

BCCL



Bharat Coking Coal Limited
(A Subsidiary of Coal India Ltd)
Contract Management Cell
Koyla Bhawan: Koyla Nagar
Dhanbad-826 005 (India)
Tele-Fax: 0326-2230206
e-mail: bcclcgmmc@cmpdi.co.in

PART-I-TECHNICAL & COMMERCIAL BID

1. Name of Work : **SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVI (TOP) SEAM.**
2. Place of Work : Moonidih Underground Project of Western Jharia Area, BCCL
3. Tender Notice No. & Date : BCCL/ GM(CMC)/ Global-20/MoonidihXVITop/2011/4214
Date 07/03/11
4. Earnest Money : Rs.25.0 Lakhs or equivalent USD
5. Date & Time of submission of tender : **On 1/08/11 up to 3.30 P.M.**
6. Date & Time of Opening of Part-I Tender : **On 02/08/11 at 4.00 P.M.**
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-----

General Manager (CMC)

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**REF NO.- BCCL/ GM(CMC)/ GLOBAL-
20/MoonidihXVITop/2011/4214 Date:07/03/11**

Name and Place of work

**SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/
OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED
SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND
PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE
FOR PRODUCTION OF COAL FROM XVI (TOP) SEAM.**

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e-mail: bccicgmc@cmpdi.co.in

NIT No. BCCL/ GM(CMC)/ Global –20/Moonidih XVI Top/2011/ 4214 Date: 07/03/11

Sealed Bids are invited in **Two sets (One original and one copy)** for the following work under two Bid system from technically and financially sound agency(s) from India and abroad having proven track record of producing coal through application of Powered Support long wall Technology at XVI Top Seam in Moonidih Under Ground Project under Western Jharia Area of Bharat Coking Coal Limited, Dist – Dhanbad, State – Jharkhand. (India).

| Name and Description of Work | Guaranteed Minimum Quantity of Production during contract period. | Total Contract Period |
|--|---|--|
| SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/ OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVI TOP SEAM. | 3.50 mte. (Three & half Million Tonne). | Production of 3.50 Mt in 1st 10000 cycles or 5 (Five) Years of Commercial operation whichever concludes earlier. |

1.1 EARNEST MONEY

Rs. 25,00,000 (Twenty five lacs) or equivalent USD as Earnest Money / Bid Security is to be deposited in the form of irrevocable Bank guarantee from any Scheduled Bank **payable at its branch at Dhanbad / Kolkata with validity of 28 (Twenty eight) 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 as promptly as possible after finalization of tender and shall bear no interest.

1.2 APPLICATION FEE FOR TENDER DOCUMENT

The price of a tender document will be ` Rs. 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 **11/04/11 to 02/05/11**

Place:

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, 6, Lyons Range, Kolkata-700001, India.

Tender document will also be available on our website <http://www.bccl.cmpdi.co.in> from the date of sale of tender document. The tenderers who downloads 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.

Sealed Tenders/bids have to be submitted by the tenderers in four envelopes duly sealed in one outer envelope indicating full postal address and telephone nos. of the tenderer. Four Envelopes as mentioned above will consist of :

- (1) **Envelope for cost of tender document & undertaking** (in case tender document is downloaded from website)
- (2) **Envelope for Earnest Money Deposit**
- (3) **Envelope for Techno - commercial bid (Part-I)**
- (4) **Envelope for Price Bid (Part-II)**

Outer sealed envelope will be marked as “Bidding Documents for.....”

b) The two parts of the offers shall contain details as follows:

Part- I

- a) Details of proposed equipments, machinery & methodology along with implementation schedule.
- b) Documentary evidence established in accordance with *that* the bidder is eligible to bid and is qualified to perform the contract if its bid is acceptable.
- c) Documents Establishing the machinery and/ or Equipment’s Eligibility and Conformity to Bidding Documents.
- d) The original bid document issued to the bidder or downloaded by the bidder, duly signed by the authorized signatory of the bidder on all pages as proof of accepting the conditions of contract (excluding the price bid).
- e) A Bid Form to be duly filled in and shipment schedule is to be provided .

Part-II

Price bid only in the format given in the tender document is required to be submitted otherwise the bid may not be considered.

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 **on 01/08/11 up to 3.30 PM** 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 **on 02/08/11 at 4.00 PM** at 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 CLARIFICATION

After opening of the tender, if the company decides to get clarifications, the tenderers should be in a position to depute their representatives, at short notice, with full authority for clarifying the same 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

Name & Address of Independent Monitor:

Name:- Sri D. Bandyopadhyay, IAS (Retd)

Address :- GD – 89, Sector – III, Salt Lake, Kolkata - 700016

General Manager(CMC)
Bharat Coking Coal Limited

Distribution:

CC: Sri D. Bandyopadhyay, 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, BCCL.

CC: CGM (Co-ordn.) /CGM(F) /GM (P&P)/CGM(MM)/CGM(E&M), BCCL/ RD,CMPDI, RI-II

CC: GM(System),BCCL 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.

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), BCCL Koyla Bhawan, level-V from 9.30 AM to 4.00 PM on 01/08/11 and also from 3.30 PM on 02/08/11

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

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

CC: Embassies/Consulates: As per list enclosed

General Manager(CMC)
Bharat Coking Coal Limited

LIST OF EMBASSIES / CONSULATES

| Sl. No. | Address | Sl. No. | Address |
|---------|---|---------|--|
| 01 | Trade Counsellor Office of the Consulate of Canada in India, New Delhi | 02 | Trade Counsellor Office of the Embassy of Indonesia in India, New Delhi |
| 03 | Trade Counsellor Office of the Embassy of USA in India, New Delhi | 04 | Trade Counsellor Office of the Embassy of Poland in India, New Delhi |
| 05 | Trade Counsellor Office of the Embassy of Germany in India, New Delhi | 06 | Trade Counsellor Office of the Embassy of South Africa in India, New Delhi |
| 07 | Trade Counsellor Office of the Embassy of Ukraine in India, New Delhi | 08 | Trade Counsellor Office of the Embassy of Russia in India, New Delhi |
| 09 | Trade Counsellor Office of the Consulate of Australia in India, New Delhi | 10 | Trade Counsellor Office of the Consulate of U.K. in India, New Delhi |
| 11 | Trade Counsellor Office of the Embassy of China in India, New Delhi | 12 | Trade Counsellor Office of the Embassy of France in India, New Delhi |

2 INSTRUCTIONS TO BIDDERS

2.1 SCOPE OF TENDER

The objective of this global bid is to achieve at least a minimum production of 3.50 million tonne of coal within a period of five (5) years with an annual production guarantee of at least 0.5 mt. through application and implementation of Powered Support Longwall Technology.

The successful bidder shall be responsible for supply, installation, commissioning, operation including service, maintenance and spares management of the necessary machinery and / or equipment supplied by the successful bidder required for such implementation of Powered Support Longwall Technology for extraction of coal as also development of trunk roadways and panels with matching support and ventilation systems as well as extraction of XVI Top seam to enhance productivity, extraction percentage, safety of the underground mines and subsequently its adoption and absorption. For implementing the above the bidder shall have to supply, install and commission the necessary equipment at site so that the minimum rated production of 0.5 million tonnes/year totaling at least 3.50 mt. over the contract period of 5 years could be achieved.

The scope of work of the successful bidder shall also include maintenance of its equipment and/ or machinery at site including replacement of spare parts if required, provisions for services together with all necessary consumables and skilled manpower. The bidder will have to organize the production at the face and transport it to the tail end of the gate conveyor both for PSLW set and Road Headers. From there onwards, it will be the responsibility of BCCL to arrange for transportation of coal up to the point of its disposal. However, the bidder will also suggest BCCL regarding a technically feasible and acceptable transport system from tail end of the gate conveyors to the point of disposal.

The Bidders shall quote the price for Machinery and/or Equipment to be supplied and the rate per tonne of committed production in terms of operation/maintenance, service & maintenance spares to be quoted by the successful bidder, in Foreign Currency (F/C) and/or Indian Rupee (INR) on yearly basis for the entire contract period of 5 years of commercial operation. While quoting such rates the bidder should refer clause 1(f) of Section III in respect of all the activities and services indicated therein.

2.2 Preamble

There are 317 underground mines under the purview of Coal India Limited (CIL), the holding company and its seven (7) coal producing subsidiaries. The most commonly used method of mining is Bord & Pillar. Conventional and Semi-mechanised (by using SDL/LHD for coal loading on to chain conveyor / belt conveyor / coal tubs). However, extraction is not compatible with development and large reserves are standing on pillars.

Highly mechanized Longwall method of mining with Powered Supports is also being operated in a few mines of CIL.

BCCL, one of the subsidiaries of CIL is now in search of an enterprise who can assure a minimum guaranteed production of 3.50 million tonnes of coal in 1st 10000 cycles within five (5) years for an annual production guarantee of at least 0.50 mt. through supply, installation, commissioning, operation including service, maintenance and spares management, of the necessary machinery and / or equipment required for implementation of Powered Support Longwall Technology including the development of trunk roadways and panels as well as full extraction of panel in XVI Top seam in order to enhance the productivity and safety standards with improved financial conditions. With this in view, BCCL has identified Moonidih Underground Project for such purpose.

2.3. Eligibility Criteria:

- (a) The Bidder must have experience in manufacturing of major equipment of Powered support Longwall for at least 7 years immediately the preceding year ended on 31/3/2010 and have experience in operation of the powered support longwall face for at least 7 years immediately the preceding year ended on 31/3/2010.
- (b) The bidder should possess experience of successful planning and implementation of similar underground coal mining project(s) in India ,or elsewhere as per the scope of work in last 7 years immediately the preceding year ended on 31/3/2010
- (c) The Bidder should provide audited / Certified Accounts / Financial statements for, last three years, establishing its average annual turnover in excess of US \$ 15 (fifteen) million or equivalent Indian Currency in mining / mining equipment business to justify its financial soundness for bidding.

- (d) The bidder must have operated at least two underground coal mines capacity 1.0 MT each using equipment of power support long wall successfully in the last 7 years as per the scope of work.
- (e) If the bidder is a subsidiary company / unit of the parent company (confirmed through authenticated documentary records), the audited / certified account / financial statement (in respect of mining / mining equipment business) as well as technical capability of the parent company shall also be considered towards eligibility of the bidder.

2.3.1 In case the bidder is a consortium of two or more parties, as members, either of the members or combination of members together should meet the eligibility criteria. Members of the consortium shall enter into a Memorandum of Understanding (MOU) for the purpose of this project, which shall be submitted by the bidder along with tender. And it should be legally acceptable by the Respondent.

Each member of consortium shall be responsible for the scope of the work of individual companies and the lead member will be solely responsible and liable for completing the task as per the contract and fulfillment of all the contract obligations and also responsible for acts of the other members of the consortium. Any consortium/JV member can be lead member.

The Consortium shall comply with the following requirements:

- i) Authorization in favour of leader of the Consortium shall be evidenced by submitting with the bid a Power of Attorney signed by legally authorized signatories of each Consortium member and shall be responsible for the scope of the work of individual companies and the lead member will be solely responsible and liable for execution of the project and fulfillment of all the contract obligations and also responsible for acts of the other members of the consortium For the purpose of submission of tender, consent letters from consortium members need to be submitted.

2.3.2 Sub-contractor's experience and resources will not be taken into account in determining the Bidders' compliance with qualifying criteria.

2.3.3 Even though the bidders meet the above Qualifying Criteria, they are subject to be disqualified, if they have:

- a) Made misleading or false representations in the forms, statements and attachments submitted in the 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.

2.3.4 Bidders are required to submit Financial Qualification Requirements Information for execution of the subject work as per the format at chapter 3 enclosed in Part-I

2.4 **ONE BID PER BIDDER**

Each Bidder shall submit only one Bid. A Bidder who submits or participates in more than one Bid (other than as a sub-contractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

2.5 **Bidders submitting bid on the strength of its Holding Company**

In case the Bidder being a Subsidiary company, submitting its Bid document on the financial strength and/or technical competence of its holding company, it has to obtain and produce a certificate to the effect that in case of any untoward happenings towards the successful execution of the contract and/or event occurring that are distinct and different from the stipulated terms and conditions of the Bid Document and attributable to Bidder's account, its holding company must have a legal binding both jointly and severally to this contract for discharging all the contractual obligations on behalf of its subsidiary bidder.

2.6 **Approval from DGMS/other authorities**

a) The successful bidder will obtain all necessary statutory approvals from DGMS (Director General of Mines Safety) and/ or any other authority for the proposed PSLW set with other matching equipment and Road headers for execution of the contract. CIL/ BCCL will not be responsible for any cost to be borne by the successful bidder in the process of obtaining such approval from DGMS and/ or any other authority. However, BCCL will provide all necessary non-pecuniary assistance to successful bidder for obtaining the DGMS approval.

b) The cost of any addition / alteration suggested by DGMS or any other authority while approving the machinery and/ or equipment shall be borne by the successful bidder.

c) The successful bidder shall initiate manufacturing/procurement of the PSLW set with other related equipment for the purpose of this contract, only after their approval is obtained from DGMS. However this is not applicable to the Prototype, which is required to be manufactured as a prerequisite to DGMS approval.

2.7 Cost of Bidding and downloading of Bid document from website

a) The Bidder shall bear all costs associated with the preparation and submission of the bid and their Site visit and BCCL will in no case be responsible or liable for those costs, regardless of the conduct or out come of the bidding process.

b) The contents of the bid documents available for sale at the office of General Manager (CMC), Koyla Bhawan, Koyla Nagar, Dhanbad shall be deemed as authenticated and responsibility of errors and omissions in the downloaded document will lie upon the bidders.

2.8 At the time of submitting applications, the prospective bidders individually must not be involved in any litigation (other than in its ordinary course of business) whatsoever. A declaration to this effect is to be submitted by the bidders along with the bid.

2.9 All application must be supported by documentary evidence in respect of Clauses as well as by

i. Audited Balance Sheet of the Company (in case of JV or Consortium, of each constituent) for the last three years and

ii. List of Client(s) of similar nature (Overseas and Indian).

If the bidder is a subsidiary company / unit of the parent company

(Confirmed through authenticated documentary records), the audited / certified account / financial statement (in respect of mining / mining equipment business) shall also be considered towards eligibility of the bidder.

2.10 ELIGIBLE TENDERER

2.10.1 The invitation of Bid is open to all Bidders eligible to participate. The qualifications of the bidders shall 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.

2.10.2 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.

2.10.3 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.

2.10.4 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.

2.10.5 **Consortium: Two or more companies / parties may jointly undertake contract. Each member shall be responsible for the scope of the work of individual companies and the lead member will be solely responsible and liable for completing the task as per the contract and fulfillment of all the contract obligations and also responsible for acts of the other members of the consortium. Any consortium/JV member can be lead member.**

The consortium shall comply with the following requirements:

Authorization in favour of leader of the Consortium shall be evidenced by submitting with the bid a Power of Attorney signed by legally authorized signatories of each Consortium member. The extraction of coal is to be made by Power support long wall production technology.

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

2.11 QUALIFICATION OF THE TENDERER

- 2.11.1 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 legally acceptable as per clause no. 2.10.5 also.

2.12 SITE VISIT

- 2.12.1 The Bidder at the Bidder's own responsibility, cost and risk, is encouraged to visit and examine the Project/ 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.
- 2.12.2 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.

2.13 CONTENT OF BIDDING DOCUMENTS

- 2.13.1 The set of bidding documents comprises the chapters listed below and addenda issued in accordance with Clause 2.15:

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

2.14 CLARIFICATION OF BIDDING DOCUMENTS

- 2.14.1 A prospective Bidder requiring any clarification about the Bidding Documents may notify BCCL in writing or by telex or cable/Fax at BCCL's mailing address indicated in Clause 2.27.2 . BCCL will respond in writing to any request for clarification of the Bid Documents that it receives no later than 30 days prior to

the deadline for the submission of Bids prescribed by BCCL. Written copies of BCCL's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective Bidders who have received the Bid Documents.

2.14.2 Bidders are advised to visit the site following receipt of the invitation to bid to familiarize themselves with local conditions and to obtain any data necessary for the preparation of their bids at their own cost.

2.14.3 The Bidders shall inspect and examine the site and its surrounding, and shall satisfy themselves fully before submitting bids as to the form and nature of the site, underground and on the surface, the geological and strata conditions conducive to the success of the project, the means of access to the site, the loading and unloading facilities at ports and railway stations. In general, the bidders shall themselves obtain all necessary information as to risks, contingencies and other circumstances susceptible to influence or affect their Bid.

2.14.4 Information about the geology and the mine has been provided in the Technical Volume of this Bid document. Additional information/data, if required, may be generated by the bidder. BCCL will provide assistance in generating such data.

2.14.5 The existing transport, ventilation & other infra-structural facilities giving transport layout, capacity of conveyor and bunker age capacity etc. have been provided in the Mine Profile Chapter-5. For integration with the existing set up of the project, of the proposed technology / equipment, as per the scope of this supply, the bidders, during their MINE site visit, are required to inspect the existing status at the mine site and assess for the purpose of submitting their list of requirement of any additional facilities in terms of equipment & machinery including provision of any further infra-structural facility, to be provided by BCCL.

2.14.6 In particular, bidders shall acquaint themselves of their own responsibility with laws and regulations in India under which the work is to be performed, including those which may influence, in general or in detail, design, transportation, installation, operation of the equipment and requirement of manpower. Any failure or neglect to do so will not absolve the potential bidders from his contractual obligations.

- 2.14.7 It is specially emphasized that it shall be the responsibility of the bidders to have them familiarized with the prevailing conditions and failure of which will not be the responsibility of BCCL.

This clause is meant for general acquaintance about Moonidih mine and not the geology of the mine. About the geological disturbances Geology of the mines in chapter 5 may be referred.

2.15 AMENDMENT OF BIDDING DOCUMENTS

- 2.15.1 Before the deadline for the submission of Bids, the Employer may modify the bidding documents by issuing addenda.
- 2.15.2 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. Such amendment will be displayed in website of BCCL also and it will be responsibility of bidders who have downloaded the document from website to take note of these amendments which will be binding on them also.
- 2.15.3 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 2.28.2 and the same is also to be communicated simultaneously to all the purchaser of the bidding document.

2.16 LANGUAGE OF BID

- 2.16.1 All documents relating to the Bid shall be in the English language only. 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.

2.17 DOCUMENTS COMPRISING THE BID

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 super scribed as Part-I and Part-II respectively.

Sealed Tenders/bids have to be submitted by the tenderers in four envelopes duly sealed in one outer envelope indicating full postal address and telephone nos. of the tenderer. Four Envelopes as mentioned above will consist of :

1. **Envelope for cost of tender document & undertaking** (in case tender document is downloaded from website)
2. **Envelope for Earnest Money Deposit**
3. **Envelope for Techno - commercial bid (Part-I)**
4. **Envelope for Price Bid (Part-II)**

Outer sealed envelope will be marked as “Bidding Documents for.....”

All the inner sealed envelopes will then be placed in one outer envelope, sealed and marked properly as per Clause 2.27 and submitted to the Employer at its address before the dead line for submission of the bid as described in Clause 2.28.

b) The two parts of the offers shall contain details as follows:

Part- I

- a) Details of proposed technology and implementation schedule.
- b) Documentary evidence established in accordance with Clause 2.21 that the bidder is eligible to bid and is qualified to perform the contract if its bid is acceptable.
- c) Documents Establishing the machinery and/ or Equipment’s Eligibility and Conformity to Bidding Documents. As per clause 2.22
- d) The original bid document issued to the bidder or downloaded by the bidder, duly signed by the authorized signatory of the bidder on all pages as proof of accepting the conditions of contract (excluding the price bid)
- e) A Bid Form and shipment schedule completed in accordance with Clause 2.18,

Part-II

Price bid only in the format given in the tender document.

2.18 Bid Form

- 2.18.1 The bidder shall fill up the bid form given under chapter 3 and the Price Bid Statement furnished in Part II (Price Bid) of this bidding documents.

2.19 BID PRICES

- 2.19.1 The Bid price will comprise the followings:

- 2.19.2 The unit price on the basis of FOB/EXW destination as per clause 2.21 of this section with respect to the cost of the necessary machinery and/ or equipment required to be supplied, successfully installed and commissioned by successful bidder.
- 2.19.3 Operation/maintenance, service & maintenance spare charges including all consumables, separately on the basis per tone with respect to clause no 1(f) chapter 4 in accordance with its scope of work under the contract.
- 2.19.4 In respect of components pertaining to Per tonne charges towards Operation & Maintenance, all the statutory levies & taxes with the tariff structure as applicable on the date of submission of bid using the rates as indicated under various Indian Law(s).
- 2.19.5 Cost towards erection / installation, commissioning, testing of machinery and/ or equipment (including trial run thereof) and which the bidder shall indicate on the appropriate price schedule (Part – II of Bid document) attached to these documents.
- 2.19.6 All activities to clear the goods through Custom and transport to ultimate destination will be undertaken by the supplier.
- 2.19.7 It is the Successful bidder's responsibility to ensure the preparation of bill(s) of entry, compilation of Custom duty and any other ancillary Charges to avoid demurrage & wharfage charges. BCCL will render reasonable assistance during appraisal of goods by Custom Authorities for correct tariff classification and sign the bill(s) of Entry. BCCL will pay Custom Duties as and when reasonably required by the Supplier. BCCL will only be responsible for demurrage & wharf age charges directly associated with delays attributable on the part of BCCL in making the payment of Custom Duties as aforesaid.BCCL shall depute one Nodal officer for all the liaison activity for the same at the request of the successful bidder.
- 2.19.8 Escalation on the rates and prices quoted by the Bidder shall be subject to variations in accordance with the price variation Clause no.14.2 chapter-4

2.20 CURRENCIES OF BID AND PAYMENT

2.20.1 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.

2.21 Documents Establishing Bidder's Eligibility and Qualifications

2.21.1 The Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.

2.21.2 The documentary evidence of the bidder's qualifications to perform the contract if its bid is accepted, shall establish to BCCL's satisfactions:

- a) that, in the case of a bidder offering to supply the machinery and/ or equipment under the contract which the bidder did not manufacture or otherwise produce, the bidder has been duly authorized by the manufacturer or producer of such equipment that the same can be imported into India for the purpose of the contract.
- b) That the bidder has the financial, technical and operational capability necessary to perform the contract.
- c) Bidder shall furnish details of supply of such similar consignment, if any, for the last 7 (Seven) years with their corresponding production performance & safety records.
- d) Attested Copies of the Certificate from the Equipment Manufacturer to the effect that there is no embargo upon using the proposed equipment/ technology to be supplied by the bidder under this contract.

2.22 Documents Establishing the machinery and/ or Equipment's Eligibility and Conformity to Bidding Documents.

2.22.1 The bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of all machinery and/ or equipment, which the bidder proposes to supply for the purpose of the contract.

- 2.22.2 Such documentary evidence of the machinery and/ or equipment and eligibility shall consist of a statement in the price schedule on the country of origin of the machinery and/ or equipment which shall be confirmed by a certificate of origin issued at the time of shipment of any or all of the machinery and/ or equipment.
- 2.22.3 The bidder shall also furnish a statement indicating the nature of services offered and their conformity and eligibility to the scope of the contract.
- 2.22.4 The documentary evidence of the equipment and services' conformity to the bidding documents may be in the form of literature, drawings and data, and shall furnish:
- (a) a detailed description of the essential technical and performance characteristics of the machinery and/ or equipment proposed to be supplied with life of the machinery and/ or equipment;
 - (b) detailed specifications of the machinery and/ or equipment proposed to be supplied by the bidder for the purpose of the contract;
 - (c) documents regarding past performances of the machinery and/ or equipment to be supplied by the bidder;
 - (d) The successful bidder should submit before the expiry of two (2) years of the contract period. a list giving full particulars of all spare parts, special tools, equipment ,consumables etc. necessary for the proper and consistent functioning of the machinery and/ or equipment for a period of three (3) years normal operation after the expiry of the contract.
- 2.22.5 The Bidder shall furnish, as a part of its Bid, a production Harmonogram indicating therein activity-wise interdependency / year-wise production in million tonnes.

