



# **Gujarat Mineral Development Corporation Limited**

**Tender Document for:**

---

**Selection of Contractor for Operation and Maintenance  
of Lignite, Lime and Ash Handling Systems of GMDC's  
2X125 MW Akrimota Thermal Power Station (ATPS)**

**Tender Number: GMDC/Power/ATPS/12/23-24**

---

**General Manager (Power)**

**Gujarat Mineral Development Corporation Ltd.**

**(A Govt. Of Gujarat Enterprise)**

**CIN: L14100GJ1963SGC001206, GST: 24AAACG7987P1ZT**

**Khanij Bhavan, 132' Ring Road, University Ground, Vastrapur, Ahmedabad 380  
052**

**☎EPABX: 079-27913501, 27913200**

**E-mail: [power@gmdcltd.com](mailto:power@gmdcltd.com), [jndave@gmdcltd.co.in](mailto:jndave@gmdcltd.co.in), Website:  
[www.gmdcltd.com](http://www.gmdcltd.com)**



## Table of Contents

<b>1. PURPOSE OF THE DOCUMENT .....</b>	<b>8</b>
<b>2. ABOUT GMDC .....</b>	<b>8</b>
<b>3. LOCATION OF WORK.....</b>	<b>8</b>
<b>4. ABOUT ATPS.....</b>	<b>8</b>
<b>5. GENERAL INSTRUCTIONS TO BIDDER.....</b>	<b>9</b>
5.1. COST OF BIDDING.....	9
5.2. DUE DILIGENCE.....	9
5.3. CLARIFICATION OF BIDDING DOCUMENTS .....	9
5.4. AMENDMENT OF TENDER DOCUMENT.....	9
5.5. CONTACT DETAILS .....	10
5.6. LANGUAGE OF BID .....	10
5.7. LATE BIDS .....	10
5.8. RIGHT TO ACCEPT PROPOSAL.....	10
5.9. SITE VISIT .....	10
5.10. PERIOD OF VALIDITY OF BIDS .....	11
5.11. SUB-CONTRACT.....	11
5.12. CONSORTIUM / JOINT VENTURE.....	11
5.13. CHANGE IN LAW.....	11
5.14. INTERPRETATION.....	12
5.15. DECLARATION.....	12
5.16. AMENDMENT OF WORK ORDER.....	12
5.17. ESCALATION IN CONTRACT AMOUNT.....	12
<b>6. EARNEST MONEY DEPOSIT .....</b>	<b>14</b>
<b>7. TENDER PROCESSING FEE.....</b>	<b>14</b>
<b>8. SECURITY DEPOSIT .....</b>	<b>15</b>
<b>9. PROCEDURE FOR SUBMISSION OF THE BID .....</b>	<b>16</b>
<b>10. ELIGIBILITY AND QUALIFICATION CRITERIA OF BIDDER.....</b>	<b>17</b>
10.1. EXPERIENCE: .....	17
10.2. FINANCIAL .....	18
10.3. STATUTORY.....	18
10.4. SITE VISIT CERTIFICATE.....	19
<b>11. EVALUATION OF BIDS.....</b>	<b>19</b>
11.1. COMPLETENESS OF BIDS.....	19
11.2. TENDER DOCUMENT CLARIFICATIONS .....	19
11.3. REJECTION OF BID .....	19
11.4. OPENING OF BIDS .....	19
11.5. SELECTION OF BIDDER .....	19
11.6. DISCUSSION.....	20
11.7. ACCEPTANCE OF LOI AND AWARD OF CONTRACT (WORK ORDER).....	20
<b>12. SCOPE OF WORK.....</b>	<b>21</b>
12.1. BATTERY LIMITS .....	21
12.2. GENERAL SCOPE OF WORK FOR O&M OF LIGNITE, LIME, AND ASH HANDLING PLANTS .....	22



12.3.	OPERATIONS OF LIGNITE HANDLING PLANT .....	28
12.4.	OPERATIONS OF LIME HANDLING SYSTEM.....	32
12.5.	OPERATIONS OF ASH HANDLING PLANT.....	34
12.6.	DEPLOYMENT OF HEAVY EARTH MOVING MACHINERY FOR OPERATIONS OF LIGNITE, LIME, AND ASH HANDLING PLANTS	
12.7.	MECHANICAL MAINTENANCE OF LIGNITE, LIME, AND ASH HANDLING PLANTS.....	41
12.8.	ELECTRICAL MAINTENANCE OF LIGNITE, LIME, AND ASH HANDLING PLANTS.....	46
12.9.	C&I MAINTENANCE OF LIGNITE, LIME, AND ASH HANDLING PLANTS .....	55
12.10.	MAINTENANCE OF WEIGHBRIDGES .....	59
12.11.	HOUSEKEEPING WORK AT LIGNITE, LIME, ASH HANDLING PLANTS.....	61
<b>13.</b>	<b>PERIOD AND DURATION OF WORK .....</b>	<b>65</b>
<b>14.</b>	<b>LIQUIDATED DAMAGES (LD) .....</b>	<b>65</b>
<b>15.</b>	<b>GOODS &amp; SERVICE TAX.....</b>	<b>66</b>
<b>16.</b>	<b>INSURANCE.....</b>	<b>66</b>
<b>17.</b>	<b>PAYMENT TERMS .....</b>	<b>67</b>
<b>18.</b>	<b>STATUTORY OBLIGATIONS.....</b>	<b>69</b>
<b>19.</b>	<b>BANKRUPTCY .....</b>	<b>72</b>
<b>20.</b>	<b>NOTICE.....</b>	<b>72</b>
<b>21.</b>	<b>CANVASSING NOT PERMITTED.....</b>	<b>72</b>
<b>22.</b>	<b>TERMINATION OF CONTRACT .....</b>	<b>73</b>
<b>23.</b>	<b>ARBITRATION .....</b>	<b>73</b>
<b>24.</b>	<b>GOVERNING LAW .....</b>	<b>73</b>
<b>25.</b>	<b>JURISDICTION.....</b>	<b>73</b>
<b>26.</b>	<b>NON-FULFILLMENT OF TERMS AND CONDITION OF THE CONTRACT .....</b>	<b>73</b>
<b>27.</b>	<b>COMPLETION OF WORK .....</b>	<b>74</b>
<b>28.</b>	<b>ACCIDENT AND RESPONSIBILITIES OF BIDDER .....</b>	<b>75</b>
<b>29.</b>	<b>FORECLOSURE .....</b>	<b>75</b>
<b>30.</b>	<b>FORCE MAJEURE .....</b>	<b>76</b>
	<b>ANNEXURE A: INSTRUCTION TO BIDDERS FOR ONLINE TENDERING .....</b>	<b>78</b>
	<b>ANNEXURE B: APPROVED BANKS .....</b>	<b>80</b>
	<b>ANNEXURE C: BANK DETAILS FOR RTGS.....</b>	<b>81</b>
	<b>ANNEXURE D: SERVICE LEVEL AGREEMENTS – O&amp;M OF MATERIAL HANDLING PLANT.....</b>	<b>83</b>
	APPENDIX I: BUNKER LEVEL COMPLIANCE .....	85
	APPENDIX II: IN-PLANT LIGNITE QUALITY LOSS .....	87
	APPENDIX III: PREVENTIVE MAINTENANCE (PM) COMPLIANCE .....	89
	APPENDIX IV: UNPLANNED/BREAKDOWN COMPLIANCE.....	90
	APPENDIX V: SAMPLE HOUSEKEEPING CALCULATION SHEET.....	92
	APPENDIX VI: PENALTY DUE TO NON-AVAILABILITY OF HEMM AND MACHINE OPERATORS .....	94
	APPENDIX VII: PENALTY DUE TO NON-AVAILABILITY WEIGHBRIDGES.....	95



---

<b>ANNEXURE E: PREVENTIVE MAINTENANCE SCHEDULE FOR MATERIAL HANDLING EQUIPMENT ..</b>	<b>96</b>
<b>ANNEXURE F: MAJOR EQUIPMENT DETAILS .....</b>	<b>101</b>
<b>ANNEXURE G: LIST OF TOOLS AND TACKLES .....</b>	<b>102</b>
<b>ANNEXURE H: LIST OF CONSUMABLES ITEMS.....</b>	<b>110</b>
<b>ANNEXURE I: MANPOWER DEPLOYMENT FOR O&amp;M WORK .....</b>	<b>114</b>
<b>ANNEXURE J: FLOWCHARTS .....</b>	<b>120</b>
<b>FORM PA .....</b>	<b>128</b>
<b>FORM PB .....</b>	<b>129</b>
<b>FORM PC .....</b>	<b>130</b>
<b>FORM PD .....</b>	<b>131</b>
<b>FORM PE .....</b>	<b>132</b>
<b>FORM PF.....</b>	<b>133</b>
<b>FORM PG .....</b>	<b>134</b>
<b>PRICE BID FORM – PP .....</b>	<b>135</b>
<b>FORMAT OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT (EMD) .....</b>	<b>136</b>



**TENDER NOTICE**

**Tender Number: GMDC/Power/ATPS/12/23-24**

<b>Place of work</b>	2x125 MW Akrimota Thermal Power Station, Village: Nanichher, Taluka: Lakhpat, District: Kutch, Gujarat.
<b>Brief description of work</b>	The work involves Operation and Maintenance of Lignite, Lime and Ash Handling Systems of GMDC's 2X125 MW Akrimota Thermal Power Station (ATPS)
<b>Period of contract</b>	The contract period will be of <b>one year from the date of</b> acceptance of LOI. Further, there shall be a provision for extension for up to <b>one year</b> , as per the same terms and conditions with a further extension provision as per discretion of GMDC.
<b>Availability of tender</b>	Tender Document will be available on the GMDC website (www.gmdcltd.com) and nprocure portal <a href="https://tender.nprocure.com">https://tender.nprocure.com</a> . Bids shall be required to be submitted online on the nprocure portal ( <a href="https://tender.nprocure.com">https://tender.nprocure.com</a> ).
<b>EMD (Earnest Money Deposit)</b>	Rs. 12,00,000/- (Rupees Twelve Lakhs Only) in any one of following form <ul style="list-style-type: none"><li>➤ DD in favour of GMDC Ltd, payable at Ahmedabad</li><li>➤ Digital Mode: Please note if payment is made through digital mode, kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-C): ICICI Bank, Ahmedabad Branch, Account Number: 002405019379 IFSC: ICIC 0000024</li><li>➤ Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR is attached in Annexure B for approved banks). It should be valid for a period of not less than 6 (six) months from the last date of submission of bid.</li></ul> <p><i>Relaxation in terms of submission of EMD shall be given to the bidder who is holding valid certificate issued under the MSME Act, 2006 on the date of submission of tender.</i></p>



<b>Tender processing fee</b>	<p><b>Rs. 15,000/-</b> (Rupees Fifteen Thousand Only) plus GST @ 18% aggregating to <b>Rs. 17,700/-</b> payable by Demand Draft/digital mode payment drawn in favor of “GMDC Ltd.” payable at Ahmedabad.</p> <p>Please note if payment is made through digital mode, kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure C):</p> <p>ICICI Bank, Ahmedabad Branch, Account Number: 002405019379 IFSC: ICIC 0000024</p> <p><i>Relaxation in terms of submission of tender processing fee shall be given to the bidder who is holding valid certificate issued under the MSME Act, 2006 on the date of submission of tender.</i></p>
<b>Commencement of tender</b>	24/11/2023
<b>Last date for download the tender document</b>	16/12/2023 up to 18:00 hours
<b>Last date of submission of bid through online</b>	16/12/2023 up to 18:00 hours
<b>Last date of submission of physical documents i.e., EMD, Tender Processing Fee etc.</b>	16/12/2023 up to 18:00 hours at Corporate Office, GMDC, Ahmedabad
<b>Date and time for online opening of preliminary bid</b>	16/12/2023 up to 18:05 hours onwards
<b>General and important terms and conditions</b>	<ol style="list-style-type: none"><li>1. GMDC reserves absolute right/discretion to accept and/or reject any or all the tenders received or invite fresh bid at any stage or split the work between more than one bidder as the case may be.</li><li>2. The bidders are required to quote the rate strictly as per the terms and conditions mentioned in the tender document. Conditional tender shall not be entertained and will be rejected summarily without assigning any reasons, whatsoever.</li><li>3. GMDC may issue amendments/corrigendum in the tender</li></ol>



documents, schedule, forms etc. at any time during the period between publication of notice and submission of bids of the tender on website. The bidders in their own interest are advised to visit the website regularly till the last date of submission of the bid. No separate newspaper advertisement will be released for amendments/corrigendum.

4. GMDC reserves the rights to modify or alter any condition of the tender.
5. The bidders are advised to submit their price bid online on <https://www.tender.nprocure.com> only. Physical price bid shall not be accepted and shall be rejected summarily without assigning any reasons, whatsoever.
6. Failure to submit bid online in stipulated time due to any reason whatsoever by any bidder shall result in disqualification of bid. In such circumstances, bid submitted physically along with supporting documents, tender processing fees, EMD amount etc. shall not be considered as bid submitted and the same will be returned back to the bidder without opening the same. GMDC reserves the right to take suitable decision in this regard.



## **1. Purpose of the Document**

The tender (this document) floated by GMDC (Gujarat Mineral Development Corporation Limited); a Government of Gujarat Enterprise is to select a successful bidder which would be responsible for operation and maintenance of lignite, lime and ash handling systems of GMDC's 2X125 MW Akrimota Thermal Power Station (ATPS) at the quoted commercials and executed contract terms & conditions.

## **2. About GMDC**

Gujarat Mineral Development Corporation Limited herein after referred to as GMDC, a Government of Gujarat Enterprise, is a pioneer company in the field of mining for more than five decades, catering to the needs of the minerals and solid fuel for the industries based in Gujarat. GMDC's mining activities are spread all over Gujarat. It is currently dealing in minerals like lignite, bauxite, fluorspar, ball clay, silica sand and manganese. GMDC has also set up a 250 MW lignite based thermal power station at Nanichher in Kutch, wind power plant of 200 MW at Maliya, Jodiya, Godsar, Bhanvad, Bada, Varvada, Rojmal, and a solar power plant of 5 MW at Panandhro project.

## **3. Location of Work**

The work is to be carried out at Akrimota Thermal Power Plant Station (ATPS) located in village Nanichher of Lakhpat taluka in Kutch district of the Gujarat State. The project is located about 150 kms from Bhuj. The nearest railway station and airport is at Bhuj.

## **4. About ATPS**

GMDC has 2x125 MW thermal power project called ATPS. Both the units have been in commercial operation since March 2005. It is getting lignite from its own mines located at Mata no Madh and Umarsar. The water requirement for the power plant is taken from the nearest Kori creek through a 1.4 KM long sea water intake channel. The CFBC boiler is used here as it is environment friendly and controls sulphur in the flue gas emission. A 100-meter-thick green belt surrounds the entire site. The state-of-the-art technology DCS has been used.

## **5. General Instructions to Bidder**

The section aims to provide guidelines/instructions for bidders, to be used while submitting the proposals.

### **5.1. Cost of Bidding**

The bidder will bear all costs associated with the preparation and submission of its bid and GMDC, will in no event or circumstance be held responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

### **5.2. Due Diligence**

The bidder is expected to and shall be deemed to have examined all instructions, forms, terms and specifications and other information in this tender document. The bid should be precise, complete and in the prescribed format as per the requirement of the tender document. Failure to furnish all information required by the tender document or submission of a bid not responsive to the tender document in every respect will be at the bidder's risk and may result in rejection of the bid. GMDC shall at its sole discretion be entitled to determine the adequacy/ sufficiency of the information provided by the bidder.

### **5.3. Clarification of Bidding Documents**

GMDC shall make best efforts to respond to any request for clarification of the tender document. The response/clarification shall to the extent possible be made in writing.

### **5.4. Amendment of Tender Document**

At any time before the deadline for submission of bids, GMDC may modify the tender document for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the tender document by amending, modifying and/or supplementing the same. Any amendments/modifications in the tender document would be displayed on GMDC web site and all such amendments shall be binding on the bidder without any further act or deed on GMDC part. In the event of any amendment, GMDC reserves the right to extend the deadline for the submission of the bids, to allow prospective bidders reasonable time in which to take the amendment into account while preparing their bids. GMDC may at its sole discretion, extend this deadline for submission of bids by amending the bid documents.

### **5.5. Contact Details**

All inquiries concerning this procurement are to be addressed to the following:

General Manager (Power)  
Gujarat Mineral Development Corporation Ltd.  
Khanij Bhavan, 132' Ring Road, University Ground,  
Vastrapur, Ahmedabad 380 052  
☎EPABX: 079-27913501, 27913200Extn.No:1760  
E-mail: power@gmdcltd.com, jndave@gmdcltd.co.in

### **5.6. Language of Bid**

All proposals and various documents related to these proposals should be in English language. All correspondence between GMDC and the bidder would also be in English language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation in English language.

### **5.7. Late Bids**

Any bid received by GMDC, after the deadline for submission of bids prescribed by GMDC, would be summarily rejected. GMDC shall not be responsible for any postal delay or non-receipt/non-delivery of the documents. No further correspondence on this subject will be entertained.

### **5.8. Right to Accept Proposal**

GMDC, reserves the right to accept or reject any proposal, and to annul the proposal process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or any obligation to inform the affected consortium of the grounds for such decision.

### **5.9. Site Visit**

Bidders advised to visit the site to study the actual working conditions before submission of the bid and shall have to submit the site visit declaration in the prescribed format. The information/details given in the tender document are only to describe the magnitude of work and are for mere guidance to the bidders.

Any neglect or failure on the part of the bidder in obtaining necessary and reliable information upon the foregoing or any other matters affecting the contract shall not relieve him from any risks or liabilities or the entire responsibility from completion of the work at the contracted rates and time in strict accordance with the contract documents.

#### **5.10. Period of Validity of Bids**

Bids shall remain valid for 180 days after the date of bid opening prescribed by GMDC and same may be extended unconditionally for further period of 60 days. The bid of the bidder shall be considered non-responsive if such bid is valid for a period less the bid validity period.

#### **5.11. Sub-contract**

The successful bidder shall not assign or sub-contract any portion of this work without prior written consent of GMDC.

#### **5.12. Consortium / Joint Venture**

Consortium / joint venture are not allowed.

#### **5.13. Change in Law**

Nothing in this contract shall entitle the bidder to claim additional payment against the work executed or being executed or likely to be executed upon the change in law by Government of India or State of Gujarat in regard to any taxes, liabilities arising out of work contract, judgments of court etc. That nothing under the said laws shall create any additional liability on the GMDC over and above that set out herein. That unforeseen circumstances in the working of the said contract shall not entitle successful bidder to abandon or demand additional payment under a different head not originally mentioned herein and hence nothing except what is contained in the present contract shall constitute binding obligations between parties.

In case of any Central/State Government directives regarding power plant operation and execution of work related thereto, the same shall have to be strictly adhered to and binding upon the successful bidder for implementation, for which GMDC will not be responsible for any compensation.

#### **5.14. Interpretation**

That no communication preceding or following the present tender shall have any bearing on the terms and conditions set out herein. That no contract, promise or obligation shall arise out of the said communication, over and above what is set out herein above. That the terms contained herein constitute the entire bargain between the parties and shall not be interpreted in the light of commercial correspondence between the parties.

