal Mine Regulations and other statutory obligations as applicable in India.
- c) In addition to the safety, the DPR should take into consideration that conservation of coal and the methods suggested must take into consideration the maximum extraction of coal under the prevailing geo-mining conditions. It is desirable that the mining method to be adopted should be able to recover in-situ coal to the maximum extent possible.
- d) It is construed that during the preparation of DPR discussion with DGMS about the method of work as well as requirement of machinery has been held and possible objection, if any, have already been taken care of / rectified in the draft DPR
- e) The draft DPR so prepared may be sent to the consultant of the Company for scrutiny and suggestions of consultant related to safety are binding on the contractor. However, the vetting of DPR by the consultant of the Company does not relieve, in any way whatsoever, the contractor of bids obligations under the contract

### **Scientific studies and approvals**

The Contractor shall be responsible for scientific study required for various activities for development and extraction coal seam, obtaining Directorate General of Mines Safety (DGMS) and other statutory approval both for application of mass production technology package as well as for proposed mining method and fulfilling other statutory obligations including statutory approval of the equipment to be deployed. Obtaining approval of DGMS at all stages, in the matters of use of all equipment, all mining operations, preparation of reports, conducting scientific studies and instrumentations as are required under Indian mining legislation and as may be advised by DGMS from time to time will be responsibility of the Contractor.

The Contractor shall carry out Subsidence prediction studies and the remedial measures.

## **Mine Development and construction**

- a) In accordance with approved detailed project report, the Contractor shall make development of the mine upto the seams and he will be responsible for preparation of all designs, drawings of the development of work and supply & installation of equipment therein.
- b) The mine in its entirety is to be developed scientifically so that coal can be extracted from seams in compliance with the provisions under Mines Act, Mines Rule, Coal Mine Regulation and other statutory obligations as applicable in India.
- c) Development and construction of all infrastructures including mine shafts/ inclines/driffts; coal, man and material transport network; ventilation network; power supply network; water drainage network; and any other infrastructures or requirement as envisaged in the approved DPR shall be the Contractor's responsibility. This part will include procurement, supply, erection/ installation and commissioning of all equipments / items from Indian or overseas sources.
- d) The Contractor shall be responsible for maintenance of all development and construction works including maintenance of all installed equipments during entire contract period.
- e) The Contractor shall be responsible for carrying out dismantling / demolition of necessary existing buildings and structures including foundations, covered works and plant & equipment and stacking and expeditious removal of the debris to the dumping ground to be specified by the Employer.

## **Installation of Mass production technology package**

The Contractor shall be responsible for supply, installation and commissioning of the mass production technology package in the panel and the equipments for transportation, communication, lighting, pumping and other safety devices in mine & seams in accordance with the approved Detailed Project report.

The Contractor shall deploy only a new set of mass production technology package. Use of refurbished or overhauled equipment is not permitted. The Contractor shall have to produce documentary evidence that the mass production technology package deployed by him is new.

## **Extraction of coal seams**

The Contractor shall be responsible for extraction of target coal seam(s) in accordance with the approved DPR during the commercial production period of minimum NINE production years to ensure the annual guaranteed production of coal. Panelling of coal deposits in each target seam in a scientific manner and carrying out mining operations for achieving target rate of production are the sole responsibility of the Contractor.

**Development** of panels and shifting of equipment accordingly for new panels shall be the responsibility of the Contractors. All allied works within the mine such as communication, pumping, ventilation, maintenance of the mass production technology package etc. shall be responsibility of the Contractor during contract period. The Contractor shall be responsible for transportation of coal produced from the face up to the designated transfer point at surface.

The Bidders are free to quote the quantity of annual guaranteed production of coal according to their capacity but not less than 'Minimum guaranteed production' as given below (subject to the maximum production per annum as per approved EMP).