2.23 BID VALIDITY

- 2.23.1 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.
- 2.23.2 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 (Part-I) but will be required to extend the validity of his bid security for a period of the extension and in compliance with Clause 2.24 in all respects.

2.24 BID SECURITY/ EARNEST MONEY DEPOSIT

- 2.24.1 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.
- 2.24.2 Any bid not accompanied by an acceptable Bid Security / Earnest Money Deposit shall be rejected by the Employer as non-responsive.
- 2.24.3** The Bid Security / Earnest Money Deposit of the unsuccessful Bidder shall **be** refunded as promptly as possible after finalization of tender and shall bear no interest.

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 .

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

2.25 ALTERNATIVE PROPOSALS BY BIDDERS

Bidders shall submit offers that comply with the requirements of the Bidding documents, including the scheme as detailed in clause 2.18 here of. Alternative Offer will not be considered

2.26 FORMAT AND SIGNING OF BID

- 2.26.1 The bidder shall prepare **2 copies of the bid**, clearly marking the "Original Bid" and "Copy of Bid" as appropriate. In the event of any discrepancy between them, the original shall govern.
- 2.26.2 The **original and one copy of the bid** shall be typed or written in indelible ink and shall be signed by the bidder or a person or persons duly authorized to bind the bidder to the contract. The letter of authorization shall be indicated by written power of attorney accompanying the bid. The person or persons signing the bid should put his/her initials on all pages of the bid, except for unattended printed literature.

2.26.3 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.

2.27 SEALING, MARKING AND SUBMISSION OF BIDS

2.27.1 Sealed Tenders/bids have to be submitted by the tenderers in four envelopes duly sealed in, in one outer envelope indicating full postal address and telephone nos. of the tenderer. Four Envelopes as mentioned above will consist of : (1) Envelope for cost of tender document & undertaking (in case tender document is downloaded from website), (2) Envelope for Earnest Money Deposit, (3) Envelope for Techno commercial bid (Part-I) and (4) Envelope for Price Bid (Part-II)..”

Outer Sealed envelope will be marked as “Bid for SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/ OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVI (TOP) SEAM.”

2.27.2 The inner envelopes placed in outer envelope shall be addressed to the Employer at the following address and submitted accordingly before the deadline for submission of bid as indicated in Clause 2.28:

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.....

2.27.3 In addition to the identification required in Sub-clause 2.27.2 the inner and outer envelopes shall indicate the name and address of the Bidder.

2.27.4 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.

2.27.5 The above submission procedure to be followed in case of submission of the **copy of PART-I and PART-II (one set)**. In case of copy, submission of EMD and cost of tender document is not required.

2.27.6 All pages of BID documents and its enclosures should be signed by the bidder/- authorized representative with seal.

2.27.7 Bids submitted without requisite Earnest Money Deposit (EMD) and cost of bid document (in case of downloaded bid documents from website) shall render the bid liable for rejection.

2.28 DEADLINE FOR SUBMISSION OF BIDS

2.28.1 Bids shall be submitted at the address specified above on 1/8/11 up to 3.30 P.M. 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.

2.28.2 The Employer may extend the deadline for submission of Bids by issuing an amendment in accordance with Clause 2.15, 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.

2.29 LATE BIDS

Any Bid received by the Employer after the deadline prescribed in Clause 2.28 due to any reason whatsoever will not be accepted.

2.30 MODIFICATION AND WITHDRAWAL OF BIDS

2.30.1 Bidders may modify or withdraw their Bids by giving notice in writing before the deadline prescribed in Clause 2.28.2, in case the bidder has submitted the bid well before the deadline or extended deadline.

2.30.2 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.

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

2.30.4 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 2.15.2 may result in the forfeiture of the Bid Security pursuant to Clause 2.24.

2.31 BID OPENING

2.31.1 The Employer will open Part- I of the bids first, including modifications made pursuant to Clause 2.32 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.

- 2.31.2 After examination and evaluation of Part -I of the bids in accordance with Clause 2.36 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.
- 2.31.3 Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause 2.32 shall not be opened.
- 2.31.4 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.

2.32 PROCESS TO BE CONFIDENTIAL

- 2.32.1 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.

2.33 CLARIFICATION OF BIDS

- 2.33.1 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.

2.34 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

- 2.34.1 BCCL will examine the Bids to determine whether these are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.
- 2.34.2 Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price that is obtained by

multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail.

2.34.3 Prior to the detailed evaluation, pursuant to Clause 2.38, BCCL will determine the substantial responsiveness of each bid to the Bidding Documents. For the purpose of this Clause, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Documents. BCCL's determination of a bid's responsiveness is to be based on the content of the bid itself without recourse to extrinsic evidence.

2.34.4 A bid determined as not substantially responsive will be rejected by BCCL and may not subsequently be made responsive by the Bidder for correction of the non-conformity.

2.34.5 BCCL's examination will take into consideration the technology proposed, its suitability to Indian condition etc. but this would not in any way absolve the successful Bidder from any of his responsibility under the Contract.

2.35 Conversion to Single Currency

2.35.1 To facilitate evaluation and comparison, BCCL 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. (Ref Clause 2.36)

2.36 EVALUATION AND COMPARISON OF BIDS

2.36.1 BCCL will evaluate and compare the Bids, previously determined to be substantially responsive, pursuant to Clause 2.34 of this Section.

2.36.2 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 maximum period of 5 years (e.g. pre-commercial period of 15 months and 5 years period of commercial operation) shall be considered. LRMC will comprise Cash outflows on account of the followings:

- a) All payments (both FC and INR) to the successful bidder to be made by BCCL towards the cost of supply of necessary machinery and/or equipment as quoted in the Price offer.

- b) All payments (both FC and INR) to the successful bidder to be made by BCCL towards the cost of successful installation and commissioning of necessary machinery and/or equipment as quoted in the Price offer.
- c) All payments (both FC and INR) to the successful bidder to be made by BCCL during operation of PSLW and Road header faces.
- d) Ocean Freight, Ocean Insurance, Port Clearance, Loading & Unloading charges, Inland Freight & Insurance etc as per actual to be payable by BCCL.
- e) Cost associated with the additional infrastructure requirement proposed by the Bidder.
- f) Cost towards the requirement of BCCL manpower as indicated by the Bidder.
- g) All applicable statutory taxes & duties leviable on BCCL's account in India.

2.36.3 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 around Five (5) years SWAP offer rates for USD LIBOR & EURO 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) plus (b) above.) / Present value of the time stream of coal production as per clause c above.)

2.36.4 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, BCCL 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.

2.36.5 Bidders may like to note that economic evaluation of the bid will consider the total cost of the PSLW package at Moonidih underground mine site (in XVIT seam, panel D-12) 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 under Clause 14 of chapter 4 of this Commercial Part Volume.

2.37 Contacting BCCL

2.37.1 Subject to Clause 2.32 of this Section, no Bidder shall contact BCCL on any matter relating to its bid, from the time of bid opening to the time the Contract is awarded.

2.37.2 Any effort by Bidder to influence BCCL's bid evaluation, bid comparison or Contract award decisions may result in the rejection of the Bidder's bid with forfeiture of its earnest money.

2.38 General Additional Issues

2.38.1 The successful Bidder shall have to perform/guarantee the following amongst others during the Contract period and has to furnish details/particulars on following items:

- (a) Suitability of the existing infra-structural facilities of Moonidih Project like workshop, transport, ventilation, etc. if not, the extra facilities required.

- (b) All offers of the bidder shall satisfy the requirements of the Indian Mines Act, 1952 and the Rules and Regulations thereof as amended, modified, or altered from time to time.
- (c) All electrical installations shall satisfy the requirements of Indian Electricity Rules, as amended, modified, or altered from time to time.
- (d) The Bidder should specifically indicate the year wise deployment of manpower to be provided by them for transport, installation, shifting, operation, maintenance and overhauling activities including supervisory grade.
- (e) The Bidder should furnish the year wise requirement of manpower to be provided by BCCL indicating therein its trade/grade and their tenure of service for transport, installation, shifting, operation, maintenance and overhauling activities during the entire period of such contract. The bidder should also indicate the requirement of statutory manpower to be provided BCCL as per Indian rules, if any.
- (f) Bidder should ensure in imparting adequate training both within India and/or abroad, as the case may be, to BCCL personnel so that they can handle all the operation, maintenance, transport & shifting activities independently even after the completion of contract period. The burden of associated cost and modalities of payment there of will be mutually decided upon between the parties to the contract, and it will not form a part of the chargeable per tone rate as per sub clause 1 (f) of chapter 4.
- (g) Give details of additional indigenous infrastructure (like ventilation, coal/material transport, power supply etc.) that would require to be provided by BCCL for the application and implementation of the proposed technology and to perform the contract
- (h) The machinery and/ or equipment to be supplied, installed and commissioned by the successful bidder should include winning/development equipment, powered support long wall equipment, face communication, lighting, loading and transport of coal upto the discharge end of the stage loader, ventilation/environment monitoring/strata control monitoring in the district. Any equipment/item required within the district and to be provided by BCCL should be clearly

specified. Any equipment required for smooth and safe operation of the district, which is not in the Bidder's scope of supply or has not been clearly specified by the bidder to be provided by BCCL, are required to be provided by the bidder at no extra cost to BCCL.

- (i) Provide mine/district layout and sequence of operation
- (j) Provide details of Support system
- (k) Provide a detailed Network of implementation
- (l) The bidder shall complete all activities towards the supply, installation, commissioning of PSLW set with other matching equipment including their trial run within a period not exceeding **Fifteen(15)** months from the date of signing of the Contract.

2.38.2 During the Contract period, BCCL would provide the following facilities. However, in case of Special tools, if any, required for specific purposes will be the responsibility of and to be provided for by the Successful Bidder: -

- a) Initially BCCL will offer D-12 panel in all readiness including out-by transport and ventilation before installation and commissioning of Long wall equipment in the proposed Moonidih Project (seam XVI T). Development of subsequent Panels including the main dip and coal laterals as may be available for development will be the responsibility of the Successful bidder
- b) Surface handling arrangement of coal produced.
- c) Existing surface infrastructure including workshop and store facilities.
- c) Gate/Trunk transport
- d) All the necessary manpower for district, transportation, installation, shifting, operation, maintenance, as indicated by the bidder.
- f)) Vocational Training Course for the personnel of the successful bidder, if any, as required under Indian Mines Act 1952 and/or various other statutory regulations as applicable from time to time during the period of contract will be at the cost of BCCL
- g) 6.6 KV Single Point power Supply at the district entry point beyond which the Successful Bidder will draw power for face equipment. The maximum length of the panel will be 1.5 Kms.
- h) BCCL will provide filtered water at the district / panel entry. For getting desired pressure at equipment end, if booster pump is necessary, the same will have to be arranged by the Successful Bidder. BCCL will provide compressed air at the district / panel entry at a pressure range of 5-7 kg/cm². For getting desired pressure at equipment end, if boosting is necessary, the same will have to be arranged by the Successful Bidder.
- i) For transport of material up to the face, BCCL will provide rail track including haulages for the transportation of materials from district entry points to face both at main gate and tail gate.

- j) Vertical transport will be provided by BCCL for lowering of the equipment in the underground. For this the bidder may refer chapter-5 Mine profile Clause No. 3.3 (Mine entries / mine model).
 - k) For transportation of equipment from pit-bottom to face at the initial stage, the present transport system of the mine may be studied as envisaged in the clause no. 3.3 of chapter-5 Mine profile.
 - l) BCCL will obtain necessary permission from Directorate General of Mines Safety (DGMS) for depillaring/extraction of the proposed panels/districts in XVI Top seam.
 - m) Construction of isolation stopping and ventilation stopping as and when required will be the responsibility of BCCL.
 - n) BCCL will provide all the necessary manpower for transportation, installation, shifting, operation, maintenance, as indicated by the bidder.
- 2.38.3 If during the contract period, there is a shortfall/excess in actual performance as compared to performance guarantee, BCCL will have the right to impose penalty/pay bonus in accordance with Clause No. 17 Chapter-4 ('Penalty and Bonus Clause') hereinafter.
- 2.38.4 The successful bidder shall be liable for payment of damages to the Buyer @ 0.25% of the value of undelivered consignment per week of delay after a grace period of two weeks subject to maximum of 5% of the undelivered value. Same penalty will also be applicable in case of delay in installation and/ or commissioning of the said machinery and/ or equipment. No Penalty will be recovered in case of delays in installation or commissioning due to the reasons attributable to BCCL.
- 2.38.5 BCCL would be responsible for Sale of coal produced.
- 2.38.6 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.
- 2.38.7 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.

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

- 2.39.1 Notwithstanding Clause 2.30, 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.

2.40 NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT

- 2.40.1 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.
- 2.40.2 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 2.41.
- 2.40.3 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.
- 2.40.4 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 as early as possible.

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

2.41 SECURITY DEPOSIT/ PERFORMANCE GUARANTEE

- 2.41.1 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 in the form of BG shall be 1% of the contract value. After submission of BG of 1% of total contract value, 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 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.

2.41.2 Retention Money:

Retention money for 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 will be released on submission of equivalent amount of B.G. annually.**

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

- 2.41.3 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 2.41.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

2.41.4 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.
- c) **The successful bidder will replace the longwall equipment package free of cost in case of collapse, failure etc at its cost or else insurance contract would be revoked.**

2.41.5 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.

2.41.6 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.

2.42 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.

2.43 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 24 & 25 in chapter 4.

2.44 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.

2.45 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.

2.46 SUB-CONTRACTOR/ SUB-VENDOR

- 2.46.1 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.
- 2.46.2 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.

2.47 NIT AND TENDER DOCUMENTS IN THE WEBSITE

- 2.47.1 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.
- 2.47.2 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.
- 2.47.3 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.

- 2.47.4 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.
- 2.47.5 The Bank Draft towards the cost of tender documents (Application Fee) and the undertaking of the tenderer (as per clause 2.47.3) shall be submitted in a separate envelope marked "Cost of Tender Documents and the Undertaking" and not with Part-I / EMD.
- 2.47.6 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

SECTION : 1

CONTRACTOR'S BID

BID FORM

GENERAL MANAGER
CONTRACT MANAGEMENT CELL
BHARAT COKING COAL LIMITED
KOYLA BHAWAN, KOYLA NAGAR
DHANBAD-826005
STATE – JHARKHAND (INDIA)
FAX NO. 91-325-2230151

In compliance with your bid for supply, installation and commissioning of machinery and/or equipment required for implementation of Powered support long wall technology at Moonidih underground Project and production of coal (XVI top seam) and successful operation thereafter, for which the bid document having BID No. BCCL/ CGM (CMC)/ F-GL/ GLOBAL BID/ dated is hereby submitted. The details of the Bidder are:

Name of the Bidder :
Full address of the Bidder :
Status of the Bidder :

The undersigned representatives (full names and titles) duly authorized to act in the name and for the account of the Bidder (name and address of the Bidder) hereby submit the following in one original and One(1) copy.

- (1) Summary Sheet of Equipment Description.
- (2) Qualification Documents.
- (3) Bank Draft for an amount of _____ issued by _____ (Name of the Bank), _____ Branch.
- (4) All documents required in response to Chapter 2, i.e. Instructions to Bidders.
- (5) The technical details submitted include:
 - a) Complete details of offered technology,
 - b) Mine Layout at least for 5 years,
 - c) District Layout,
 - d) Guaranteed target of Production with Production phasing,
 - e) List and specification of all machinery and/ or equipment to be supplied and used for the purpose of executing the contract by the successful bidder,
 - f) Manpower requirement from the BCCL,
 - g) Additional mine infrastructure requirement,
 - h) Implementation schedule – Activity wise.
- (5) Any other relevant information.

By this letter, the undersigned representatives hereby declare and agree:

- (1) That the Bidder will take the responsibility and obligations for accomplishment of the Contract in accordance with all provisions of the Bidding Documents.

- (2) That the Bidder has examined in detail all the Bidding Documents, including amendments (if any), and all information furnished for reference as well as relevant Attachments and that he is perfectly aware that he must renounce all rights of invoking ambiguities of misunderstandings in this respect.
- (3) That the Bid is valid for a period of Six calendar months from the date of opening of PART-I of BID.
- (4) That in the event the Bid is withdrawn after the time and date set for bid opening, within the period of validity, the Earnest Money shall be forfeited to Bharat Coking Coal Ltd (BCCL).
- (5) That the Bidder agrees to furnish any other data or information pertinent to the Bid that might be requested by Bharat Coking Coal Limited.
- (5) That all official correspondence to this Bid shall be addressed to:

Address _____

Tel.No. Cable or Fax No. _____

Name of the Representative

Name of the Bidder

(Signature of the Bidder)

Address

SECTION: 2

QUALIFICATION INFORMATION

(The information to be submitted by all the Bidders)

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

1.1 Constitution or Legal status of Bidder (attach copy)

Place of registration.....

Principal place of business

Power of Attorney of signatory Bid: (attach)

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

| Annual Turnover Data | | |
|----------------------|--------------------|---------|
| Year | Turnover in Rs. | Remarks |
| | | |
| | | |
| | | |

1.3 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) 1. Sole contractor 2. Member in Consortium 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:

- Total value of work executed in last five years (yearwise).
- Details of existing commitments and ongoing works.
- 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: 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 LONGWALL PACKAGE to be used for the work:-

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

Detailed specification of Longwall package is to be included with the Technical offer

1.12 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 Alternative name | | | | |
| Site engineers of respective discipline. Alternative names | | | | |
| Finance personnel Alternative name | | | | |
| Quality assurance Engineer Alternative name | | | | |
| Site supervisors of respective discipline 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.

Details of expertise available may be furnished but the details of personnel as per the table may be furnished at the time of signing of the contract. However the change if any has to be required approval of concerned authority as and when required.

- 1.13** 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.
- 1.14** 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.

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

1.16 The bidders are required to furnish PAN based Registration No. of Service Tax

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.

Dated

Signature of the Bidder,

Seal of Notary

SECTION:4

FORMAT OF POWER OF ATTORNEY

(Format for the Notarised and Legalised Power of Attorney for Authorised Signatory dealing the Bid on behalf of the Bidder)

(To be executed on Non-Judicial Stamp Paper of appropriate value)

I _____, on behalf of M/s _____ (Name & address of the Bidder) would like to declare as below:

WHEREAS I hereby authorise Mr / Mrs _____ to act as my Attorney and to look after the affairs pertaining to the Bid against the Bid Document bearing No. _____ issued by BCCL.

AND WHEREAS the above named-person, Mr / Mrs _____ is sufficiently capable and knowledgeable about all the affairs related to the said Bid and is capable of handling them and decision taken by him shall be binding on the Bidder.

Attested by:

Signature _____ :

Name & Designation of the Authorised Signatory:

Signature of the Authorised Signatory:

Name of the Person : (CEO of the Bidder)

Designation :

For and on behalf of : (Name of the Bidder)

SECTION:5 FORMAT OF MEMORANDUM OF UNDERSTANDING WITH ASSOCIATES/CONSORTIUM

(Format for the MoU between the Bidder & its Associates and to be submitted along with the Bid by the Bidder)

(To be executed on Non-Judicial Stamp Paper of appropriate value)

Date:

Place:

Sub: Supply, Installation and commissioning of Machinery and/or Equipment required for implementation of Powered Support Long Wall Technology at Moonidih and thereafter successful operation & maintenance for production of coal from XVIT seam

Ref: Bidding Document No.

We, M/s (Name & Address of the Bidder) and M/s (Name and address of the Associate hereby undertake:

1.0 Lead member to be held responsible for the Supply, Installation and commissioning of Machinery and/or Equipment and thereafter successful operation & maintenance for production of coal from XVIT seam

2.0 that M/s (Bidder / Associate)* have the experience of Supply, Installation and commissioning of Machinery and/or Equipment whose details are given hereafter.

Details of Supply, Installation and commissioning of PSLW Set

| Sl. No. | Type of Plant | Project Capacity (Mtpa) | Date of Commissioning | Period of Successful Installation and commissioning (As on last day of month previous to the one in which BID is invited) | Remarks |
|---------|---------------|-------------------------|-----------------------|---|---------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

3.0 that I, M/s (Bidder / Associate)* have the experience of operation & maintenance of Underground Plant whose details are given hereafter.

* Strike out which is not applicable.

Details of Operation & Maintenance of PSLW Set for Underground mine

| Sl. No. | Type of Plant | Project Capacity (Mtpa) | Date of Commissioning | Period of Successful Operation & Maintenance (As on last day of month previous to the one in which Bid is invited) | Remarks |
|---------|---------------|-------------------------|-----------------------|--|---------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

4.0 that M/s shall be the Lead Member for this Associate/Consortium.

6.0 that M/s (Bidder) having experience of Installation and commissioning as stipulated at **para 2.0** above and the Associate having experience of Operation & Maintenance as stipulated in **para 3.0** above.

OR

that M/s (Bidder) having experience of Operation & Maintenance as stipulated at **para 3.0** above and the Associate having experience of Installation and commissioning as stipulated in **para 2.0** above.

An operator / equipment manufacturer of major longwall equipment can include another consortium partner to take care of the logistics support in India including providing operational assistance.

For and on behalf of :

(Lead Member of Associate/Consortium)

Signature :

(Authorised Signatory)

Name of the Signatory:

Designation :

For and on behalf of :

(the Associate)

Signature :

(Authorised Signatory)

Name of the Signatory:

Designation :

Note: The above MoU shall be governed by substantive and procedural laws in India.

- Strike out which is not applicable.

SECTION 6: Format for submission of information of bid for Supply, Installation and commissioning of Machinery and/or Equipment required for implementation of Powered Support Long Wall Technology at Moonidih and thereafter successful operation & maintenance for production of coal from XVI(T) seam

(BCCL reserves the right to assess the capacity/ capability of the Bidders and may seek to verify the authenticity of various claims/ certificates/ documents submitted by the Bidder)

This has reference to the Bid for Qualification being submitted by _____ (name of the Bidder), in respect of execution of the subject work at Moonidih underground project of BCCL in response to the Bid Document vide Bidding Document No. issued by BCCL on (date).

We hereby confirm the following:

1. We, _____ (name of the Bidder), have examined in detail and have understood and satisfied ourselves regarding the contents in respect of the following:
 - The Bid Document issued by BCCL;
 - All subsequent communications between BCCL and the Bidder, represented by _____ (name of Authorised Signatory); and
2. We seek for qualification for execution of subject work at Moonidih XVIT seam and accordingly wish to submit the required details vide **Attachment-1(for technical qualification requirement) & Attachment-2 (for financial qualification requirement)** for the Bidder who shall continue till the contract period (separate Attachments for Bidder/ Associate/ each of Joint Venture partners) for your perusal.