#### **5.15. Declaration**

The bidder should give a declaration that it has not enclosed any conditional offer as per the format provided in FORM PD of the tender document.

#### **5.16. Amendment of Work Order**

GMDC is authorized to take suitable decision and action in case of requirement to amend/alter the contract conditions/quantities of the works/extension of the contract period/allotment of additional works/revision of the rates of the work etc., if necessary, in the interest of GMDC.

The successful bidder shall not change the constitution of the firm/name during the currency of the contract without prior approval of GMDC. Upon such change in constitution and/or name, supplementary agreement to that effect shall be executed and if the SD is submitted in form of BG/FD than fresh BG in the name and/or constitution shall be submitted failing which necessary action as deemed fit by GMDC shall be taken.

#### **5.17. Escalation in Contract Amount**

The contract amount for the extension period shall be considered as the contract amount in the preceding year, with a yearly escalation as per Wholesale Price Index (WPI) and Consumer Price Index (CPI).

In case of extension of the contract, the contract amount for the period of extension shall be escalated taking the value quoted by the successful bidder for the preceding year. The escalation rate shall be calculated based on the Wholesale Price Index (WPI) and Consumer Price Index (CPI).

For avoidance of doubt and by way of illustration, consider the following scenario:

- The contract amount for the preceding year is Rs. 10,00,00,000 (Rs. Ten Crores).
- The price index is 200 (two hundred) for the month when the contract is signed (say January 2024).
- The price index is 220 (two hundred and twenty) for the month when the contract ends (January 2025 – 12 (twelve) months from signing of the contract).
- The price index multiple for extension year shall be 1.1, calculated as 220 divided by 200.
- The contract amount for extension year shall be calculated as the contract amount in the preceding year multiplied by the price index multiple for the extension year, i.e., Rs. 10,00,00,000 x 1.1 = Rs. 11,00,00,000
- The price index for any year shall be a weighted average index as per 70% (seventy percent) of WPI and 30% of CPI (IW), i.e., 70%\*WPI + 30%\*CPI(IW)
- WPI shall mean the Wholesale Price Index for all commodities as published by the Ministry of Industry (GoI) on <http://eaindustry.nic.in/#>
- CPI (IW) shall mean the Consumer Price Index for Industrial Workers as published by the Labour Bureau, GoI on <http://www.labourbureau.gov.in/>
- Should the WPI or the CPI (IW) not be published for any time period, the escalation rate proposed by the Managing Director of the Owner shall prevail.

The bidder to quote charges inclusive of all other taxes except applicable GST. Applicable GST, over and above approved contract amount, at the time of invoicing shall be reimbursed by GMDC. The risk of applicability of any taxes, duties, and levies except GST, shall rest with the bidder.

GMDC shall be entitled to deduct tax at source as may be applicable. The TDS certificate(s) shall be submitted as per the due date specified in the Income Tax Act.

Each bidder must quote his rates after through reading of this RFP document and estimates of its cost through detailed due diligence of the Site, statutory laws/regulations. GMDC

reserves the right to seek any clarifications regarding price quoted from bidders before any decisions.

## 6. Earnest Money Deposit

A non-interest-bearing Earnest Money Deposit of Rs 12,00,000/- (Rupees Twelve Lakhs Only) in any one of following form shall be submitted by the bidder along with the technical bid.

1. Demand Draft in favor of GMDC Limited payable at Ahmedabad.

OR

2. Digital Mode: Please note if payment is made through digital mode kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-C)

ICICI Bank, Ahmedabad Branch,  
Account Number: 002405019379  
IFSC: ICIC0000024

OR

3. Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR is attached in Annexure B for approved banks). It should be valid for a period of not less than 6 (six) months from the last date of submission of bid.

*Relaxation in terms of submission of EMD shall be given to the bidder who is holding valid certificate issued under the MSME Act, 2006 on the date of submission of tender.*

## 7. Tender Processing Fee

The tender processing fee is to be paid at the time of submission of supporting document of technical bid in the form of demand draft/pay order of **Rs. 15,000/-** (Rupees Fifteen Thousand Only) plus GST @ 18% aggregating to **Rs. 17,700/-** as mentioned in tender notice in the sealed technical bid cover. If the amount mentioned in the DD/ digital mode payment is found short, the tender will not be considered for scrutiny and will be out rightly rejected.

*Relaxation in terms of submission of tender processing fee shall be given to the bidder who is holding valid certificate issued under the MSME Act, 2006 on the date of submission of tender.*

## 8. Security Deposit

8.1. Security deposit is measure of liquidated damages sustained by GMDC for not performing the contract satisfactorily. Nothing herein above shall disentitle GMDC from claiming the damages actually sustained in the value over and above the security deposit.

8.2. The successful bidder shall submit security deposit of 10% of the total contract value excluding Goods & Service Tax (GST) within 10 days from the date of issuance of LOI in any one of following form:

1. Demand Draft in favor of GMDC Limited payable at Ahmedabad.

OR

2. Bank Guarantee issued by banks approved by Govt. Of Gujarat from time to time (except Co-Operative bank) in the form and manner acceptable to GMDC (Govt. GR approved banks are given in Annexure B for approved bank). It should be valid for a period of not less than 12 (twelve months) from the date of receipt of LOI and shall be renewed from time to time in case of requirement.

3. Digital Mode: Please note if payment is made through digital mode kindly submit the receipt of the same in the attached documents. RTGS details for payment (Annexure-C):

ICICI Bank, Ahmedabad Branch

Account Number: 002405019379

IFSC: ICIC0000024

8.3. It shall be refunded to the successful bidder, within a period of six months after satisfactory completion of the work and removal of equipment, tools tackles, campsite etc., and the due fulfillment of all the terms and conditions of the contract.

8.4. The successful bidder shall obtain “No Dues Certificate” and “Site Clearance” certificate to this effect from the General Manager [Project]/Project-in-Charge and shall submit the same to the General Manager [Power] at HO, who after verification of the fact will arrange for refund of SD.

8.5. The successful bidder will also have to submit “NO DEMAND CERTIFICATE” along with the above-mentioned certificate.

- 8.6. The SD deposited by the successful bidder may be forfeited if the successful bidder fails to adhere to fulfill the conditions of work order/agreement.
- 8.7. Security deposit shall not bear any interest under any circumstances.
- 8.8. GMDC will reserve the right to recover the charges or the liquidated damages from the security deposit in the following circumstances-
  1. If the successful bidder or its employees causes any damage or destroy any property belonging to GMDC.
  2. The shortfall amount of all compensations, penalties, and other sums of money payable by the successful bidder or recoveries to be made under the terms of this contract which is due but not paid by the successful bidder in full, etc.
  3. Any other dues on account of statutory compliance.

## 9. Procedure for Submission of the Bid

- 9.1. Offers prepared in accordance with the procedures enumerated below.
- 9.2. Bid should be submitted **online** at [www.nprocure.com](http://www.nprocure.com) on or before the last date and time as prescribed in this tender.
- 9.3. The bidder should submit their bids in TWO parts, these are:
  1. Technical bid (Details of EMD, tender processing fee, and documents listed in FORM PA – hard copy)
  2. Price bid (online).
- 9.4. Manual price bids or the bids submitted by telex/telegram/fax/e-mail etc. will not be accepted under any circumstances. No correspondence will be entertained on this matter.
- 9.5. Bidders are advised to follow the ‘Instructions for Bids Submission’ given in Annexure A for e-submission of the bids online through n-procure.
- 9.6. Documents should be submitted as per check list given in FORM PA in offline/hard copy mode in the sealed cover superscribed as “Technical Bid for Tender Number: **GMDC/Power/ATPS/12/23-24** and Name of work: “Selection of Contractor for Operation and Maintenance of Lignite, Lime and Ash Handling Systems of GMDC’s 2X125 MW

Akrimota Thermal Power Station (ATPS)". Bids must be submitted as per the schedule (date & time) indicated in tender notice.

## **10. Eligibility and Qualification Criteria of Bidder**

### **10.1. Experience:**

The bidders should have the following minimum experience of having successfully completed similar works during last 7 (seven) years (i.e., period from 01/11/2016 to 31/10/2023):

1. Three or more similar completed works each having amount of Rs 4,64,00,000/- (Rupees Four Crores Sixty-Four Lakhs Only)

**OR**

2. Two or more similar completed works each having amount of Rs 5,80,00,000/- (Rupees Five Crores Eighty Lakhs Only)

**OR**

3. One or more similar completed work having amount of Rs 9,28,00,000/- (Rupees Nine Crores Twenty-Eight Lakhs Only)

“Similar Works” means the bidders should have experience in:

1. Annual Maintenance Contract (AMC) of Material Handling Plant (lignite/lime/coal) with handling of earth moving equipment at thermal power plant or any industry’s thermal power plant having capacity greater than 100 MW and works carried out under the single LOI/work order/agreement.

**OR**

2. Operation & Maintenance (O&M) of Material Handling Plant (lignite/lime/coal) with handling of earth moving equipment at thermal power plant or any industry’s thermal power plant having capacity greater than 100 MW and works carried out under the single LOI/work order/agreement.

**OR**

3. Operation & Maintenance (O&M) of thermal power plant including O&M of Material Handling Plant (lignite/lime/coal) with handling of earth moving equipment at thermal power plant or any industry's thermal power plant having capacity greater than 100 MWs and works carried out under the single LOI/work order/agreement.

Bidder shall submit the details of work completed in FORM PC as provided in the tender document. Separate year-wise statement of experience with work orders and work executed certificates duly certified by the certificate issuing authority shall be submitted as supporting documents. In case of confidentiality, self-certified work orders should be submitted.

## **10.2. Financial**

1. Bidder must have an average positive net worth of last three financial years ended on 31.03.2021, 31.03.2022 and 31.03.2023.
2. Bidder must have a minimum average turnover of Rs 20,00,00,000/- (Twenty Crores Only) for last three financial years ended on 31.03.2021, 31.03.2022 and 31.03.2023.

A certificate from Chartered Accountant regarding financial capacity shall be submitted as per format provided in FORM PC of the tender document.

## **10.3. Statutory**

### **1. License**

The Bidder should have suitable valid statutory certification/license required for executing above works.

### **2. Blacklisting of the Bidder**

The bidder or its directors have not been blacklisted by any government organization. The bidder will submit a declaration to this effect as per the format provided in FORM PD of the tender document. If at any time such declaration is found false, the bid will be rejected or if the contract work is already awarded, it will be terminated forthwith without payment of any compensation and the EMD/SD will be forfeited.

### **3. Company Registration**

Registered in India under Indian Companies Act 1956/2013 or Limited Liability Partnership firm registered under LLP act in India.

#### **10.4. Site Visit Certificate**

The bidder should give a declaration of site visit as per the format provided in FORM PG of the tender document.

## **11. Evaluation of Bids**

### **11.1. Completeness of Bids**

GMDC will examine the bids to determine whether they are complete, whether they meet all the conditions of the tender document and technical specifications, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bid documents are substantially responsive to the requirements of the tender document.

### **11.2. Tender Document Clarifications**

GMDC may at its discretion, seek from any or all bidders, clarifications on their bids, including technical information, documents, and materials.

### **11.3. Rejection of Bid**

A bid that does not meet all eligibility criteria or is not responsive shall be rejected by GMDC. Submission of false or incorrect information, history of delayed work, reports of unprofessional conduct, among other things, shall be sufficient grounds for disqualification in technical bid.

### **11.4. Opening of Bids**

Technical bids will be opened after verification of receipt of payment towards tender processing fee and EMD. The eligible bidders will be able to view the technical bids after opening of technical bid. On verification of the supporting documents, technical qualification of the bidders will be assessed. However, all successful bidders will be able to view the price bids online on their computers after opening of price bid.

### **11.5. Selection of Bidder**

The contract will be awarded to the bidder who stands **L1 in total price**. GMDC reserves its right to reject any or all tenders or split the job between more than one bidder without assigning any reason and thereby without incurring any liability to the affected successful bidder or bidders or any obligation to inform the affected successful bidder or successful bidders of the grounds for GMDC's action/decision.

*In the event of any two price bids being the same, then in such a tie situation the bidder who have higher average turnover of last three financial years (i.e., 2020-21,2021-22 & 2022-23) shall get preference.*

#### **11.6. Discussion**

It is absolutely essential for the successful bidder to quote the lowest price at the time of making the offer in their own interest. GMDC, however, will have the discretion to choose to enter into any mode of discussion.

#### **11.7. Acceptance of LOI and Award of Contract (Work Order)**

1. GMDC, on acceptance of the offer, will issue Letter of Intent (LOI) to the successful bidder, who will be required to confirm its acceptance of the LOI within 7 days from the date of receipt. If successful bidder does not accept the LOI within stipulated time-period, the amount of the EMD paid will be forfeited and necessary further actions may be initiated as may be deemed fit by GMDC.
2. The successful bidder shall have to submit the security deposit within 14 days from acceptance of LOI. The successful bidder shall submit the security deposit in the manner prescribed in this tender document. In case of failure to submit the security deposit, the amount of EMD will be forfeited and necessary further actions may be initiated as may be deemed fit by GMDC.
3. GMDC will award the contract (Work Order) to the successful bidder, after the payment of security deposit, in token of acceptance of the terms and conditions of the contract, within 30 days from the date of submission of security deposit by the successful bidder. In case of any necessity arising after executing work order and during the execution of the work, which requires alteration/modifications in the agreement, the same can be made in writing after mutual understanding and consent of both the parties.

## 12. Scope of Work

The work involves operation and maintenance of lignite, lime and ash handling systems of GMDC's 2X125 MW Akrimota Thermal Power Station (ATPS).

### 12.1. Battery Limits

The battery limits for the operation and maintenance including housekeeping of different systems under MHP and AHP are as follows:

1. **Lignite Handling System:** GMDC shall provide lignite at weigh bridge end. After weigh bridge end, all the activities shall be in the scope of the successful bidder. Successful bidder must manage unloading of lignite directly into dump hopper for conveying to bunker or stack yard or directly stacking in the lignite storage yard. Lignite handling operation starts as soon as the truck leaves the weigh bridge. Lignite is then transferred for sizing, post which handling includes feeding of sized lignite to lignite bunkers up to gravimetric feeder gates/bunker gate. Any operations and maintenance work in the flow path of lignite handling plant after weigh bridge up to bunker gate is in the successful bidder's scope.
2. **Lime Handling System:** GMDC shall provide lime at weigh bridge end. After weigh bridge end, all the activities shall be in the scope of the successful bidder. The successful bidder must manage unloading of lime directly into dump hopper for conveying to bunker or stack yard or directly stacking in the lime storage yard. Lime handling operation starts as soon as the truck leaves the weigh bridge. Lime is then sent for sizing, post which handling includes feeding of sized lime to lime bunkers up to gravimetric feeder gates/bunker gate. Any operations and maintenance work in the flow path of lime handling plant after weigh bridge up to bunker gate is in the successful bidder's scope.
3. **Ash Handling System:** The ash handling system comprises of bead ash and fly ash handling system.
  1. Bed ash handling system operation and maintenance starts just after rotary feeders of ash coolers and conveying bed ash through intermediate silo up to bed ash silo

and bed ash evacuation. Successful bidder must maintain full level of boiler bed ash make up silo. Any operations and maintenance work in the flow path of ash handling plant after rotary feeders of ash coolers up to bed ash silo is in the successful bidder's scope. Bed ash must be dumped through dumpers and loaders as per allocated area within ATPS premises.

2. Fly ash handling system starts from both unit ESP field hopper's, TAPH and Stack Hopper from bottom flange up to fly ash silo's unloading point and there after unloading silo into ash yard in emergency situation when unloading of ash is restricted. Any operations and maintenance work in the flow path of ash handling plant after both units ESP field hopper's, TAPH and Stack Hopper from bottom flange up to fly ash unloading point or unloading into ash yard (as per the situation) is in the successful bidder's scope.
4. **Weighbridges Maintenance:** Weighbridge - 04 nos. (50 TON each) includes the pit, all mechanical, electrical, instrumentation component including sensors, weightage surrounding area and nearby roads.

## 12.2. General scope of work for O&M of Lignite, Lime, and Ash Handling Plants

### Plant Operations

1. The successful bidder must prepare procedures for starting, stopping, and operating the plant at optimum efficiency to introduce systematic monitoring and reporting systems in consultation with GMDC site team.
2. All operational log sheets (shift in-charge, stacker machine, dump hopper logbook, field operator logbooks., vehicle logbook, defect register, PTW book, PTW register etc.), running hours and availability history to be maintained on day-to-day basis.
3. It will be the responsibility of the successful bidder to ensure the smooth operation of the system considering all safety aspects and ensuring the healthiness of the system as per requirement of the main generating units. Co-ordination of all activities of MHP, AHP O&M in consultation with GMDC is the responsibility of the successful bidder.

4. The scope of running operation group is to identify and report all the defects that will arise during operation of lignite, lime, and ash handling system and inform the running maintenance team.
5. The successful bidder must maintain dry fog and dust suppression system effectively. Separator logbooks need to maintain for compressor and skid pump operations.
6. All types of hoist operation and maintenance are to be done regularly and maintained in a healthy condition.
7. The successful bidder must continuously target to improve plant efficiency by identifying deviations in the efficiency linked parameters.
8. The standard checks must be carried out during operations like safe working parameters, high vibration, and noise, bearing temperature etc. strictly as per manufacturer's instructions. Successful bidder must fill reports on daily basis.
9. Auxiliaries are to be run according to requirement of the system only. No idle running of the system/equipment is to be done.
10. O&M of belt-weigher, metal detector, hydraulic system, belt jointing work, and DS & DF system etc. needs special expertise and hence bidder must ensure trouble free operation and performance for the same. If required, bidder must engage expertise service and AMC for the same.
11. The successful bidder must arrange for services of specialists (i.e., vibration experts, etc.), if required.
12. The successful bidder has to maintain the environment health and safety of the plant.

### **Maintenance**

13. The running maintenance team should be available in the system round the clock to attend the defects when informed by the operations team. The rectification process of any defects/faults should be initiated immediately upon identification/reporting.
14. Permit to work system is to be followed to carry out maintenance job. All maintenance activities are to be carried out by the successful bidder as directed by GMDC EIC.

15. The successful bidder should analyze breakdown and maintenance schedule and update preventive maintenance schedule and overhauling of equipment with PERT and CPM charts for mechanical, electrical, and C&I systems in consultation with GMDC site team.
16. Successful bidder must plan and prepare the schedule for oil filling in gearboxes and fluid couplings etc. based on the running hours and manufacturers' recommendation.
17. The successful bidder must follow the routine and preventive maintenance schedule strictly as per the updated and agreed PM schedule. The preventive maintenance checklist for every equipment is to be followed and submitted to GMDC daily after completion of job as mentioned in the next clause.
18. The successful bidder shall have to submit daily report showing maintenance work carried out, spare parts/consumables etc. replaced, operational running hours, status of availability of system /equipment of lignite and lime feeding system.
19. Equipment history register is to be maintained as per instruction of GMDC and to be submitted weekly for review.
20. The maintenance scope includes analysis of failures and to implementation of corrective and preventive actions for improvement in plant performance.
21. For addressing unplanned/breakdown maintenance, successful bidder must deploy maximum manpower immediately so that the break down equipment is revived as soon as possible. Incident investigation/Root Cause Analysis (RCA) report must be submitted for major breakdowns to EIC.
22. Successful bidder must arrange belt jointer service with hot vulcanizing machine, vulcanizing solution, and all consumables for hot vulcanizing of conveyor belts, pulley lagging replacement work as and when required. Vulcanizing solution should be of reputed quality brand like, Thejo, Om, Continental etc. approved by EIC.
23. Bidder must carry out chute repair work periodically as per requirement which includes replacement/repair of MS mother plates and SS liners plate. MS and SS plate shall be provided by GMDC.