Minimum guaranteed production during the Commercial production period:

- 1st production year : 2.0 MTe. (Million Tonne)
- 2nd production year : 2.0 MTe. (Million Tonne)
- 3rd production year : 2.0 MTe. (Million Tonne)
- 4th production year : 2.0 MTe. (Million Tonne)
- 5th production year : 2.0 MTe. (Million Tonne)
- 6th production year : 2.0 MTe. (Million Tonne)
- 7th production year : 2.0 MTe. (Million Tonne)
- 8th production year : 2.0 MTe. (Million Tonne)
- 9th production year : 2.0 MTe. (Million Tonne)

## **Construction and operation of CHP**

The Contractor shall supply coal of -50mm size on the surface at the designated transfer point. For smooth & continuous supply of coal of required size, the Contractor shall construct and operate the 'Coal Handling Plant' including coal bunkering and high

speed loading system, etc. suitable for the quantity of coal to be handled (taking into account the potential of existing infrastructure, if any). Construction and operation of CHP will include procurement, supply, erection / installation & commissioning of all equipments & accessories and maintenance of the CHP during entire Contract period.

### **Deputation of foreign experts**

The Contractor may depute at site its Foreign Experts from various disciplines for Installation, Commissioning, operation & maintenance of mass production technology package. The Contractor may also depute Experts, if required, for proper and safe handling of cargo at the time of unloading of Mass production technology package at the port of clearance and storage, conservation and re-conservation.

Bio-data of the Foreign Engineers / Experts shall be furnished by the Contractor to the Employer / Engineer for information sufficiently in advance before their deputation. The Contractor shall obtain at its own cost, necessary work permits, passports, visas, police permits and expenses for customs duty related to personal and other effects of any Experts / personnel who are non-residents of India, employed or engaged by him for work

### **Training of Employer's personnel**

In the last production year of commercial production period, the Contractor shall give adequate training to the sufficient numbers of Employer's personnel in India or abroad for running the mine after expiry of the commercial production period. The traveling, boarding & lodging expenses of the Employer's trainees shall be borne by the Employer. The Employer shall also arrange necessary travel documents for its trainees. The Contractor shall, however, assist in arranging visa and medical insurance for such trainees, wherever necessary. Other arrangements and expenses are to be done by the Contractor.

### **GENERAL RESPONSIBILITY:**

- i) The Contractor shall carryout above works which includes supply of equipment; customs & port clearances; inland transportation; intermediate storage; insurance & handling; erection / construction work; testing; start-up & commissioning and preparation of PR & EMP, development of the mine and production of coal for commercial production period of minimum NINE production years with due care and diligence in accordance with the Contract.
- ii) The contractor shall furnish all, but not limited to, equipment, materials and accessories and services to complete this work. The work shall have to be

completed and operative in all details. Any item of work or material or equipment which may not have been specifically mentioned but incidental to or necessary for completing the works shall be provided by the contractor. The contractor shall also supply and/ or erect the addition or modification as will be agreed upon in writing after mutual discussions with Company's representatives.

- iii) The provision of all labour, materials, temporary works, surface constructional infrastructures (such as office, buildings, storage area, labour / staff colony, fabrication area etc.) whether of a temporary or permanent nature, and everything required for the completion of works, shall be deemed to be included in the Scope of Work.
- iv) All excavated materials shall remain the property of the Employer. In case the Contractor wishes to utilise the boulders excavated by the Contractor during the excavation work at the site, the same may be issued to the Contractor at prevailing rates on cost recovery basis. Percentage of voids on stack measurement shall be mutually agreed. Contractor shall have to account for all excavated hard rock.
- v) "All fossils, coins, articles of value of antiquity and structure and other remains or things of geological and archaeological interest discovered on the site of works shall be the absolute property of the Company and the Contractor shall take all precautions to prevent his workmen or any other person removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal inform the Company of such discovery and carry out the removal under the supervision of the Employer of the same and hand it over to the Employer".
- vi) The Contractor shall intimate the Employer in writing well in advance about the requirement of shut down of any of the existing units / facilities for inter-connection / incorporation of additional facilities. The shutdown period shall be mutually discussed and finalised. The work to be undertaken during the shut down period shall be planned meticulously by the Contractor to reduce the shut down period to the minimum.
- vii) The Contractor shall be responsible for delays and losses consequent there upon, in case the mine is stopped or conditions imposed by DGMS.