(Authorised Signatory of Bidder/ Associate/ Joint Venture Partners)

| | | |
|--------|----------------------|---|
| | For and on behalf of | : |
| | Signature | : |
| Date: | Name of the Person | : |
| Place: | Designation | : |

ATTACHMENT – 1 (A)

We, M/s..... (the bidder) have experience of Commissioning/Installation of PSLW set and operation & maintenance for extraction of coal. In support of above we furnish following information:

(1) Details of Experience of 'Commissioning/Installation of PSLW set :

| | Parameters | | DETAILS |
|----|--|--------------------------------|----------------|
| a. | Name of the Project where such Commissioning/installation effected by the Bidder | | |
| b. | Complete address of the Project | | |
| c. | No. & Date of Award of Work | | |
| d. | Scope of work of the Bidder | | |
| e. | Whether the scope of work for the reference Project included | | |
| | i. | Planning, Design & Engineering | Yes / No |
| | ii. | Procurement | Yes / No |
| | iii. | Construction & Erection | Yes / No |
| | iv. | Commissioning | Yes / No |
| f. | Project capacity (in Mtpa) | | |
| g. | Date of Commencement of Work | | |
| h. | Date of Commissioning of the Project | | |
| i. | Date of completion of work | | |
| j. | Number of manpower employed for operation of the Project | | |
| | i. | Executives | |
| | ii. | Supervisors | |
| | iii. | Workman | |
| k. | Quantity of Raw Coal (Mtpa) handled by the Project during the two years indicated by the Bidder. | | |
| | Year – 1 (.....) | | Qty. |
| | Year – 2 (.....) | | Qty. |

Attachment – 1 (A)

| | Parameters | DETAILS |
|----|---|----------------|
| l. | Make, type and capacity of major equipment. (Please enclose brief write-up about the process & make, type and capacity of major equipments) | |
| m. | No. of years of successful operation of the plant as on last day of month previous to the one in which bid is invited | |
| n. | Whether the plant is operational as on last day of month previous to the one in which bid is invited (if no, please state the reason) | YES/ NO |
| o. | Certificates/ documentary evidence enclosed in support of "a" to "n" above | YES/ NO |

(2) Detail of Operation & Maintenance Experience:

| | Parameters | DETAILS |
|----|--|----------------|
| a. | Name of the Underground Project operated by the Bidder | |
| b. | Complete address of the Project | |
| c. | Ref. No. & Date of Award of Work | |
| d. | Date of commissioning of the Project | |
| e. | Date of Commencement of the plant operation | |
| f. | Project capacity (in Mtpa) | |
| g. | Scope of work of the Bidder | |
| h. | Total plant operating hours during the two years indicated by them | |
| | Year – 1 (.....) Hrs. | |
| | Year – 2 (.....) Hrs. | |
| i. | Number of manpower employed for operation of the plant | |
| | i. Executives | |
| | ii. Supervisors | |
| | iii. Workman | |
| j. | Quantity of Raw Coal handled by the plant during the two years indicated by them. | |
| | Year – 1 (.....) Qty. | |
| | Year – 2 (.....) Qty. | |
| k. | Make, type and capacity of major equipment (Please enclose brief write-up about the process & make, type and capacity of major equipment) | |
| l. | No. of years of successful operation of the plant as on last day of month previous to the one in which bid is invited | |
| m. | Whether the plant is operational as on last day of month previous to the one in which bid is invited (if no please state the reason) | YES/ NO |
| n. | Certificates enclosed in support of "a" to "m" above | YES/ NO |

* *Strike out whichever is not applicable*

ATTACHMENT – 2

Format for submission of Financial Information of the Bidder M/s for execution of the subject work at who will continue till the completion of Contract Period.

This has reference to the Bid for Qualification being submitted by M/s (Name of the bidder). The following are the details for assessment.

The details are given hereafter.

(1) *Year-wise annual sales turnover:*

| <i>Sl. No</i> | <i>Financial year</i> | <i>Applicable Exchange Rate</i> | <i>Annual sales turnover during last 3 (three) years (ending 31st March of the previous financial year in INR and/or USD or equivalent USD for other F.E.)</i> | <i>Furnish yearly audited Balance Sheets, Profit & Loss a/c and annual reports</i> |
|---------------|-----------------------|-------------------------------------|--|--|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

We, M/s (Sole Bidder/ Lead Member of Associates or Joint Venture) enclose herewith the details as mentioned in the above tables and agreeing in principle to meet our financial obligations for the subject work.

For and on behalf of : _____
(Sole Bidder/ Lead Member of the
Associates or Joint Venture)

Signature : _____
(Authorised Signatory)

Name of the Signatory :

Designation :

4. CONDITIONS OF CONTRACT

GENERAL CONDITIONS OF CONTRACT

1. Definitions

In this Contract, the following terms shall be defined as indicated:

- a) "The Contract" means the agreement entered into between BHARAT COKING COAL LIMITED and the Successful Bidder, as recorded in the Contract Form signed by the parties, including all annexes thereto and all documents incorporated by reference therein;
- b) "Contract Period" towards commercial operation means the period from the date of successful commissioning including trial run of PSLW set along other matching equipment until the occurrence of the following events whichever concludes earlier:
 - (i) (Five) years of commercial operation after test & trial run.
 - (ii) Production of at least 3.50 mtes with 1st 10000 DGMS approved cycles.However the contract may remain valid even after achieving 3.50 mtes of coal before five (5) years, if sufficient coal is available for extraction on the same terms and conditions of the contract.
- c) "The Contract price" shall mean and include:
 - i. The FOB value towards the procurement, supply and delivery of necessary imported machinery and/or equipment at Moonidih Project as quoted in the firm price offer.
 - ii. The Price at FOR destination value towards the procurement, supply and delivery of necessary indigenous machinery and/or equipment at Moonidih Project as quoted in the firm price offer.
 - iii. Cost towards Installation & commissioning of PSLW set in Moonidih mine as quoted in the firm price offer.
 - iv. Cost of operation/ Maintenance, service and maintenance spares and all consumables including any other items considered by the bidder in computation of cost per tonne, required for extraction of coal by the successful bidder during the entire contract period for five (5) years' commercial operation in accordance with the terms of the contract as quoted in the firm price offer.
 - v. Apart from the above, the admissible escalation/de-escalation against the above mentioned per tonne payment will also form part of such contract price.
- d) "DGMS" means Director-General of Mines Safety, Govt. of India.
- e) "Machinery" "or Equipment" means all the equipment, machinery, structure, Spare Parts, tools, manuals and other technical documentation and/or other materials, which the successful bidder is required to supply to CIL/ BCCL under the contract.
- f) Rate per tonne relating to production and/ or extraction of coal as per scope of the contract:

Rate per tonne means and includes the activities to be performed by own arrangement of the successful bidder for evaluating the charges to be made and they are listed below:

- i) Operation / maintenance, service and maintenance spares and all consumable items in respect of all the face machinery and/ or equipment up to compatible tail end arrangement of the gate conveyor including face communication system but excluding first two years' corresponding spares already included in PSLW package cost.
- ii) Services of their technical personnel.
- iii) Major overhauling of PSLW set.
- iv) In case, any item other than the above like some special tests and/or studies required to select suitable type and capacity of Powered Support longwall set, Road headers, winning, transport equipment and existence of discontinuity of seam under geo-mining conditions of Moonidih underground project, if considered in the computation of cost per tonne, the bidder should indicate the same in a separate note justifying their necessity of inclusion in such cost per tonne.
- g) "Guaranteed Production" means the minimum total production of 3.50 million tonnes in 1st 10000 cycles within a period of 5 (Five) years together with an annual production of at least 0.5 million tonnes, which the Successful Bidder guarantees to produce towards the performance of the contract and against which the payment will be made on rate/tonne basis.
- h) "BCCL" means BHARAT COKING COAL LIMITED, the authority who will select the Successful Bidder and award the work for extraction of coal by application of the powered support longwall technology with matching Road Headers.
- i) "Statutory Levies" means any and all sort of payment in the form of tax, cess, fees or duties payable either and/ or to Central Government, State Government and any other Local Administrative bodies having statutory power to impose and collect such levies that are binding upon the Successful Bidder. Statutory Levies will also cover any taxes, duties, cess or fees that may become payable due to any subsequent changes in tax structures and/ or laws and/ or introduction of new laws during the execution period of the contract.
- j) "Initial Spares" shall mean all initial replaceable consignment of spare parts and special tools, necessary for the proper functioning of Equipment for a period of first 2 (Two) years of normal operation and which the successful bidder is authorized to consume in performing their contractual obligation during the whole contract period with a stipulation of their arrangement for replacement of such spares for further 2 years after completion of contract period at BCCL cost. The rate for the spares for such 2 years will be mutually agreed based on the consumption pattern & agreed rate for the terminal year of the contract period and prevailing inflation rate for mining equipment & spares in the international market.
- k) "Consumables" shall mean all the consumables required for roof support including roof bolting, drill rods, resins, drill bits & ventilation ducts and any other consumables required for the "Equipment" supplied by the bidder to meet the obligations under this contract.
- l) "Trial run" means operation of PSLW set and Road header along with other matching equipment for at least five (5) cycles after commissioning of the set at underground face of XVI Top seam in Moonidih mine.

- m) Annual Production Period” (APP) means a period commencing form the date of successful commissioning of the equipment and shall normally last for 1 (One) year i.e. 300 working days. However, in case of time loss due to reasons beyond the control of Successful Bidder’s equipment in excess of 30 minutes shall be recorded in a separate register maintained for the purpose and shall be signed jointly by the authorized representative of Moonidih project and authorized representatives of Successful Bidder. 18 hours of such cumulative stoppages will be deemed as one working day and such time loss would be adjusted while assessing the production performance. That is, the guaranteed production would be reduced for the number of days so lost or the number of working days increased at Buyer’s cost depending on what is acceptable for the Supplier. Any delay due to any equipment supplied by successful bidder, shall not be counted for such adjustment. The first APP therefore shall last for 300 working days excluding any extension thereof as provided in this sub clause. Each of the subsequent APP shall commence on the expiry of the previous APP and shall last for 1 (One) year plus any extension as provided in this sub-clause. However, 18 hours of the aforesaid cumulative stoppages will be reckoned provided the cause for their happenings occur during the effective five (5) working hours out of general 8 hours per shift.
- n) “Month” means 25 (Twenty five) working days excluding additional number of days applicable if any.
- o) “Date of Delivery” means the date of delivery of the imported Equipment to the ship at the port of shipment outside India where the Equipment would be shipped. In case of Indigenous equipment such date of delivery would be the date of dispatch from Ex – Works.
- p) “Installation” means putting together the component parts of structures, Owner’s Equipment and/ or systems by successful bidder’s team along with BCCL’s installation team resulting in a structure, equipment and/ or systems ready for proper operation.
- q) “Commissioning” means testing the structure, equipment and/ or systems supplied by successful bidder under full load condition to the satisfaction of BCCL team shall make all reasonable endeavors to achieve the Target Commissioning date. BCCL will be responsible for the provision of mutually agreed manpower and all district infrastructure and equipment as identified in their scope of supply and timely delivery of the same to the district so that the Target Commissioning Date can be met. On the achievement of satisfactory commissioning (Actual Commissioning Date) Successful bidder will notify the Owner and measurement of production will commence.
- r) “Target Commissioning Date” means the expected date of commissioning of the owners equipment supplied by successful bidder which is three (3) months from the effective date of handing over of the owners equipment to successful bidder at mine site and availability of one (1) longwall panel for installation at the mine as per the time schedule.
- s) “ROM” means Run Of Mine coal

- t) "Dollars" or "\$" or "USD" or "US\$" means the lawful currency of United States of America (USA).
- u) "INR" means Indian Rupee the lawful currency of India.
- v) "TPD" means Tonne Per Day;
- w) "Coming Into Force of the Contract" means the date of the Contract comes into effect in accordance with Clause 39 of Section I of this Contract
- x) "Zero Date of the contract" in means the date of receiving 15% FOB/EX-Works price by successful bidder.
- y) "Development" means the two single heading drivages of gate roads for formation of Long wall Panel without any interconnections;
- z) "Depillaring" means extraction of coal blocks/Long wall panel formed after development, with a reasonable percentage of recovery of coal, leaving void underground;
- m) "Panel/District" means independent blocks/Longwall Panel of coal connected at one end to the main arterial transport and ventilation networks and at the other end extending upto the boundary or barrier of the adjacent district with the barrier extending on the other two sides of the district. The district is as such an independent production unit in an underground mine.
- n) "Overhaul" means one of overhauling of owner's equipment during contract period and transfer of technical know-how to BCCL for its undertaking the work independently in future. The timing of the overhaul will be in the fourth year of operation, as mutually agreed by the parties.
- o) "Written notice" shall mean a notice or the 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 Corporation/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.
- p) "Mobilization Period" is that period during which the successful bidder will order, procure, transport, install and commission the total equipment package.
- q) "Supply" includes all associated activities incidental to delivery like shipping arrangement, effecting insurance coverage towards both ocean and inland, necessary clearance from custom authority, loading & unloading and transport arrangement necessary to complete the delivery from manufacturer's premises upto the stage of successful installation and commissioning of Machinery and/or Equipment required for implementation of Powered Support Long Wall Technology at XVIT seam of Moonidih Project as per the scope of this contract.

2. Successful Bidder's Scope of Work

Supply, Installation and commissioning of Machinery and/or Equipment required for implementation of Powered Support Long Wall Technology at Moonidih Underground Project and thereafter operation and maintenance for production of coal from XVI (TOP) seam.

- 2.1 The successful bidder will obtain all necessary statutory approvals from DGMS and/ or any other authority for the proposed PSLW set with matching equipment for execution of the contract. There will not be any obligation on the part of BCCL for above purpose. CIL/ BCCL will not be responsible for any cost borne by the

successful bidder in the process of obtaining such approval from DGMS and/ or any other authority.

BCCL will provide all necessary non-pecuniary assistance to successful bidder for obtaining the DGMS approval for equipment. However, BCCL will be responsible for obtaining such DGMS approval for its mine planning and application of the proposed technology for extraction of XVI T seam in Moonidih project.

- 2.2 It also includes all the obligations covered in various parts of "Instructions to Bidders", "General Conditions", "Special Conditions" and "Technical Volume". The Successful Bidder's Scope of Work will include:
- a) The supply to CIL/ BCCL of all machinery and/ or equipment required for the purpose of the contract up to the tail end of gate conveyor from the face.
 - b) Winning equipment, roof support equipment, strata control monitoring face communication, lighting, loading and transport of coal up to compatible tail end arrangement of gate transport system, ventilation / environment monitoring in the district. Any equipment/item required within the district and to be provided by CIL / BCCL, should be clearly specified. (Both quantity and specification). Equipment required for development of gate roads of panels, trunk roadways and main dip will be provided by the bidder. BCCL will provide power supply and out-bye transport arrangement.
 - c) Transporting the machinery and/ or equipment by suitable means and mode and associated risk thereof shall be the responsibility of the successful bidder. It is the responsibility of the successful bidder to lower down the equipment in the underground and transport them up to the working face at their own risk with the help of the facilities to be provided by BCCL. Physical facilities will be provided by BCCL in lowering down the Machinery and /or equipment.
 - d) Installation, commissioning, maintenance and operation of all machinery and/ or equipment in the districts supplied by the Successful Bidder.
 - e) One major overhauling of the above equipment will be undertaken at surface, by the successful bidder during the contract period. Such overhauling should not be earlier than three (3) years of commercial operation and after overhauling it should meet all statutory test requirements at the cost of the bidder. It will include the following details:
 - i) Suitability of the existing workshop facility of the project, if not, the extra facilities required
 - ii) List of bidder's expert manpower who will undertake the overhaul.
 - iii) Training details of BCCL manpower
 - f) Extraction and/ or production of coal in accordance with its scope of work under the contract and complete extraction of district (both development and final) and demonstrate shifting of machinery and/or equipment.
 - g) Give details of additional indigenous infrastructure (like ventilation, coal/material transport, power supply etc.) that would require to be provided by BCCL for implementation of the proposed technology.
 - h) Provide mine/district layout and sequence of operation.
 - i) Provide details of winning, support and transport systems.
 - j) Provide a detailed Network of implementation.

- k) Transfer of technology and training of CIL/ BCCL's personnel in operation and maintenance.
- l) Provision for safety aspects in the district including strata control during development and extraction.
- m) Provide "Incidental Services" during the Contract Period
- n) Provide "Service and Maintenance Spares" during the Contract Period
- o) Provide detailed list of their own manpower showing their experience, qualification, etc. to be deployed in the proposed project.
- p) Along with the commencement of commercial extraction of 1st Panel, the successful bidder will develop all the future panels in virgin property, as available, of XVI (T) seam for continuation of production from PSLW set.
- q) Provide& install & operate necessary Air-conditioning/chilling plant.

3. Standards and Technical Specifications

- 3.1 The machinery and/ or equipment to be supplied by the successful bidder for the purpose of this Contract shall be designed and manufactured with the following norms/recommendations and standards currently in force.

Electrical: IEC standards/recommendations/Indian Electricity ` Rules as amended, modified, or altered from time to time.

Mechanical: ISO Standards/BIS (Bureau of Indian Standards)

- 3.2 National standards and/or manufacturer's shop standards currently practiced in the country of origin of the MACHINERY and/ or equipment to be supplied under the contract may be applied provided they are similar or superior to those mentioned above.

- 3.3 All the machinery and/ or equipment, components and appliances approved by the Director General of Mines Safety (DGMS), Dhanbad, India, shall be used in underground.

4. Patent Rights

The Successful Bidder shall indemnify BCCL against all third-party claims for infringement of patent, trademark or industrial design rights arising from use of the machinery and/ or equipment or any part thereof to be supplied by the successful bidder in India.

5. Inspection and Tests

- 5.1 BCCL or its representative shall have the right to inspect and/or to test the machinery and/ or equipment to be supplied by the successful bidder for the purpose of the contract to confirm their conformity to the Contract. BCCL shall notify the Successful Bidder in writing of the identity of any representatives retained for these purposes.

- 5.2 BCCL or its representatives may undertake the inspections and tests of any or all the machinery and/ or equipment on the premises of the Successful Bidder or its subcontractor(s), at the point of delivery and/or at the machinery and/ or equipment's final destination. When such test/inspection is conducted on the premises of the Successful Bidder or its subcontractor(s), the Successful Bidder shall extend all reasonable facilities and assistance including access to drawings and other related information to the inspectors free of cost.

- 5.3 Should any inspected or tested machinery and/ or equipment fail to conform to the Specifications, BCCL will have the right to refuse usage of the same for extraction of coal under the contract and the Successful Bidder shall either replace the rejected machinery and/ or equipment or make all alternations necessary to meet the specifications requirements free of cost to BCCL as per the satisfaction of CIL/ BCCL.
- 5.4 BCCL's right to inspect, test and where necessary, refuse application of the machinery and/ or equipment for the purpose of the contract after the machinery and/ or equipment's arrival in India shall in no way be limited or waived by reason of any or all of the machinery and/ or equipment having previously been inspected, tested and passed by BCCL or its representative prior to the shipment of the said machinery and/ or equipment from the country of origin.
- 5.5 Any provision of Clause 5 above shall not in any way release/absolve the Successful Bidder from any Warranty or any other obligations under the Contract.
- 6. Successful Bidder's Inspection of Equipment before use at site**
- 6.1 All the machinery and/ or equipment shall be inspected and tested before delivery by the Successful Bidder in its or its subcontractor's shops to make sure that the machinery and/ or equipment have been fabricated to the standards required and will yield perfect performance after being assembled, erected, installed or commissioned at the mining site.
- 6.2 The Successful Bidder shall prepare factory inspection certificates indicating also testing results as a component of the documents required under Clause 2.22 of chapter-2 for payment.
- 6.3 Such certificates shall not in any way release the Successful Bidder from any warranty or other obligations in respect of quality, specifications and quantity.
- 7. Shipping Advice**
- 7.1 The Successful Bidder shall within forty-eight (48) hours after completion of the loading notify the Port Consignee with a copy to BCCL by telex, cable or fax the Contract no., description of Equipment and/or initial spares, quantity gross rates, volume in cubic meter, invoice value, name of carrying vessel and the date of its sailing and also about the expected arrival date of consignment at pit-top of Moonidih.
- 7.2 The Successful Bidder shall notify port consignee with copy to BCCL (45) calendar days before shipment by cable or fax, the Contract no., description of Equipment and/or initial spares, quantity, no of packages, total gross weight, total volume in cubic meter and expected date of readiness for loading at port of shipment together with details on total invoice value and any special requirements or attention to be paid during handling and storage.
- 7.3 The Successful Bidder /its shipping agent shall on behalf of BCCL, book shipping space in Indian Vessel and arrange the shipment such that the equipment and initial spares reach the port of destination according to the time schedule mentioned in the contract. The freight payable shall be reasonable and economical. The Successful Bidder /its shipping agent shall before booking, notify BCCL by cable or fax the name of the Indian shipping company and the name of the vessel in which the equipment are intended to be shipped. In case Indian vessel is not available, the successful bidder will produce a non-availability certificate from the shipping agent and obtain prior approval of BCCL for sending the equipment and initial spares by other vessels.
- 7.4 Unless otherwise agreed, the shipment shall be from the country of origin of the equipment. The successful bidder shall not shift the equipment and initial spares "On deck". Not more than one transshipment is permissible between the port of shipment and port of destination.

- 7.5 All cost of packaging, internal transportation, fees of forwarding agent, warehousing charges, port charges, dock and harbor dues and all other expenses as may be incurred for the purpose and up to the point of delivery of the equipment and initial spares on board the nominated ship shall be paid by the successful bidder. The Successful bidder shall be liable for all expenses including dead & extra freight, demurrage of vessel etc. arising from non delivery, frustrated delivery or delay in shipment due to lack of shipping opportunities, or delay in providing documents, which are for any cause attributable to the supplier. The Successful bidder shall not be responsible for the above costs or expenses arising due to delay caused by BCCL with regard to approval or non approval of non Indian vessel in which event the cost will be to the account of BCCL.

8. Insurance

- 8.1 The successful bidder shall on behalf of BCCL take insurance cover for equipment, initial and subsequent spares on a full replacement cost basis from FOB/Ex works, port of shipment/factory, till the time of complete commissioning for the equipment is made. The premium for the insurance should be reasonable and economical. This insurance cost shall be to the account of BCCL.
- 8.2 Any payment received against insurance claim by BCCL before final payment of the equipment to the successful bidder, will be passed on to the successful bidder, subject to the recovery of any dues lying outstanding to the account of successful bidder.
- 8.3 **Full insurance of Long wall package should be made by the successful bidder, assigned in favour of BCCL and to be renewed every year till the contract period.**

9. Inspection of material and/ or Equipment at Site

- 9.1 The Successful Bidder and BCCL or their respective representatives shall inspect on the date mutually agreed upon any or all the machinery and/ or equipment to be supplied by the successful bidder for the purpose of the contract after their arrival at Moonidih site in respect of quality, specification and quantity.
- 9.2 If discrepancies are found in specification or quantity or both from that specified under the Contract, BCCL shall have the right to refuse usage of any or all the said machinery and/ or equipment for the purpose of the contract.
- 9.3 Any discrepancy arising in respect to quality, quantity and/or performance of the machinery and/ or equipment during the course of installation of the same at the site (Panel D-12) shall be resolved by the site representatives of the parties to the Contract. (On behalf of BCCL, the General Manager of the area within which the mine falls, would be the site representative for this purpose)
- 9.4 Cost for arranging additional infrastructure, if any for lowering the machinery and/ or equipment will be borne by the successful bidder.

10. Incidental Services

- 10.1 The Successful Bidder shall provide installation and commissioning services with assistance of CIL/ BCCL's personnel so that the machinery and/ or equipment under the contract can be correctly erected, installed and successfully commissioned in a perfect coal winning, support and transport systems.
- 10.2 For the purpose of installation and commissioning services the successful bidder shall also involve the services of BCCL's personnel and provide them with necessary technical information and knowledge at free of cost.