24. Any kind of maintenance work which requires workshop will be in bidder's scope. For example, wear shaft built up and machining, repair of gear box, gear box bearing replacement, replacement of fluid coupling bearings and casing, fabrication chute liners and mother plates, fabrication of coffin box, skirt frames, drilling and thread tapping work, etc.
25. If any damage occurs due to negligence of the successful bidder, they must bear the entire cost of repair/replacement of equipment/machinery to the satisfaction of GMDC. Decision of EIC shall be final and binding to successful bidder.
26. The successful bidder must restore / repair all the equipments under scope of work which are not available for operation and as per requirements of GMDC.

**Spares, Tools, Tackles, Consumables and Stores**

27. Bidder is completely responsible and will make own arrangements to issue material/spares from main store or any location and shifting to required location.
28. The O&M successful bidder must access and submit list of spares and lubricants well in advance at least before three months.
29. If the successful bidder has used any of the tools, tackles and equipment of GMDC, which is in the scope of the successful bidder, hire charges as per mutual agreement shall be imposed on the successful bidder.
30. Reconciliation statement of equipment spares, steel and lubricants, consumed in each month must be submitted to GMDC by 5th day of next month strictly with due verification by GMDC maintenance engineer.
31. The successful bidder must develop their own store and keep minimum tools, routine fasteners, HT bolts and consumables. In addition to that as per requirement of plant need to keep ever day tools and tackles (including welding machines and cutting set with oxygen and DA cylinder etc.) at apron feeders, stacker/reclaimer, crusher houses, screen house, lignite bunker and lime bunker, ash handling plant to reduce mobilization time as per site requirement.

32. The successful bidder must maintain separate sub store for lubricants also. All oil/grease containers shall be marked clearly. Separate can (5 L, 10 L capacity) and oil pump to be kept for oil containers. If any equipment is found damaged due to mixing of lubricants, cost of repair/replacement shall be borne by the successful bidder. Daily and monthly consumption records need to maintain and verify.
33. Mobilization of spares and lubrication etc. from GMDC main store/plant premises up to work location/sub-store shall be in the scope of the bidder. Transfer of any kind of such spares shall be done in advance to avoid delay in work.
34. All tools and tackle available for work shall be calibrated by bidder as per standard procedure.
35. Bidder must access condition of all equipment of material handling, lime handling plant and ash handling plant during handover of plant for O&M work. Bidder must make all breakdown equipment available for operation up to the satisfaction of GMDC. List of required spares shall be submitted to GMDC for procurement of spares for availability of breakdown equipment.

### **Workforce deployment**

36. Successful bidder shall have to appoint qualified, experienced and well conversant site-in-charge for handling the site. The site-in-charge should have hands on experience in handling operation and maintenance of similar type of equipment(s), who will co-ordinate with GMDC engineer and should bear over all responsibilities of contract.
37. The successful bidder shall deploy adequate number of qualified and skilled persons at all locations for effective and efficient execution of the contractual obligation and to fulfill the terms and conditions of the contract. The successful bidder shall be responsible for overall supervision and control of the work assignment and the manpower deployed for the purpose.

38. All the staff members of the successful bidder shall carry Photo Identity Card while on duty.
39. It is the responsibility of the successful bidder to ensure that all the employees deployed by them remain available at their respective locations.
40. It is a pre-condition that the successful bidder and the persons deployed by the successful bidder are for a contractual period only.
41. The successful bidder shall provide necessary arrangement for transportation of manpower from township or other locations to work site with all the required safety provisions/devices enforced by statutory authority and other applicable laws/rules or as directed by GMDC authority.
42. Successful bidder shall have to work in three shifts and by three different relays compulsory (mandatory). The time of commencement of work and of the end of the work for each relay will be in accordance with the timings of GMDC's own workings. Duration of each shift will be eight hours, with at least half-an hour rest interval in between.

### **Safety**

43. Safety of equipment and workforce are of most important. Issue of permit (Isolation, Work at Height, Hot work and confined space, work on Electrical system HT& LT both etc.) to work to maintenance people, is to be strictly in line of direction given by EIC of GMDC.
44. Manpower deployed by the successful bidder must be equipped with suitable personal protective equipment like safety shoes, safety belts, safety goggles, safety helmet, ear plug & dust mask (including HEPA mask) etc. and company uniform. As and when required other personal protective wears shall also be provided to them.
45. Existing safety rules are to be followed. Permit to work system is to be followed to carry out maintenance job. Successful bidder as per system requirement shall carry out every maintenance activity.

46. Medical examination of all persons to be employed by the successful bidder in the power project shall have to be conducted as per law.

**Contract Related**

47. The decision of General Manager (Power Project) in consultation and approval of General Manager (Power) of the plant shall be final and binding on the successful bidder for defining the terms and conditions included in this contract.
48. GMDC ATPS would undergo overhauling. The successful bidder must support the overhauling agency in the overhauling activities as per the discretion of the GMDC team.
49. All the tools, tackles consumable and earth moving, and equipment proposed to be used in the power project shall be physically examined by GMDC's engineers for verifying its use-worthiness in the power plant. In case, any irregularities are found, the item must be replaced to the satisfaction of the GMDC engineers.
50. In case of any Central/State Government directives regarding power plant operation and execution of work related thereto, the same shall have to be strictly adhered to and binding upon the successful bidder for implementation, for which GMDC will not be responsible for any compensation.
51. To meet the exigencies arising out of natural calamities or disaster or during any emergency, GMDC reserves the right to take away any of the equipment/machineries deployed at the project site with a mutually consented rate. A separate agreement will be made to this effect.
52. MD-GMDC is authorized to take suitable decision and action in case of requirement to amend/alter the contract conditions/quantities of the works/ extension of the contract period/allotment of additional works/revision of the rates of the work etc. if necessary, in the interest of GMDC.

**Detailed scope of work for operations of MHP and AHP**

**12.3. Operations of Lignite Handling Plant**

1. ATPS has a 600 TPH lignite handling system supplied by M/s TRF. The lignite handling system consists of major equipment like apron feeder, sizers, impactors, ultra flow feeders, unbalance motor feeders, vibrating screens, traveling feeders, stacker-reclaimer machine, conveyors, and belt feeders, etc.
2. The scope of work involves operation of lignite handling system and its associated equipment through qualified and knowledgeable manpower including housekeeping of the complete lignite handling plant and all the associated facilities with all terms and conditions as mentioned in scope of work.
3. Following are major equipment of lignite handling system for which operation & maintenance is to be carried out:
  - Truck dump hopper
  - Apron feeder
  - Dribble conveyor
  - Stacker/reclaimer
  - Sizer 1, 2, 3
  - Belt conveyors
  - Belt feeders
  - Shuttle conveyors
  - Impactors
  - Ultra flow feeders
  - Unbalance motor feeders
  - Flip flop screens
  - Traveling trippers
  - Magnetic separators
  - Metal detectors

- Flap gates
- Rod gates
- Rack and pinion gates
- Dry fog system
- Dust suppression system
- Sump pumps
- Chutes at all TPs and houses
- Hoists (electrical and manual)
- Belt weighers
- Stacker cum reclaimer
- Local stock yard
- Stacker yard

The above list is non-exhaustive and indicative only. The successful bidder must ensure the smooth operations of the entire lignite handling system which may include equipment/components not mentioned in the above list.

4. The main motto of O&M contract is to operate the system efficiently in proper co-ordination with the main plant for filling lignite bunkers and maintain bunker level as per GMDC's need. The successful bidder must ensure that lignite bunkers are not starved at the time of need and no generation loss occurs due to shortage of lignite feeding in the bunkers.
5. The detailed flowchart of material handling system is appended in Annexure J.
6. The lignite handling plant has a rated capacity of 600 MT/Hr. The successful bidder must maintain all the equipment and maintain the rated capacity of the plant to ensure sufficient supply of lignite to the units for smooth operations.

7. The successful bidder must ensure at least 4,500 MT  $\pm$  10% of lignite feeding to bunkers per day for both units & maintaining lignite sufficient stock at stacker area to enable feeding through both the input paths.
8. The successful bidder must operate the plant in optimum way so that the bunkers can be fed in minimum period to achieve optimum power consumption and remaining time is utilized for system/equipment maintenance.
9. The successful bidder must carry out de-choking/emptying/washing of all lignite bunkers, chutes, hoppers and shifting of lignite after de-choking work as and when requirement arises.
10. Dewatering work at various location of lignite system need to be carry out. If require additional portable dewatering and slurry pumps with delivery hoses shall be arranged by the successful bidder.
11. Weekly calibration and correction of all belt weigher shall be carried out. After completion of calibration, drop test for around 100 ton must be carry out as per instruction of EIC.
12. An indicative list of required resources is shown in the Annexure I. However, the successful bidder must ensure sufficient operators at various locations to ensure smooth operations of the lignite handling system. In addition, the successful bidder must ensure critical supervisors like resident manager, O&M in-charge, and general shift SICs (shift in-charges for maintenance, electrical, C&I) for participating and leading daily planning meetings (DPMs). In case of absence of a supervisor due to unavoidable circumstances, the supervisor should nominate someone to participate in the DPM on their behalf.
13. During the lignite feeding/stacking at lignite truck dump hopper, successful bidder must always keep half level full to avoid direct impact on pan. If any damage occurs, then the successful bidder shall be responsible for repairing the damage made to the equipment and plant of GMDC and compensate for the cost of damage.

#### **12.4. Operations of Lime Handling System**

1. ATPS has a 300 TPH lime handling system supplied by M/s TRF. The lime handling system consists of major equipment like apron feeder, sizer, impactors, unbalance motor feeders, traveling feeders, conveyors and telescopic chute, etc.
2. The scope of work involves operation of lime handling system and its associated equipment through qualified and knowledgeable manpower including housekeeping of the complete lime handling plant and all the associated facilities with all terms and conditions as mentioned in scope of work.
3. Followings are the major equipment of lime feeding system for which operation is to be carried out:
  - Truck dump hopper
  - Reclaim hopper
  - Apron feeder
  - Dribble conveyor
  - Sizer
  - Belt conveyors
  - Impactor 1&2
  - Unbalance motor feeders
  - Traveling trippers
  - Magnetic separator 1&2
  - Metal detector
  - Belt weighers
  - Flap gates
  - Rod gate
  - Rack and pinion gate

- Bunker level indicator
- Transfer points
- Dust extraction system
- Sump pumps
- Telescopic chute
- Chutes at all TPs and houses
- Hoists (electrical and manual)
- Dry fog system
- Lime stack yard

The above list is non-exhaustive and indicative only. The successful bidder must ensure the smooth operations of the entire lime handling system which may include equipment/components not mentioned in the above list.

4. The main motto of O&M contract is to operate the system efficiently in proper coordination with main plant for filling lime bunkers and maintain bunker level as per GMDC's need. The successful bidder must ensure that lime bunkers are not starved at the time of need and no generation loss occurs due to shortage of lime feeding in the bunkers.
5. The detailed flowchart of material handling system is appended in Annexure J.
6. Lime handling plant has a rated capacity of 300 MT/Hr. The successful bidder must maintain all the equipment and maintain the rated capacity of the plant to ensure sufficient supply of lime to the units for smooth operations.
7. The successful bidder must ensure at least 1200 MT  $\pm$  10% of lime feeding to bunkers per day for both units & maintaining lime sufficient stock at stacker area to enable feeding through both the input paths.

8. The successful bidder must operate the plant in optimum way so that the bunkers can be fed in minimum time-period to achieve optimum power consumptions and remaining time may be made available for maintenance.
9. The successful bidder must carry out de-choking/emptying/washing of all lime bunkers, chutes, hoppers and shifting of lime after de-choking work as and when requirement arises.
10. Dewatering work at various location of lime system need to be carry out. If require additional portable dewatering and slurry pumps with delivery hoses shall be arranged by the successful bidder.
11. Weekly calibration and correction of all belt weigher shall be carried out. After completion of calibration, drop test for around 100 ton must be carry out as per instruction of EIC.
12. An indicative list of required resources is shown in the Annexure I. However, the successful bidder must ensure sufficient operators at various locations to ensure smooth operations of the lime handling system. In addition, the successful bidder must ensure critical supervisors like resident manager, O&M in-charge, and general shift SICs (shift in-charges for maintenance, electrical, C&I) for participating and leading daily planning meetings (DPMs). In case of absence of a supervisor due to unavoidable circumstances, the supervisor should nominate someone to participate in the DPM on their behalf.
13. During the lime feeding/stacking at lime truck dump hopper, successful bidder must always keep half level full to avoid direct impact on pan. If any damage occurs, then the successful bidder shall be responsible for repairing the damage made to the equipment and plant of GMDC and compensate for the cost of damage.

#### **12.5. Operations of Ash Handling Plant**

1. ATPS has an ash handling system supplied by M/s. McNally Bharat Engineering company. This is a dry dense phase fly ash system of 110 TPH capacity for each unit and bed ash conveying system of 25 TPH capacity for each unit. System comprises of

major equipment like air compressors, air dryers, fly ash top discharge transporters, bed ash bottom discharge transporters, blowers, fly ash silos (650 MT capacity per silo), bottom ash silo (650 MT capacity), I.M.B.A silo (90 MT capacity), bag filters house with vent fan, rotary ash conditioners, pumps etc.

2. Scope of work involves operation of ash handling plant and its associated equipment through qualified and knowledgeable manpower including housekeeping of the complete ash handling plant and all the associated facilities with all terms and conditions as mentioned in scope of work.
3. Followings are major equipment of ash handling system for which operation is to be carried out:
  - Air compressors
  - Air dryers
  - Buffer hoppers system bottom discharge
  - Bed ash bypass belts
  - Intermediate mediate bed ash silo with bag filter house.
  - Bed ash transporter system with top discharge.
  - Vibrating screen.
  - Screw feeders.
  - Fluidizing blowers for ESP.
  - Dance phase top discharge transporter system for ESP.
  - Fly ash & bottom ash silo with bag filter house.
  - Fluidizing blowers of silo
  - Ash silo rotary ash conditioner
  - Ash silo pump
  - Ash silo bag filter blower

- Ash siloes all types of valves
- TAPH ash transporter
- Stack bellow ash transporter
- Bottom ash silo bag filter
- Bottom ash silo system
- Bed ash silo system (Alstom)
- Bed ash silo bag filter system (Alstom)
- Flap gates
- Ash transportation pipelines and valves.
- Fly ash silo and buffer hopper sea water lines and valves.

The above list is non-exhaustive and indicative only. The successful bidder must ensure the smooth operations of the entire ash handling system which may include equipment/components not mentioned in the above list.

4. The successful bidder must maintain ash handling plant in healthy condition to achieve rated conveying capacities for different systems (for buffer hopper system  $12.5 \text{ TPH} * 2 = 25 \text{ TPH}$  each unit and  $25 \text{ TPH} * 2 = 50 \text{ TPH}$  system for bottom ash conveying from intermediate bed ash silo to main bed ash silo, each ESP 110 TPH etc.) for smooth operations.
5. No generation loss should occur due high fly ash silo level.
6. The successful bidder must carry out conveying of bed ash and fly ash generated in boiler up to ash silos and unload in ash dumpers. If silo level is increased, same are to be emptied out in ash yard.
7. The successful bidder must carry out inspection of ESP bottom hopper fluidizing system, whenever opportunity arises or as per instruction of EIC.
8. Successful bidder must check and ensure emptiness of all ESP hoppers in every shift and on daily basis.

9. Bed ash buffer hopper bypass belt operation to be carry out as per instruction from main plant EIC.
10. An indicative list of required resources is shown in the Annexure I. However, the successful bidder must ensure sufficient operators at various locations to ensure smooth operations of the ash handling system. In addition, the successful bidder must ensure critical supervisors like resident manager, O&M in-charge, and general shift SICs (shift in-charges for maintenance, electrical, C&I) for participating and leading daily planning meetings (DPMs). In case of absence of a supervisor due to unavoidable circumstances, the supervisor should nominate someone to participate in the DPM on their behalf.

*Note: The above list is indicative only. However, many equipment like firefighting, piping, EOT cranes, hoist etc. are available in MHP (lignite handling plant, lime handling plant, ash handling plant) other than the list given under 1, 2, 3 above for which operation & maintenance is required to be carried out.*

#### **12.6. Deployment of Heavy Earth Moving Machinery for operations of Lignite, Lime, and Ash Handling Plants**

1. The successful bidder is required to provide excavator 01 No. (20 MT operating capacity), wheel loader 01 No. (3 Ch. M. bucket capacity), and hydraulic double differential dumper- 04 Nos. (each having capacity of 18 MT), skid loader 02 Nos. (each having 1.5 ton bucket capacity & 5 ton load carrying capacity) along with fuel and operators for lignite, lime, ash loading/unloading and local transportation at MHP and AHP with supervisor round the clock. These equipments are required to operate for local loading of lignite, lime, and ash as and when required to maintain the bunker/silo levels for optimum generation.
2. The successful bidder has to control smoke/fire in lignite stacker yard and local yard. Bidder has to keep their own arrangement for the suppressing the fire and smoke. Complete responsibility of fire and smoke control will be of the successful bidder.

3. Under the scope of this work, the successful bidder is required to provide qualified operators for lignite, lime and ash transportation by deploying excavator, wheel loader and hydraulic dumper under premises of Akrimota Thermal Power Station.
4. Successful bidder must deploy excavator 01 No., wheel loader 01 No. and hydraulic dumper No. 02 along with fuel and operators round the clock.
5. Fuel required for the running of all above machinery shall be in the scope of successful bidder.
6. Successful bidder shall ensure availability of vehicles and its operator round the clock abiding labour laws.
7. In case of any leave absent of any operator for above vehicle, successful bidder shall provide replacement for that absent operator immediately.
8. Successful bidder shall ensure that operator shall remain present during duty period and maintain the decorum of this plant premises including offices.
9. Successful bidder shall ensure to make its operator to abide by rules and regulations and follow instructions of GMDC EIC.
10. Successful bidder must ensure availability and maintain necessary/mandatory spares, consumables and tools of the earth moving equipment so that availability of vehicle does not get jeopardize.
11. Vehicle availability shall be computed along with availability of fuel and operator. In case fuel or operator is not available then accordingly vehicle shall be considered as non-available.
12. The successful bidder must submit the daily attendance of all operator staff through biometric attendance system approved by EIC & availability of vehicle for monthly invoice payment along with utilization report, any miss-match in biometric attendance system related to timing (early or late punching), finger not detecting etc. shall immediately be brought in the notice of EIC, otherwise full day of the person is regarded as absent.