- viii) The Contractor must adhere to all relevant codes and practices, safety regulations, statutory laws, environmental protection acts, electricity rules etc. The Contractor shall be responsible for all the statutory obligations during development and extraction of coal seam(s).
- ix) Statutory man power required for the project shall be provided by the Company.
- x) The Contractor shall be responsible for carrying all mining and progressive mine closure activities as per approved mine plan.

## **7.2 MINE HAND OVER**

After successful completion of commercial production period of minimum NINE production years, the mine / seams and entire infrastructure including transportation system for man, material & coal; ventilation system; pumping system; power & communication system; coal handling plant, surface buildings / constructions, deliverable P&M including mass production technology package and every things will be handed over to the Company in good working condition after due consideration for allowable wear and tear.

All documents, drawings, reports, photographs, statistical data etc. in hard and/ or soft versions will be properly indexed, maintained and handed over to the Employer on conclusion of the contract or intervening period as may be required by the Employer.

## **7.3 TIME SCHEDULE**

The different activities of works should be completed within the scheduled time as per the approved scheme or the detailed project report as applicable.



## 7.4 PROFORMA FOR PRICE BID

### 1. Format for Price for preparation and approval of reports (Mining Plan, EMP, DPR, etc.)

(For each report separate Performa should be used)

Total price for preparation and approval of reports:

Scheduled date of submission of approved reports:

| Price Components |      | INR   |       |            |             | USD   |       |            |             | Euro  |       |            |             |
|------------------|------|-------|-------|------------|-------------|-------|-------|------------|-------------|-------|-------|------------|-------------|
|                  |      | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes |
|                  |      |       |       |            |             |       |       |            |             |       |       |            |             |
|                  |      |       |       |            |             |       |       |            |             |       |       |            |             |
| Fixed Comp.      | 100% |       |       |            |             |       |       |            |             |       |       |            |             |

(In words): INR ..... and Euro .....  
and USD .....

Note: 1. Price for preparation of reports will be firm. No escalation will be admissible for preparation and approval of the reports.

## 2. Format for Price for shaft sinking

(For each shaft separate Performa should be used)

Shaft dia

Estimated depth

Total price of shaft sinking and furnishing

Scheduled Starting date:

Scheduled Completion date :

| Price Components |     | INR   |       |            |             | USD   |       |            |             | Euro  |       |            |             |
|------------------|-----|-------|-------|------------|-------------|-------|-------|------------|-------------|-------|-------|------------|-------------|
|                  |     | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes |
|                  |     |       |       |            |             |       |       |            |             |       |       |            |             |
|                  |     |       |       |            |             |       |       |            |             |       |       |            |             |
| Fixed Comp.      | 20% |       |       |            |             |       |       |            |             |       |       |            |             |
| Variable Comp.   | 80% |       |       |            |             |       |       |            |             |       |       |            |             |

Sinking schedule

Progress

First Year :  
 Second Year :  
 Third Year :  
 Fourth Year :  
 Fifth Year :

**Notes :**

1

- Price of shaft sinking is firm except the case as per point no.2 below.

2 In case there is any delay in completion of mine infrastructure activities due to the fault on the part of the Company, escalation will be given as the escalation clause no. 4.1.39

3 Per meter rate of shaft sinking and furnishing will be calculated on the basis of total price quoted for shaft sinking & furnishing and the shaft depth. The contractor will be paid on the basis of physical progress per month and at the calculated rate of shaft sinking. However, in case of change in shaft depth, no additional payment on the basis of sinking & furnishing cost per meter will be admissible.

4

- Electricity consumed by the Contractor will be deducted on actual from the monthly bills.