- 10.3 The services provided shall also include furnishing of complete and detailed operation and maintenance manuals for the winning, support and transportation systems at free of cost.
- 10.4 The incidental services shall also include the conduct of training of BCCL's personnel on site during the assembling, installation, commissioning, operation, maintenance, repairs, overhauling and shifting of the machinery and/ or equipment.
- 10.5 The technical services required in the operation, maintenance, repairs and overhauling of the machinery and/ or equipment to be supplied by the successful bidder for the purpose of the contract is to be provided by the successful bidder. Costs of such services should be included in the operating cost per tone as per clause 2.19 of CHAPTER- 2.

11. Installation, Test Run, Performance Test and Management

- 11.1 For purposes of this Clause, "installation" means putting together the component parts of structure, machinery and/ or equipment and/or systems by the Successful Bidder's service team along with BCCL's installation team mentioned in Clause 10 resulting in a structure, equipment and/or systems ready for proper operation; "test run" means testing the structure, equipment and/or system under no-load conditions. "Performance test" shall mean the coal production achieved after the "test run".
- 11.2 BCCL shall provide competent and qualified persons to be involved with the Successful Bidder's service team in doing the works on free of cost.
- 11.3 The Successful Bidder's service team shall bring with them all special tools necessary for doing such works.
- 11.4 Each party to the Contract shall nominate two (2) months prior to the Commencement of installation work of the machinery and/ or equipment to be supplied and used for the purpose of the contract two (2) site representatives; one each representing PSLW manufacturer/supplier and PSLW operator to deal with all technical matters in connection with the works during the period from commencement of installation up to its Completion at working face. The site representatives shall settle any problems or disputes through mutual consultation. Either party may change the representative by giving one month's notice.
- 11.5 Before and during the installation of the machinery and/ or equipment to be supplied and used for the purpose of the contract, the member (s) of the Successful Bidder's service team shall give technical instructions to BCCL's installation team in handling such job and also assure its correct execution.

11.6 Performance

- 11.6.1 For the purpose of estimating the production of coal in tonne, a weighmeter shall be installed by BCCL at suitable points in trunk conveyor circuit. The reading of the weighmeter shall be recorded jointly by officials designated by BCCL and the successful bidder at least once in a day. The reading of the weighmeter shall be considered as production for that day.
- 11.6.1.1 In addition to the above, production of coal in tonne will also be calculated based on records jointly maintained by officials designated by BCCL and successful bidder on the basis of agreed survey method conducted at least once in a week. For the purpose of calculation of production achievement by agreed survey method, the specific gravity of coal shall be taken as given in Mine Profile CHAPTER-5 clause 2.11.1. Advance of face and face height shall be measured jointly by the personnel of successful bidder and BCCL.

- 11.6.1.2 In the event of non-functioning of weighmeter due to any reason, the above survey method shall be applied to calculate the production achievement.
- 11.6.1.2 Time loss arising out of any factor like power, water supply, and stoppage of trunk belt due to jamming of bunker at Coal Handling Plant at surface, in excess of 30 minutes shall be recorded. 18 hours of such cumulative stoppages will be deemed as one working day. Such production time loss would be adjusted while assessing the production performance. That is, the guaranteed production would be reduced by the number of days so lost or the number of working days increased at Buyer's cost on mutual agreement. Any delay due to any equipment supplied by Seller, shall not be counted for such adjustment.
- 11.6.2 Safety should be better than the average of the BCCL underground mines during the previous year.
- 11.6.3 Productivity: Manpower requirement details to be submitted.
- 11.7 The Management of the mine is the responsibility of BCCL. The Management Committee will consist the following:
- 1) Director (Technical) P&P, BCCL
 - 2) GM / CGM of Western Jharia Area
 - 3) **Two(2)** Representative of Successful Bidder

It shall be constituted so as to resolve any issue relating to mine management and considered necessary to be placed before this committee. The decision of this committee would be binding on both the parties to the contract.

12. Warranty

- 12.1 The Successful Bidder shall ensure warranty as to the machinery and/ or equipment to be supplied and used under the Contract are brand-new, unused, and have no defects arising from improper design, material or workmanship or any act or omission of the Successful Bidder that may develop under normal use and comply in all respects with quality, specifications and performance specified in the Technical Specifications. The Successful Bidder further should ensure that the machinery and/ or equipment when correctly installed under the Successful Bidder's supervision are properly operated and maintained according to the manuals furnished by the Successful Bidder under Clause 7 of special Terms and conditions, will be successfully commissioned to BCCL's satisfaction towards guaranteed production level.
- 12.2 The Successful Bidder should ensure the prompt delivery, completeness and correctness of the technical literature and manuals supplied pursuant to Clause 2.22 of CHAPTER-2 and the correctness of the instructions given by the Successful Bidder's experts during supervision as stipulated in Clause 10 in order that the requirements in installation, commissioning, operation, maintenance and repair are met in every respect.
- 12.3 BCCL may notify the Successful Bidder in writing of any claims arising under this Warranty.
- 12.4 Upon receipt of such notice, or information from BCCL's representative, the Successful Bidder shall, within thirty (30) days, commence to repair or replace the defective material or parts thereof without cost to BCCL and deliver them at the job site.
- 12.5 The Successful Bidder, having been notified, should rectify the defect(s) within 3 months period without dishonoring the minimum annual guaranteed production.

- 12.5 The warranty shall be comprehensive and remain valid for 12 months from the date of completion of trial run of at least 5 cycles after successful commissioning of the whole system.

13. Claims

- 13.1 In case the Successful Bidder is liable for discrepancies and a claim is lodged by BCCL during inspection, installation and commissioning of the machinery and/ or equipment to be supplied and used by the successful bidder for the purpose of the contract the Successful Bidder shall settle the claim upon BCCL's agreement in one of the following ways :-

- a) Replace the defective part or component, or the whole item of the machinery and/ or equipment with new material conforming to the specifications, quality and performance as specified in the contract and bear all directly related expenses sustained by BCCL.
- b) Successful Bidder cannot claim compensation in case of failure of facilities provided by BCCL for 225 hours in a year. The average working hours/shift considered is 5. There are 3 shifts in a day, and the no. of working days/year considered is 300. The above stated idle hours (225) are to be considered within the total available working hours of 4500/year (i.e. $4500 - 225 = 4275$) will be the maximum working hours available per year without any claim. They can claim compensation beyond these hours of failure to be decided mutually between Successful Bidder and BCCL before the Contract is signed.

The bidder may like to note that the recognition of subject annual time loss of 225 hours presupposes their occurrence during the actual productive working hours of five hours (5) out of general working hours of eight (8) hours in every shift.

14 Terms of payment:

14.1 Equipment package (with 2 years initial spares):

P&m items ,which are quoted for, will be paid as per the provisions given below.

i. For imported items,

5% of contract amount towards imported P&M item will be released upon signing of the agreement to the successful bidder after furnishes a BG against such advance payment. The amount of BG should include 5% of the cost of imported P&M on the terms of FOB (port of origin) plus an interest @ 6 months' LIBOR plus 150 basis points upto the date of arrival of equipment at designated port plus delay period, if any, attributable on successful bidders account.

The BG covering 5% of contract amount towards imported P&M item including interest thereon will be released within fifteen days of the FAX date of receipt towards shipping advice for the complete P&M item followed by registered Air Mail of the said documents to reach BCCL before release of the BG.

Payment will be facilitated by letter of credit.

a) 70% of the total price of FOB P&M, spares & consumables shall be paid by confirmed and irrevocable transferable letter of credit to be opened by the buyer through State Bank of India, CAG Branch, Kolkata in favour of the supplier and confirmed by a first class bank in the Country from where goods are supplied by the supplier. The costs on account of opening at actual and confirmation of the Letter of Credit and usance charges including confirmation in (Name of the Country) for at sight and other LC operating charges in India shall be on account of the buyer. All charges towards negotiation of Letter of Credit in (Name of the Country) shall on account of the supplier. Letter of Credit shall be payable at sight in the ...(Name of the Country) (against shipping documents) and permit shipments from sea ports. Part shipments and transshipments shall be allowed.

b)The said Letter of credit will be established as soon as possible but in any event not later than five months prior to the scheduled FOB Port delivery date of the first package of equipment. The terms of the LC shall call for presentation of the following documents by the supplier evidencing supply of the equipment, spares and consumables of the contract.

i) All payment under this Clause shall be released by BCCL on submission of the following documents by the successful bidder as prescribed by BCCL.

- 1) Three originals and two copies of clean on board ocean bill of lading marked "Freight payable at destination" for Contract on FOB basis and made out to order blank endorsed and notifying BCCL at the port of destination and made out to order, blank endorsed and notifying BCCL at the port of destination and state bank of India, CAG branch , Kolkata.
- 2) Five copies of each freight certificates.
- 3) Five copies of each commercial invoice covering the prices of the goods.
- 4) Five copies of each detailed packing list.
- 5) Five copies of each supplier's inspection certificate issued by the manufacturer.
- 6) The supplier shall within 72 hours after completion of the loading notify the port consignee with a copy to BCCL by cable or FAX the contract number, description of goods,quantity,gross weight, volume in cubic metres,invoice value, name of carrying vessel and date of its sailing.
- 7) Five copies of each certificate of origin.

On production of proof of dispatch along with the bills, 70% of FOB price for deliverable P&M will be released.

Taxes, duties and levies as per statute will be reimbursed at actual on production of documentary proof.

Payment for the bills for the remaining FOB price and for other expenses 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.

Retention money will be released on successful completion of one year of commercial production period.

For indigenous items

5% FOR destination value of indigenous P&M item will be released by drawing account payee cheque / electronic transfer with any Nationalized Indian Bank, provided the successful bidder furnishes a BG against re-imbursement of such advance payment. The amount of BG should include an interest at a rate of yield to maturity (YTM) for six years GOI bonds plus 150 basis points up to the date of arrival of equipment at the site of work plus delay period, if any.

The BG covering 5% of contract amount towards indigenous P&M item including interest thereon will be released within fifteen days of receipt of complete indigenous P&M item at work site.

70% of ex-works price 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 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 first year of commercial production period.

14.2. Operation / Maintenance, Service & Maintenance Spares including Charges for all consumables:

- I. To be quoted by the bidder on firm basis, in USD \$/or Indian Rupee (INR) on yearly basis for the entire contract period on per tonne of committed production. Actual payment will be linked to the actual coal produced with the rate being subject to the Penalty/Bonus Clause as contained in clause no.17 of chapter-4. In this regard a Table is furnished below:-

| Sl | Item | Index Indicator | Remarks | Year-1 | | Year-2 | | Year-3 | | Year-4 | | Year-5 | |
|----|--------------------------------------|-----------------|---|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | | | | USD | INR | USD | INR | USD | INR | USD | INR | USD | INR |
| 1 | <u>Spares:</u> | | <u>Firm Price till the expiry of twelve (12) months from the last date of submission of the offer unless mentioned otherwise.</u> | | | | | | | | | | |
| a | <u>Imported</u> | | | | | | | | | | | | |
| b | <u>Indigenous</u> | | | | | | | | | | | | |
| 2 | <u>Consumables:</u> | | | | | | | | | | | | |
| a | <u>Imported</u> | | | | | | | | | | | | |
| b | <u>Indigenous</u> | | | | | | | | | | | | |
| 3 | <u>Manpower cost Overseas</u> | | | | | | | | | | | | |
| a | <u>Indigenous</u> | | | | | | | | | | | | |
| b | | | | | | | | | | | | | |
| 4 | <u>Major overhauling of PSLW set</u> | | | | | | | | | | | | |
| 5 | <u>Ocean Freight</u> | | <u>Actual reimbursement</u> | | | | | | | | | | |

| Sl | Item | Index Indicator | Remarks | Year-1 | | Year-2 | | Year-3 | | Year-4 | | Year-5 | |
|----|----------------------------------|------------------------------|---|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | | | | USD | INR | USD | INR | USD | INR | USD | INR | USD | INR |
| 6 | Insurance | | with a ceiling limit of tariff structure as applicable in case of SCI, GIC & TCI (Transport Corporation of India) for the similar consignment | | | | | | | | | | |
| 7 | Import Duty | Applicable Rate will govern. | Payable on actual as & when becoming due for payment | | | | | | | | | | |
| 8 | Excise Duty | | | | | | | | | | | | |
| 9 | Sales Tax | | | | | | | | | | | | |
| 10 | Loading & Unloading Charges | | Actual reimbursement with a ceiling limit of quoted offer rate. | | | | | | | | | | |
| 11 | Clearing & Port handling Charges | | | | | | | | | | | | |
| 12 | Service Tax | Prevailing Rate will govern. | Payable on actual as & when becoming due for payment. | | | | | | | | | | |
| 13 | Education Cess | | | | | | | | | | | | |
| 14 | TOTAL | | | | | | | | | | | | |

The above quoted price in per tonne excluding Tax & Duty components thereof will be treated as firm price till the expiry of twelve (12) months from the last date of submission of the offer unless mentioned otherwise,. However, the bidders may like to note that upon the expiry of such twelve (12)months or any extension thereof, as the case may be, in respect of actual payment, such rates are eligible for escalation/de-escalation using the applicable indices such as WPI of RBI for the respective items of supplies; WPI in respect of Fuel/ Power, Oil & Lubricants; AICPI – IW; Indian Minimum Wages Act as applicable in case of indigenous labor component and similar such authenticated indices published by Central Bank or Government institution or any other appropriate authority & available in public domain as applicable in case of imported components for operation & maintenance. However, bidder has to quote the indices applicable in the country of the currency in which they have quoted their price offer.

Formula for Calculation is furnished below:

Price Variation for Labour (Indigenous)

The amount paid to the Successful bidder for the work done shall be adjusted for increase or decrease in the cost of labour and the cost shall be calculated in accordance with the formula given hereafter.

$$V_L = W \times \frac{L - L_0}{L_0}$$

Where:

V_L = Variation in labour cost i.e. increase or decrease in the amount in rupees to be paid or recovered.

W = per tonne Charges towards manpower cost in respect of Operation & maintenance during the period under reckoning to which the price variation relates.

L_0 = Minimum wages for unskilled workers payable as per the Minimum Wages Act / Rules of the State or Central Government, whichever is more, applicable to the place of work as on the expiry date of the firm quoted price.

L = Revised minimum wages of unskilled workers corresponding to L_0 during the period to which the escalation relates.

Price Variation on Indigenous Materials:

The amount to be paid to the Successful bidder for the work done shall be adjusted for increase or decrease in the cost of materials and the cost shall be calculated quarterly in accordance with the following formula:

$$V_m = W \times \frac{M - M_0}{M_0}$$

Where:

V_m = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered

W = per tonne Charges towards spares & consumables in respect of Operation & maintenance during the period under reckoning to which the price variation relates

M_0 = All India Wholesale Price Index for the applicable items as published by the RBI Bulletin, Ministry of Industry & Commerce, Govt. of India, relating to the expiry date of the firm quoted price.

M = Revised average All India Wholesale Price Index for the applicable items for the period to which price variation relates as published by the RBI Bulletin, Ministry of Industry & Commerce, Govt. of India.

Note:

(a) In case of overseas supplies/services the methodology for calculation will remain same as of indigenous components except the changes in their respective indices.

(b) For the purpose of calculating escalation the reference base date for the applicable Price Index will be..... The bidder may like to note that the timing of execution will be considered as escalable event for such calculation irrespective of their actual date of monthly billing.

II. Supply of all Consumables will be the responsibility of successful bidder as per detailed list of requirement to be furnished by the successful bidder in the execution of performance to the contract. Since the spares for both the first and second year of commercial operation are covered under PSLW package, no amount is payable separately towards the price of such spares for their inbuilt price in the equipment package cost.

III. 75% payment on account of bills raised by the bidder towards per tonne payment will be released within fourteen (14) working days from the date of submission/receipt of the bill. The balance 25% on account of such dues will be

released within thirty (30) working days from the date of submission/receipt of the bill after financial audit and scrutiny.

- IV. In order to reduce the incidence of avoidable Service & Educational tax as applicable under Indian Law on the value of services to be supplied by the bidder, this document has stipulated separate indication of Manpower cost by the bidder.
- 14.2.1 Payment towards ocean freight, Ocean Insurance, Forwarding, Clearing & Port Charges, and Loading/Unloading Charges, Inland Insurance & Transportation, Installation & commissioning of PSLW set.**

- a. All the costs and expenses at actual subject to a ceiling limit as indicated in Table 1A, IC & part B of the price bid in respect of the above items of cost towards supply of the PSLW package with other equipment to the Moonidih underground site will be borne by BCCL. However, the responsibility of discharging such activities will be on the Successful bidder or his authorized representative.
- b. All the above payment(s) other than **Installation & commissioning of PSLW set** will be released only on production of documentary evidence(s) showing either as a proof of payment or establishing a liability cognizable on BCCL for payment.
- c. Unless otherwise indicated under any clause(s) of this document, all the above payments to the account of BCCL under this clause shall be released within thirty (30) days of receipt of written notice from the successful bidder towards the same.

14.2.2 Statutory Levies & taxes:

Subject to the provisions contained under clause 21 of this section, all the payments towards these items will be borne by BCCL on actual basis. The necessary fund will be released for payment as and when it becomes due for payment upon receipt of written notice with supporting document(s), if any, from the successful bidder towards the same.

14.3 Mode of Payment:

- 14.3.1** All the payments towards imported equipments including spares will take place through Letter of Credit (L/C) "at sight" with any nationalized Indian bank as mutually agreed upon. The payment shall be made in US \$ dollar after withholding of any penalty payable by the successful bidder, if any.
- 14.3.2** All the payments on account of Indigenous components will be made by BCCL authority directly by drawing A/c Payee Cheque with any nationalized Indian bank in favor of the successful bidder subject to the satisfactory inspection report from the project authority. The payment shall be made in INR after withholding of any taxes, duty, cess or fees at source, applicable as per Indian law and adjustment on account of penalty payable by the successful bidder, if any.

14.4 Payment(s) by Letter of Credit (L/C)

Where the payments are to be made by L/C:

- a) Charges associated with establishing the L/C in accordance with the contract shall be for BCCL's Account;
- b) Charges associated with negotiation of documents and payments against the L/C in accordance with the contract shall be on successful bidder Account;
- c) The LC should be transferable, irrevocable and confirmed at the successful bidder's Cost, if specifically requested by the successful bidder;

- d) If the LC is required to be extended/reinstated for reasons not attributable to BCCL, the charges therefore shall be on successful bidder's Account;

and shall otherwise be subject in all respect to the latest uniform Custom & practice for documentary credit published by the International Chamber of Commerce, Paris, France.

15 Execution of Bank Guarantee:

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 in the form of BG shall be 1% of the contract value. After submission of BG of 1% of total contract value, 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 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-

- c) at Bidder's option by a Scheduled Indian Bank or
- d) 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.

16. Retention Money:

Retention money for 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 will be released on submission of equivalent amount of B.G. annually.

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

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 2.41.1 of chapter-2 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Bid Security.

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

- e)) 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.
- f) 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.
- g) **The successful bidder will replace the longwall equipment package free of cost in case of collapse, failure etc at its cost or else insurance contract would be revoked.**

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.

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.

17 Penalty & Bonus Clause:

17.1 Delay in delivery of Equipment & machinery.

- a) Delivery of machinery and/ or equipment and performance of Services like testing, installation, commissioning etc. shall be made by the Successful Bidder in accordance with the Time Schedule Specified in the bid.
- b) Liquidated damages in case of default on the part of Successful bidder delivering the contract equipment with two years' initial spares within the period as mentioned in the terms of the contract, the successful bidder shall be liable for payment of damages to the Buyer @ 0.25% of the value of undelivered consignment per week of delay after a grace period of two weeks subject to maximum of 5% of the contract value.
- c) If at any time during performance of the Contract, the Successful Bidder or its subcontractor(s) should encounter conditions impeding timely delivery of the MACHINERY and/ or equipment to be supplied and used by the successful bidder for the purpose of the contract and performance of services, the Successful Bidder shall promptly notify BCCL in writing of the fact of the delay, its likely duration and its cause(s). As far as practicable after receipt of the Successful Bidder's notice, BCCL shall evaluate the situation and may at its discretion extend the Successful Bidder's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

17.2 However, during the year of major overhauling to be undertaken not earlier than three (3) years, the guaranteed production for that particular year of overhauling will be reduced by a percentage equivalent of such major overhauling period to annual working of three hundred (300) days. However, in no case the time limit for such overhauling should exceed 4 months.

17.3 In case of geological disturbances like fault having throw >0.5mtr and/or any dyke or sill encountered while working PSLW face, the associated cost will be borne by BCCL but the operation of negotiating such geological disturbances will be the responsibility of the Successful bidder. However, the guaranteed production for that particular year of negotiating such geological disturbances having throw >0.5mtr and/or any dyke or sill encountered while working PSLW face will be reduced by a percentage equivalent of such geological disturbances period to annual working of three hundred (300) days. BCCL will cooperate in case situation so demands.

17.4 Provision for refund of PBG encashment, if any.

The successful bidder will be repaid back of their earlier losses, if any, made in terms of encashment of PBGs provided they recoup the shortfall in their guaranteed production of 3.50 mtes. within the time limit of the contract period.

17.5 Adjustment in the rate payable for Operation, Maintenance Service & spares including all consumables (i.e. both imported & indigenous) during the Contract period on per ton basis on account of Bonus/Penalty.

- (a) In case of actual production achieved in the range of >95% & <=105%, the quoted rate will apply without any adjustment.
- (b) In case, the actual production achieved falls below 95% of the guaranteed production, the quoted rate per ton shall be reduced at the same rate of such percentage shortfall reckoned from 95% of the guaranteed production.
- (c) Where the actual production achieved exceeds 105% of the guaranteed production, the quoted rate per ton shall be adjusted upward at the same rate of such percentage in excess of 105% of the guaranteed production.
- (d) However, in no case, such payable amount in rate per tonne shall exceed 125% of the quoted rate.
- (e) The above adjustment shall apply annually.

In this regard, an example is given below in Table I:

Table- I

| Sl | % of Guaranteed Production | Rate payable as a % of rate per tonne on account of Operation, Maintenance Service & spares including consumables. |
|----|----------------------------|--|
| 1 | 135% | 125% |
| 2 | 130% | 125% |
| 3 | 125% | 120% |
| 4 | 120% | 115% |
| 5 | 110% | 105% |
| 6 | 106% | 101% |
| 7 | =>95% - <=105% | 100% |
| 8 | 90% | 95% |
| 9 | 85% | 90% |
| 10 | 80% | 85% |
| 11 | 75% | 80% |
| 12 | 70% | 75% |

17.6 Conservation of Coal in Panel -

The maximum percentage of extraction of coal from panel should be offered by the Successful Bidder. The said percentage of extraction from the panel will be decided mutually between the Successful Bidder and BCCL. In case of failure of such commitment, Bidder will be liable to be under the penal clause as mutually agreed upon at the time of signing the contract with BCCL.