13. All Heavy Earth Moving Vehicles running hour meter must be healthy for records purpose and in every shift at least 4 hrs vehicle running to be ensured.
14. Above vehicles shall be utilize for management of lignite, lime and ash available at ATPS site.
15. Management of lignite means-management of lignite stocks available at stacker yard as well as local stock yard and dump hopper area of MHP which includes loading, unloading, stacking, compacting, creating approach for the truck to unload lignite directly into dump hopper, filling dump hopper by loading from yard area to maintain dump hopper as per requirement of operation.
16. Management of limestone means-management of lime stocks available at lime stack yard under telescopic chute as well as local stock yard and lime dump hopper area of MHP which includes loading-unloading, creating approach for the truck to unload lime directly in to the lime dump hopper, filling dump hopper by loading from local yard area to maintain dump hopper level as per requirement for operation. Loading of lime from lime stack yard and fill ground hopper of lime UBF as per plant requirement
17. Management of ash means management of ash available in ash yard as well as local silo area and other ash area of MHP & AHP which includes loading, unloading, creating approach, space for the truck to unload ash directly in to the ash yard.
18. The bidder will be responsible to maintain lignite quantity equivalent to 15 days of lignite consumption (~60000 MT) in the plant.
19. The bidder shall be responsible for the complete supervision of loading, unloading, stacking, pile making, compacting, creating approach for the trucks to unload the lignite at dump hopper. This will be carried out in all areas as per requirement of plant.
20. Any other jobs as per requirement and instruction by EIC.
21. Stacking of lignite in-plant at stockpile, stacking, etc. of other material like limestone, soil, ash, etc. as per instruction of EIC/authorized person.

22. Apart from above for some miscellaneous works of other departments, loader and other vehicles may also be required to be used as per instruction of EIC. No additional payment shall be made for the same.
23. Under the scope of this work, the successful bidder is required to provide 02 Nos. skid loader and 2 Nos. hydraulic double differential dumper (18 ton capacity) with diesel and qualified operator for bed ash evacuation at ATPS.
24. Additional equipment shall be supplied by successful bidder on as and when required basis of plant with prevailing rate in market and within 48 hours for unforeseen situation works.
25. The scope of work shall include supply of skid loader 02 Nos. and 02 Nos. dumper with diesel and operator for bed ash evacuation.
26. Under the scope of this contract, the successful bidder is required to provide qualified operator for bed ash evacuation.
27. In case of any leave absent of any employee in any category, your entity shall provide replacement for that category immediately.
28. However, if the operator is absent due to any justified emergency, your entity must provide the same category manpower within five days.
29. Your entity shall ensure that your operator shall remain present during duty period and maintain the decorum of this office.
30. Your entity shall ensure to make its operator to abide by rules and regulations and follow instructions of GMDC EIC.
31. All tools and spares will be provided by your entity.
32. All the tools, spares and associated equipment as required for effective bed ash evacuation and housekeeping and any additional tools and spares of equipment, if required, shall be arranged by the successful bidder.
33. All the earth moving equipment to be deployed by the successful bidder must be maintained healthy and in proper working condition and all equipment should be new having registered within three years from the last date of bid submission date and be

fitted with all the required safety devices enforced by statutory authority, e.g., audio visual alarms, fire extinguisher etc.

34. In case of non-availability of either HEMM or its operators, LD shall be applicable as per Annexure D.

### **Detailed scope of work for maintenance of MHP and AHP**

#### **12.7. Mechanical maintenance of Lignite, Lime, and Ash Handling Plants**

1. Scope of work for mechanical maintenance work includes breakdown, predictive, condition based, corrective and preventive maintenance work of all equipment in lignite and lime handling plant.
2. Following are some of major equipment maintenance activities for to be carried out for lignite and lime handling plants:

- 1. Apron feeder:**

Major mechanical maintenance activities like pan replacement work, pan conveyor chain replacement, chain link repairing/replacement, gear and pinion replacement, guide roller repairing/replacement, drive gear box replacement and alignment, drive and driven sprocket repairing/replacement work, drive chain tension giving work, chain guide repairing work, all bearing checking/replacement work etc. to be carried out.

- 2. Dribble conveyor:**

Major mechanical maintenance activities like scraper repairing/replacement, scraper chain repairing/replacement, drive sprocket repairing/replacement, bottom and side plate repairing/replacement, drive gearbox repairing/replace, all bearing checking/replacement, drive alignment work etc. to be carried out.

- 3. Sizers:**

Major mechanical maintenance activities like sizer picks, sleeves, pick-boxes rearing/replacement, rotor assembly repairing/replacement, all bearing

checking/replacement, pure gears checking/replacement, wear plate checking/replacement, rotor seventh tooth segment checking/replacement/repairing, side combs repairing/replacement, side wear plates checking adjustment/replacement etc. to be carried out.

**4. Impactors:**

Major mechanical maintenance activities like rotor assembly repairing/replacement, beater head replacement, beater arms replacement, grinding wall repairing/replacement, grinding gib repairing/replacement, drive belts replacement, drive belt alignment and tension giving, main body repairing, all bearing checking/replacement, drive alignment, drive main foundation bolts replacement, fluid coupling checking/replacement etc. to be carried out.

**5. Ultra flow feeder:**

Major mechanical maintenance activities like support spring replacement, gear box repairing/replacement, universal joint repairing/replacement, etc. to be carried out.

**6. Vibrating screen:**

Major mechanical maintenance activities like sieve mats repairing/replacement, rubber block replacement, screen support repairing/replacement, Drive v belt checking/replacement, sieve clamping piece repairing/replacement, hood cover repairing/replacement, all bearing checking/replacement, etc. to be carried out.

**7. Unbalance motor feeder:**

Major mechanical maintenance activities like support spring replacement, motor counterweight adjustment work, etc. to be carried out.

**8. Reversible shuttle conveyors:**

Major mechanical maintenance activities like gear box repairing/replacement, conveyor belt repairing/replacement, all rollers checking/replacement, drive alignment, coupling checking/replacement, all bearing checking/replacement, all

pulley and lagging checking/replacement, drive rail checking/alignment/replacement, etc. to be carried out.

**9. Traveling tippler:**

Major mechanical maintenance activities like gear box repairing/replacement, all rollers checking/replacement, drive alignment, coupling checking/replacement, all bearing checking/replacement, all pulley and lagging checking/replacement, drive rail checking/alignment/replacement, drive chain for CRD checking/alignment/replacement, traveling tippler main drive wheel checking/repairing/replacement work, etc. to be carried out.

**10. All conveyor belts (600, 1000, 1200 mm width etc.):**

Major mechanical maintenance activities like belt replacement work, belt joint/patching work, all conveyors all roller, frame, deck sheet checking/repairing/replacement, all conveyors' bearing checking/replacement, all types pulley and lagging repairing/replacement, all bearing checking/replacement, drive alignment, all coupling checking/replacement, etc. to be carried out.

**11. Stacker-Reclaimer machine:**

Major mechanical maintenance activities like stacker-reclaimer machine, all bearing checking/replacement, all drive checking/alignment, all coupling checking/alignment/replacement work, all fluid coupling checking/replacement, bucket checking/repairing/replacement, hydraulic system all pipe checking/repairing/replacement, hydraulic system checking/repairing/replacement, drive rail checking/repairing/replacement, CCRD & PCRD system checking/repairing/replacement, UBF main support checking/replacement, etc. to be carried out.

**12. All types of receiving, discharge, hoppers, coffin box:**

Major mechanical maintenance activities like liner checking/repairing/replacement, main mother plate checking/repairing/replacement, leakage attending, etc. to be carried out.

**13. Telescopic chutes:**

Major mechanical maintenance activities like wire rope and pulley checking/replacement, telescopic chute all sell checking/repairing/replacement, etc. to be carried out.

*Note: The above list is indicative only. Successful bidder must also carry out mechanical maintenance (predictive, preventive, breakdown) of all other equipment within battery limits of lignite and lime handling systems to ensure smooth plant operations.*

3. Following are some of major equipment maintenance activities to be carried out for ash handling plant:

**1. Air compressor:**

Major mechanical maintenance activities shall include air suction filter checking/cleaning/replacement, all kit (BDV, MPV kit, etc.) timely checking/servicing /replacement, hydraulic oil checking/replacement, all types of valve checking/repairing/replacement work, separator element checking/replacement, oil and air cooler checking/cleaning/replacement, main air end unit checking/repairing/replacement, coupling checking/replacement, etc.

**2. Blowers:**

Major mechanical maintenance activities shall include air suction filter cleaning/replacement, drive v-belt checking/alignment/replacement, drive and driven pulley checking/replacement, all bearings checking/replacement, twin lob checking/alignment/replacement work, etc.

**3. Pumps:**

Major mechanical maintenance activities shall include coupling checking/replacement, gland checking/replacement, pump dismantling and servicing/replacement, etc.

**4. All types of fly and bottom ash transporters:**

Major mechanical maintenance activities shall include bottom disc checking/servicing/spares replacement, all types of valve checking/repairing/replacement, etc.

**5. Fly/bottom ash silos:**

Major mechanical maintenance activities shall include bag filter house checking/repairing and spares replacement, air purging line checking and repairing/replacement, fluidizing panel checking, repairing/replacement, under/over pressure valve checking and repairing/replacement, knife gate valve checking and repairing/replacement, bag filter house vent fan servicing with balancing, silo internal de-choking, etc.

**6. Rotary ash conditioner:**

Major mechanical maintenance activities shall include long baffle plate alignment/replacement, short baffle plate repairing/replacement, spray nozzle cleaning/replacement, guide and thrust roller servicing/replacement, main drum repairing/replacement, drive chain repairing/replacement, drive assembly servicing/replacement, drive sprocket & driven sprocket checking/replacement, input and output teflon seal checking/replacement, etc.

**7. Bed ash bypass belt:**

Major mechanical maintenance activities shall include belt replacement work, belt joint and patching, all roller checking, repairing/replacement, conveyor drive servicing work/replacement work, drive chain and sprocket checking/replacement work, all pulley and bearing checking, repairing/replacement, etc.

**8. Air Dryer:**

Major mechanical activities shall include all cooler checking/repairing/replacement, all system leakage checking/replacement, all valve servicing/replacement, gas pressure checking, gas filling (if required post gas checking), all parts checking/repairing/replacement, etc.

**9. All ash discharges pipe and airline pipes:**

Major mechanical activities shall include all pipe thickness checking/repairing/replacement, leakage attending work, line basalt bend checking, repairing/replacement, etc.

*Note: The above list is indicative only. Successful bidder must also carry out mechanical maintenance (predictive, preventive, breakdown) of all other equipment within battery limits of ash handling system to ensure smooth plant operations.*

**12.8. Electrical maintenance of Lignite, Lime, and Ash Handling Plants**

1. The scope of work for electrical system in lignite and lime system shall include from AS-1C, AS-2C breaker out going cable termination to all incomer and outgoing HT/LT equipment which is connected to MHP main MCC directly and indirectly including main MCC, stacker, reclaimer, lignite and lime dump hopper, TP#1,2,3,4, PCH, SCH, screen house, lime crusher house, lime reclaimer and lignite and lime conveying system up to lignite and lime bunker.
2. The scope of work however shall not include beyond HT cable termination after MHP 6.6 KV breaker for the colony electrical supply. The scope of work also shall not include beyond LT cable termination after JB termination in TP#4 house for the weigh bridge electrical supply.
3. The scope of work for electrical system in AHP shall include from AS-1C, AS-2C breaker out going cable termination to all incomer and outgoing HT/ LT equipment which is connected to AHP main MCC directly and indirectly including compressor house, AHP conveying system from buffer hopper after the ash rotary seal up to the silo discharge.

4. Lighting system of the above area including high masts shall be in successful bidder's scope.
5. Some of the major electrical equipment are 6.6 KV HT breaker and motors up to 1100KW, LT feeder / breaker up to 160KW, Dry transformer upto 2500KVA, LT VFD, metal detectors, ILMS, Ventilation, etc.
6. The detailed scope of electrical maintenance works under the successful bidder are as follows:
  1. The successful bidder shall make necessary arrangements for regular cleaning and maintenance.
  2. The successful bidder shall take preventive maintenance work on transformers, air circuit breaker panel, MCC, H.T. & L.T. motors, fan, pumps, metal detector, in-line magnetic separator, chute vibrator, ventilation system, dry fog system, flap gates & different safety switches and their power supply module and also the lighting system of MHP so that all the equipment are covered, and each equipment is cleaned periodically.
  3. The successful bidder should have sufficient experience of operation & maintenance of coal plant & stacker reclaimer with latest technology.
  4. In addition to preventive maintenance & breakdown maintenance work, Interlocking & Protection testing of equipment shall also as & when required is to be done. This work is to be taken up during general shift hours.
  5. All types of cable connection, disconnection and laying out, electrical equipment installation, removal and shifting to designated places like workshop / main store etc. shall be in bidder scope.
  6. If any equipment is damaged due to any cause that can be attributed to the bidder, then repairing the equipment like motor rewinding and / or repairing, cards repairing, etc. shall be in bidder's scope.
  7. If expert / any service engineer is required to be called for making any electrical equipment available for normal operation, then that shall be in bidder's scope.

8. All types of material issuing, shifting including scarp returning to main store shall be in bidder's scope.
9. All the requirements for making all electrical system available for normal operation like preventive, breakdown and corrective maintenance, overhauling, etc., submission of maintenance sheets, test reports to GMDC shall be in bidder's scope:

1. **6.6 KV/415 V TRANSFORMER-**

External cleaning of transformers

Cleaning & tightness checking of marshalling JBs of transformers.

Rectification / replacement of defective parts.

Relay Testing (Voltamp-7570), etc

2. **LT SWGR PANEL:**

External cleaning of panels, cleaning and tightness checking of ACBs, replacement of defective parts, checking of module alignments, tightness checking for outgoing power and control cables, Control scheme checking and rectification, opening /closing time checking of breakers, lubricating the moving parts etc. is coming under the scope of the successful bidder.

3. **LT MOTORS:**

AT SWITCHGEAR: Cleaning and tightness checking of breaker & SFU modules, replacement of defective parts, checking of module alignment, tightness checking of outgoing powers and control cables.

AT FIELD: Cleaning and tightness checking of LPB stations, JBs, motor TB and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Control scheme checking and rectification.

Applying sealing compound for terminal boxes, if required.

Bearing replacement, if required, etc.

**4. HT MOTORS:**

AT SWITCHGEAR: Cleaning and tightness checking of breaker modules, replacement of defective parts, checking of module alignment, tightness checking of outgoing powers and control cables.

AT FIELD: Cleaning and tightness checking of LPB stations, JBs, motor TB, CT terminal box, RTD box and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Control scheme checking and rectification.

Applying sealing compound for terminal boxes if required.

Maintenance of electrical parts of local control panel.

Bearing replacement, if required etc.

**5. LIGHTING MAINTENANCE:**

Cleaning of fittings including high masts.

Replacement of lighting accessories whenever required.

Fault rectification in circuit and lighting accessories.

Cleaning & fault rectification / replacement of MLDB and SLDB.

Periodical checking of all lighting transformers.

Maintenance of welding sockets, etc.

**6. DC SYSTEM & DCDB:**

Cleaning and tightness checking of module, replacements of defective parts & tightness checking for cables.

Locating & removal of earth fault in DC system, etc.

**7. IN LINE MAGNETIC SEPARATOR:**

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters, and motor winding heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, motor TB, Transformer and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels etc.

#### **8. METAL DETECTOR:**

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, and field switches. Rectification/replacement of defective parts.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Maintenance of electrical parts of local control panels, etc.

#### **9. CHUTE VIBRATES & HOISTS:**

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's and field switches. Rectification/replacement of defective parts.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels, etc.

#### **10. FLAP GATES:**

AT SWITCHGEAR: Cleaning and tightness checking of SFU modules, replacement of defective parts, checking of module alignment and actuation of limit switches, tightness checking of power and control cables, checking of relays, checking of space heaters, and motor winding heaters.

AT FIELD: Cleaning and tightness checking of LPB stations, JB's, motor TB, and field switches. Rectification/replacement of defective parts. External cleaning and greasing of field motors.

Applying sealing compound for terminal boxes if required.

Control scheme checking and rectification.

Checking of opening and closing time of the breakers, if required.

Maintenance of electrical parts of local control panels, etc.

#### **11. HT SWGR PANEL:**

External cleaning of panels, cleaning and tightness checking of VCBs, replacement of defective parts, checking of module alignments, tightness checking for outgoing power and control cables.

Control scheme checking and rectification,

Opening /closing time checking of breakers, if required.

Lubricating the moving parts, relay Testing etc.

## **12. TESTING OF ELECTRICAL EQUIPMENTS:**

The scope of testing includes transport of materials and necessary equipments to site and back, preparation, supervision, execution and normalizing. The successful bidder shall conduct all the required test with his team of skilled and unskilled labour and qualified supervisors in presence of GMDC Engineer. Work shall be carried out without causing any damage to the test specimen or adjacent equipments. Damage if any so caused shall be rectified / replaced by the successful bidder.

The following testing equipments will be provided by GMDC free of cost on request for testing. Any damage / loss of equipment during transportation or due to improper handling by the successful bidder or his work man shall be borne by the successful bidder.

- a. Transformer winding resistance meter.
- b. Transformer ratio meter.
- c. Tan delta meter to measure tan delta of transformer winding.
- d. Relay testing kit.
- e. HV test kit, etc.

The successful bidder must make his own arrangement of all other test kit & instruments such as tongue tester, multi meter, MV/LV breaker test kit. Timers, contact resistance meters etc. and tools and tackles required for execution of testing. The instrument used for testing shall be of requisite class of accuracy and with valid calibration certificate. The report shall be furnished in the prescribed format approved by GMDC Engineer.

## **13. REPLACEMENT OF MOTORS/ OTHER ELECTRICAL EQUIPMENTS:**

Replacement of Motor including transportation to and from the GMDC store and related other jobs in the event of breakdown is to done by the successful bidder.

#### **14. BREAKDOWN CONDITION:**

If any type of breakdown occurs due to careless handling by working people, the cost of breakdown will be barred by successful bidder.

After any type of breakdown, the breakdown occurrence report will be submitted by successful bidder within a day.

*In case the successful bidder fails to execute the jobs as assigned to satisfaction of GMDC, reserve the right to execute the job through a third party at the cost and risk of the successful bidder.*

10. The successful bidder or his associates should have valid electrical license grade ESA for carrying out of the electrical scope of works.
11. The successful bidder shall maintain a register for works done in general shift and regular shift.
12. External cleaning of transformers, bus ducts, control panels, switchgear panels shall be done before taking up breakdown maintenance/running maintenance. All works shall be carried out after taking proper line clear/work permit. The successful bidder shall assist operation staff in isolating power supply and carrying out other precautionary work for taking the line clear/work permit.
13. Cleaning of cable trays and transformer yard in connection with maintenance. Work shall be arranged by the successful bidder.
14. Painting of electrical equipment, if required, shall be in bidder's scope.
15. Greasing of equipment shall be carried out periodically as per requirements/GMDC's instructions.
16. GMDC will have the right to divert the successful bidder's manpower to other areas within the scope of the contract to avoid idle hours.
17. The successful bidder shall arrange for wheelbarrows, trolleys, scaffoldings required for maintenance and display the necessary safety boards at the area of maintenance works.