**3. Format For Price For Incline/ Drift-Drivage (As Applicable)**

(For each incline/ drift separate Performa should be used)

Cross-section

Estimated length

Gradient

Total price of incline drivage and furnishing

Scheduled Starting date:

Scheduled Completion date :

| Price Components |    | INR   |       |            |             | USD   |       |            |             | Euro  |       |            |             |
|------------------|----|-------|-------|------------|-------------|-------|-------|------------|-------------|-------|-------|------------|-------------|
|                  |    | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes |
|                  |    |       |       |            |             |       |       |            |             |       |       |            |             |
|                  |    |       |       |            |             |       |       |            |             |       |       |            |             |
| Fixed            | 20 |       |       |            |             |       |       |            |             |       |       |            |             |

|          |    |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|----|--|--|--|--|--|--|--|--|--|--|--|--|
| Comp.    | %  |  |  |  |  |  |  |  |  |  |  |  |  |
| Variable | 80 |  |  |  |  |  |  |  |  |  |  |  |  |
| Comp.    | %  |  |  |  |  |  |  |  |  |  |  |  |  |

Drivage  
schedule

Progress

First Year :  
Second Year :  
Third Year :  
Fourth Year :  
Fifth Year :

**Notes:**

1. Price of incline/ drift drivage is firm except the case as per point no.2 below.
2. In case there is any delay in completion of mine infrastructure activities due to the fault on the part of the Company, escalation will be given as per escalation clause no. 4.1.39
3. Per meter rate of incline drivage and support will be calculated on the basis of total price quoted for incline drivage & support and the incline length. The contractor will be paid on the basis of physical progress per month and at the calculated rate of drivage. However, in case of change in incline length, no additional payment on the basis of incline drivage & support cost per meter will be admissible.
4. Electricity consumed by the Contractor will be deducted on actual from the monthly bills.

#### 4. Price Format for Civil & Structural Works

1. Base indices                      Value  
     i) AICPI  
     ii) WPI
2. Applicable taxes              Percentage  
     i) Service tax  
     ii) Cess  
     iii) Others, if any

| Sl. No. | Description            | Type of structure/ building | No. of units | Price/ unit |                 |              | Total Amount | Scheduled month & year of completion |
|---------|------------------------|-----------------------------|--------------|-------------|-----------------|--------------|--------------|--------------------------------------|
|         |                        |                             |              | Area (sq.m) | Rate (Rs./sq.m) | Amount/ Unit |              |                                      |
| 1       | Residential buildings  |                             |              |             |                 |              |              |                                      |
| a.      | Quarters               | A – Type                    |              |             |                 |              |              |                                      |
|         |                        | B – Type                    |              |             |                 |              |              |                                      |
| b.      | Hostel                 |                             |              |             |                 |              |              |                                      |
|         | ...                    |                             |              |             |                 |              |              |                                      |
|         | ...                    |                             |              |             |                 |              |              |                                      |
| 2       | Service buildings      |                             |              |             |                 |              |              |                                      |
| a.      | Office buildings       |                             |              |             |                 |              |              |                                      |
|         | ....                   |                             |              |             |                 |              |              |                                      |
| b.      | Workshop and stores    |                             |              |             |                 |              |              |                                      |
| 3       | Industrial buildings   |                             |              |             |                 |              |              |                                      |
| a.      | Electrical Sub-station |                             |              |             |                 |              |              |                                      |
| b.      | CHP                    |                             |              |             |                 |              |              |                                      |

#### **Notes:**

- The contractor will give details of the buildings to be constructed by him. Specifications for various types of buildings are given in Annexure-VI & VII herein and specific classification of these buildings as per these specifications are to be included in the above format. In case, some buildings do not fall under any of the category given in the Annexures-VI & VII full detailed specifications for such buildings are to be provided separately.

2. The price quoted for the civil work is firm except in case there is delay in completion of construction activity due to the fault on part of the employer. In that case the escalation will be paid as per the escalation clause no. 4.1.39.