18. Technical Documentation

18.1 Copies of technical documents including but not limited to the:

- i) Operating Instructions (10 copies)
Description of operation with sketches and diagrams/electrical diagrams suitable for understanding by operating personnel and supervisors.
- ii) Instruction for repair and exchange of parts (10 copies)
Description of procedure for repair and exchange of machine parts with sketches and diagrams suitable for understanding by Fitters, Electricians and Overman.
- iii) Maintenance Schedules (10 copies)
Description of maintenance instructions, control schedule of all vulnerable parts, greasing and oiling schedules, hydraulic circuit diagram with suitable sketches. It should be written in very simple English and be published on plastic cards to be handed over to BCCL or their associated persons.
- iv) Spare part and equipment specific consumables lists (10 copies)
Each and any part of the equipment must be listed up having the corresponding code number so that at a later time the orders for these parts, if deemed necessary by CIL/ BCCL can easily be placed in English corresponding to each unit of Equipment/ machinery e.g. current price of each part/spare, catalogue sheet, drawings, operating manual, application instructions, maintenance instructions and/or service note and schematics. These shall be sent to BCCL not later than three months from coming into force of the Contract. Delivery of drawings and specifications by the Successful Bidder is to be made in a timely manner as not to hinder the execution of any works.

19. Assignment

The Successful Bidder shall not assign either in part or in whole, its obligations to be performed under this Contract, except with BCCL's prior written consent.

20 Subcontracts

- 20.1 All subcontracts awarded by the Successful Bidder under this Contract with prior written permission of BCCL shall not relieve the Successful Bidder from any liability or obligation under the Contract.
- 20.2 Subcontracts must comply with the provisions of Clause 2.

21. Statutory Levies

- 21.1 The bidder shall familiarize himself and fully comply with the provisions of all the Acts/ Rules/ Regulations/ Bye-laws and orders of the Local authority/ Municipality/

- State Govt./ Central Govt. applicable to the worker, Mines Act, Payment of Wages Act, Workmen's Compensation Act, etc. and shall be fully responsible and liable for due observance of the same. The company shall have no responsibility/ liability whatsoever on these account, and the bidder shall fully indemnify the Company against any claim/ dispute/reference Award, etc. arising out of the same.
- 21.2 Any Service Tax, Education Cess, Work Contract Tax payable/ levied/ leviable on the successful bidder and/ or its personnel and/ or on the sub-contractors engaged by the successful bidder and/ or the personnel of such sub-contractors as per Indian Service Tax Laws subject to the prior approval of CIL or its subsidiary in respect of such engagement for this contract, shall be paid/ reimbursed by CIL or its subsidiary provided such liability for payment is duly raised by the successful bidder and/ or its personnel at the time of raising its/their claims. However, the responsibility towards discharging obligations in the matter of timely deposit of such payment, submission for their periodic return with the concerned authority including all sorts of replies to the quires of service tax authority will lie upon successful bidder.
- 21.3 All applicable taxes and duties, imposed by Local, Municipal, Provincial, State or Central Authorities as on the date of closing of tender, except taxes under Income Tax Act will be to BCCL account.
- 21.4 All taxes and duties decreased or increased during the course of the contract, except taxes under Income Tax Act, in connection with and in execution of extraction of coal arising in India will be on BCCL's account according to the tax laws in effect.
- 21.5 The Indian Income Tax so payable will be to the account of the Successful Bidder. TDS will be made at applicable rate while making payments by BCCL for which BCCL shall issue valid TDS certificate.
- 21.6 BCCL will neither be responsible for Income Tax leviable in any other country than India on the income of the Successful Bidder nor for any Income Tax leviable on the individual staff member of the Successful Bidder deputed to India by the Successful Bidder in connection with this Contract.
- 21.7 The Successful bidder shall also be responsible for filing any necessary return and/ or complying with necessary procedure and/ or formalities as required or may be required under the fiscal laws of India and/ or abroad in respect of the work to be performed by the successful bidder in accordance with the contract
- 21.8 For availing benefits of project import duties, the Bidder shall provide CIL or its subsidiary with the list of equipment and two years initial spares, which shall be identical with the same to be submitted along with the Bill of Lading. This list shall be given to CIL or its subsidiary within (30) thirty days from the date of Contract coming into force as per clause 28 of this section so as to enable CIL or its subsidiary to register the contract for customs clearance under project import regulations.
- 21.9 Wherever necessary, BCCL with the consent of Supplier will place order for supply of indigenous equipment/services if it results in reduction of taxes/duties, and also make such payments, but the amount would be deducted from the Supplier's invoice for repayment of Equipment Cost and Services/Maintenance Charges.
- 21.10 All statutory taxes and duties in connection with and in execution of this contract arising in country of origin of the equipment will be on supplier's account according to the tax law in effect in that country.

22. Force Majeure

22.1.1 Any delay in or failure of the performance of either party shall not constitute a default and give rise to any claim for damages if such delay or failure or performance were caused by –

- a. War;
- b. Acts of Government;
- c. Invasion;
- d. Revolution;
- e. Civil commotion;
- f. Strike
- g. Fire
- h. Floods;
- i. Earthquake
- j. Event being in the nature of acts of God which cannot be anticipated or controlled by the affected party

22.1.2 Delays occasioned by the events of force majeure shall give rise to extension of the tenure of the contract commensurate with the period of actual delay.

22.1.3 The party by the event of fore majeure shall immediately notify the other party in writing of the case of event and set forth the fact relating thereto upon cessation of delay caused by the event for force majeure. The affected party shall notify the other party in writing as to the expected effects of the event on the rights and obligations specified in the contract and the party shall thereafter mutually settle the period of extension of the contract and other consequences resulted therefrom, if any.

22.1.4 In the event, delays caused by an event of force majeure shall extend for a period of more than three months the, parties hereto shall study the possibilities of modifying this contract so as to suit the continuity of the performance of the contract. In the event, the parties are unable to mutually settle such basis; contract may be terminated by giving notice to the other party.

22.2 Remedy against Force Majeure:

For delays arising out of force majeure the contract will be operated as per details given below:

22.2.1 For continuous stoppage of work up to thirty (30 days) – Successful bidder's liability arising out of such closure will be fully borne by him.

22.2.2 For continuous stoppage of work beyond 30 days and upto 90 days – the bidder's liability arising out of such closure will be shared equally between BCCL and successful bidder.

22.2.3 For continuous stoppage of work beyond 90 days both the parties shall consult each other regarding further continuation / discontinuation of the contract. During this period bidder's liability out of such closure will be borne by BCCL and Successful bidder till the date of settlement / expiry of the contract.

Note: BCCL's agreed liability during the period stated above under shall be dealt by BCCL itself.

22.2.4 If no mutually satisfied agreement is arrived at within a period of one (1) month from the date of expiry of ninety (90) days as referred above the contract shall be deemed to have expired at the end of the later one (1) month period referred to above. However, in such case of termination actual cost of work done and equipment (at the discretion of BCCL authority) brought at site shall be taken over by BCCL on as is where is basis by paying the residual/actual value (as the case may be) to be

calculated in accordance with the applicable provisions of Companies Act 1956 & Indian Income Tax Act of the equipment brought to the site and also financed by the successful bidder. Any shipment ordered shall also be taken over by BCCL (at the discretion of BCCL authority) at cost price (landing cost). In case of such termination BCCL will acquire as per its requirement the identified additional infrastructure, equipment, goods, existing in mine and the goods ready for shipment. In no event shall any party be liable whether in the contract, cost or otherwise for any special indirect, incidental or consequential damages arising out of or in connection with this agreement or any breach of performance or non-performance of any provision hereof. No compensation shall however be payable by either party.

23A. Termination for Default

(I) for Successful bidder

23.1 BCCL may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Successful Bidder, terminate this Contract in whole or in part after a period of thirty (30) days or such longer period as it may authorize in writing:

- a) If the Successful Bidder fails to deliver and/ or install and/ or commission any or all of the machinery and/ or equipment to be supplied and used by it for the purpose of the contract according to the Time Schedule stipulated in the Contract, or any extension thereof granted by BCCL pursuant to Clause 17.1 ©.

Or

- b) If the Successful Bidder fails to perform any other obligation(s) under the Contract.

23.2 In the event BCCL intends to terminate the Contract in part, BCCL may procure, upon such terms and in such manner as it deems appropriate, machinery and/ or equipment similar to those undelivered and the Successful Bidder shall be liable to BCCL for any excess costs for such similar Equipment/Machinery. The Successful Bidder shall, however, continue performance of the Contract to the extent not fulfilled, if the termination relates to a part of the Contract only.

(II) For BCCL

23.3 If BCCL shall commit a default in respect of its any obligations to the Successful bidder then, without prejudice to any other remedy which the Successful bidder may have in respect of such default, the Successful bidder may give notice in writing to BCCL, to make good the neglect, refusal, contravention or failure complained of, together with the steps required to remedy the said default.

23.4 In the event BCCL fails to comply with the notice within thirty (30) days or such other longer period as the Successful bidder may authorize in writing, from the date of service thereof, the Successful bidder can forthwith suspend or terminate the contract in whole or in part, by notice in writing to BCCL without prejudice to any rights which may have accrued there under to either party prior to such termination including but not limited to recourse to the consignment already delivered.

23.5 In the event the Successful bidder so terminates the contract in whole or in part then:-

a) All payments already received by the Successful bidder shall be retained, and all payments due and accrued shall be paid forthwith.

b) Suspension of the Contract by either party shall not prejudice its entitlement at any subsequent time to terminate the Contract.

c) Any forbearance in regard to the exercise of the provisions of Clause 23 above by either party shall be without prejudice to the rights of such party under the contract.

23B TERMINATION FOR INSOLVENCY

BCCL may at any time terminate the Contract by giving written notice to the Successful Bidder, without compensation to the Successful Bidder, if the Successful Bidder becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to BCCL.

24. Applicable Laws

24.1 The applicable laws of India shall govern the Contract.

24.2 The successful bidder shall be governed by and shall require sub-contractors to be governed by any applicable National, Municipal, Local or other law and any requirement or regulations of any Indian Governmental Authority or Agency in connection with the performance of the work.

24.3 The successful bidder shall observe all the safety rules and regulations as required under the statutory Acts of the Government of India including specially, Mine Safety Regulations of India. The successful bidder shall be well acquainted with all such laws applicable in connection with the performance of the contract and diligently observe and comply with all such laws.

24.4 BCCL shall have the right to object to an unsafe practice followed by the successful bidder and direct that the work be carried out in a safe manner.

24.5 In the event the parties mutually agree not to go for arbitration pursuant to Clause 25 then the Civil Courts having ordinary original civil jurisdiction over BCCL shall alone have exclusive jurisdiction with regard to all claims of whatever nature in respect of this Contract.

25. Arbitration

25.1 In the event of any dispute or differences arising out of the contract the parties shall use every means to settle such disputes and differences amicably.

In the event, the parties fail to reach an agreement within 50 days after dispute arises or any such greater period as may be mutually agreed upon, the dispute may be submitted by either party to the arbitration for final settlement under the provisions of Arbitration and Conciliation Act, 1995 within 5 months from the date of such failure of amicable settlement.

25.2 The arbitration shall take place in New Delhi, India. The Arbitration Tribunal shall consist of 3 (three) Arbitrators.

25.3 The arbitration award shall be final and binding on both parties.

25.4 During the course of arbitration, the performance of the Contract shall continue to the extent not affected.

25.5 The Arbitration Proceedings shall be in the English language.

25.6 The appointment of Arbitrators – the Arbitral Tribunal consisting of three arbitrators shall be formed by BCCL and the successful bidder each nominating one (1) Arbitrator and the third Arbitrator shall be nominated by the two Arbitrators nominated by BCCL and the successful bidder and if the two Arbitrators have failed

to nominate the third Arbitrator, the third Arbitrator shall be nominated by the President of the Indian Council of Arbitration, New Delhi.

26. Indemnity

26.1 The successful bidder in course of performance of the contract through its personnel shall be liable to indemnify BCCL for any loss, damage or injury to any person or property whatsoever caused by or arising from either gross negligence or wilful misconduct of its personnel.

26.2 BCCL shall indemnify the Successful bidder against any direct loss or damage suffered or expenditure incurred by the Successful bidder arising out of the death or injury to any person or out of the damage to any property, including property of the Successful bidder, to the extent that such death, injury or damage is caused by any breach of contract, negligence or breach of any statutory duty by BCCL, its employees or agent (except to the extent that any such breach of statutory duty results from any act of omission mentioned in respective clauses in this document) This indemnity shall in so far as it relates to damage to any property, be subject to a maximum amount received by the Successful bidder under this contract.

27. Amendment and Supplement

Should any of the contents of the Contract be amended or supplemented by mutual agreement, an amendment in written form to the Contract shall be signed by both parties and shall form an integral part of the Contract.

28. Coming into Force of the Contract

28.1 The Contract shall come into force on the latest occurrence for any of the following

- Receipt of all DGMS approval of the PSLW package
- signing of the contract agreement.
- Receipt of 5% of contract amount imported P&M items.

28.2 The period of Five (5) years during which the successful bidder is required to extract coal with production guarantee in accordance with the contract will commence from the date on which the successful bidder begins commercial production of coal after trial run.

28.3 This Contract is made in English language in two originals, one for each party.

29. Validity of the Contract

29.1 The tenure of this contract towards commercial operation shall be for a period of Five (5) years or production of 3.50 mtes in 10000 cycles whichever concludes earlier from the date of commencement of commercial production of coal after trial run.

29.2 However, such period may be extended on any of the following grounds:

- a) In the case of Force Majeure as provided in clause 22.
- b) Where it becomes necessary to work on panels beyond six (6) panels to achieve minimum guaranteed production and thereby causing the bidder to continue their committed production beyond the Five (5) years contractual period of commercial operation.

4.1 SPECIAL CONDITIONS OF CONTRACT

1. General

- 1.1 The machinery and/ or equipment and Services to be offered, delivered, installed and commissioned by the Bidder should be for Powered support long wall set and Road headers for the Moonidih Underground Project of BCCL.
- 1.2 Bidders are expected to carefully read through all the provisions contained in these Sections, in particular the Technical Volume. The machinery and/ or equipment and Services that the Bidder proposes to offer shall technically comply with and meet in every respect the requirements set forth therein.
- 1.3 The Bidder shall only recommend the use of consumables such as lubricants, greases and hydraulic oil etc. available in India.

2. Norms and Standards to be followed

- 2.1 The machinery and/ or equipment to be supplied and used by the successful bidder for the purpose of the contract shall be designed and manufactured to the following norms/recommendations and standards currently in force:

Electrical: IEC Standards / Recommendations / Indian Electricity Rules as amended, modified, or altered from time to time.

Mechanical: ISO Standards / Bureau of Indian Standards (BIS).

National standards in the country of origin or other national standards currently practiced may be applied provided they are similar or superior to those mentioned above. The electrical flame-proof apparatus shall meet the requirements of DGMS standards or as required by Government of India Authorities.

- 2.2 All measurements, dimensions, weight etc. shall be indicated in metric system.

3. Packaging and Shipping Limitations

- 3.1 Due to railway and bridge limitations, the dimensions of each individual package containing the machinery and/ or equipment or part thereof shall be limited to the inside measurements of 5 metre standard box container i.e.

Length : 5.8 m.
Width : 2.3 m.
Height : 2.25 m.
Weight : 18 metric tonnes.

Mention shall be made in the bid submitted, regarding any individual package expected to exceed such limits, to enable BCCL to explore the possibility of handling such extra size. Failing to do so, all expenses arising there from including but not limited to the cost for dismantling and making necessary arrangement for handling such large pieces shall be borne by the Successful Bidder.

4. Delivery of Equipment and Port of Destination

- 4.1 Port of destination for the machinery and/ or equipment to be supplied by the successful bidder for the purpose of the contract shall be Kolkata.

5. Assembly and Installation

- 5.1 The machinery and/ or equipment supplied under the Contract may be brought into India and/ or site in a P.K.D. (partly-knocked-down), C.K.D. (completely-knocked-down) or assembled condition provided that the maximum size does not exceed the limitation set forth in Clause 3.1 of this section. Special tools and other necessary facilities and materials needed for the assembly and installation on the site of such machinery and/ or equipment shall be provided by the Bidder at Bidder's own cost.

- 5.2 Imported machinery and/ or equipment shall be assembled and installed under the technical assistance of the Bidder.

Training and transfer of know-how to BCCL's personnel shall be undertaken by Bidder's team during assembly, installation, commissioning. Training would continue during operation.

- 5.3 The Bidder will also be required to provide all required lubricants, greases and hydraulic oil for initial start-up of the equipment.

6. Technical Services and Training

- 6.1 The Bidder shall include the price for technical services including installation and commissioning of the machinery and/ or equipment in rate/tonne as per clause 14.2 of chapter 4.
- 6.2 Bidder should ensure in imparting adequate training both in-house and /or overseas, as the case may be, to BCCL personnel so that they can handle all the operation, maintenance, transport & shifting activities independently even after the completion of contract period. The burden of associated cost and modalities of payment thereof will be mutually decided upon between the parties to the contract, and it will not form a part of the per tonne rate chargeable as per clause 14.2 of chapter 4.
- 6.3 There will be no liability what so ever, on the part of BCCL in regard to the manpower provided by the Bidder during and after the expiry of the contractual period.
- 6.3.1 The Bidder is required to arrange for training of the Indian personnel in India and/or abroad, as the case may be, especially for operation and maintenance of the Equipment. Details of which are to be provided by the Bidder.

7. Manuals and Drawings

- 7.1 Catalogue sheets, drawings, schematic and/or circuit diagrams submitted with the bid and provided later with the delivery of the machinery and/ or equipment to be supplied by the successful bidder must be legible; operating manuals and maintenance instructions must be comprehensive. All operation, maintenance and repair manuals and all significant safety and maintenance instructions and list of spare parts and equipment specific consumables (i.e. consumables not available indigenously) attached to the equipment shall be printed in English. The Successful Bidder will provide copies of above mentioned manuals and drawings to BCCL including but not limited to those listed under clause 14 of chapter 4. Without limitation and without any additional payments, BCCL will have the right for training purposes to make additional copies of any literature submitted.

8. Duties of BCCL

During the implementation phase of the Contract BCCL undertakes to co-operate and render all reasonable assistance to the Bidder and to observe the spirit of the

Contract in all respects whether explicitly mentioned or customary in the relations between the parties concerned. This applies in particular but is not limited to:

- (a) Unimpeded access to the site for the performance of their contractual duties;
- (b) As per the availability BCCL will provide facilities of office building and residential houses to the successful bidder at Moonidih Project. However, furnishing of the office building and residential houses shall be done by the successful bidder. Cost of electricity consumed for the office building & residential houses shall be born by the bidder.
- (c) Recovery of charges towards medical facilities in BCCL hospitals will be made at rates chargeable to Non BCCL persons. This recovery will be made from the dues payable to the successful bidder;
- (d) BCCL will provide medical facility in BCCL's hospital/dispensary to the personnel of successful bidder subject to payment of charges applicable to outside patients;
- (e) Timely approval of the Project Time Schedule and strict adherence to specifications and delivery schedules for indigenous material and equipment, required to be supplied by BCCL;
- (f) One (1) panel in all readiness including out-by transport and ventilation before installation and commissioning of Long wall equipment in the proposed Moonidih Project (seam XVI T);
- (g) Prompt attention to acceptance of deliveries and services and timely released of payments due to the Successful Bidder;
- (h) Careful and timely selection of counterpart personnel and trainees.

9. Additional Obligations of BCCL

BCCL would have the following Additional Obligations:

- Surface handling of coal produced.
- Sale of Coal produced.
- Surface infrastructure including workshop and store facilities.
- From gate to onward transportation upto surface.

- All the necessary manpower for district, transportation, installation, shifting operation, maintenance, as mutually agreed upon.
- Additional infrastructure asked for by the Bidder and then agreed by BCCL in writing.
- Vocational Training Course for the personnel of the successful bidder, if any, as required under Indian Mines Act 1952 and/or various other statutory regulations as applicable from time to time during the period of contract will be at the cost of BCCL.
- Where due to any unforeseen geological reasons other than stipulated in General Condition to Contract (GCC), more than six (6) panels need to be worked for meeting the total required production, the associated additional cost towards shifting of PSLW equipment on panel basis will be borne by BCCL.
- In case of non-availability of sufficient coal in the six (6) panels, causing shortfall for the bidder to achieve minimum guaranteed as well as bonus production, BCCL will offer to extend additional time for the bidder apart from reimbursement for the cost of shifting including idle manpower cost, if any, likely to be incurred by the bidder without imposing any penalty on this account.

10. Additional Obligations for the Successful Bidder

- The Successful bidder shall maintain proper records in English/Hindi of the equipment/persons etc. deployed for the work, work done, daily attendance of the employee, payment to the employees etc. and BCCL shall have the right of access for inspection of these records OR to call for any or all such records and ask the Successful bidder to submit such reports as it considers necessary and the Successful bidder shall be bound to comply with such instructions.
- The Successful bidder shall issue to each employee engaged, either directly by him or through contractor, an identity card/employment card with photograph duly attested by the authorized person and which the employee shall always carry with him, while on work and produce for inspection, whenever required.
- The Successful bidder shall make timely payment of all salary/ wages/ other dues to his employees and shall also provide all benefits to his employees, applicable as per various Acts/Rules, Regulations, Orders to the contract e,g bonus under Coal Mines Bonus Scheme and payment of Bonus Act. Sunday wages, Overtime, Holiday wages, leave Wages, Sick Leave etc.

- The Successful bidder shall make payment to his employees at the place(s) specified by the General Manager/Project officer and in the presence of BCCL's representative authorized by General Manager/Project officer who shall duly witness all payments made by the Successful bidder to his employees. For this purpose the Successful bidder shall notify to the General Manager/Project officer the wage period(s) day/date and time of payment.
- The Successful bidder shall comply with the provisions of Coal Mines Provident Fund Scheme and regularly deposit the contributions in accordance with the same. BCCL shall have no liability whatsoever in this regard.
- The responsibility of the Successful bidder in respect of all-payments to his employees will be complete and absolute. BCCL shall have no liability whatsoever in this regard and shall be fully indemnified by the Successful bidder against any claim arising out of any non-payment/ short payment/dispute/award.
- The Successful bidder shall provide footwear, helmets and other protective equipments, to his employees as provided in law at his own cost. In case of failure on the part of the Successful bidder to provide such protective equipments, BCCL may provide the same at the cost of the Successful bidder. However, cap lamps shall be provided by BCCL to the Successful bidder's person during shift hours free of cost.

5. MINE PROFILE

SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/ OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVI TOP SEAM

1.0 GENERAL INFORMATION

1.1 Introduction

1.1.1 Mine

Moonidih Underground Project is situated in the South central part of Jharia Coalfield. This mine was designed in early 1960's by Polish Consultants under a Technical Collaboration for horizon mining system to produce coking coal from seams XVIII to XV bottom upto a depth of 500 m for a production capacity of 2.1 mty. This mine has achieved the production level of 1.2 mty. This Project was opened in 1967 by two vertical shafts. The infrastructural facilities for production are fully developed including pit head washery. The present annual production of the mine was about 0.201 Mt in the year 2009-10. District (s) / panel (s) are being offered to replace the existing PSLW set by new one in XVI (T) seam to enhance the coking coal production after implementing Powered Support Longwall Technology to an annual average of 0.67 million only from this seam.