- 
18. Cable tracing, dressing, jointing, and lugging if required shall be done by the successful bidder.
  19. Any wiring modification work required for safety and trouble-free operation of the system will be in the scope of successful bidder.
  20. The successful bidder shall maintain a separate register for daily consumption of spares. He shall furnish the future requirement of spares well in advance. Spares will be procured and supplied by GMDC.
  21. In the event of an emergency the successful bidder shall mobilize work in general shift by redeploying his staff from regular shifts, as per the requirement of GMDC officials.
  22. The following items are also under the successful bidder's scope: -
    - a. Megger
    - b. Multimeter & clip on meter
    - c. Toolbox
    - d. Crimping tool
    - e. Cable dressing material
    - f. Emery paper, all chemicals required for cleaning of electrical parts (excluding grease, diesel.)
    - g. Dungy cloth, gada cloth, waste, cotton and soap.
    - h. Safety items like gloves, shoes, helmets and safety belts.
    - i. Hydrometer
    - j. Induction heater
    - k. Bearing puller
    - l. Air blower & hot air gun
    - m. Halogen fixers with tube, insulation tap rolls

- 
- n. Lifting and shifting arrangements like chain block, nylon belt, chain rope, D cycle, pulley, etc.
23. Any other work which are not covered in the above list but are essentially required for the reliable operation shall be under the successful bidder's scope.
24. The waste material/scrap material generated during maintenance shall be properly stored and disposed off as per the instruction of the GMDC EIC to the places identified.
25. The successful bidder shall maintain all types of reports like PM sheet, equipment maintenance history, formats as per GMDC etc. and submit a set of copy to GMDC every month.
26. All drawing and manuals shall be maintained by the successful bidder. If xerox copy of any documents like drawing, flowchart, blank/filled format, manual shall be required, then that shall be in bidder's scope.
27. Each deployed manpower of the bidder shall wear safety PPEs and carry electrical line tester with them.
28. Any electrical work if required during odd hours i.e., after or before general shift, shall be arranged and carried out by the bidder without any extra financial burden to GMDC.

### **12.9. C&I maintenance of Lignite, Lime, and Ash Handling Plants**

1. ATPS has ABB make AC 800 M PLC systems supplied by M/s. ABB to control the process parameters of lignite & limestone handling system having 4 RIO panel, PP-320 touch screen, GE Fanuc (CPUE05) PLC system at stacker reclaimer machine area, workstations, remote I/O panel, dry fog system & dust suppression systems. ALLEN BRADLY 1756 PLC (ROCKWELL) make PLC System at AHP. The field instruments contain electronic belt weighers, switches, etc.

2. Successful bidder must provide AMC services for ABB AC800M, ROCKWELL PLC system and GE Fanuc make PLC system with the OEM for smooth, trouble free and breakdown attending services.
3. The scope of the work for the vendor/successful bidder is to maintain the control and instrumentation system and equipment by deploying qualified & experienced manpower for smooth & safe maintenance of system.
4. Scope of work includes routine, breakdown, shutdown and preventive maintenance of entire instrumentation works in lignite, limestone and ash handling system. PM reports, incident investigation report regarding failure of instruments needs to be submitted regularly:
  1. PLC system checking of interlocks, inputs, outputs in the PLC through the functional block diagram and rectification of the faults, interconnection wiring trouble shooting, wiring checking in field junction boxes and field equipment. In future any modification required in wiring, SCADA or PLC (M/s ABB and M/s GE Fanuc) logic will be in successful bidder's scope.
  2. Routine maintenance of limit switches, vibration monitoring system, field switches like zero speed switches, pull cord switches, belt sway switches, SOV, pneumatic cylinder, level switch, ELGI make compressor and dryer instruments, selector switch, UPS, marshalling panels, PLC panels, remote I/O Panels, bunker level indicators, local panels, RTs, computers and printers etc.
  3. If required control and communication cable lying of various sizes and termination of above cables with glanding, ferruling and lugging.
  4. Successful bidder must provide AMC services for IPA make belt weighers for correctness, calibration and breakdown if any. Preventive, routine and breakdown maintenance of total 09 Nos. IPA makes belt weighers will be done by successful bidder. This covers PCB checking, connectors checking, calibration with standard weights, load cell voltage, tacho voltage checking and total troubleshooting of belt weigher system.

5. Preventive, routine and breakdown maintenance of 06 Nos, bunker level transmitters which covers indicator checking, simulation mode checking, if required to bring level sensor from bunker to outside for further checking and calibration.
6. C&I related maintenance and calibration and fault troubleshooting of dry fog system that includes belt load monitors, solenoid valves, pressure switches, and pressure gauges etc.
7. Any material required for plant use from ATPS stores will be collected by successful bidder from ATPS Stores and if any damaged equipment, spare parts etc. is to be submitted to ATPS stores by successful bidder.
8. At stacker reclaimer machine area preventive and breakdown maintenance of GE Fanuc PLC system that includes I/O checking, interconnection wiring troubleshooting if any, DI, DO, AI, AO.
9. Module and module channels healthiness checking of PLC panel and remote I/O panel, touch panel. Any modification in SCADA or ladder logic in future if any will be in successful bidder's scope. Also, preventive and breakdown maintenance of belt weighers, calibration. if required, limit switches, anemometers, encoders, field control junction boxes, two Nos. RF type level switches etc.
10. However, for annual overhauling and for regular/breakdown visits successful bidder will enter into a separate AMC. Successful bidder will provide AMC to the OEM.
11. Cable tray, cable gallery cleaning and dressing work at lignite, lime, ash system.

***The instruments/equipment listed above are only indicative. All the instruments and equipment: that are not listed but are part of the lignite, limestone and ash handling systems are covered under the scope of the successful bidder.***

5. The successful bidder shall maintain a register for works done in general shift & regular shift.
6. External cleaning of, control panels, shall be done before taking up breakdown maintenance/running maintenance. All works shall be carried out after taking proper line clear / work permit. The successful bidder shall assist operation staff in isolating power supply and carrying out other precautionary work for taking the line clear/work permit.
7. Cleaning of cable trays in connection with maintenance. Work shall be arranged by the successful bidder.
8. Painting of C&I equipment, if required, shall be in bidder's scope.
9. GMDC will have the right to divert the successful bidder's manpower to other areas within the scope of the contract to avoid idle hours.
10. The successful bidder shall arrange for wheelbarrows, trolleys, scaffoldings required for maintenance and also display the necessary safety boards at the area of maintenance works.
11. Cable tracing, dressing and jointing, lugging if required shall be done by the successful bidder.
12. Any wiring modification work required for safety and trouble-free operation of the system will be in the scope of successful bidder.
13. The successful bidder shall maintain a separate register for daily consumption of spares. He shall furnish the future requirement of spares well in advance. Spares will be procured and supplied by GMDC.
14. In the event of an emergency the successful bidder shall mobilize work in general shift by redeploying his staff from regular shifts, as per the requirement of GMDC officials.
15. The following items are also under the successful bidder's scope:
  - a. Megger
  - b. Tool box

- c. Cable dressing material
  - d. All spray required for cleaning of equipments (WD-40, CRC, OKS etc.)
  - e. Dungy cloth, Gada cloth, waste, cotton and soap.
  - f. Safety items like Gloves, Shoes, Helmets and Safety belts.
  - g. Consumables (insulation tape, aluminum foil, silicone sealant, Teflon tape etc.)
16. Any other work which are not covered in the above list but are essentially required for the reliable operation shall be under the successful bidder's scope.
  17. The waste material/scrap material generated during maintenance shall be properly stored and disposed of as per the instruction of the GMDC EIC to the places identified.
  18. The successful bidder shall maintain all types of reports like PM sheet, equipment maintenance history, formats as per GMDC etc. and submit a set of copy to GMDC every month.
  19. All drawing and manuals shall be maintained by the successful bidder. If xerox copy of any documents like drawing, flowchart, blank / filled format, manual shall be required, then that shall be in bidder's scope.
  20. Each deployed manpower of the bidder shall wear safety PPEs.
  21. Any electrical and C&I work if required during odd hours i.e., after or before general shift, shall be arranged and carried out by the bidder without any extra financial burden to GMDC.
  22. C&I equipment needs to be repaired and install during maintenance new spare will be provided by GMDC with proper justification and evidence report.

#### **12.10. Maintenance of weighbridges**

1. The successful bidder must maintain 4 Nos. weighbridges installed at power project.
2. The maintenance of complete weighbridge system includes weighbridge cabin computers, printers, UPS and other related all accessories/equipment/spares/plates

required for operating of the weighbridge. If required new installation of weighbridge in future instead of existing weighbridge, it will be installed by successful bidder at their cost and contract will be considered as BOOM (built, own, operate and maintain) type without any extra payment. The existing weighbridge scrap/spares will be given to GMDC.

3. The material like load cells provided by successful bidder shall be of reputed/branded make of ISI/CE/NTEP mark only and compatible with existing GMDC software.
4. Section used in the maintenance of weighbridge platform shall have adequate strength and size.
5. The successful bidder shall have to operate and maintain all the weighbridge as in good conditions.
6. Testing and stamping from concerned authority will be the responsibility of bidder.
7. The weighbridges at project shall be calibrated fortnightly and to be certified by GM (Project).
8. Daily cleaning of the weighbridge including above the platform and underneath the platform is essential and submit the report to GMDC officer in-charge.
9. The weighbridge system should have capacity of 50MT and suitable to weigh all capacity of dumper/trucks according to rated capacity (within 50 MT).
10. Successful bidder will have to make necessary arrangements to get minimum 95% machine output per month.
11. The successful bidder must have a valid license by weights & measurement department. Copy of the same duly attested should be submitted. License from department of metrology, Government of Gujarat for manufacturing/repairing/servicing of electronic lorry weighbridge in their name. License should be possessed for repairing and servicing for the weigh bridges as per the standards of weight and measure act in the state.
12. Successful bidder shall have to supply all tools, tackles, consumables and required spares, software etc. for maintenance of whole system of weighbridges.

13. The successful bidder must arrange for services of specialists (i.e., weighbridge experts, load cell calibration etc.)

#### **12.11. Housekeeping work at Lignite, Lime, Ash Handling Plants and weighbridges**

1. Scope of work for housekeeping includes complete housekeeping of lignite, lime, ash handling plant, weighbridges and all facilities of these plants. The indicative list of areas of the above plants are enlisted blow. Successful bidder must carry out cleaning and maintain these areas neat and clean throughout the tenure of the contract period.
2. Major areas of lignite, lime, and ash handling systems under bidder's scope are mentioned below:

##### **Lignite Handling System**

1. Stacker reclaimer area
2. Truck dump hopper/apron feeder house
3. CBF-1 & TP-1
4. CBF-2/3 & TP-2
5. C- 1 A/B
6. Primary crusher house
7. C- 2 A/B
8. Secondary crusher house
9. Return conveyor
10. C- 3A/B
11. Screen house
12. C-4 A/B & TP3
13. C- 5 A/B & tripper, bunker house
14. MCC room & control room building

15. DS pump house and DS tank

**Lime Handling System**

1. Ramp & truck dump hopper
2. LM-1/2 & TP-4, telescopic chute
3. LM-1 A/B & MD
4. Lime crusher house
5. LM-2 A/B & tripper, bunker house

**Ash Handling System**

1. Buffer hopper area U#01&02
2. Intermediate bad ash silo
3. ESP area U#01 &02
4. Silo area
5. AHP control room area
6. AHP MCC area
7. Compressor house
8. Bypass belt conveyor for bad ash system

**Weighbridges**

1. Pit area (below platform)
2. Above and near the platform
3. The cleaning covers the entire area of lignite, lime stone, ash handling system, and weighbridges comprising of area from lignite dump hopper to lignite bunker house and limestone dump hopper to lime bunker, ash discharge to ash silo area including lignite & lime storage area ,conveyor deck sheets, crusher houses ,screen house , bunker houses, transfers points, silo area, buffer hoper area, ESP area, intermediate silo area and the outside area of all houses and equipment i.e. belt conveyors , sizers,

crushers, screens, trippers, stacker/reclaimer , apron feeder, belt feeders etc. and lignite & lime control room, ash handling control room, MCC room & offices including toilets and urinals, drinking water cooler, service water tank, roads within MHP,AHP and Weighbridge area, Grass cutting within battery limit etc.

4. Spilled lignite/lignite dust to be cleaned /washed from the entire conveyor gallery either from floor or walkways.
5. Cleaning/reclaiming of lignite below the return conveyor belt.
6. Cleaning of entire gallery including equipment, floors, structures, side walls, roofs, cable trays, cable trench, junction box and deck sheets by brooming and washing as desired by EIC.
7. Cleaning of drains and sump pump pits thoroughly for accumulated water and slurry.
8. Cleaning thoroughly the bunker floor & trippers.
9. Cleaning of associated dust separation (DS) ventilation and pumping system, falling with in the area.
10. All the foreign materials like broken hammers, worn out skirt rubber pieces, foreign materials coming along with lignite is to be removed and dumped in to scrap yard as per direction of EIC.
11. All spilled lignite/ lignite dust is to be cleaned from all the floors, take up floors etc.
12. Clearing of chute jamming or any other jamming of material on war foot basis.
13. Cleaning and washing of chutes and conveyor galleries immediately as desired by shift engineer.
14. The spillage lignite is to be fed back to the conveyor belt or transported back to lignite stack yard as per the direction of GMDC EIC.
15. All equipment of stacker/reclaimer are to be cleaned thoroughly to make it lignite/lignite dust free for smooth operation of the equipment and the system. Power cable and control cable lying in the area are to be kept always cleaned to avoid fire hazards.

16. Cleaning of walkways and banks of yards.
17. Removal of foreign material namely stone boulders, metallic pieces, wooden pieces, plastic bags, cable and wire pieces etc. from the yards.
18. Cleaning of floors and doors inside and open space outside the respective premises daily.
19. Cleaning offices, bathroom, toilet, dusting of furniture and fixtures, doors, windows, etc. other misc. work.
20. All the foreign materials either old or new from the respective areas are to be stacked properly in an area as desired by EIC. These foreign materials under no circumstances would be mixed with lignite and would not be carried to the lignite stack yard. Foreign materials are to be carried to scrap yard and stacked properly.
21. Successful bidder is to start the jobs as per site conditions as is where is basis and no extra claim will be entertained.
22. Any other work as instructed by GMDC EIC or their representative from time to time as per plant requirement.
23. From the floors on height spillage material should be collected in empty bags and then after it should be lowered down on ground floor or in tractor trolley. Effective use of sweeping chute needs to be ensured.
24. All report generation should be carried out as per instruction of GMDC EIC. Daily and monthly check sheet etc. to calculate the housekeeping index to be create as per Appendix V.
25. During the contract period if skid steer loader is required as instructed by GMDC EIC for housekeeping, then it shall be arrange by successful bidder and no any extra payment shall be given for the same.
26. If any tools and tackles, other than the ones listed in Annexure G, shall be required to carry out any job, then successful bidder shall arrange the same without any financial burden to GMDC.

27. The successful bidder has to identify spillage, unsafe points and rectify to avoid any spillage, dusting and accident in the plant.

28. The successful bidder has to clean, inspect, strengthen and paint all the structure.

### **13. Period and Duration of Work**

13.1. The contract period will be of **one year from the date of acceptance of LOI**. Further, there shall be a provision for extension for up to **one year**, as per the same terms and conditions with a further extension provision subject to entire satisfaction and requirement of the GMDC.

13.2. In case of any reason including adverse working conditions during execution of the contract that may compel suspension/closure of the contract, GMDC shall be at liberty to conclude/postpone/complete/terminate/foreclose this contract. No compensation or payment shall be made on account of afforested events. Decision of GMDC in this regard shall be final and binding to the successful bidder.

### **14. Liquidated Damages (LD)**

14.1 If the bidder fails to start the actual work within 14 days from the date of acceptance of LOI as required, a liquidated damage @ Rs. 20,000/- per day shall be leviable, for a maximum period of 20 days. If the bidder fails to start work even after 20 days, GMDC will be free to forfeit the EMD and/or SD and take suitable/necessary action.

14.2 In event of failure in execution of services under the scope of the successful bidder due to the reasons attributable to the successful bidder, employer/owner shall have the right to make the deductions as detailed below:

1. Monthly payment shall be derived as per Service Level Agreements (SLAs) after consideration of deductions as per SLAs mentioned in Annexure D.

14.3 Under any circumstances, GMDC shall not be liable to pay any compensation to the successful bidder.

14.4 **Overall cap on the total LD shall be 10% of the contract value.**

14.5 GMDC shall not be made liable for any damage and /or compensation for the manpower and/or tools and tackles provided by the successful bidder.

- 14.6 GMDC reserves the right to review and assess the performance of the work at any time during the contract period. In case of poor performance by the successful factor, defined as, actual K factor lying in the worst performance category for three or more Key Performance Indicators (KPIs) defined in Annexure D, and/or breach of any terms and conditions of the contract, GMDC shall have discretion to take appropriate action including termination of the contract and backlisting the successful bidder.
- 14.7 The successful bidder shall have to follow all safety norms. The successful bidder shall be responsible for safety of equipment and plants. If any damage occurs, then the successful bidder shall be responsible for repairing the damage made to the equipment and plant of GMDC and compensate for the cost of damage. This will be above the 10% LD cap and would equal to the actual cost of repair/replace.
- 14.8 The lime plant retrofitting work is under process. All service level agreements (SLAs) related to lime handling plant (lime bunker level) to be considered as fully achieved till completion of retrofitting of lime handling plant.

## **15. Goods & Service Tax**

- 15.1. All bidders are required to submit their GST number and date in the bid. Bid received from unregistered bidder will not be considered and out rightly rejected.
- 15.2. Bidders are requested to quote their rates without GST. GST will be paid/adjusted/reimbursed to the Successful bidder as per prevailing rates and rules to the extent directly related to the services rendered OR Goods supplied by the Successful bidder under the said contract subject to production of documentary proof and Successful bidder will mention the GST amount separately in the invoice/invoice along with SAC/HSN Code under GST.

## **16. Insurance**

- 16.1. The successful bidder shall take full responsibility to take all precautions to prevent loss or damage to the works or part thereof for any reasons whatsoever (except for reasons which are beyond control of the successful bidder or act of God, e.g. flood, riots, war, earthquake, etc.) and shall at his own cost, repair and make good the loss/damage to the work so that on

completion, the work shall be in good order and condition and in conformity with the requirements of the contract and instructions of the project authority, if any.

- 16.2. The successful bidder shall, at all times during the pendency of the contract, indemnify the GMDC against all claims, damages or compensation under the provisions of the Employee's Compensation Act and shall take insurance policy covering all risk, claims, damages or compensation payable under the Employee's Compensation Act or under any other law relating thereto.
- 16.3. The Successful bidder shall take adequate statutorily prescribed insurance cover for all men and machinery engaged by him/it for performance of the work at site. Any insurance claim brought against the GMDC by an individual or by customers or by any such other persons who suffered damage due to negligence of the successful bidder or his employees, the same shall be settled by the successful bidder at his cost.
- 16.4. The successful bidder shall ensure that the insurance policy/policies are kept alive till full expiry of the contract by timely payment of premiums and shall not be cancelled without the approval of the GMDC. The cost of premiums shall be borne by the successful bidder and it shall be deemed to have been included in the tendered rate.
- 16.5. In the event of the successful bidder's failure to effect or to keep in force the insurance referred to above or any other insurance which the Successful bidder is required to effect under the terms of the contract, the GMDC may effect and keep in force any such insurance and pay such premium/premiums as may be necessary for that purpose from time to time and recover the amount thus paid from any moneys due by the successful bidder.