## 5. Price Format for Roads & Culverts

1. Base indices Value  
 i) AICPI  
 ii) WPI  
 2. Applicable taxes Percentage  
 i) Service tax  
 ii) Cess  
 iii) Others, if any

| Sl. No. | Description | Type of road/ culvert | Length (km) | Width (m) | Rate (Rs./km) | Total Amount | Scheduled month & year of completion |
|---------|-------------|-----------------------|-------------|-----------|---------------|--------------|--------------------------------------|
|         |             |                       |             |           |               |              |                                      |
|         |             |                       |             |           |               |              |                                      |
|         |             |                       |             |           |               |              |                                      |
|         |             |                       |             |           |               |              |                                      |
|         |             |                       |             |           |               |              |                                      |
|         |             |                       |             |           |               |              |                                      |

### **Note:**

- The contractor will give details of the roads/ culverts to be constructed by him. Specifications for various types of roads are given in Annexure-VIII and specific classification of these roads/ culverts as per these specifications are to be included in the above format. In case, some roads/ culverts do not fall under any of the category given in the Annexure-VIII, full detailed specifications for such roads/ culverts are to be provided separately.
- The price quoted for the civil work is firm except in case there is delay in completion of construction activity due to the fault on part of the employer. In that case the escalation will be paid as per the escalation clause no. 4.1.39.

## 6. Price Format for supply of deliverable P&M

### A. For imported supplies

(For each item/ item set separate Performa should be used)

Name and description of item/ set -

Nos. -

Currency (Please select from **Euro or USD**) -

(Amount in .....)

Applicable base index -

| <u>S.No.</u> | <u>Description</u>  | <u>Taxes</u>           |               | <u>Amount</u> | <u>Remarks</u>         |
|--------------|---|------------------------|---------------|---------------|------------------------|
|              |   | <u>Rate</u>            | <u>Amount</u> |               |                        |
| <u>1.</u>    | <u>&lt;Item/ item set description&gt;</u>                           | <u>FOB / FCA Price</u> |               |               | <u>Firm Price</u>      |
| <u>2.</u>    | <u>Freight, insurance, handling charges@10%* on FOB / FCA Price</u> |                        |               |               | <u>Firm Price</u>      |
| <u>3</u>     | <u>CIF (1+2)</u>  |                        |               |               |                        |
| <u>4.</u>    | <u>Basic custom duty@ 7.5% on CIF</u>                               | <u>7.5%</u>            |               |               | <u>On actual basis</u> |
| <u>5.</u>    | <u>CIF+BCD (3+4)</u>  |                        |               |               |                        |
| <u>6.</u>    | <u>CVD @ 8% on (5)</u>  | <u>8%</u>              |               |               | <u>On actual basis</u> |
| <u>7.</u>    | <u>Education cess @3% on (6)</u>                                    | <u>3%</u>              |               |               | <u>On actual basis</u> |
| <u>8.</u>    | <u>Sub-total (5+6+7)</u>  |                        |               |               |                        |
| <u>9.</u>    | <u>Custom education cess @3% on (8)</u>                             | <u>3%</u>              |               |               | <u>On actual basis</u> |
| <u>10.</u>   | <u>Sub-total (8+9)</u>  |                        |               |               |                        |
| <u>11.</u>   | <u>Special countervailing Duty@4% on (10)</u>                       | <u>4%</u>              |               |               | <u>On actual basis</u> |
| <u>12.</u>   | <u>Misc. expenses @ 5% of FOB/ FCA</u>                              |                        |               |               | <u>Firm Price</u>      |
| <u>13.</u>   | <u>Total landed price(10+11+12)</u>                                 |                        |               |               |                        |

\* 12% if the origin of the country is USA, Canada or Japan

**Note:** The price quoted for the items of indigenous supplies is firm except in case there is delay due to the fault on part of the employer. In that case the escalation will be paid as per the escalation clause no. 4.1.39.

.....Contd.