1.1.2 Administrative Area : Western Jharia Area.

1.1.3 Company : Bharat Coking Coal Limited.

1.2 Location

- Latitude : 23°42'47" and 23°45'42" N
- Longitude : 86°19'21" and 86°22'26" E
- Nearest Rly. Station: Dhanbad (11 Km)
- Nearest Airport : Ranchi (180 Km)
- Approach by Road : Dhanbad-Chas section of the NH-32 passes through north-western part of Moonidih. (11 Km from Dhanbad).
- District / State : Dhanbad / JHARKHAND

2.0 GEOLOGY

2.1 Coal Seams

The generalised sequence of coal seam and intervening partings in descending order along with ash %, UVM % and grade are as follows :

| Seam / Parting | Inband Thickness of Seam (m) | Inband Ash % | UVM % | Grade |
|--------------------------------------|------------------------------|--------------|-------------|--------------|
| XVIII | 3.24-4.75 | 14.30-20.50 | 27.46-34.28 | S-I to W-I |
| Parting (m) | 32-63 | | | |
| XVII Top | Upto 2.15 | 12.10-35.00 | 20.10-32.55 | S-I to W-IV |
| Parting (m) | 14-47 | | | |
| XVII Bot. | Upto 1.70 | 15.30-49.10 | 21.59-31.82 | S-II to UG |
| Parting (XVII Bot. to XVI Comb.) (m) | 96-101 | | | |
| Parting (XVII Bot. to XVI Top) (m) | 73-125 | | | |
| XVI Comb. | 4.2-5.84 | 18.00-22.50 | 25.70-28.90 | S-II to W-II |
| XVI Top | 1.7-3.1 | 19.60-32.00 | 23.77-30.50 | W-I to W-IV |
| Parting (m) | Upto 28 | | | |
| XVI Bot. | 0.38-2.72 | 12.90-41.00 | 20.42-30.10 | S-I to UG |
| Parting (XVI Comb. to XV Comb.) (m) | 89-104 | | | |
| Parting (XVI Comb. to XV Top) (m) | 106-126 | | | |
| Parting (XVI Bot. to XV Comb.) (m) | 89-125 | | | |
| Parting (XVI Bot. to XV Top) (m) | 87-128 | | | |
| XV Comb. | 5.99-9.61 | 17.10-34.40 | 19.25-27.80 | S-II to W-IV |
| XV Top | 1.53-4.18 | 14.00-34.70 | 20.90-29.55 | S-I to W-IV |
| Parting (m) | Upto 12 | | | |
| XV Bot. | 1.65-6.15 | 11.60-30.95 | 19.72-27.50 | S-I to W-IV |

S : Steel, W : Washery, UG : Ungraded.

N.B. : 1. Seam XVIII, XVI (T), XVI Bot. & XVI Combined have been exploited by Longwall retreating with caving.

2. Seam XV Top, XV Bot. & XV Combined are virgin.
3. Seam XVI Top has been considered as potential seam for enhancement of production.
4. In India the ash content forms the basis of grading of coking coal mentioned as follows:

| <u>Grade</u> | <u>Ash % Range</u> |
|-------------------|--------------------|
| Steel Grade-I | Upto 15 |
| Steel Grade-II | > 15 upto 18 |
| Washery Grade-I | > 18 upto 21 |
| Washery Grade-II | > 21 upto 24 |
| Washery Grade-III | > 24 upto 28 |
| Washery Grade-IV | > 28 upto 35 |
| Ungraded | > 35 |

2.2 Geological Boundary of Project

North & North-East : Pootkee-Bulliary-Bhutgoria Project
South & South-West : Damodar river / Parbatpur and Singra U/G Blocks.
East : Tata leasehold
West : Jarian Nala / Kapuria U/G Block.

2.3 Drilling Details

| | | | |
|-----|------------------|---|---|
| (a) | Total Area | - | 14.6 Sq. Km. |
| (b) | No. of boreholes | - | 69+17(Production Support BH)= 86 |
| (c) | Meterage drilled | - | 48277.90m+11324.40m = 59602.30m |
| (d) | Borehole density | - | 4.6/Km ² (5.7/Km ² after including Production Support boreholes). |

- N.B. :
1. In addition to the existing 14.6 sq.km area of Moonidih Mine adjoining Singra underground block having about 4.9 sq.km area may be annexed with it after exploration.
 2. 17 boreholes have been drilled in Moonidih Project as part of production support drilling.

2.4 Faults

Based on the available borehole data and colliery workings, 19 no. of faults of various type such as dip, oblique, curvilinear, underground etc. with varying degree of throw ranging upto as high as 190 m have been interpreted to have affected the seams under consideration as detailed vide Table No. 2.4.1. In addition, numerous minor faults have been encountered in the workings of XVIII, XVII Top and XVI Top seams; the concentration having been observed more in the anticlinal axial region in the central/south eastern part of the area specially in the vicinity of major faults. Further, the possibility of existence of additional minor faults cannot be ruled out in the virgin area. The dip of the fault is, in general, 60 degrees.

TABLE NO. 2.4.1
DESCRIPTION OF FAULTS

| Sl. No. | Fault | Location | Strike & Dip | Throw (m) Maxm. | Nature | Borehole in which inter-sected | Approx. Depth of Inter-section (m) | Seam Evidence |
|---------|-------|---|---------------------------|-----------------|-------------------|--------------------------------|------------------------------------|--|
| 1 | F1-F1 | Located in the Northern part of the colliery area | NW-SE, dip 60 degree SW | 50 | Curvilinear fault | NCCJ-3 | 365 | Reduction in parting between XVI Bot & XV Top seam |
| 2 | F2-F2 | Located in the North-eastern to Eastern part of the colliery area | NNW-SE, dip 60 degree SSW | 50 | Dip Fault | NCCJ-25 MND-4 | 300 390 | Reduction in parting between XVII Bot and XVI Comb. Seams Reduction in parting between XVII Bot and XVI Top seams |

| Sl. No. | Fault | Location | Strike & Dip | Throw (m) Maxm. | Nature | Borehole in which intersected | Approx. Depth of Intersection (m) | Seam Evidence |
|---------|------------------------------------|---|----------------------------|-----------------|-------------------|-------------------------------|-----------------------------------|---|
| | | | | | | MND-9 | 365 | Encountered above XVI Top seam |
| | | | | | | MND-13 | 145 | Encountered above XVIII seam, just below the Barren Measure contact |
| | | | | | | NCJJ-2 | 700 | Reduction in parting between XV Bot. And XIV seam |
| 3 | F2a-F2a | Located in the Eastern part of the colliery area | NW-SE, Dip 60 degree SW | 20 | Dip/oblique fault | MND-9 | 395 | Encountered above XVI Top seam. |
| | | | | | | MND-14 | 495 | Reduction in parting between XVII Bot. And XVI Top seam. |
| 4. | F3-F3 | Located in the North-eastern to Eastern part of the Colliery area | NNW-SSE, dip 75 degree SSW | 190 | Dip/oblique fault | PBG-7 | | |
| 5 | F3a-F3a | Located in the Eastern part of the Colliery area | NNW-SSE, dip 75 degree SSW | 15 | Dip fault | JK-7 | 650 | Part faulting of XVI Comb. Seam |
| 6 | F3b-F3b | Located in the Eastern part of the colliery area | NNW-SSE, dip 60 degree SSW | 30 | Dip fault | JBK-4 | 500 | Reduction in parting between XVII Bot. And XVI Top seams |
| 7 | F4-F4 (Concerning to XVI Top seam) | Located in the Northern part of the colliery area | E-W, Dip 60 degree S | 90 | Oblique fault | NCCJ-5 | 280 | Reduction in parting between XVII Bot. and XVI Top Seams. Seam XVI Top faulted. |
| | | | | | | NCJ-6 | 190 | Encountered above XVI Top seam |
| | | | | | | NCJ-28 | 300 | Reduction in parting between XVII Bot. & XV Top seams. Seam XVI top faulted and XVI Bot seam faulted. |
| 8 | F5-F5 | Located in the Northern part of the colliery area | NE-SW Dip 60 degree NW | 10 | Oblique fault | | | Extended in the area from Pootkee-Bullary side |
| 9 | 6-F6 (Concerning to XVI Top seam) | Located in the Western part of the Colliery area | N-S, dip 60 degree E | 5 | Dip fault | | | Stoppage of workings of XVI Top seam |
| 10 | F7-F7 (Concerning to) | Located in the Central part of the Colliery area | NW-SE, dip 60 degree SW | 4 | Curvilinear fault | NCCJ-16 | 344 | Part faulting of XVII Top seam. Encountered in the workings of XVI |

| Sl. No. | Fault | Location | Strike & Dip | Throw (m) Maxm. | Nature | Borehole in which intersected | Approx. Depth of Intersection (m) | Seam Evidence |
|---------|-------------------------------------|---|--------------------------|-----------------|--------------------|-------------------------------|-----------------------------------|--|
| | XVI Top seam) | | | | | | | Top, XVI Bot, XVII Top and XVII Bot. seams |
| 11 | F8-F8 | Located in the Central part of the Colliery area | NW-SW, dip 60 degree NW | 5 | Oblique fault | | | Encountered in the workings of XVI Comb. And XVII Bot seams. |
| 12 | F9-F9 (Concerning to XVI Top seam) | Located in the Western part of the Colliery Area | NE-SW, dip 60 degree SW | 10 | Oblique fault | NCCJ-22 NCCJ-26 | 560 610 | Reduction in parting between XVI Bot and XV Top seam. XVI Top & Bottom seams faulted. |
| 13 | F10-F10 | Located in the Northern part of the colliery area | NNW-SSE, dip 60 degree S | 2 | Underground | | | |
| 14 | F11-F11 | Located in the Central part of the Colliery area | NE-SW, dip 60 degree NW | 2 | Underground | | | Encountered in the workings of XVI Bot seam |
| 15 | F12-F12 | Located in the Central/Southern part of the Colliery Area | NE-SW, dip 60 degree SE | 0.70 | Underground | | | Encountered in the workings of XVII Top seam |
| 16 | F13-F13 | Located in the Central/Southern part of the Colliery area | NE-SW, dip 60 degree SE | 0.60 | underground | | | Encountered in the workings of XVII Top seam |
| 17 | F14-F14 | Located in the North-eastern part of the colliery area | NW-SE, dip 60 degree SW | 5 | Oblique fault | | | Entered in the area from the adjoining Kapuria Block. |
| 18 | F15-F15 | Located in the northern part of the colliery area | E-W, dip 60 degree S | | Oblique fault | | | Entered in the area from the adjoining P.B. Block in the XV seam |
| 19 | F16-F16 | Located in the Central part of the colliery area | NW-SE, dip 60 degree NE | 5 m | Underground fault. | | | Encountered in the working of XVI Top seam |

Note : Out of the 19 no. of faults shown above, only F4-F4, F6-F6, F7-F7 and F9-F9 are occurring in the proposed area to be exploited in XVI Top seam.

2.5 Strike & Dip

The general strike of the formations is found to be NW-SE in the major part of the area lying south of fault F2-F2, swinging to north and NE-SW on the northern part of fault F2-F2. An anticlinal fold axis is interpreted to run along NNW-SSE.

The area exhibits a gentle anticlinal structure & the dip varies from 7 to 15 degree.

2.6 Igneous Intrusives

Invariably all coal seams under consideration have been affected by igneous intrusives in the form of dykes and sills to varied extent. The coal seams have been pyrolitised and converted to Jhama as a result of these intrusives. The dykes are generally narrow and have a shorter linear extent and have affected coal seams less in comparison to sills. Few dykes (2 to 3 m thick) have been met in the workings of XVI Top seam. The sills (Mica-peridotite) occur randomly within the coal seams and their effect on coal seams is very erratic. As such, it is extremely difficult to precisely delineate the Jhama zone. The Jhama and part Jhama zone (C + J zone) have been shown in the seam folio plan. In virgin area these lines have been drawn on the basis of boreholes data and they are interpretative and may be dealt with caution. However in developed area occurrences of Coal – Jhama have been taken into consideration. Like small faults, the encountering of dykes and devolatilised zones also create problems in mechanised mining. Devolatilised zones also can not be proved conclusively by surface drilling. The in-seam seismic survey and magnetic survey however, may give some advance information about occurrences. The BMCL has carried out in-seam seismic survey in a panel of XVI Top seam and indicated the existence of a discontinuity on the basis of data so obtained. During the course of development of this seam, a dyke of 2 m thickness (approx) was encountered at the predicted position. Disposition of Jhama in the short schematic borehole section has been shown in the respective seam Folio plans.

In Moonidih, majority of the burning is due to effect of sills, it is difficult to precisely delineate the burnt zone and any prediction of burning pattern shall be conjectural. The details of seam-wise burning are mentioned as follows :

XVIII Seam :

This seam is the top most seam considered in the Moonidih Block. This seam has undergone extensive pyrolitisation in the entire area except in South-eastern part and in a small patch in Northern part.

XVII Top Seam

This seam has undergone pyrolitisation in Southern part of the area

XVII Bot. seam

This seam appears to be largely free from pyrolitisation except in a very small patch in North-western part.

XVI Top Seam

This seam has undergone extensive pyrolitisation and major part of Southern area has been pyrolitised. The northern and western part of the area appears to be free from pyrolitisation. Few small dykes (2 to 3 m thick) have been encountered in the project workings.

XVI Bot./XVI Comb. Seam

XVI Bot/XVI Comb. Seam has undergone pyrolitisation in Northern, South- Western part of the area. The XVI Bot seam has also undergone pyrolitisation in the Northern, Southern & South-eastern part of its area of occurrence.

XV Top Seam :

This seam appears to be free from pyrolitisation in the entire area.

XV Bot / XV Comb. Seam :

The XV Bot. Seam appears to be free from burning except in a small eastern patch. However, the XV Comb. Seam has undergone pyrolitisation in eastern part.

2.7 Immediate Roof & floor of Coal Seams :

The nature of immediate roof and floor rocks of different seams are as follows:

| Seam | Roof Rock | Floor Rock |
|-------------|---|---|
| XVIII | Generally intercalation of shale and sandstone but at places carbonaceous shale. | Generally intercalation of shale and sandstone but at places varies to shale and carbonaceous shale. |
| XVII Top | Intercalation of shale and sandstone. | Intercalation of shale and sandstone. |
| XVII Bot | Intercalation of shale and sandstone. | Intercalation of shale and sandstone. |
| XVI Comb. | Intercalation of shale and sandstone. | Intercalation of shale and sandstone. |
| XVI Top | Generally intercalation of shale and sandstone but at few places carbonaceous shale. | Generally intercalation of shale and sandstone but at few places carbonaceous shale. |
| XVI Bot | Generally sandstone but at few places intercalation of shale and sandstone. | Generally intercalation of shale and sandstone but at places varies to sandstone. |
| XV Top | Generally carbonaceous shale to shale but few places alternating shale and sandstone. | Generally sandstone but varies to alternating shale and sand stone and at few places carbonaceous shale or shale. |
| XV Bot | Generally sandstone but varies to alternating shale and sand stone. | Generally intercalation of shale and sandstone but varies to sandstone. |
| XV Comb. | Generally carbonaceous shale but changes to intercalation of shale & sandstone at places. | Generally intercalation of shale and sandstone but at few places only sandstone. |

2.8 Depth :

The depth range (Approx.) in which the seams XVIII to XV occur at Moonidih Mine are as follows :

| Seam | Depth Range (Metre) |
|----------|---------------------|
| XVIII | 80 – 590 |
| XVII Top | 120 – 640 |
| XVII Bot | 140 – 650 |
| XVI Top | 230 – 780 |
| XVI Bot | 240 – 790 |
| XV Top | 310 – 900 |
| XV Bot | 320 – 910 |

2.9 Gassiness :

The gassiness of the seam proposed to be worked at Moonidih Underground Project (XVIII to XV) is degree – III.

(“Gassy seam of degree – III “ means a coal seam or part thereof lying within the precincts of a mine not being an opencast working in which the rate of emission of inflammable gas per tonne of coal produced exceeds ten cubic metres).

Methane gas blowers have been encountered at various places while working XVIII, XVII Top, XVII Bot., XVI Top and XVI Comb. Seam at Moonidih Underground Project.

2.10 Incubation Period :

The incubation period for coal seams at Moonidih Project varies from 9 to 10 months.

2.11 Geological Reserves :

The net Geological Reserve of coal seams in XVI Top, XVI Bottom & XVI Combined at Moonidih Underground mine is 42.69 Million tonnes.

The specific gravity of coal has been calculated on the basis of the following equation to estimate the geological reserve :-

$$\text{Specific Gravity} = 1.28 + 0.01 \times \text{Ash \%ge.}$$

The reserve falls under both proved and indicated category detailed in Table No. 2.11.1.

TABLE NO. 2.11.1

GEOLOGICAL RESERVE

(Figs. In Million Tonnes)

| SEAM | COAL ZONE | COAL IN C+J ZONE | INDICATED | TOTAL |
|--------------------|--------------|------------------|-------------|--------------|
| A. MOONIDIH | | | | |
| XVI TOP | 17.38 | 4.73 | 0.69 | 22.8 |
| XVI BOT. | 12.81 | 0.56 | 0.56 | 13.93 |
| XVI COMB. | 3.93 | 2.03 | - | 5.96 |
| Total | 34.12 | 7.32 | 1.25 | 42.69 |

Note: Area having thickness less than 1.2m has not been considered for reserve estimation.

2.11.1 Mineable Reserve

The mineable reserve has been estimated at 4.532 mtes from projected seven (7) panels i.e, (D-12, D-13, D-14, D-15 & D-11A, D-16 & D-17) (including coal in Coal-Jhama of D-14 & D-15 panels, 4.167 mtes excluding the above) in XVI (T) seam. This includes 0.43 MTe. Of coal available during development. Panel wise details of reserve is shown below:

| Sl.no | Panel No | Panel Length (m) | Face Length (m) | Avg.Heigth of Extrn. (m) | Density (t/m3) | Tonnage (Lakh Tonne) | Net Coal Without Jhama Part |
|-------|--------------------------------|------------------|-----------------|--------------------------|----------------|----------------------|-----------------------------|
| 1 | D12 | 1428 | 145.4 | 2.53 | 1.53 | 8.04 | 8.04 |
| 2 | D13 | 820 | 145.4 | 2.53 | 1.53 | 4.62 | 4.62 |
| 3 | D15 | 1330 | 145.4 | 2.27 | 1.54 | 6.76 | 6.76 |
| 4 | D16 | 1144 | 130 | 2.36 | 1.55 | 5.44 | 5.44 |
| 5 | D17 | 1144 | 130 | 2.36 | 1.55 | 5.44 | 5.44 |
| 6 | D11a | 936 | 130 | 2.45 | 1.53 | 4.56 | 4.56 |
| | Total | | | | | 34.86 | 34.86 |
| | Coal during Development | | | | | 4.30 | 4.30 |
| | Grand Total | | | | | 39.16 | 39.16 |

2.12 Water Regime :

2.12.1 Hydrology :

The surface area of Moonidih Project has a gently undulating topography. The topography of the area has changed considerably due to subsidence of the surface caused by large scale mining operation carried out in the area. The maximum elevation observed in the area is 202 m above Mean Sea Level in the northern part where as the minimum elevation observed is 148 m above Mean Sea Level in the South-eastern part of the project area. The General Slope of the area is towards South and West.

The average annual rainfall varies from 1197 mm to 1380 mm with maximum precipitation in the months of June to September.

The drainage pattern in the area is controlled by easterly flowing Damodar river which forms the southern boundary of the Moonidih block and southerly flowing Jarian Nalla which forms the western boundary of the Moonidih block. A large number of ponds with different weirs, divergent gradient and vary low drainage density are indicative of structural disturbance which occurs in the immediate vicinity of the area.

2.12.2 Hydro-geology :

The area is covered by alluvium which is product of barren measures rock. Some dugwells are situated in the top alluvial portion. The ground water occurs under water table or phreatic and confined to semi-confined conditions in the area. The phreatic or water table aquifer is confined to weathered and partially weathered sandstone and intercalations and extends to a depth of 10 m to 20m below ground level from the surface. The water level is around 0.60 m below ground level during immediate post-monsoon period where as it goes down as low as 9 m below ground level during pre-monsoon period. During drilling operation of

borehole No. MNH – 1, the water level recorded was 200m below ground level i.e. there was total water loss. It has been observed that with the increase of depth, hydraulic head of the aquifer

stands below 200m ground level. Initially heavy eruption of water was encountered in 3A dip (1.12 m³/min having 42.2°C Temp) of XVI top seam. Later on, during development of gate roads in F2 & F3 panel in XVI Comb. Seam, heavy eruption of water was encountered resulting in decrease in water eruption in 3A dip of XVI top seam.

Recently, an aquifer has been encountered in XVI top seam while developing bottom gate of D-9 panel where initial water eruption rate was 0.68 m³/min having 51°C temp. which has decreased to 0.23 m³/min at present.

The make of water below ground at Moonidih Underground Project, measured in Sept. '96, was 4.1 m³/min.

High temperatures are recorded in the water found in the mine working. The water which is likely to be found in Moonidih workings is likely to develop a stabilised temperature of 38°C to 40°C.

2.13 Physico-Mechanical Properties :

One borehole MGE-1 was drilled upto XVII Top seam in the southern part of the mine area for determining the physico-mechanical parameters of rocks. The results of these tests are available with CMPDI, RI-II in the form of a separate book. However, a part of this i.e. about 10m above and about 10m below XVIII seam and about 8 m above & about 5m below (Limit of borehole MGE-1) XVII Top seam is being given vide Annexure – I for quick reference.