## **17. Payment Terms**

- 17.1. The successful bidder shall submit invoice after completing the mentioned work in all respect including removal shifting and submitting the old spares, scraps to designated place/main store, cleaning of the location.
- 17.2. Monthly Payment will be done to the vendor equal to the value derived basis Service Level Agreements.

17.3. Invoice shall be submitted to the office of the General Manager (Power Project), ATPS with following documents:

1. Duly certified area wise KPI values as mentioned in Annexure D:
  1. Duly certified shift-wise bunker levels for all lignite and lime bunkers.
  2. Duly certified date wise status of lignite receipt, lignite storage at reclaimed yard, lignite storage other than reclaimed yard, lignite feed to boiler bunker with all lignite handling system running hours.
  3. Duly certified date wise report of mechanical, electrical, and C&I predictive, preventive and breakdown maintenance work with details of consumable and spare use for lignite, lime and ash handling plant work.
  4. Duly certified date-wise housekeeping index as surveyed by joint team.
  5. Duly certified date wise list of healthy earth moving equipment available at site for lignite, lime and ash handling plant work.
  6. Copies of Muster Roll and Payment sheets showing the amount of PF deducted from salaries of the labour and employees, PF No. of labour and employee, amount of contribution of the Successful bidder.
  7. Copy of the challans for the PF amount deposited in RPFC for the previous month, in respect of PF deduction related exclusively to this contract as well as copies of monthly returns i.e. 3A and yearly 6A.
  8. Compliance of all law relevant with the work carried out by Contract or such as Labour and Factories Act etc.
  9. Check List
2. Duly certified date wise status of lime receipt, lime storage at reclaimed yard, lime storage other than yard, lime feed to boiler bunker with all lime handling system running hours.

3. Duly certified Date wise status of fly ash and bottom ash lifted from silo, fly ash and bottom ash lifted from other than silo area, all silo level with all ash handling system running hours.

17.4. Invoice, submitted at the office of General Manager (Power Project) will be processed there considering following deductions:

1. Income tax as per provision of Income Tax Act, and other Taxes (and surcharges) applicable in force from time to time
2. Cost of any other services provided / material supplied plus 15% administrative charge, if any, by the GMDC.
3. Liquidated damages
4. Other deductions, if any.
5. An ad-hoc payment @ 80% of the payable amount arrived after considering above deduction, will be paid by office of the G.M. [Power Project], within 30 days of submission of the invoice along with its details.
6. The invoice shall then be sent to GMDC's Corporate Office at Ahmedabad for verification, auditing and approval. Balance 20% payable amount of Running account invoices shall become payable by Project within two weeks of the receipt of the approved invoice from Corporate Office.

## **18. Statutory Obligations**

- 18.1. That the successful bidder shall obtain license under the Bombay Shops and Establishment Act and it shall pay wages and benefits in accordance with the applicable laws and shall not pay less than as notified by the Government Authorities from time to time and shall maintain the employment records as required under applicable laws.
- 18.2. That the Successful Bidder shall get his own License under Contract Labour (Regulation and Abolition) Act. It shall be binding to get the same renewed from time to time and shall maintain all the records as per the act.
- 18.3. That the Successful Bidder shall be responsible to enroll his employees, deduct, add and deposit in the relevant accounts the contributions as required under the Employees State

Insurance Act, 1952 and the Employees Provident Funds and Miscellaneous Provisions Act 1952 and any other enactment's covered under the various applicable labour laws as well as maintain all books of records for the staff and employees deputed by it for this contract such as required under any laws applicable. The Successful Bidder shall also furnish a copy of such statements as documentary proof to the GMDC.

- 18.4. That if the Successful Bidder is not covered under the Employees State Insurance Act, 1952 then it shall be the duty of the Successful Bidder to take appropriate insurance cover under the Workmen Compensation Act and take Group Personal Accident Policy for all the employees deputed at the project site.
- 18.5. The Successful Bidder must issue to the employee's Identity card with their photos and shall also maintain relevant register.
- 18.6. That the Successful Bidder shall give leave/holiday to its workforce as per the provisions of labour laws applicable.
- 18.7. Every person deployed by the Successful bidder in a plant must wear safety gadgets to be provided by the Successful bidder.
- 18.8. Any statutory clearance, permission required for the work, it's completion, commissioning shall be in successful bidder's scope.
- 18.9. The Successful bidder will be required to obtain License from the office of the Labour Commissioner for the required strength of labour, before commencement of work at site and the same shall be maintained updated and valid throughout the currency of the contract.
- 18.10. If any amount becomes payable by GMDC as a result of any claim or application in terms of the provisions or non-compliance of provision of any Acts and the Rules and Regulations, By-laws or the Orders made there under, applicable from time to time, such amounts shall be recoverable from the Successful bidder for which GMDC will not be responsible for any compensation.
- 18.11. That the Successful Bidder would obey with all applicable laws and maintain all such necessary records as necessitated under such enactments.

18.12. The successful bidder shall also indemnify the GMDC against any claims, compensations, damages, loss, liquidated damages etc. for breach and / or non-fulfillment of the prevailing Rules and Regulations and other statutory provisions in force from time to time and applicable to the work during the currency of contract.

18.13. The successful bidder shall abide by the provision of the Motor Vehicle Act for machinery. Any consequences arising out of non-compliance of said Provisions will be at the Successful bidder sole risk and cost, for which GMDC will not be responsible for any compensation.

18.14. The successful bidder shall comply with other statutory provisions of Law. The Successful bidder shall comply with all applicable laws, ordinances, approved standards, rules and regulations, and shall procure all necessary municipal and governmental permits, licenses and inspection and shall pay all fees and charges in connection with the items covered by the contract. The Successful bidder shall serve GMDC harmless as a result of any in factious thereof. Successful bidder will be solely liable for all non-compliances. The following are some of the major Government of India Acts and Regulations to be complied with by the Successful Bidder. The List is illustrative and not exhaustive.

1. The Factories Act of 1948 (63 to 1948) and Amendments and Rules (Amended up to date)
2. The Electricity Act, 2003 and rules made there under
3. The Indian Boiler Regulation Act, 1950 and rules made there under
4. The Minimum Wages Act, 1948
5. The Employees Compensation Act 1923 and Amendment Act 2010
6. The Payment of Wages Act 1936 and Amendment Act 2012
7. Payment of Bonus Act 1965 and Amended up to date
8. Contract Labour Regulations & Abolition Act 1970
9. Interstate Migrant Workmen (Regulations) Act 1979

18.15. All the activities arising under the scope of the works shall be complied with various statute/laws/rules/regulations etc. Including environmental laws and if the successful bidder fails to comply the laws; it will be done at the risk and cost of the successful bidder and expenses will be recovered from RA invoice of the successful bidder.

## **19. Bankruptcy**

19.1. If the Successful bidder commits an act of Bankruptcy or goes into liquidation except for construction purposes, or if its business is carried on by a receiver, such receiver, liquidator or any person in whom the contract may become vested shall forthwith give notice thereof in writing to GMDC and in reasonable time during which he shall take all reasonable steps to prevent stoppage of performance of the contract, have the option of carrying out the contract subject to his or their providing such guarantees as may be required by GMDC but not exceeding the value of the work for the time being remaining unexecuted.

19.2. In the event of stoppage of performance under the contract, the period of option under this clause shall be decided by GMDC considering the situation, provided that the above option is not exercised, GMDC may terminate the contract by serving notice in writing to the Successful bidder. The power and provision so reserved to GMDC on taking of the work out of the Successful bidder's hands shall apply as far as they may be when the contract is so terminated.

## **20. Notice**

Written notice shall be deemed to have been duly served if delivered to the individual or to Successful bidder or to the Signing Authority of the GMDC from whom it is intended, or if delivered at or sent by mail or post, to the last business address known to him who gives the notice.

## **21. Canvassing Not Permitted**

21.1. Bidder should not canvass their offer personally or otherwise by approaching the Chairman or the Member of GMDC. If any Bidder wants to make any representation regarding his offer, he should write to the General Manager (Power), if he desires, but personal and oral representations are not permitted.

21.2. In spite of the above clear instructions, any Bidder is found to canvass his offer or against his competitor's offer through personal approach to the competent authority or the officials of GMDC, their offer will be rejected without assigning any reason and the firm even is blacklisted.

## **22. Termination Of Contract**

If at any time during the currency of this contract, if any breach occurs due to the reasons attributed to the successful bidder, GMDC shall be at liberty to terminate this contract without assigning any reasons, whatsoever, for such termination and any losses and/or damages occurring due to such termination shall be borne by the Successful bidder. GMDC shall be entitled to forfeit Security deposits as Liquidated damages.

## **23. Arbitration**

All questions, disputes, differences whatsoever which may at any time arises between the parties to this Tender and subsequent contract in connection with the Tender and subsequent contract or any matter arising out of or in relation thereto, shall be referred to Sole Arbitrator as per the provisions of Arbitration and Conciliation Act, 1996 and subsequent amendment thereto and the venue of arbitration proceedings shall be at Ahmedabad only. The Language of the Arbitration shall be in English only.

## **24. Governing Law**

This Tender and subsequent Contract shall be construed and interpreted in accordance with and governed by the laws of India.

## **25. Jurisdiction**

The matter related to any dispute or difference arising out of this Tender and subsequent contract shall be subject to the exclusive jurisdiction of Court at Ahmedabad only.

## **26. Non-Fulfillment of Terms And Condition of The Contract**

26.1. If the Successful bidder fails to carry out the work as per terms and conditions of the contract to the satisfaction of the GMDC, GMDC shall be entitled to forfeit the security deposit paid by the Successful bidder. This however, shall not absolve the Successful bidder from his obligation to fulfill the contract. In such event, the GMDC shall have a right to

complete and / or to get the work completed at the cost & risk of the Successful bidder and the Successful bidder shall be responsible to pay such cost incurred by the GMDC to complete the work and / or to get the work completed.

26.2. Likewise, if the Successful bidder does not fulfill the terms and conditions of the contract and does not carry out the work up to the entire satisfaction of GMDC, GMDC has the right to forthwith terminate the contract at its sole discretion, without assigning any reason, Under such events, the GMDC shall be entitled to forfeit the security deposit paid by the Successful bidder and the GMDC shall have a right to complete the work and / or to get the work completed at the risk and cost of the Successful bidder.

26.3. For any reasons, if it is required, the GMDC reserves rights to cancel, terminate, amend and / or alter the contract and / or bifurcate and / or increase and/or reduce the contract work at any time without giving any notice or reason to the Successful bidder and without incurring any responsibility. For such cases, Successful bidder shall have to take away his labour, tools, tackles, machinery, equipment etc. and shall leave the site at once or shall have to carry out the instructions of the GMDC.

## **27. Completion Of Work**

27.1. Upon the Successful bidder fulfilling the entirety of its obligations under the Contract to the satisfaction of GMDC and subject to terms and conditions of the Contract, it shall become eligible to apply for a Completion Certificate. The General Manager (Power Project)/ General Manager (Power) of GMDC shall formally issue the Completion Certificate, after verifying from the completion documents and satisfying himself that the Works under the Contract have been completed in accordance with all the provisions of this Contract. The Successful bidder, after obtaining the Completion Certificate shall become eligible to present the final invoice for the Works executed by it under the Contract.

27.2. Upon completion of Works under the Contract and before the application for the Completion Certificate, the Successful bidder shall clear the project of GMDC of all rubbish, dirt, structures, scrap, oily rags etc. Failure to clear the project may constrain GMDC to clear the said site at the risk and cost of the Successful bidder.

27.3. The Successful bidder shall provide GMDC with any and all documents/records/proofs that may be demanded before issuance of Completion Certificate.

## **28. Accident and Responsibilities of Bidder**

28.1. The entire responsibility on account of any accidents, damage or personal injury which may occurred to any of the Successful bidder's vehicles/ equipment or his/its employees or any outside party shall be exclusively that of the Successful bidder and no claim whatsoever shall be entertain by the GMDC on this account. The Successful bidder shall keep the GMDC indemnified from all the consequence.

28.2. In the event of any breakdown or accident during the course of any operation, the successful bidder shall notify the facts to the Project Authority or any other officer immediately present there of such incidence and shall simultaneously make adequate remedial arrangements on his/its own cost and risk and as per the instruction of the Project Authority.

28.3. The Successful bidder shall pay all claims, damages and compensation with cost arising out of or resulting there from to the third party(s) and in case the GMDC would be required to face any proceedings all to pay any amount on the aforesaid account, it shall be deemed to have been discharge on behalf of the Successful bidder, the same amount shall be recovered half-an hour rest interval in between. The Successful bidder shall ensure that the attendance of all the supplied manpower shall be taken through biometric attendance machine.

## **29. Foreclosure**

29.1. In case of any necessity or any situation arising due to local working conditions or any unforeseen reason not in the control of the GMDC or of the Successful Bidder, Committee comprising of representative of GMDC, Successful Bidder and Outside Expert from Technical and Financial background shall be constituted and Committee will look into the reasons/causes and analyze the conditions as to whether the work awarded is feasible to continue with the existing terms and conditions of the contract or any other available option or to Fore Close the contract in the interest of both the GMDC and the Successful Bidder.

29.2. If after study of the prevailing conditions of the contract under execution, committee recommends to Fore Close the contract keeping in view the financial implication to both the GMDC and Successful Bidder, guideline/Modality of the Fore Closure of the contract shall

be decided by the committee considering the work executed and unexecuted, period of the contract completed and balance period of the contract, value of the work executed and value of the work unexecuted etc.

### **30. Force Majeure**

- 30.1. Force majeure is herein defined as any cause which is beyond the control of the Successful bidder or the GMDC as the case may be which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:
- 30.2. Natural phenomena such as flood, draughts Cyclone, earthquake and epidemics, declaration of war.
- 30.3. Acts of any government, including but not limited to war, declared or undeclared priorities, quantities, embargoes, providing either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such cases.
- 30.4. The successful bidder will advise, in the event of his having resort to this clause by a registered letter duly certified by the statutory authorities, the beginning and end of the cause of delay, within fifteen days of the occurrence and cessation of such Force Majeure condition. In the event of delay lasting over two months, if arising out of Force Majeure, the contract may be terminated at the discretion of the GMDC.
- 30.5. For delay arising out of Force Majeure, the successful bidder will not claim extension in completion date for a period exceeding the period of delay attributable to the causes of force Majeure and neither company nor the Successful bidder shall be liable to pay extra costs (like increase in rates, remobilization, advance, idle charges for labour and machinery etc.) provided it is mutually established that the Force Majeure conditions did actually exist.
- 30.6. If any of the Force Majeure conditions exists in the place of operation of the Successful bidder even at the time of submission of bid, he will categorically specify them in his bid and state whether they have been taken into consideration in their quotations.



30.7. The successful bidder or the GMDC shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and/ or defined above. The date of completion will, subject to hereinafter provided, be extended by a reasonable time.

### **Annexure A: Instruction to Bidders for Online Tendering**

1. All Bidders must submit their bid online through the website <https://tender.nprocure.com>
2. Bidders who wish to participate in online tenders will have to procure / should have legally valid Digital Certificate (Class III) as per Information Technology Act-2000, using which they can sign their electronic bids. Bidders can procure the same from any of the license certifying Authority of India or can contact (n) code solutions- a division of GNFC Limited, who are licensed Certifying Authority by Government of India at address mentioned below at clause 5.
3. All bids should be digitally signed. For details regarding digital signature certificate and related training involved at the below mentioned address should be contacted:

4. Address:

**(n)Procure Cell**

**(n)Code solutions A division of GNFC**

**403, GNFC Info-Tower, Bodakdev, Ahmedabad- 380 054 (India)**

**Tel: +91 26857316/17/18 Fax: +91 79 26857321, Toll Free: 1800-233-1010**

**E-mail : nprocure@gnfc.net**

5. Kindly take note that, valid Digital Signature Certificates is a must for all the interested Bidders. Online tendering process is not possible without a valid digital signature certificate.
6. Interested Bidders are also requested to complete their procedure for taking digital signature certificate in respect to filling of application form, supporting documents with necessary fees at least 3 days before last date of tender submission.
7. (n) code solutions reserves the rights to issue digital signature certificate after verification of application forms / supporting documents submitted by bidder. (n) code solutions is fully authorized to issue digital signature certificate to Bidders.
8. Bidders who have no facility to participate in on-line tenders are requested to contact (n) code solutions for the same.
9. Free vendor training camp will be organized every Saturday between 4.00 to 5.00 P.M. at (n) code solutions-A Division of GNFC Ltd. at address mentioned above at Clause No. 5 of Chapter No-III.
10. Bidders are requested to take benefit of the same.



11. All the correspondence in respect to training, support or digital signature certificate should be addressed to (n) code solutions directly on the above mentioned address. In case the Bidders face any difficulty, they may contact the officials of the GMDC or GNFC on the below mentioned details:

a. GMDC:

Contact Person: General Manager (Power)

Contact numbers: 079-27913200/3501 Ext No 1760

E-Mail: power@gmdcltd.com; jndave@gmdcltd.co.in

b. GNFC

Contact Number: 079- 26857316/17/18

E-Mail: nprocure@gnfc.net

## Annexure B: Approved Banks

### Annexure I.

Finance Department, GR. No.: FD/MSM/e-file/4/2023/0057/D.M.O.

Date: 21/04/2023

(A) Guarantees issued by the following banks will be accepted as SD/EMD on permanent basis:

❖ **All Nationalized Banks**

(B) Guarantees issued by the following Banks will be accepted as SD/EMD for the period up to March 31, 2024. The validity cut-off date in the GR is with respect to the date of issue of Bank Guarantee irrespective of the date of termination of Bank Guarantee.

Sr No	Name of Banks	Sr No	Name of Banks
1	AXIS Bank	17	Kotak Mahindra Bank
2	AU Small Finance Bank	18	South Indian Bank
3	Bandhan Bank	19	Standard Chartered Bank
4	BNP Paribas	20	Tamilnadu Mercantile Bank
5	City Union Bank	21	Utkarsh Small Finance Bank
6	CSB Bank	22	The Kalupur Commercial Co-op. Bank
7	DBS Bank India Limited	23	Ahmedabad Mercantile Co-op. Bank
8	DCB Bank	24	Nutan Nagarik Sahakari Bank Ltd.
9	Equitas Small Finance Bank	25	Rajkot Nagarik Sahakari Bank Ltd.
10	FEDERAL Bank	26	Saraswat Co-Operative Bank Ltd
11	HDFC Bank	27	SVC Co-Operative Bank LTD.
12	HSBC Bank	28	The Gujarat State Co-operative Bank
13	ICICI Bank	29	The Mehsana Urban Co-Op. Bank Ltd
14	IndusInd Bank	30	The Surat District Co-Operative Bank Ltd
15	Karnataka Bank	31	The Surat People's Co-Op. Bank Ltd
16	Karur Vysya Bank	32	Saurashtra Gramin Bank

All the eligible banks are instructed to collect the original documents/papers of guarantee from the concerned tendering authority.