### Price Format for supply of deliverable P&M

#### B. For indigenous supplies

For each item/ item set separate Performa should be used)

Name and description of item/ set -

Nos. -

**Base indices**

**(Amount in INR)**

| <u>S.No.</u> | <u>Description</u>                            | <u>Taxes</u>          |               | <u>Amount</u> | <u>Remarks</u>         |
|--------------|---|-----------------------|---------------|---------------|------------------------|
|              |   | <u>Rate</u>           | <u>Amount</u> |               |                        |
| <u>1.</u>    | <u>&lt;Item/ item set description&gt;</u>     | <u>Ex-works Price</u> |               |               | <u>Firm Price</u>      |
| <u>2.</u>    | <u>Excise Duty@14% on Ex-works Price</u>      | <u>14%</u>            |               |               | <u>On actual basis</u> |
| <u>3</u>     | <u>Education cess @3% on Excise Duty</u>      | <u>3%</u>             |               |               | <u>On actual basis</u> |
| <u>4.</u>    | <u>Sub total (1+2+3)</u>                      |                       |               |               |                        |
| <u>5.</u>    | <u>Sales Tax against form "C" @ 2% on (4)</u> | <u>2%</u>             |               |               | <u>On actual basis</u> |
| <u>6.</u>    | <u>Sub total (4+5)</u>                        |                       |               |               |                        |
| <u>7.</u>    | <u>Octroi# @ 3% on (6)</u>                    | <u>3%</u>             |               |               | <u>On actual basis</u> |
| <u>8.</u>    | <u>Misc. (Packing, Loading charges,</u>       | <u>3%</u>             |               |               | <u>Firm Price</u>      |



|           |  |  |  |  |  |
|-----------|--|--|--|--|--|
|           | <u>Inland Insurance</u><br><u>,Inland</u><br><u>Transportation,</u><br><u>Unloading</u><br><u>Charges) 3% on</u><br><u>(6)</u> |  |  |  |  |
| <b>9.</b> | <b>Total (6+7+8)</b>   |  |  |  |  |

# if applicable

**Note:** The price quoted for the items of imported supplies is firm except in case there is delay due to the fault on part of the employer. In that case the escalation will be paid as per the escalation clause no. 4.1.39

.....Contd.

### Price Format for supply of deliverable P&M

#### C. Total price (A+B) of major P&M

| Item  | INR | EURO | USD |
|---|-----|------|-----|
| <b>Cost towards indigenous and overseas supplies of major P&amp;M</b> |     |      |     |

(In words): INR ..... and Euro .....  
and USD .....

Note:

1. Price for all P&M items given in Annexure-I is to be quoted in the format given above.
2. Supply, installation and commissioning schedule for each item is to be provided

## 7. Format for Price of coal production for the first commercial production year

Scheduled Starting date of commercial production period

| Price Components |      | INR   |       |            |             | USD   |       |            |             | Euro  |       |            |             |
|------------------|------|-------|-------|------------|-------------|-------|-------|------------|-------------|-------|-------|------------|-------------|
|                  |      | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes | Price | Taxes | Base index | Price+Taxes |
|                  |      |       |       |            |             |       |       |            |             |       |       |            |             |
|                  |      |       |       |            |             |       |       |            |             |       |       |            |             |
| Fixed Comp.      | 20 % |       |       |            |             |       |       |            |             |       |       |            |             |
| Variable Comp.   | 80 % |       |       |            |             |       |       |            |             |       |       |            |             |

Minimum guaranteed production

Mt.

First Year  
 Second Year  
 Third Year  
 Fourth Year  
 Fifth Year  
 Sixth year  
 Seventh year  
 Eight year  
 Ninth year

### Notes:

1. Price of coal production in the first production year of commercial production period is firm.

2. In case there is any delay in completion of mine infrastructure activities due to the fault on the part of the employer, the cost per tonne of coal for the first production year will be escalated as per the escalation clause no. 4.1.39.
3. The price per tonne of coal for subsequent years will be calculated on the basis of escalation clause taking 1<sup>st</sup> year escalated price as base price.
4. Electricity consumed by the Contractor will be deducted on actual from the monthly bills