ANNEXURE-I

RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNGS MODULUS 10E4 / KGF/SQ CM | PSI |
|-----------------------|------------|----------|-------------|------------------------|------------------------|------------------------------------|------------------------------------|-------------------------------|-----------------------------|---------------------------------------|-------|
| FOR XVIII SEAM | | | | | | | | | | | |
| MGE-1/4 46 | 415.78 | 415.87 | 0.09 | SHALE | - | - | - | - | - | - | 4.651 |
| MGE-1/4 47 | 415.87 | 416.46 | 0.59 | SHALY SST | 2.489 **0.035 *2 | 645.4 12.5 2 | - | 87.2 5.7 2 | 72.9 14.2 2 | - | - |
| MGE-1/4 48 | 416.46 | 416.56 | 0.10 | INT.CAL OF SH & SST | - | - | - | - | - | - | 5.145 |
| MGE-1/4 49 | 416.56 | 417.92 | 1.36 | SST. MGD | 2.652 **0.020 *2 | 816.0 98.8 2 | - | 113.5 1.0 2 | 174.8 3.5 2 | - | - |
| MGE-1/4 50 | 417.92 | 418.87 | 0.95 | INT.CAL OF SH & SST | 2.574 **0.026 *2 | 465.2 113.5 2 | - | 84.1 21.6 2 | 64.4 31.5 2 | - | - |
| MGE-1/4 51 | 418.87 | 419.51 | 0.64 | SST. FGD | 2.723 **0.050 *2 | 1005.7 255.7 3 | - | 93.5 0.3 2 | 153.2 34.0 2 | - | - |
| MGE-1/4 52 | 419.51 | 419.78 | 0.27 | INT.CAL OF SH & SST | - | - | - | - | - | - | 5.281 |
| MGE-1/4 53 | 419.78 | 420.30 | 0.52 | SST. FGD | 2.739 **0.050 *2 | 829.5 231.3 2 | - | 108.1 25.3 2 | 148.7 67.9 2 | - | - |

ANNEXURE-I

RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNGS MODULUS 10E4 / KGF/SQ CM |
|------------|------------|----------|-------------|-----------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|---------------------------------|
| MGE-1/4 62 | 425.40 | 425.67 | 0.27 | JHAMA | 1.929 **0.081 *3 | 499.8 0.0 1 | - | 51.6 17.6 2 | 48.6 12.2 2 | - |
| MGE-1/4 63 | 425.67 | 426.05 | 0.38 | MICA PERIDOTITE | 2.955 **0.017 *4 | 742.5 400.1 2 | - | 96.4 0.9 2 | 116.3 40.5 2 | - |
| MGE-1/4 64 | 426.05 | 426.25 | 0.20 | JHAMA | - | - | - | - | - | - |
| MGE-1/4 65 | 426.25 | 427.33 | 1.08 | JHAMA | 1.822 **0.033 *4 | 254.1 7.8 2 | - | 36.3 18.0 2 | - | - |
| MGE-1/4 66 | 427.33 | 427.87 | 0.54 | MP WITH JHAMA | 2.641 **0.266 *6 | 447.6 16.3 3 | - | 67.3 3.2 3 | 113.2 0.0 1 | - |
| MGE-1/4 67 | 427.87 | 428.07 | 0.20 | MP WITH JHAMA | - | - | - | - | - | - |
| MGE-1/4 68 | 428.07 | 429.24 | 1.17 | JHAMA | 1.967 **0.251 *4 | 331.3 52.6 2 | - | 24.6 0.6 2 | 51.2 37.0 2 | - |
| MGE-1/4 69 | 429.24 | 429.40 | 0.16 | MP WITH JHAMA | 2.485 **0.507 *3 | 239.9 0.0 1 | - | 57.1 49.0 2 | - | - |

ANNEXURE-I

RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNGS MODULUS 10E4 / KGF/SQ CM | PSI |
|------------|------------|----------|-------------|----------------------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|---------------------------------|-----------|
| MGE-1/4 70 | 429.40 | 429.64 | 0.24 | MP WITH JHAMA | 2.736 **0.166 *4 | 430.3 0.0 2 | - | 43.5 3.1 2 | - | - | - |
| MGE-1/4 71 | 429.64 | 429.78 | 0.14 | BAKED COAL | 2.062 **0.093 *3 | 504.6 0.0 1 | - | 63.2 29.5 2 | - | - | - |
| MGE-1/4 72 | 429.78 | 430.15 | 0.37 | INT. OF SHALE / SAND STONE | 2.359 **0.250 *4 | 263.1 85.2 2 | - | 49.6 47.7 2 | - | - | - |
| MGE-1/4 73 | 430.15 | 432.55 | 2.40 | SST. MGD | 2.568 **0.016 *8 | 345.3 65.0 3 | 262.6 142.7 3 | 73.5 6.7 5 | 163.5 13.1 2 | 1.961 0.054 2 | - |
| MGE-1/4 74 | 432.55 | 434.22 | 1.67 | SST. CGD | 2.575 **0.053 *9 | 539.7 213.9 3 | 490.3 36.0 3 | 86.8 11.8 6 | 109.6 1.3 2 | 0.0 0.0 2 | - |
| MGE-1/4 75 | 434.22 | 434.76 | 0.54 | INT.CAL OF SHALE & SST | - | - | - | - | - | - | 8.03 6 |
| | 3.653 | 434.99 | 0.23 | CARB SHALE | - | - | - | - | - | - | |

ANNEXURE-I
RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNGS MODULUS 10E4 / KGF/SQ CM | PSI |
|------------|------------|----------|-------------|---------------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|---------------------------------|-------|
| MGE-1/4 77 | 434.99 | 435.31 | 0.32 | INT.CAL OF SH & SST | - | - | - | - | - | - | 4.839 |
| MGE-1/4 78 | 435.31 | 435.65 | 0.34 | SST. MGD | - | - | - | - | - | - | 3.925 |
| MGE-1/4 79 | 435.65 | 436.57 | 0.92 | SST. CGD | 2.740 **0.016 *3 | 850.4 351.5 3 | - | 162.6 27.1 3 | 220.4 80.5 2 | - | - |
| MGE-1/4 80 | 436.57 | 437.24 | 0.67 | INT.CAL OF SH & SST | - | - | - | - | 148.7 0.0 1 | - | 4.600 |
| MGE-1/4 81 | 437.24 | 437.51 | 0.27 | SHALE | - | - | - | - | - | - | 5.960 |
| MGE-1/4 82 | 437.51 | 438.00 | 0.49 | CARB SHALE | - | - | - | - | - | - | 2.256 |
| MGE-1/4 83 | 438.00 | 438.24 | 0.24 | SHALE SST | 2.609 **0.001 *2 | 253.6 0.0 1 | - | 90.1 7.3 2 | - | - | - |
| MGE-1/4 84 | 438.24 | 439.08 | 0.84 | SST MGI | 2.729 **0.009 *2 | 507.3 113.5 2 | - | 104.8 2.1 2 | - | - | - |
| MGE-1/4 85 | 439.08 | 439.24 | 0.16 | SHALE | 2.519 **0.081 *2 | 485.8 0.0 1 | - | 86.6 19.3 2 | - | - | - |

ANNEXURE-I

RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNG S MODUL US 10E4 / KGF/SQ CM | PSI |
|--------------------------|------------|----------|-------------|----------------------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|-----------------------------------|-------|
| MGE-1/4 86 | 439.24 | 439.80 | 0.56 | INT.CAL OF SH & SST | 2.596 **0.019 *2 | 506.6 173.5 3 | - | 106.7 19.1 2 | 72.0 22.6 2 | - | - |
| MGE-1/4 87 | 439.80 | 440.11 | 0.31 | SST. MGD | 2.964 **0.117 *2 | 611.5 176.3 3 | - | 98.3 19.3 2 | - | - | - |
| MGE-1/4 88 | 440.11 | 440.29 | 0.18 | INT.CAL OF SH & SST | 2.563 **0.006 *2 | 318.5 0.0 1 | - | 73.2 16.7 2 | - | - | - |
| FOR XVII SEAM TOP | | | | | | | | | | | |
| MGE-1/5 29 | 474.84 | 475.03 | 0.19 | COAL | - | - | - | - | - | - | - |
| MGE-1/5 30 | 475.03 | 475.11 | 0.08 | CARB SHALE | - | - | - | - | - | - | - |
| MGE-1/5 31 | 475.11 | 477.73 | 1.62 | INT. OF SHALE / SAND STONE | 2.686 **0.097 *6 | 547.0 203.8 3 | 457.9 142.9 3 | 125.4 20.2 4 | 122.9 51.7 2 | 3.972 1.032 2 | - |
| MGE-1/5 32 | 477.73 | 478.17 | 0.44 | INT. OF SHALE / SAND STONE | 2.807 **0.051 *2 | 593.7 226.1 3 | - | 150.2 20.6 2 | - | - | - |
| MGE-1/5 33 | 478.17 | 479.08 | 0.91 | INT. OF SHALE / SAND STONE | 2.676 **0.016 *2 | 633.1 133.0 2 | - | 127.4 16.9 2 | 45.5 40.2 2 | - | - |
| MGE-1/5 34 | 479.08 | 479.70 | 0.62 | SHALE | - | - | - | - | - | - | 4.336 |
| MGE-1/5 35 | 479.70 | 480.23 | 0.53 | INT. OF SHALE / SAND STONE | 2.544 **0.0 *1 | 513.0 192.2 2 | - | 101.7 0.0 1 | - | - | - |
| MGE-1/5 36 | 480.23 | 480.57 | 0.34 | COAL | - | - | - | - | - | - | - |

ANNEXURE-I

RESULTS OF PHYSICOMECHANICAL TEST OF ROOF & FLOOR OF XVIII AND XVII TOP SEAMS ENCOUNTERED
IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGf/SQ CM | COMP. STRENGTH WET KGf/SQ CM | TENSILE STRENGTH KGf/SQ CM | SHEAR STRENGTH KGf/SQ CM | YOUNGS MODULUS 10E4 / KGf/SQ CM | PSI |
|------------|------------|----------|-------------|----------------------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|---------------------------------|-------|
| MGE-1/5 37 | 480.57 | 482.34 | 1.77 | INT. OF SHALE / SAND STONE | 2.673 **0.089 *6 | 585.5 187.0 3 | 429.5 191.7 3 | 124.7 19.0 4 | 41.5 7.2 2 | 4.080 2.111 2 | - |
| MGE-1/5 38 | 482.34 | 482.67 | 0.33 | CARB SHALE | - | - | - | - | - | - | 3.010 |
| MGE-1/5 39 | 482.67 | 484.27 | 1.60 | COAL | - | - | - | - | - | - | 0.680 |
| MGE-1/5 40 | 484.27 | 484.42 | 0.15 | SHALE | - | - | - | - | 34.1 N.A. 2 | - | - |
| MGE-1/5 41 | 484.42 | 485.50 | 1.08 | INT. OF SHALE / SAND STONE | 2.628 **0.119 *6 | 418.3 127.8 3 | 408.9 172.0 3 | 102.7 20.4 4 | 40.9 12.9 2 | 3.055 0.019 2 | - |
| MGE-1/5 42 | 485.50 | 486.02 | 0.52 | COAL | - | - | - | - | - | - | 0.989 |

ANNEXURE-I

**RESULTS OF PHYSICOMECHANICAL TEST
OF ROOF & FLOOR OF XVIII AND XVII TOP
SEAMS ENCOUNTERED**

IN BOREHOLE MGE-1

| SAMPLE NO. | FROM (MTR) | TO (MTR) | THICK (MTR) | ROCK TYPE | BULK DENSITY GMS/CC | COMP. STRENGTH DRY KGF/SQ CM | COMP. STRENGTH WET KGF/SQ CM | TENSILE STRENGTH KGF/SQ CM | SHEAR STRENGTH KGF/SQ CM | YOUNGS MODULUS 10E4 / KGF/SQ CM | PSI |
|------------|------------|----------|-------------|------------------|------------------------|------------------------------|------------------------------|----------------------------|--------------------------|---------------------------------|-----|
| MGE-1/5 43 | 486.02 | 486.70 | 0.68 | SHALY SAND STONE | 2.591 **0.026 *2 | 523.5 52.5 2 | - | 118.9 6.5 2 | 69.7 15.2 2 | - | - |
| MGE-1/5 44 | 486.70 | 487.35 | 0.63 | SAND STONE CGD | 2.590 **0.006 *2 | 586.0 105.0 3 | - | 111.1 25.4 2 | 110.0 78.6 2 | - | - |
| MGE-1/5 45 | 487.35 | 489.12 | 1.77 | SAND STONE CGD | 2.582 **0.042 *6 | 413.8 69.4 3 | 306.6 49.0 3 | 76.3 5.1 4 | 132.1 42.5 2 | 4.431 1.272 2 | - |
| MGE-1/5 46 | 489.12 | 490.35 | 1.13 | SAND STONE MGD | 2.680 **0.023 *6 | 686.0 156.2 3 | 469.6 127.2 3 | 112.6 29.2 3 | - | 7.250 1.556 2 | - |

3.0 PRESENT STATUS :

Moonidih Underground Project, planned on horizon mining system upto 500 metre horizon to exploit XVIII to XV seam. The present annual production from the mine is about **0.201 mtes.** in the year 2009-10 from seams XVI T by Longwall retreating Caving System with Powered Support Longwall (PSLW) Set. The next lower seam XV has been opened up. This project has been opened by two shafts namely Shaft No. 1 (depth 543.5 M) and Shaft no. 2 (depth – 560.7 M) each of 7.5 metre finished diameter & situated 80 metre apart. This project was originally planned for a capacity of 2.1 MTY. However, the maximum production achieved by this mine till date is 1.2 mty.

3.1 Mining Block :

Moonidih Underground Project covers an area of 14.6 Sq.km. (which includes Moonidih, Jarma and part of Singra blocks) located in the south central part of Jharia coalfield. In addition, adjoining Singra Underground block having an area of about 4.9 Sq. km. may be annexed with Moonidih after exploration.

3.2 Land Acquisition Status :

The Land required for surface infrastructure at Moonidih Underground Project has already been acquired.

3.3 Mine Entries / Mine Model :

Moonidih Underground Project has been opened by two shafts namely shaft no. 1 and shaft no. 2 situated 80m apart. From the shafts, 4 horizons have been opened at 220m, 280m, 400m and 500m depths. At each of these horizons, cross cuts have been driven to intersect the seams. Presently 220m & 280m Horizons are closed and 400 m & 500 m Horizon are being utilised. 400 m is being used as production horizon. Pumping is being done through 500m horizon. Both shaft no. 1 and shaft no. 2 are equipped with coal hoisting facility. The entire coal production is fed to pit head washery.

The Technical parameters for the shafts are as follows :

| Sl. No. | Particulars | Shaft No.1 | Shaft No. 2 |
|---------|-------------------------------------|--|---|
| 1 | Diameter | 7.5m | 7.5 m |
| 2 | Depth at which horizons are opened. | 280m, 400m and 500m | 220 m, 280 m, 400 m and 500 m |
| 3 | No. of compartment | 2 | 2 |
| 4 | Hoisting Arrangement | 2 nos. 4 decked cage in each of the two compartments | 2 skips each of 10 tonnes capacity having 8m / sec. Speed in one compartment. Second compartment equipped with single deck cage to act as emergency winder for men. |
| 5 | Winders | i) Koepe (K-6000) 1600 KW winder ii) Koepe (WEF-6) winder, MAMC make, 1600 KW | Koepe (WEF-6) Winder MAMC make, 1600 kW |
| 6 | Purpose | Intake, Man & Material winding upto 400 m horizon and coal hoisting facility also available from 400m hor. through one winder (K-6000) & upto 500 m Horizon through second winder (WEF-6). | Production from 400m horizon and ventilation return. |
| 7 | Capacity of the container | <u>Cages</u> Man – 80 (20 man per deck) Coal – 10 tes per cage in 4 deck each containing coal filled in 2.5 Te Mine Car). | 2 Skip each of 10 tonnes capacity. |

3.4 Present Status of PSLW Sets and Roadheaders

At present, no longwall face is in operation and only four nos. of Road headers are in operation for drivage of galleries.

ML-VI is idle. There is no further use of this set in Moonidih due to height constraint

ML-VII set is idle since long because of inherent design defect and requires major refurbishment.

3.5 The present status of PSLW sets deployed at Moonidih since inception are as follows:

| PSLW Set | Year of Commissioning | Present Status |
|----------|-----------------------|--|
| ML-I | 08/78 | Surveyed off in 1990-91. |
| ML-II | 07/80 | Surveyed off in 2001-02. |
| ML-III | 10/85 | Surveyed off in 2001-02. |
| ML-IV | 10/86 | Completed life cycles |
| ML-V | 04/88 | Completed life cycles |
| ML-VI | 01/88 | Modified from Plough to Shearer. This is no more in use in Moonidih. |
| ML-VII | 03/92 | Inherent Design Defects. Unsafe for use. Idle. Requires major Refurbishment. |

- 3.6 The development of Longwall Panels as well as rise & dip headings is being carried out with Roadheaders, Machines are mostly old. Presently out of 4Nos. of RH/DR are deployed in different seams.

3.7 **Exploitation Status of Coal Seams**

The status of exploitation of different seams at Moonidih Underground Project is as follows:

XVIII Seam:

Approach to this seam is through 3 Nos. of drifts from XVII Top seam on 400 m horizon. This seam is being worked in-seam on Longwall retreating with caving system by ML-IV PSLW set with 'A' series of panels in eastern side. Seven (7) panels namely A-1, A-2, A-3, A-4, A-5, A-7, A-8, A-6 and A-6a have been extracted.

XVII Top Seam:

Approach to this seam is through 280 m and 400 m horizon (220 m horizon is sealed). At present coal extraction in this seam has been discontinued. This seam has been worked in-seam through 400 m horizon between 400 m and 500 m depth on Longwall retreating with caving system by ML-III PSLW set with 'B' series of panels in western side upto B-32 Panel. Eastern side is virgin. It is to be worked after working overlying XVIII seam. The coal was transported by series of belt conveyors upto 1200 tonne strata bunker and then through skip from 400 m horizon to surface via Shaft No. 2.

XVII Bot. Seam:

The entry to this seam is through 280 m horizon. Two panels, namely, C-1 & C-2 were extracted in this seam between 280 m and 400 m depth by Longwall retreating with caving by ML-VI PSLW set which was equipped with plough. The extraction in XVII Bot. Seam was discontinued after Oct. '94 as its extraction was considered uneconomical because of its low thickness and poorer grade.

XVI Top Seam:

Entry to this seam is through 400 m horizon and 500 m horizon. This seam is being worked at present beyond 500 m depth. Development of D-12 Panel has been completed and panel D-13 is under development.

XVI Bot. Seam:

Entry to this seam is through 400 m horizon and 500 M. horizon. Three Longwall retreating with caving panels were worked between 280 m and 400 m depth with 'E' series of panels by ML-VI PSLW set. At present, this set is idle. There is no further use of this set at Moonidih. Only development galleries are being driven for approach to west side.

XVI Comb. Seam:

Entry to this seam is through 400 m and 500 m horizons. This seam has been worked on Longwall retreating with caving system by ML-VII PSLW set with 'F' series of panels. Four panels namely F-1, F-2, F-3A and F-3B have been worked in this seam with PSLW set ML-VII. Coal extraction in this seam was discontinued due to unsafe working of PSLW set ML-VII because of its design defect. Panels F-4, F-5, F-6 Panels have been extracted with ML-V PSLW Set..

XV Top, XV Bot. & XV Comb. Seam:

These seams have been touched at 500 m horizon.

3.8 Ventilation

At Moonidih Project, Shaft No. 1 is intake and Shaft No. 2 is return. The intake horizons are 400 m and 500 m. The return horizons are 280 m, 400 m and 500 m. Main mechanical ventilator is installed at surface near return Shaft No. 2. Specifications of the ventilator are given overleaf.

Specifications of the Ventilator

| Sl. No. | Particulars | Designed | Existing |
|---------|-------------------|------------------------------------|-----------------------------|
| 1. | Fan Type | 2 MV ₂ – 3 double stage | |
| 2. | Make | MAMC, INDIA | |
| 3. | Speed | 600 RPM | |
| 4. | Voltage | 6.6 kV | 6.6 kV |
| 5. | Current | Rated 165 Amp | 80 Amp |
| 6. | Motor | 1600 kW Synchronous | |
| 7. | Capacity | 265 m ³ /sec. | 207.50 m ³ /sec. |
| 8. | Efficiency | 75% (Maximum) | |
| 9. | No. of Blades | 32 in two stage | |
| 10. | Power Factor | 0.9 | |
| 11. | Blade Angle | 45° | |
| 12. | Water Gauge | 400 mm | 160 mm |
| 13. | Impeller Diameter | 3000 mm | |

In addition, there is another identical 2 MV₂ – 3 double stage fan connected in parallel to the main mechanical ventilator & working as stand by and having capacity 186 m³/sec, speed – 500 RPM and water gauge ranging from 130 mm to 140 mm, the motor power is 630 kW and voltage 6.6 kV. However, 1600 kW motor is also available and can be fitted, if required.

For ventilation of XVIII seam and XVII Top seam, 400 m horizon is intake and 280 m horizon is return. For ventilation of XVI T seam the intake and return both are from 500MH. For ventilation of XVI B seam, the intake is from 400 MH and return is from 500MH. For ventilation of XVI Comb. and XV Seams, both intake and return are from 500 M horizon

3.9 Transport

3.9.1 Vertical Transport

No. 1 Shaft is fitted with 4 deck cage and is at present used for man and material transport. No. 2 Shaft is fitted with a pair of skips, each of 10 Te capacity. The skip is at present used for coal transport from 400 m horizon. It has the capacity to cope up with the additional production.

3.9.2 Underground Transport

3.9.2.1 Coal Transport

Transport Circuit of XVI Top/Bot./Comb. Seams

Conveyor circuit of XVI Top seam transports coal from D/E/F-series of Longwall panels and related development faces.

At present the coal from development faces are carried through a series of belt conveyors to feed the coal to strata bunker of 1200 te capacity between XVII Top seam and 400 m horizon near Shaft No. 2. A drift belt conveyor of length 380 m, gradient 1 in 5 and 1000 tph capacity feeds the coal from XVI Top seam to

the top of strata bunker at XVII Top seam. From the bunker it is loaded into skip through skip measuring pocket for transport to surface. The details of belt conveyors are given in Annexure-II. Apart from this a 300 Tonnes capacity strata bunker has constructed in the above said drift for coal evacuation by mine car and cage from 400m. horizon.

3.9.2.2 Material Transport

For transportation of material in the underground in horizons (400 m horizon and 500 m horizon) locomotive is being presently used.

The existing transport circuit is shown in Plate No 6.

3.9.3 Surface Coal Handling Arrangement

At surface, coal from skip of Pit No. 2 is discharged onto belt conveyor for onward transport to pit top washery. At the pit top of No. 1 Pit, a well designed mine car circuit with chain creeper and motor driven rotary tippler is provided for tipping the mine car onto belt conveyor for onward transport to washery. Cages and mine car circuit are used for coal transport if there is any stoppage or breakdown in skip winding pit. Pit top car circuit has been connected to workshop for transporting equipment for repair and maintenance. The same system will continue to be used.

3.10 Pumping:

To deal with make of water during rainy season, the main pumping capacity installed at 500m horizon is 20 cum / min. There are two delivery range of 300 mm diameter. Normally 4 no. of pump, two (2) Nos. of 5 cum / min one no of 2.5 cum/min & one no of 7.5 cum/min are in operation. The detail of pump specifications are given in Annexure – III.

3.11 Compressors:

There are total 6 nos. of compressors, in which one no. is of 14 cum/min capacity, 2 nos. are of 22 cum / min capacity and the rest 3 nos. are of 30 cum/min capacity and four nos. Atlas Copco make 28 cum/minute capacity are under installation for supplying the compressed air to underground through a 150 mm dia pipe range. The compressed air is being used for roof bolting, drift drivage in stone, in longwall faces for blasting rock, pit bottom and pit top mine car pushers, skip loading plant, bunker operation etc. The detail of compressors are given in Annexure – III.

3.12 Power Supply :

Moonidih Project receives power at 33 KV from Pootkee, DVC grid through a double circuit overhead transmission line. The power frequency is 50 Hz and is earthed neutral system on 33 KV. The operating voltages for face equipment are 1100 v and 550v. The 1100v system is restricted neutral System where as 550v is Insulated Neutral System. Power is taken to underground at 6.6 kv & is stepped down to 1100 / 550 v for feeding to face equipment. The 6.6 kv system is Insulated Neutral System. The Flameproof transwitch units for longwall face is of 1000 KVA, 6600/1100v. The underground main and auxiliary pumps are at 6.6 KV and 550 V power supply respectively.

The contract demand is 12.5 MVA. The main power transformers presently installed are four numbers each of 10 MVA, 33/6.6 KV.

In addition to DVC source, two sets DG sets each of 10 MW are in operation through two feeders CPP Feeder -1 & CPP Feeder – 2.

System Voltage :

| | | | |
|---|-----------------------------------|---|------------------|
| • | Incoming Supply Voltage | : | 33 kv |
| • | Supply Voltage to underground | : | 6.6 kv |
| • | Supply Voltage to face equipment | : | 1100 & 550 volts |
| • | Supply Voltage to conveyor motors | : | 1100 & 550 volts |

| | | | |
|---|--|---|-----------|
| • | Supply Voltage to main underground pump | : | 6.6 kv |
| • | Supply Voltage to auxiliary underground pump | : | 550 volts |
| • | Supply Voltage to workshop | : | 6.6 kv |
| • | Supply Voltage to winder | : | 6.6 kv |
| • | Supply Voltage to washery | : | 6.6 kv |
| • | Supply Voltage to ventilation fan | : | 6.6 kv |
| • | Colony / Surface lighting | : | 230v |
| • | Underground lighting & signalling | : | 110v |

3.13 **Workshop** :

In Moonidih Project, there is a workshop complex with the facilities of miner / major overhauling and repair of equipment. The workshop consists of two no. of main sheds having dimensions 95m x 18m and 60m x 25m. The first shed has the facilities as follows with transportation trolley, chain pulley block etc.