  
(S. Chhakchhuak)

Additional Secretary (Budget)  
Finance Department

-----XXXXX-----



VALID FOR THREE MONTHS ONLY

--	--	--	--	--	--	--	--	--	--	--	--

D D M M Y Y Y Y

OR ORDER

₹

FOR GUJARAT MINERAL DEVE CORP LTD

AUTHORISED SIGNATORIES  
Please sign above

*Rivilege*  
RIVILEGE  
SOLUTIONS

Pay *Gmdc Ltd*

Rupees

ICICI Bank  
Ahmedabad Branch  
Jmc House, Opp. Parimal Garden, Ahmedabad - 380006.  
RTGS / NEFT / FSC Code : ICIC0000024

Account No. 002405019379

CBS  
BUSINESS BANKING - NEW CURRENT ACCOUNT  
Payable at par at all branches of ICICI Bank Limited in India

SESHASAI (M) LTD - 2019

28/12/12

N S1

⑈491099⑈ 380229002⑈ 019379⑈ 29

Annexure C: Bank Details for RTGS



## Annexure D: Service Level Agreements – O&M of Material Handling Plant

S. No.	Key Performance Indicator (KPI)	KPI Measurement Criteria	K Factor	Weightage (%)	Monthly Amount (say) <sup>1</sup>		1,00,00,000	Monthly amount considering actual value of K factor	Output measurement
					Actual Values	Applicable K factor	Monthly amount considering K factor = 1.00		
					a	b	c		
<b>1. Operations Productivity @ 40% of total monthly amount</b>									
A	Maintaining Bunker Level for both lignite system and lime system at all times (Refer Appendix I for calculations)	A ≥ 99%	1.00	60%	97%	0.95	24,00,000	22,80,000	Manual
		95% ≤ A < 99%	0.95						
		90% ≤ A < 95%	0.90						
		85% ≤ A < 90%	0.85						
B	In-plant Lignite Quality Losses (LQL) (Refer Appendix II for calculations)	A < 85%	0.00	40%	8%	0.98	16,00,000	15,68,000	Automated + Manual
		B < 5.0%	1.00						
		5.0% ≤ B < 7.5%	0.99						
		7.5% ≤ B < 10.0%	0.98						
C	Timely Compliance of Preventive Maintenance (Refer Appendix III for calculations)	10.0% ≤ B < 12.5%	0.96	60%	98%	1.00	24,00,000	24,00,000	Automated + Manual
		B > 12.5%	0.95						
		95% ≤ C ≤ 100%	1.00						
		85% ≤ C < 95%	0.90						
D	Unplanned/Breakdown Compliance (Refer Appendix IV for calculations)	75% ≤ C < 85%	0.80	40%	97%	1.00	16,00,000	16,00,000	Automated + Manual
		C < 75%	0.00						
		95% ≤ D ≤ 100%	1.00						
		85% ≤ D < 95%	0.90						
E	Compliance of Housekeeping as per agreed plan (Refer Appendix V for calculations)	75% ≤ D < 85%	0.80	100%	95%	1.00	20,00,000	20,00,000	Manual
		D < 75%	0.00						
		90% ≤ E ≤ 100%	1.00						
		80% ≤ E < 90%	0.95						
		70% ≤ E < 80%	0.90						
		60% ≤ E < 70%	0.85						
		E < 60%	0.00						
<b>Sub-total (A+B+C+D+E)</b>							<b>1,00,00,000</b>	<b>98,48,000</b>	
<b>4. Deduction on account of non-availability of HEMM/machine operators @ 1.5 time quoted hourly price</b>									
S. No.	SLA Description	Non-availability (Hours)	Penalty (INR/Hour)					Monthly Penalty on HEMM/operators' non-availability	Output Measurement
		a	b					c = a*b	
F	HEMM and operators' availability (Refer Appendix VI)	0	1.5 x Quoted Hourly Price of Machine					0	Manual
G	Weighbridge availability (Refer Appendix VII)	0	Rs. 1000/hr. of non-availability					0	Manual
<b>Total (A+B+C+D+E-F-G)</b>								<b>98,48,000</b>	

<sup>1</sup> Monthly amount would include total value excluding O&M of Lime Handling System. The value of Lime Handling System would be considered post its revival.



**Note:** Monthly payment shall be derived as per SLAs after consideration of deductions as mentioned above with a maximum cap of 10%.

## Appendix I: Bunker Level Compliance

Bunker level = Height of bunker till which lignite/lime is filled

### Illustrative Calculations

Lignite bunkers fill index – 90% weightage.

Date	Shift A	Shift B	Shift C	% Compliance =
<i>Formula</i>	<i>a</i>	<i>b</i>	<i>c</i>	$G = (a+b+c)*100/(4*3)$
01-Jan-2024	3	4	4	91.67%
02-Jan-2024	4	4	4	100.00%
...	...	...	...	...
31-Jan-2024	3	3	4	83.33%
<b>Average</b>				<b>95.30%</b>

Lime bunkers fill index – 10% weightage.

Date	Shift A	Shift B	Shift C	% Compliance =
<i>Formula</i>	<i>a</i>	<i>b</i>	<i>c</i>	$G = (a+b+c)*100/(2*3)$
01-Jan-2024	0	2	2	66.67%
02-Jan-2024	2	2	1	83.33%
...	...	...	...	...
31-Jan-2024	2	2	2	100.00%
<b>Average</b>				<b>99.70%</b>

$$\text{Average monthly compliance} = \frac{\text{Compliance of (Day 1 + Day 2 + \dots + Day N)}}{N}$$

**Bunker Fill Index = 90% x Lignite bunkers fill index + 10% x Lime bunkers fills index**

$$= 90\% \times 95.30 + 10\% \times 99.7 = 95.74\%$$

**Note:**

1. a, b, c is the number of lignite and lime bunkers with bunker level > 90% of bunker height/capacity.
2. Total height for:
  1. Lignite bunkers – 20 meters
  2. Lime bunkers –15 meters
3. Total number of bunkers across each unit is:
  1. Lignite – 2
  2. Lime - 1
4. Bunker level measurements for each bunker are to be done once every 8-hour shift (shift A, shift B, shift C). Bunker level measurements is to be indicated as empty from top of the bunker, i.e. if bunker level measurements is 8 meters, it means bunker is empty 8 meter from the top of the bunker.
5. In situations, where a unit is not operational or the bunker is required to be empty for any maintenance reasons, the bunker shall be considered to have material > 90% of bunker height/capacity.
6. If the bunker level drops below **30%** in any particular shift, **an additional 1% penalty** on the total monthly amount of Bunker Level compliance KPI (Rs. 24,00,000 as per the above example SLA table) would be charged for that day.
7. The lime plant retrofitting work is under process. All service level agreements (SLAs) related to lime handling plant (lime bunker level) to be considered as fully achieved till completion of retrofitting of lime handling plant.
8. The 90%:10% weightage of lignite to lime bunkers fills index would be considered post revival of Lime Handling System. Till that time, the complete 100% weightage would be attributed to Lignite Handling System for this KPI as per the allotted weightage and allotted monthly amount.

## Appendix II: In-plant Lignite Quality Loss

$$\text{In – plant Lignite Quality Loss} = \frac{\text{Available Energy} - \text{Useful Energy}}{\text{Available Energy}}$$

Available Energy = Opening yard stock quantity (Kg) x Opening yard stock weighted average GCV (Kcal/Kg)  
+ Lignite received quantity (Kg) x Weighted average As Received GCV at plant (Kcal/Kg)

Useful Energy = Closing yard stock quantity (Kg) x Closing yard stock weighted average GCV (Kcal/Kg)  
+ Lignite fired quantity (Kg) x Weighted average As Fired GCV at bunker (Kcal/Kg)

### Lignite Quality Loss Norms

#### **GCV loss penalty guidelines**

1. GCV loss penalties, under normal conditions and non-deviance of any of the clauses below will be computed monthly.
2. Physical verification (PV) of lignite will be done on monthly basis by a 3<sup>rd</sup> party contractor in the presence of GMDC CHP team and yard supervisor from successful bidder's team.
3. The 3<sup>rd</sup> party contractor would be appointed by GMDC for the monthly physical verification.

#### **Lignite GCV loss measurement guideline**

1. **As Received GCV:** The weighted GCV (ARB) obtained from samples taken from trucks unloaded at the plant for the subject month will be analyzed and weighted GCV (ARB) of all samples taken for the month (for which GCV loss is calculated) will be called “As Received GCV” for the month.
2. **Opening Stock GCV:** The weighted GCV (ARB) obtained from samples drawn and analyzed from the stockyard during monthly physical verification (PV) at the start of the month (for which GCV loss is calculated) will be called as “Opening Stock GCV.”
3. **Closing Stock GCV:** The weighted GCV (ARB) obtained from the samples drawn and analyzed from the stockyard during monthly physical verification (PV) at the end of the month (for which GCV loss is calculated) will be called as “Closing Stock GCV.”

4. **As Fired GCV:** The weighted GCV (ARB) from the samples taken from the auto sampler or manual sampling before feeding to the bunkers in the month (for which GCV loss is calculated) will be called “As Fired GCV” for the month.
5. **Available GCV:** Weighted average GCV of “Opening Stock GCV” and “As Received GCV” for the month.
6. **Useful GCV:** Weighted average GCV of “Closing Stock GCV” and “As Fired GCV” for the month.

**Illustration**

Opening yard stock quantity (MT) = 50,000 MT

Opening yard stock weighted average GCV (Kcal/Kg) = 3000 Kcal/Kg

Lignite received quantity (MT) = 2,40,000 MT

Weighted average As Received GCV at plant (Kcal/Kg) = 3050 Kcal/Kg

Closing yard stock quantity (MT) = 60,000 MT

Closing yard stock weighted average GCV (Kcal/Kg) = 3100 Kcal/Kg

Lignite fired quantity (MT) = 2,35,000 MT

Weighted average As Fired GCV at bunker (Kcal/Kg) = 2950 Kcal/Kg

Available Energy =  $50,000 \times 3000 + 2,40,000 \times 3050 = 8,82,000$  Gcal

Useful Energy =  $60,000 \times 3100 + 2,35,000 \times 3075 = 8,79,250$  Gcal

In-plant lignite quality loss =  $(8,82,000 - 8,79,250)/8,82,000 = 0.31\%$

### Appendix III: Preventive Maintenance (PM) Compliance

$$PM\ Compliance = \frac{\text{No. of scheduled PM done during the month as per Annexure E}}{\text{No. of scheduled PM during the month as per Annexure E}}$$

**Note:**

1. Successful bidder shall complete PM schedule as mentioned in scope of work and Annexure E within the timeline.
2. PM schedule mentioned in the scope of work is based on previous history and OEM guidelines and will be revised time to time considering the overall health of the equipment and as decided by the employer / owner. All such changes to the PM schedule shall be binding to the successful bidder.
3. Any PM scheduled which is not performed or where completion is delayed as compared to the planned schedule and non-conforming shall be treated as a default for the purpose of calculating PM compliance index.
4. PM activities scheduled but not completed during any calendar month shall automatically be carried forward to the PM activities scheduled in the subsequent month (subject to a revised schedule to be agreed with the employer / owner) and shall form part of the compliance requirement of the subsequent month. Employer/owner, however, reserves the right to carry out such non-completed PM by themselves or any other 3<sup>rd</sup> party entirely at the costs and risks of the successful bidder if decided by the employer / owner if such carry forward may be detrimental to the operation and safety of the plant.



### Appendix IV: Unplanned/Breakdown Compliance

$$\text{Unplanned/Breakdown Compliance} = \frac{\text{No. of breakdowns resolved within stipulated time during the period}}{\text{No. of breakdowns occurred during the period}}$$

S. No.	Mechanical	C&I	Electrical
<b>Category I: To be done immediately as per equipment requirement/condition decided by GMDC supervisory team within stipulated time or &lt;24 hours</b>			
1	VGS related issues in crusher house	Protection fault of equipment	HT and LT motor related issues which restricts the lignite/lime/ash flow movement
2	Damaged idlers and frames	Failure of PLC hardware and communication network	UPS defect which restricts the lignite/lime/ash flow movement
3	Belt repairing/cold patch work	Hooter and alarm issue	DC system
4	Hose/tube leakage	Flap gate related	Battery charger related which restricts the lignite/lime/ash flow
5	Chute puncture	Malfunctioning of chute switches	HT and LT switchgear related which restricts the lignite/lime/ash flow movement
6	Belt sway	Hydraulic power packs, hydraulic systems etc. (pressure switches, limit switches, float switches etc.)	HT/LT cable faults which restricts the lignite/lime/ash flow movement
7	Belt tightness	Control desk signals and local control panels signals feedback related issues to PLC systems of MHP which restricts lignite flow movement	Faults in transformers causing restriction in lignite/lime/ash flow
8	Deflector plate	Crusher instruments which restrict the lignite/lime flow movement	Stacker reclaimer related issues
9	Damaged toothed ring hammer, crusher screens and crusher drive elements related issues	Stacker reclaimer related issues	Major breakdown in any equipment which restricts the lignite/lime/ash flow movement including weighbridges
10	Choking of hoppers and bag filter	Major breakdown in any equipment which restricts the lignite/lime/ash flow movement including weighbridges	



---

11	Pulley bearing shifting issue		
12	Safety related defects point		
13	Stacker reclaimer related issues		
14	Major breakdown in any equipment which restricts the lignite/lime/ash flow movement including weighbridges		
<b>Category II: To be done within stipulated time or &lt;3 days</b>			
1	All defects of MHP which have not been covered in Category I	All defects of MHP which have not been covered in Category I	All defects of MHP which have not been covered in Category I

### Appendix V: Sample Housekeeping Calculation Sheet

1. Successful bidder to define areas and respective checklist of activities to be completed along with site team to comprehensively cover entire MHP and AHP for housekeeping performance measurement (e.g., Lime primary crusher house, Lime secondary crusher house, Lime dump hopper area, etc.)
2. Calculation is out of 100 marks per area.
3. Housekeeping monitoring team will be formed (employer/owner + successful bidder), team will monitor it on daily basis and marking to be done accordingly.
4. For each area, the housekeeping team shall conduct surveys and give scores (as illustrated below) and a daily average housekeeping compliance percentage shall be completed which will be aggregated to calculate the monthly average housekeeping compliance.

***Illustration***

Date	Area 1: Lignite Screen House	Area 2: Lignite Primary Crusher House	Area 3: Lignite Stock Yard	...	Area N:	Housekeeping compliance in %
1	98	92	95	...	99	94
2	99	91	96	...	93	95
3	98	92	94	...	93	98
4	95	93	99	...	98	96
5	96	90	90	...	91	93
6	93	95	95	...	94	98
7	92	98	99	...	95	100
8	98	90	100	...	99	94
9	100	91	92	...	93	96
10	96	92	97	...	94	100
11	96	97	98	...	94	94
12	99	100	94	...	98	95
13	92	98	97	...	96	99
14	99	96	93	...	97	93
15	92	94	94	...	90	98
16	100	94	98	...	93	97
17	97	99	96	...	96	94
18	93	98	94	...	94	99
19	90	94	91	...	97	92
20	99	97	100	...	93	94



21	99	94	90	...	99	98
22	91	95	96	...	93	91
23	95	100	93	...	93	100
24	97	92	94	...	94	90
25	98	92	93	...	92	90
26	94	100	98	...	92	98
27	100	99	95	...	90	91
28	93	91	96	...	94	92
29	93	96	98	...	90	98
30	99	97	98	...	93	93
31	98	98	100	...	96	96
<b>Average House Keeping Compliance in %</b>						<b>95.35</b>

## **Appendix VI: Penalty due to Non-availability of HEMM and machine operators**

1. Non-availability of each HEMM will be tracked and the penalty will be calculated basis number of hours of non-availability of each HEMM or corresponding machine operators and 1.5 times the corresponding rate of that HEMM.
2. Total 1 day/month non-availability of any vehicle shall be exempted from LD for servicing and any emergency break down). Also, everyday 1 hour will be exempted from the LD for daily greasing, oiling, fuel filling and routine checking

**Appendix VII: Penalty due to Non-availability Weighbridges**

1. Non-availability of each weighbridge will be tracked and the penalty will be calculated basis number of hours of non-availability of each weighbridge equal to Rs. 1000/hr.
2. Total 1 hour/day non-availability of any weighbridge shall be exempted from LD for servicing and any emergency break down.

## Annexure E: Preventive maintenance schedule for material handling equipment

MECHANICAL		
S. No.	Description	Monthly Frequency
<b>Lignite Handling System</b>		
1.	Apron Feeder & Dribble Conveyor	2
2.	Sizers	2
3.	Stacker-cum-Reclaimer all equipment	1
4.	Belt Conveyors	2
5.	Belt Feeders & Shuttle Conveyors	2
6.	Flip Flop Screens	2
7.	Impactors	2
8.	Vibrating Feeders	2
9.	Traveling Tripper	2
10.	Magnetic Separators	1
11.	Flap Gates	1
12.	RPG and Rod Gates	1
13.	Dry Fog System	1
14.	Sump Pumps	1
15.	Dust Suppression System	1
16.	Hoppers and chutes inspection	1
<b>Lime Handling System</b>		
1.	Apron Feeders & Dribble Conveyor	2
2.	Sizer	1
3.	Belt Conveyors	2
4.	Telescopic chute	1
5.	Impactor	2
6.	Vibrating Feeders	2
7.	Traveling Tripper	2
8.	Magnetic Separators	1
9.	Flap Gates	1
10.	RPG and Rod Gates	1
11.	Dry Fog System	1
12.	Sump Pumps	1
13.	Hoppers and chutes inspection	1
<b>Ash Handling Plant</b>		
1	Air Compressors	2
2	Air Dryers	2



3	Vibrating Screens	1
4	Screw feeders	1
5	OTR system (i.e-OTR-1,2,3,4,5,6)	1
6	ESP-01 & 02: Transporters and discharge lines.	1
7	Rotary ash conditioners	1
8	Rotary feeder	1
9	Fly ash silo with bag filter house	1
10	Bottom ash silo with bag filter house	1
11	Silo and ESP blower	1
12	Dust conditioner pumps	1
13	Buffer hopper to IMBA Silo bottom ash discharge line.	1
14	Buffer hopper with vent fan	1
15	Telescopic chute for dry ash unloading system	1
16	By pass belt system for Bottom ash	1
17	Fly ash dry unloading system	1

**Weighbridges**

1	Complete maintenance of electrical, mechanical and instrumentation parts	1

**ELECTRICAL and C&I**

S. No.	Description	Frequency
	<b>Transformers</b>	
1.	External cleaning of transformers	Monthly
2.	Tightness checking of marshalling JB's	Quarterly
	<b>Cables</b>	
1	Cleaning of cable Galleries	Quarterly
2	Cables laying & tracing	As & when required.
	<b>L T Motors</b>	
1.	External cleaning of motors	Monthly
2.	Tightness checking of power terminals	Quarterly
3.	Greasing of motors	Monthly
	<b>H T Switch Gear Breaker Modules</b>	
1.	External cleaning of the panels	Monthly
2.	Routine maintenance of the breakers (Cleaning, Tightness checking, Contacts cleaning)	Monthly
3.	Lubricating the moving parts	Monthly
4.	Modules alignment checking	Half yearly
5.	Alignment of Limit switches	Quarterly