- i) Pneumatic machine shed
- ii) Black smith shed
- iii) Fabrication shed
- iv) Hydraulic maintenance shed
- v) Gear box and conveyor drum repair shed
- vi) Machine Shop
- vii) Switch repair shop (Polish)
- viii) Motor assembling shop
- ix) Switch repair shop (UK)
- x) Loco/Mine car repair shed

The second shed has the facilities as follows with a EOT Crane of 15 te cap.

- i) Fabrication shop
- ii) Hydraulic maintenance for Polish equipment
- iii) Machine shop shed
- iv) Motor assembly section
- v) Welding section

The details of workshop equipments available are shown in Annexure – III.

Additional facilities over and above the existing one may be indicated and provided by the bidder.

3.14 **Store facilities:**

Near the Moonidih pit complex, a well constructed store facility is available.

3.15 **Manpower** :

The total manpower on roll of Moonidih Underground Mine as on 01.01.2011 is 1518 out of which the Underground Manpower is 1309 and Surface Manpower is 209.

3.16 **Coal Quality & Selling Price** :

The seams are indicating wide range of quality as shown in para 2.1 and exact grade / quality of coal from a particular panel/ district can be found from the borehole data.

The gradewise current selling price per tonne of run – off – mine Coking Coal, as applicable, is as follows :

| Sl. No. | Grade | Ash % Range | Selling Price-ROM (Rs/te) |
|---------|---------------|--------------|---------------------------|
| 1 | Steel-I | Upto 15 | 3750 |
| 2 | Steel-II | > 15 upto 18 | 3140 |
| 3 | Washery - I | > 18 upto 21 | 2740 |
| 4 | Washery – II | > 21 upto 24 | 1980 |
| 5 | Washery – III | > 24 upto 28 | 1480 |
| 6 | Washery - IV | > 28 upto 35 | 1370 |

For ungraded coking coal having ash percentage above 35% there is no fixed selling price and the selling price is decided on the basis of the UHV (useful Heat Value) of the coal which is determined by the formula given as follows:

$$\text{UHV (K.Cal / Kg)} = 8900 - 138 (\text{Ash \%} + \text{Moisture \%})$$

Where ash & Moisture are determined at 60% Relative humidity & 40° Celsius temperature.

LIST OF UNDERGROUND TRANSPORT P&M

ANNEXURE - II

| Sl. No | Particulars | PLANT & MACHINERY | | | | | |
|--------|-----------------------------------|-------------------------------------|---------------|---------------|-------|---------------|---------------|
| | | XVI TOP SEAM IN OPERATING | | | | | |
| | | Belt Conveyor(BC)/ Conveyor (CC) | Chain | Width (mm) | TPH | Length (M) | Power (KW) |
| | | Index | | | | | |
| | | (A) | Metricon-1200 | 1200 | 750 | 420 | 112 X 2 |
| | | (B) | Vishwa-1200 | 1200 | 650 | 220 | 112 X 2 |
| | | (C) | Gwarek-1000 | 1000 | 350 | 920 | 112 X 3 |
| | | (D) | Huwood-1200 | 1200 | 750 | 320 | 90 X 1 |
| | | (E) | Huwood-900 | 900 | 450 | 270 | 112 X 1 |
| | | (F) | BTL-II | 1000 | 500 | 350 | 110 X 1 |
| | | (G) | BTL-I | 1000 | 500 | 250 | 110 X 2 |
| | | (H) | Kg-8 | 800 | 150 | 180 | 30 X 1 |
| | | (I) | Kg-8 | 800 | 150 | 180 | 30 x 1 |
| | | (J) | Vishwa-1200 | 1200 | 650 | 700 | 110 x 1 |
| | | (K) | Vishwa-1200 | 1200 | 650 | 650 | 110 x 1 |
| | | (L) | Matricon-1000 | 1000 | 600 | 250 | 90 x 1 |
| | | (M) | Vishwa-900 | 900 | 600 | 250 | 90 x 1 |
| | | (N) | Metricon-1000 | 1000 | 600 | 220 | 90 x 1 |
| | | (O) | Huwood-900 | 900 | 450 | 400 | 90 x 1 |
| | | (P) | Matricon-1000 | 1000 | 600 | 440 | 90 x 1 |
| | | (Q) | KG-8 | 800 | 150 | 150 | 30 x 1 |
| | | (R) | Gwarek-1000 | 1000 | 520 | 580 | 112 x 3 |
| | | (S) | KG-8 | 800 | 150 | 155 | 30 x 1 |
| | | (T) | KG-8 | 800 | 150 | 30 | 30 x 1 |
| | | (U) | FSW-1000 | 800 | 500 | 60 | 90 x 1 |
| 2. | U/G TRANSPORT (LOCOMOTIVES) | HORIZON TRANSPORT | | | | | |
| | | 1. BATTERY LOCOMOTIVE | | 13Te Wt. | 4 Nos | | |
| | | 2. BATTERY LOCOMOTIVE 8 Te Wt. | | 8 Te Wt. | 2Nos | | |

ANNEXURE - IIILIST OF PUMPS, COMPRESSORS AND WORKSHOP EQUIPMENT

| Sl. No. | PARTICULARS | PLANT & MACHINERY | Nos. |
|---------|-------------|--|------|
| 1. | PUMPS | 1. Discharge 5M3 /Min., Head-632M, KW-1150, 6.6KV Electricals | 2 |
| | | 2. Discharge 2.5M3 /Min., Head-550M, KW-460, 6.6KV Electricals | 1 |
| | | 3. Discharge 7.5M3 /Min., Head-600M, KW-1260, 6.6KV Electricals . | 1 |
| 2. | COMPRESSORS | 1. Discharge 14 M3/Min., 90KW | 1 |
| | | 2. Discharge 22 M3/Min., 135KW | 2 |
| | | 3. Discharge 30 M3/Min., 185KW | 3 |
| | | 4. Discharge 28 M3/Min, 200KW (under installation | 4 |
| 3. | WORKSHOP | 1. Lathe m/c | 6 |
| | | 2. Radial drill m/c | 2 |
| | | 3. Slotting m/c | 2 |
| | | 4. Shaping m/c | 1 |
| | | 5. Milling m/c | 1 |
| | | 6. W.Strap m/c | 1 |
| | | 7. Roof Bolt manufacturing m/c | 1 |
| | | 8. Hydraulic test rig | 2 |
| | | 9. Power Hammer | 1 |
| | | 10. Hydraulic Press | 1 |
| | | 11. Transformer welding set | 6 |
| | | 12. EOT Crane, 15Te capacity | 1 |
| | | 13. Motor Heating Chamber | 1 |
| | | 14. Miscellaneous Item – Chain pulley block, transportation trolley, Motor Testing Bay | |

6 List of Drawings

- (a) Location Plan (Plate No. 1)
- (b) Surface & Geological Plan (Plate No. 2)
- (c) Litholog of Representative Boreholes (Plate No. 3)
- (d) Working Plan of Seam XVI Top (Plate No. 4)
- (e) Transport layout of XVI T / (Comb.) Seam (Plate No. 6).

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 forbear 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 Employer

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 - 1

(Signature)

(Signature)

(Name in Capital Letters)

(Name in Capital Letters)

Official Address:

Official Address:

WITNESS - 2

WITNESS-2

(Signature)

(Signature)

(Name in Capital Letters)

(Name in Capital Letters)

Official Address:

Official Address:

BCCL



Bharat Coking Coal Limited
(A Subsidiary of Coal India Ltd)
Contract Management Cell
Koyla Bhawan: Koyla Nagar
Dhanbad-826 005 (India)
Tele-Fax: 0326-2230206
e-mail: bccclcgmmc@cmpdi.co.in

GLOBAL BID

SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/ OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVIT SEAM.

NIT No. BCCL/ GM(CMC)/ Global –20/Moonidih XVI Top/2011/4214

Date: 07/03/11

BID DOCUMENT
Part – II (PRICE BID)

BCCL



Bharat Coking Coal Limited
(A Subsidiary of Coal India Ltd)
Contract Management Cell
Koyla Bhawan:Koyla Nagar
Dhanbad-826 005 (India)
Tele-Fax: 0326-2230206
e-mail: bccclcgmmc@cmpdi.co.in

PART-I-TECHNICAL & COMMERCIAL BID

1. Name of Work : **SUPPLY, INSTALLATION AND COMMISSIONING OF MACHINERY AND/OR EQUIPMENT REQUIRED FOR IMPLEMENTATION OF POWERED SUPPORT LONGWALL TECHNOLOGY AT MOONIDIH UNDERGROUND PROJECT AND THEREAFTER SUCCESSFUL OPERATION & MAINTENANCE FOR PRODUCTION OF COAL FROM XVI (TOP) SEAM.**
2. Place of Work : Moonidih Underground Project of Western Jharia Area, BCCL
3. Tender Notice No. & Date : BCCL/ GM(CMC)/ Global-20/MoonidihXVITop/2011/4214
Date 07/03/11
4. Earnest Money : Rs.25.0 Lakhs or equivalent USD
5. Date & Time of submission of tender : **On 1/08/11 up to 3.30 P.M.**
6. Date & Time of Opening of Part-I Tender : **On 02/08/11 at 4.00 P.M.**
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-----

General Manager (CMC)

BCCL



Bharat Coking Coal Limited
(A Subsidiary of Coal India Ltd)
Contract Management Cell
Koyla Bhawan: Koyla Nagar
Dhanbad-826 005 (India)
Tele-Fax: 0326-2230206
e-mail: bcclcgmmc@cmpdi.co.in

PART – II (PRICE BID)

NIT No. BCCL/ GM(CMC)/ Global –20/Moonidih XVI Top/2011/4214

Date: 07/03/11

GENERAL MANAGER
CONTRACT MANAGEMENT CELL
BHARAT COKING COAL LIMITED
KOYLA BHAWAN, KOYLA NAGAR
DHANBAD-826005
STATE – JHARKHAND (INDIA)
FAX NO. 91-326-2230161

In compliance with your bid for supply, installation and commissioning of machinery and/ or equipment required for implementation of Powered support long wall technology and development at Moonidih underground Project and production of coal (XVI top seam) and successful operation thereafter, for which the bid document having **NIT No. BCCL/ GM(CMC)/ Global –20/Moonidih XVI Top/2011/4214 Date: 07/03/11** is hereby submitted.

The details of the Bidder are:

| | |
|----------------------------|---|
| Name of the Bidder | : |
| Full address of the Bidder | : |
| Status of the Bidder | : |

The undersigned representatives (full names and titles) duly authorized to act in the name and for the account of the Bidder (name and address of the Bidder) hereby submit the following in one original and one (1) copy. PART – II (PRICE BID)

A) Equipment Price

| Sl | Item | Firm price to be quoted both in figure and in words | |
|----|--|---|-----|
| | | FC | INR |
| A | The Basic price on the basis of EXW/ FOB value as per clause 12.1 of this section in respect of the cost of the necessary machinery and/ or equipment required to be supplied, successfully installed and commissioned by successful bidder including supply of two (2) years' initial spares. | | |
| B | The price shall also indicate separately the aggregate cost of machinery and/ or equipment on account of transportation, insurance, services & other cost associated with erection / installation, commissioning, testing and any other taxes, duties, commission, fees, value addition or cess etc.) proposed to be supplied, successfully installed and commissioned at Long wall face, XVII seam for the purpose of the contract by the successful bidder. In this regard, separate formats to be duly filled in by the bidder, are given in the form of a Bid Data Statement as enclosed herewith. | | |

For the sake of expediency in quoting Price offer, a summary Format showing separately on account of Indigenous Supplies and Overseas Supplies in a consolidated form is further provided for consultation by the bidders and which is given hereunder. The bidder should also submit such format(s) with all their completeness along with their Price Offer.

Table 1

Summary for Indigenous Supplies:

| SI | Items | Particulars | | | Remarks |
|----------|---|----------------------------------|--|---|---|
| | | Amount (All figures in absolute) | Currency preferred (in USD and/or INR) | Rate may expressed either in % or Lump sum, whichever is applicable | |
| A | B | C | D | E | F |
| 1 | Basic price | | | | Firm Price |
| 2 | 2 Years' Initial Spares, if any | | | | Firm Price |
| 3 | Excise Duty | | | | To be paid by BCCL as & when required on actual basis |
| 4 | Sales Tax | | | | |
| 5 | Loading Charges | | | | |
| 6 | Inland Insurance | | | | To be paid on actual basis subject to a limit of quoted offer Price |
| 7 | Inland Transportation | | | | |
| 8 | Unloading Charges | | | | |
| 9 | Installation & Commissioning Charges, if any. | | | | Firm Price |
| 10 | Service Tax | | | | To be paid by BCCL as & when required on actual basis |
| 11 | Education Cess | | | | |
| | TOTAL | | | | |
| a | USD | | | | |
| b | INR | | | | |

Note: For the items with Firm Price, Column 'E' may be ignored.

Table 2
Summary for Overseas Supplies:

| Sl | Items | Particulars | | | Remarks |
|----------|---|----------------------------------|--|---|---|
| | | Amount (All figures in absolute) | Currency preferred (in USD and/or INR) | Rate may expressed either in % or Lump sum, whichever is applicable | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| a | FOB price | | | | Firm Price |
| b | Ocean Freight | | | | To be paid by BCCL as & when required on actual basis |
| c | Insurance | | | | |
| d | CIF value | | | | |
| e | Import Duty | | | | |
| f | Loading & Unloading Charges | | | | To be paid on actual basis subject to a limit of quoted offer Price |
| g | Clearing & Port handling Charges | | | | |
| h | Inland Insurance | | | | |
| i | Inland Transportation | | | | |
| j | Installation & Commissioning Charges, if any. | | | | Firm Price |
| K | Service Tax | | | | To be paid by BCCL as & when required on actual basis |
| L | Education Cess | | | | |
| | TOTAL | | | | |
| a | USD | | | | |
| b | INR | | | | |

Note: For the items with Firm Price, Column '5' may be ignored.

For item(s) no 5 to 8 of Table .1 and item(s) no (f) & (g) of Table 2, the bidder may prefer to consider distance, volume & value of the consignment with applicable rate of tariff prevailing on the date of bid submission.

PART – II (PRICE BID)

Bid Data Statement – Format I

Price Schedule for Domestic Goods and/or Goods of Foreign Origin Located within the Buyer's Country

| Schedule No. | Item Description | Country of Origin | Quantity & Unit | Price of Each Unit | | | | Unit Price (sum of V) | Total Price as per Schedule for Delivery at Final Destination | Sales and other Taxes payable if contract is awarded |
|--------------|------------------|-------------------|-----------------|---|----------------------|---|---|-----------------------|---|--|
| | | | | Ex-Factory/Ex-Warehouse/Ex-Showroom/Off the Shelf | Packing & Forwarding | Inland Transportation, Insurance and other Local Costs incidental to Delivery | Incidental services Listed in GCC clause 10.1 of Section III Volume I (Amended) | | | |
| I | II | III | IV | V | | | | VI | VII | VIII |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Note:

(a) In case of discrepancy between unit price and total price, the unit price shall prevail.

(b) The Bidder shall indicate the total cost of Spare parts in this Price schedule and give price list of Spares for first two years of operation separately indicating description, quantity, unit price, and total price in the above format.

(c) Bidder may like to indicate separately the additional cost for shifting of PSLW equipment on panel basis to enable working of additional panels. Such cost of shifting beyond five (5) panels will be borne separately by BCCL and which may be firmed up at the time of finalization of contract with the Successful bidder.

(d) The quoted offer should be exclusive of Service Tax. Service Tax will be paid extra, as applicable. However, tenderer has to furnish a certificate at the time of claiming reimbursement stating the rate of Service Tax at which the Service Tax has been paid and confirming that reimbursement for this amount has not been claimed for any place, anywhere in India.

PART – II (PRICE BID)
 Bid Data Statement – Format II
 Price Schedule for Goods to be imported from Abroad.

| Schedule No. | Item Description | Country of Origin | Quantity & Unit | Price of Each Unit | | | | Unit Price (sum of V) | Total Price as per Schedule for Delivery at Final Destination | Indian Agents Name | Shipment weight and Volume(s) |
|--------------|------------------|-------------------|-----------------|---------------------|----------------------|---|---|-----------------------|---|--------------------|-------------------------------|
| | | | | FOB Port of Loading | CIF at Port of Entry | Inland Transportation, Insurance and other Local Costs incidental to Delivery | Incidental services Listed in GCC clause 10.1 of Section III Volume I (Amended) | | | | |
| I | II | III | IV | V | | | | VI | VII | VIII | X |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

By this letter the undersigned bidder / their authorized representative agree to do the above mentioned work as per my/our quoted firm price (in words and in figures) with due consideration of various stipulations given in the Part-I and Part-II of the bid documents.

Note:

- (a) In case of discrepancy between unit price and total price, the unit price shall prevail.
- (b) Under no circumstances, CIL or its subsidiary shall make any direct payments of whatsoever nature to the Bidder's Indian Agent.
- (c) The bidder shall indicate the total cost of Spare Parts in this Price schedule and give price list of spares for 2 years operation separately indicating description, quantity, unit price and total price in the above format.
- (d) For the purpose of quoting price offer, the above Bid Price will consider and include all the components of Statutory Levies like Custom duty, Excise duty, Sales Tax, Work Contract Tax,

Service tax & Education Cess, Ocean Freight & Insurance, likely to be levied and governed under Indian Law. Apart from other such components as applicable in the foreign country of origin including all incidental expenditure like packing, Clearing & Port handling Charges, wharfage, inland insurance, inland freight,

Inland transportation, etc. for execution of the subject work. In case of any default in the inclusion of any of the applicable statutory tax component in the Price Bid, the financial evaluation of this Price Offer will consider the quoted price as all inclusive.

(e) The overseas bidders, not being a manufacturer for indigenous component, for claiming reimbursement of all admissible expenditure towards excise duty, if any, on actual basis for the items of Equipment, spares, consumables of Indian origin, would not be in a position to raise excise invoice. Under the circumstances, this document has envisaged that if the Supplier of Indian Equipment raises commercial bill towards delivery of their indigenous supply, such bill should specifically mention the reimbursement of excise duty component and accompany the documentary evidence towards the payment of excise duty and accordingly such excise duty would be reimbursed at actual by CIL or its coal company to Selected Bidder and/or its authorized representative, as the case may be.

(f) In case bidder finds any inconvenience while filling in the prescribed format, it is suggested to make minimum necessary changes according to their suitability without impairing the essence thereof.

(g) The quoted offer should be exclusive of Service Tax. Service Tax will be paid extra, as applicable. However, tenderer has to furnish a certificate at the time of claiming reimbursement stating the rate of Service Tax at which the Service Tax has been paid and confirming that reimbursement for this amount has not been claimed for any place, anywhere in India.

B) Rate per tonne:

- I. Operation/ maintenance Charges, Service & maintenance spares (excluding the 2 years' initial spares) and charges for all consumables (refer Clause No. 1(f) of Section-III) on per tonne of committed production of coal on a yearly basis during the (5) five years of contract period of commercial operation. Such services and/or facilities should cover all the face machinery and/or equipment up to compatible tail end arrangement of the gate conveyor including face communication system irrespective of their ownership.
- II. Since the spares for both the first and second year of commercial operation are covered under PSLW package, no amount is payable separately towards the price of such spares for their inbuilt price in the equipment package cost.

- III. Services of their technical personnel.
- IV. In case, any item other than the above like some special tests and/or studies required to select suitable type and capacity of Powered Support longwall set, Road headers, winning, transport equipment and existence of discontinuity of seam under geo-mining conditions of Moonidih underground project, if considered in the computation of cost per tonne, the bidder should indicate the same in a separate note justifying their necessity of inclusion in the cost per tonne.
- V For the purpose of quoting price offer against rate per tonne, the Bid Price will consider and include all the components of Statutory Levies like Custom duty, Excise duty, Sales Tax, Work Contract Tax, Service tax & Education Cess, alongwith ocean Freight & Insurance, likely to be levied and governed under Indian Law apart from other such components as applicable in the foreign country of origin including all incidental expenditure like packing, Clearing & Port handling Charges, wharfage, inland insurance, inland freight, inland transportation, etc. for execution of the subject work. In case of any default in the inclusion of any of the applicable statutory tax component and other associated cost towards the execution of this contract in the Price Bid, the financial evaluation of this Price Offer will consider the quoted price as all inclusive.
- VI The bidder may like to note that where it becomes necessary to work on panels beyond five (5) panels to achieve minimum guaranteed production, and thereby causing the bidder to continue their committed production beyond the five (5) years contractual period, in such cases, BCCL will offer to extend the bidder for additional time apart from reimbursement for the cost of shifting, without imposing any penalty on this account and which will be firmed up at the time of finalization of the contract.
- VII Where the bidder incurs the additional cost of manpower for this extra time lost due to shortfall in the availability of any sufficient coal in the five (5) panels. BCCL will also absorb this cost that will be incurred for no fault of the bidder.
- VIII The Price offer may like to indicate separately the cost of idle hours in respect of the item VII above. However, such cost will be firmed up at the time of finalization of contract.

The firm price quoted in Foreign Currency (FC) and / or Indian Rupee (INR) on yearly basis for the entire contract period of 5(five) years on per tonne of committed production are furnished below:

| SI | Item | Year-1 | | Year-2 | | Year-3 | | Year-4 | | Year-5 | |
|----|--|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| | | USD | INR | USD | INR | USD | INR | USD | INR | USD | INR |
| 1 | Operation Maintenance including Guaranteed Spares & all consumables. | | | | | | | | | | |
| 2 | Service Maintenance | | | | | | | | | | |
| 3 | Manpower cost | | | | | | | | | | |
| 4 | Major overhauling of PSLW set | | | | | | | | | | |
| 5 | Ocean Freight | | | | | | | | | | |
| 6 | Insurance | | | | | | | | | | |
| 7 | Import Duty | | | | | | | | | | |
| 8 | Excise Duty | | | | | | | | | | |
| 9 | Sales Tax | | | | | | | | | | |
| 10 | Loading & Unloading Charges | | | | | | | | | | |
| 11 | Clearing & Port handling Charges | | | | | | | | | | |
| 12 | Service Tax | | | | | | | | | | |
| 13 | Education Cess | | | | | | | | | | |
| 14 | TOTAL | | | | | | | | | | |

The quoted offer should be exclusive of Service Tax. Service Tax will be paid extra, as applicable. However, tenderer has to furnish a certificate at the time of claiming reimbursement stating the rate of Service Tax at which the Service Tax has been paid and confirming that reimbursement for this amount has not been claimed for any place, anywhere in India.

By this letter, the undersigned bidder/ authorized representative hereby declare and agree:

- (1) The Prices quoted are firm other than applicable statutory levies & taxes.
- (2) That the Bidder will take the responsibility and obligations for accomplishment of the Contract in accordance with all provisions of the Bidding Documents.
- (3) That the Bidder has examined in detail all the Bidding Documents and all information furnished for reference as well as relevant Attachments and that he is perfectly aware that he must renounce all rights of invoking ambiguities of misunderstandings in this respect.
- (4) That the Bid is valid for a period of six calendar months from the date of opening of Part – I of bid.
- (5) That in the event the Bid is withdrawn after the time and date set for bid opening, within the period of validity, the EMD should be forfeited by BCCL.

(6) That the Bidder agrees to furnish any other data or information pertinent to the Bid that might be requested by Bharat Coking Coal Limited.

(7) That all official correspondence to this Bid shall be addressed to:

Address _____

Tel.No. Cable or Fax No. _____

Name of the Representative

Name of the Bidder

(Signature of the Bidder)

Address