6.	Checking of Breakers operating time	Annually
7.	Testing of Relays, meters	Annually
8.	Tightness checking of outgoing Power & Control cables	Monthly
9.	Checking of space heaters and motor winding heaters	Half yearly
10.	Control scheme checking and rectification	Annually
<b>L T Switch Gear Breaker Modules</b>		
1.	External cleaning of the panels	Monthly
2.	Routine maintenance of the breakers (Cleaning, Tightness checking, Contacts cleaning)	Monthly
3.	Lubricating the moving parts	Quarterly
4.	Modules alignment checking	Half yearly
5.	Alignment of Limit switches	Quarterly
6.	Checking of Breakers operating time	Annually
7.	Testing of Relays, meters	Annually
8.	Tightness checking of outgoing Power & Control cables	Monthly
9.	Checking of space heaters and motor winding heaters	Half yearly
10.	Control scheme checking and rectification	Annually
<b>MCC Modules and PDB modules</b>		
1.	External cleaning of panels	Monthly
2.	Preventive maintenance Of the modules (Cleaning, Tightness checking, Contacts cleaning)	Quarterly
3.	Module alignment checking	Quarterly
4.	Tightness checking for outgoing power and control cables	Monthly
5.	Control scheme checking and rectification	Annually
<b>Valves &amp; Dampers</b>		
1.	External cleaning of the valves & dampers	Quarterly
2.	Topping up of oil & Greasing of motors	
<b>Lighting</b>		
1.	Cleaning of Light fittings	Quarterly
2.	Cleaning of MLDBs, SLDBs	Monthly
3.	Cleaning and tightness checking of Lighting transformers	Monthly
<b>HT Motors</b>		
1.	External cleaning of motors	Monthly
2.	Tightness checking of power terminals	Quarterly
3.	Greasing of motors	Monthly



4.	Checking of CT& RT D box	Monthly
	<b>DCDB &amp; ACDB SYSTEM</b>	
1.	Cleaning and tightness checking of module	Monthly
	<b>IN LINE MAGNETIC SEPARATOR</b>	Monthly
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Monthly
	<b>FLAP GATES</b>	Monthly
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Monthly
	<b>METAL DETECTOR</b>	
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Quarterly
	<b>CHUTE VIBRATOR</b>	
1.	Cleaning and tightness checking of module	Monthly
2.	Control scheme checking and rectification.	Quarterly
	<b>AHP System</b>	
1	Compressors	Half yearly
2	ESP blower	Quarterly
3	Screen	Quarterly
4	Screw Feeder-	Quarterly
5	Vent Fan Intermediate Silo	Quarterly
6	Silo Vent Fan	Quarterly
7	Ash Conditioner Water Pump-	Quarterly
8	Rotary Feeder	Quarterly
9	Silo Blower	Quarterly
10	Ash Conditioner	Quarterly
11	Bypass Conveyer	Quarterly
12	buffer hopper vent fan	Quarterly
13	MLDB	Quarterly
14	ACDB	Quarterly
15	DCDB	Quarterly
16	X'mer	Quarterly
17	LT MCC	Quarterly
18	HT MCC	Quarterly
19	Air Dryer	Quarterly



---

20	ESP air heater	Quarterly
21	Silo air heater	Quarterly
22	LP	Quarterly
23	Exhaust fan	Quarterly
	<b>Lighting equipment including high mast</b>	
1	Indoor and outdoor lighting equipment	Quarterly

**Note:**

1. Successful bidder has to intimate to Engineer In-Charge of GMDC, the details of work to be performed during preventive maintenance prior to undertaking the equipment for Maintenance.
2. All the above works shown are indicative. If any additional work is required to operate the plant efficiently, the same is required to be carried out by the successful bidder.
3. Apart from the above list, for any LT equipment, PM periodicity shall be every three months and for any HT equipment, PM periodicity shall be every six months.



### Annexure F: Major equipment details

Location	System details	Make	Model	Brief Details
MHP	PLC/SCADA	ABB	AC800M	4 nos. of RIO panel, 3 nos. of work station, 2 nos. of HMI
STACKER RECLAIMER	PLC	GE FANUC	CPUE05	With one RIO panel & touch panel.
AHP	PLC/SCADA	ALLEN BRADLEY	LOGIX 1756	With two PLC panel, 2 nos. of work station one engineering work station & one operating work station with MIMIC panel.
MHP CCR	UPS	DB Power		2 x 5 KVA UPS
MHP-Stacker Reclaimer	UPS	BPE		1 KVA UPS
AHP	UPS	LIEBERT		2X10 KVA
AHP	Compressor	ELGI		7 nos. of compressor with two nos. of Air Dryer
MHP	Compressor	Kirloskar		(3 nos . of different type for Dry fog system)
MHP/LIME	Belt weigher	IPA	BCW-DS	Total 9 nos. of belt weigher including Lime system.(5 nos. Lignite, 3 nos. Lime & 1 no. at Stacker)

### Annexure G: LIST OF TOOLS AND TACKLES

Sr. No.	Item	Unit	Qty.
1	Welding Machine Single Phase(portable)-5nos & 3phase-5nos	Nos	10
2	Grinding Machine AG 7	Nos	3
3	Grinding Machine AG 4	Nos	6
4	Cutting Set With Nozzles And Regulators	Set	5
5	Welding Cable-Copper Only	Mtr	300
6	Right Angle 12" 6"	Nos	2
7	Hammer 3 Kg	Nos	5
8	Hammer 1.5 Kg	Nos	5
9	Hexo Frame With Blade	Nos	3
10	Half Round File	Nos	3
11	Round File	Set	3
12	Flat File	Set	3
13	Triangle File	Set	2
14	Pipe Wrench 24"	Nos	5
15	Pipe Wrench 12"	Nos	6
16	Pipe Wrench 18"	Nos	5
17	Grease Gun 10kg	Nos	2
18	Grease Gun 5 Kg	Nos	3
19	Grease Gun 2 Kg	Nos	2
20	Safety Belt	Nos	10
21	D Shackle 5 Ton	Nos	5
22	D Shackle 3 Ton	Nos	5
23	D Shackle 3 Ton	Nos	5
24	D Shackle 1 Ton	Nos	5
25	Hammer Wrench Ring 60	Nos	2
26	Hammer Wrench Ring 55	Nos	2
27	Hammer Wrench Ring 50	Nos	2



28	Hammer Wrench Ring 46	Nos	2
29	Hammer Wrench Ring 30	Nos	2
30	Hammer Wrench Ring 36	Nos	2
31	Hammer Wrench Ring 65	Nos	2
32	Hammer Wrench Ring 75	Nos	2
33	Hammer Wrench D-Fix 60	Nos	2
34	Hammer Wrench D-Fix 55	Nos	2
35	Hammer Wrench D-Fix 50	Nos	2
36	Hammer Wrench D-Fix 46	Nos	2
37	Hammer Wrench D-Fix 41	Nos	2
38	Hammer Wrench D-Fix 36	Nos	2
39	Lifting Belt 5 Ton 3mtr	Nos	4
40	Lifting Belt 3 Ton 1.5mtr	Nos	4
41	Wire Sling 5 Ton 3mtr	Nos	5
42	Wire Sling 3 Ton 3mtr	Nos	5
43	Wire Sling 1 Ton Mtr	Nos	5
44	Chain Block 10 Ton	Nos	2
45	Chain Block 5 Ton	Nos	3
46	Chain Block 3 Ton	Nos	5
47	Chain Block :2Tonne capacity with 30 mtr chain	Nos	6
48	Chain Block 1 Ton	Nos	3
49	Combination plier,Size-8inch,Make-Taparia	Nos	6
50	Screw Driver Set	Set	2
51	Screw Driver 12inch	Nos	5
52	Measuring Tape 3 Mtr	Nos	10
53	Slide Wrench 8	Nos	5
54	Slide Wrench 12	Nos	5
55	Box spanner set,(6mm to 32mm) with ratchet handle, Standard make likeTaparia, etc.	Set	5
56	Water Level	Nos	1



57	Spirit Level	Nos	1
58	Cotton Rope Around 20mm	Mtr	50
59	Wire rope Pulley suitable for 12mm wire rope.	Nos	5
60	Rope pulley	Nos	2
61	Chisel 25x150	Nos	4
62	Chisel 25x300	Nos	4
63	Hole Punch	Set	3
64	Marking punch(A-Z,0-9)	Set	2
65	Belt Cutter(industrial)Taparia make	Nos	10
66	Dial Indicator(Mitutoyo only) With Magnetic Stand	Nos	5
67	Nose plier-6 Inch	Nos	5
68	Outside circlip plier,Size-6,8,10 inch (1 each)	set	5
69	Inside circlip plier,,Size-6,8,10 inch (1 each)	set	5
70	Oxygen cylinder Key	Nos	10
71	Heavy Duty Shim Cutter	Nos	5
72	Allen Key Up to 17mm	Nos	3 Nos Each
73	Hand Lamp	Nos	10
74	Industrial Extension Board With 10mtr Cable	Nos	10
75	Portable Drill Machine	Nos	2
76	Hot blower	Nos.	1
77	Box Spanner 14 MM	Nos	2
78	Box Spanner 15 MM	Nos	2
79	Box Spanner 16 MM	Nos	2
80	Box Spanner 17 MM	Nos	2
81	Box Spanner 18 MM	Nos	2
82	Box Spanner 21 MM	Nos	2
83	Box Spanner 27 MM	Nos	2
84	Box Spanner 36MM	Nos	2
85	Box Spanner 38MM	Nos	2
86	Box Spanner 41MM	Nos	2



87	Box Spanner 46MM	Nos	2
88	Box Spanner Handle With Extension Bar	Nos	3
89	Screw Operated Coupling & Bearing Pullers- 18”	Set	2
90	Bore Gauge	Nos	1
91	External Micrometers(0-150mm)	Nos	1
92	External Micrometers (up to 500mm)	Nos	1
93	Internal Micrometers (0-150mm)	Nos	1
94	Internal Micrometers (up to 500mm)	Nos	1
95	External Clipers	Nos	2
96	Internal Calipers	Nos	2
97	Divider	Nos	1
98	VernierCaliper-Digital (150mm)	Nos	1
99	VernierCaliper (300mm)	Nos	1
100	RachetHandlefor Box Spanners Upto 32mm	Nos	3
101	Rachet For Box Spanners Above 32mm	Nos	3
102	Torque Wrench	Nos	2
103	Steel Wire Brush	Nos	25
104	Die For External Thread Cutting Size:Upto 32mm	Nos	1
105	Hydraulic Jacking oil pump, 50 Ton for industry use, Botton Type	Nos	4
106	Hydraulic Jack Cylidner 10ton	Nos	4
107	Hydraulic Jack Cylidner 25ton	Nos	4
108	Hydraulic Jack Cylidner 50ton	Nos	2
109	Hollow cylinder 25ton	Nos.	2
110	Heavy duty Torch	Nos	25
111	Temperature Gun	Nos	2
112	Steel Scales	Nos	2
113	Steel wire rope 12mm	Mtr	250
114	Bearing heater suitable for bearing ID 160mm	Nos	1
115	Rotary hand grinder	Nos.	2
116	Filler gauges	Nos	5



117	Wire Sling 10 Ton Mtr	Nos	4
118	D Shackle 10 Ton	Nos	4
119	Vibration Meter, Make:-Masibus	Nos	1
120	Complete set of tool box(ring spanner set(6-32),D spanner set(6-32),right angle, measuring tape, center punch, plier,Hammer-500gm, allenkey set mm, shim cutter 10inch,screw driver, taparia knife,slide wrench 6",)	Set	12
121	Pneumatic wrench ½'	Nos	1
122	Pneumatic wrench 1"	Nos	1
123	Hydraulic puller 3 jaw 20ton with hydraulic pump	Nos	1
124	Pipe spanner set (6-7mm to 18-19mm), Make Taparia	Set	4
125	Long nose plier-8 Inch	Nos	2
126	Industrial Electric Air blower, Min 650W, Standard Make like Hitachi, Bosch, etc	Nos	2
127	Screw driver,905-I,Make-Taparia	Nos	4
128	Heavy Screw driver, DES177211	Nos	3
129	Ring spanner set(6-7mm to 30-32mm), Make Taparia	Set	5
130	Fix Spanner set(6-7mm to 30-32mm), Make Taparia	Set	5
131	Fix ring combo spanner set, size-(6mm to 32mm), Make Taparia	Set	5
132	T-spanner set, size-(6mm to 24mm),	Set	2
133	Hydraulic puller- Big,3-jaw type, max. spread-200mm,output 5 ton	Nos	1
134	Three arm Bearing puller,size-300mm,Arm Length-240mm,Force- 50KN,Torque-160Nm,Make-Any standard	Nos	2
135	Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
136	Hydraulic Hex Press big size crimping tool suitable for crimping of lug upto 630Sq	Nos	1
137	Hex Press Medium size crimping tool,Size-16 to 50sqmm,Make- TAPARIA	Nos	2
138	Hex Press Medium size crimping tool,Size-0.5 sq mm to 16sqmm,Make- TAPARIA	Nos	2
139	Allen key set, in mm	Set	4



140	Allen key set, in Inch	Set	4
141	Allen key set, T- type ,in mm	Set	3
142	Electrical Knife	Nos	2
143	Bearing induction heater, with heating clamp , Big, TIH030m/230V,	Nos	1
144	Screw driver set, Heavy screw driver set with insulation sleeve, in the set screw driver no.-713,922,725,828,912,712,937,Make- Taparia	Set	4
145	Tap die set with handle, (2 mm to 16 mm) inner and outer	Set	1
146	Double speed Drill machine with bits, up to 16 mm Drill bits, Bosch or any standard make for concrete and RCC use	Set	1
147	Safety Belt with anti-skidding lock and double hook type. IS standard certified	Nos	15
148	Cutter, 6 inch, 8 inch	Set	1
149	Hammer medium, 500g weight	Nos	2
150	Teflon Hammer medium size 500g	Nos	2
151	Bearing inserting fitting kit,	Nos	1
152	Copper Bar, 500Gram	Nos	1
153	Nylon belt, 10 Tonne	Nos	2
154	Wire Stripper	Nos	5
155	Digital climp on cum multi meter	Nos	3
156	Analog LT insulation tester battery operated, 2KV	Nos	3
157	Digital Multi meter for 4-20m Amp measurement (True RMS)	Nos	1
158	Digital HT insulation tester 5KV with PI measurement	Nos	1
159	15 Tonn ceiling wire rope with 2 nos. D cycle	Set	2
160	Hot air blower, 1000 Watt	Set	3
161	File set- round and flat	Set	1
162	Paint spray Gun	Nos	2
163	LED Long Distance Torch 1 KM, Chargeable	Nos	1
164	11 KV electrical hand gloves	Pair	1



165	Rubber Gloves for battery maintenance work	Pair	2
166	Hydro meter for Battery maintenance	Nos	2
167	Nylon Rope-30mm, 5 tons – 30 mtr	Nos	5
168	HoleShaw Cutter 5mm to 55mm	set	1
169	Extension Board with 6ASwitch Socket-4nos. and 16A- Switch Socket-1 Nos. With 20 Meter Cable	Set	7
170	Paint spray gun with flexible air pipe	Set	2
171	Flexible air hose pipe 1” dia.	Mtr	50
172	Adjustable Screw spanner 6"	Nos	2
173	Adjustable Screw spanner 10"	Nos	2
174	Crimping tool set size 0.5 to 5 sqmm	Set	1
175	High speed Electrical drill machine with up to 16mm drillbit( RCC & HHS)	Nos	1
176	Soldering iron with soldering wire & flux	Nos	2
177	File set	Set	2
178	Hex saw with blade (6 inch)	Nos	3
179	Hex saw with blade (12 inch)	Nos	3
180	Screw driver set, Taparia 812	Set	2
181	Small size screw driver set (watch maker set), Taparia precision, Model- PSFP6	Set	2
182	Number Punch for making cable gland holes	Set	1
183	RJ 45and RJ 11 Crimping tool	Nos	1
184	Air blower variable speed, make – Bosch	Nos	2
185	Tester, taparia	Nos	6
186	Long nose plier 8" size	Nos	2
187	Long nose plier 6" size	Nos	2
188	200gm Teflon Hammer	Nos	1
189	Industrial application Vacuum cleaner	Nos	1
190	Fix & Ring type spanner 36 mm	Nos	2



191	Multimeter with Auto range facility & true RMS type including 4-20 mA.	Nos	6
192	RJ- 45 LAN Tester.	Nos	1
193	knife for cutting wire	Nos	8
194	LED Torch 1 Watt rechargeable	Nos	10
195	Box Spanner 10-11, 32-36	Set	2
196	Shovel (belcha)	Nos	40
197	Basket (Tegeedi)	Nos	20
198	Phavda	Nos	20
199	Vaccum cleaner(wet and dry)	Nos	2
200	Trikam for digging	Nos	5
201	Pulling & Lifting Machine (Hook Chook) - 5 Ton (approx.)	Nos	2
202	Pulling & Lifting Machine (Hook Chook) - 3 Ton (approx.)	Nos	2
203	Winch Machine for Belt laying (Capacity-10 ton)	Nos	1
204	Vulcanising machine (for 1200 mm belt width)	Nos	1

***Note: The above list is indicative only. If any tools and tackles, except the list mentioned herein above, if required to carry out any job, shall then be arranged by the successful bidder for which the payment shall be done by GMDC team at mutually agreed rates..***

### Annexure H: List of Consumables Items

Sr. No.	Item	Unit	Minimum quantity to be maintained	Estimated Qty. to be consumed for 1 year.
1	Cotton west	Kg	400	2000
2	Grinding wheel - AG-4	Nos	60	325
3	Grinding wheel - AG-7	Nos	30	150
4	Cutting Wheel –AG-4	Nos	60	325
5	Cutting wheel –AG-7	Nos	20	100
6	Buffing wheel –AG-4	Nos	30	175
7	Welding cable holder	Nos	8	40
8	Welding helmet	Nos	5	25
9	Cutting helmet	Nos	5	25
10	Gas cutting torch	Nos	2	10
11	Gas cutting torch nozzle	Nos	12	60
12	Gas cutting torch nozzle cleaner	Nos	12	60
13	Gas cutting pipe (both-DA & Oxy)	Mtr	40	200
14	Gas cutting pipe clamp	nos	10	50
15	Welding Electrodes -6013 ,2.5 MM	Kg	40	200
16	Welding Electrodes -6013 ,3.15 MM	Kg	100	500
17	Welding Electrodes -6013 ,4 MM	Kg	20	100
18	Welding Electrodes -308 ,2.5 MM	Kg	20	100
19	Welding Electrodes -308 ,3.15 MM	Kg	60	300
20	Welding Electrodes -308,4 MM	Kg	20	100
21	Welding Electrodes -309 ,2.5 MM	Kg	20	100
22	Welding Electrodes -309 ,3.15 MM	Kg	60	300
23	Welding Electrodes -309,4 MM	Kg	20	100
24	Welding Electrodes -7018 ,2.5 MM	Kg	40	200
25	Welding Electrodes -7018 ,3.15 MM	Kg	100	500
26	Welding Electrodes -7018,4 MM	Kg	20	100
27	Welding Electrodes 9018G MM,3.15MM	Kg	40	200



28	Welding Electrodes 9018G MM,4MM	Kg	40	200
29	Welding Electrodes 680CGS 2.5MM	Kg	5	25
30	Welding Electrodes Zed Alloy 550 4.00mm	Kg	10	500
31	Anabond paste 666	Nos	20	100
32	WD-40	Nos	24	200
33	Valve lapping compound (silicon carbide) -fine	Kg	1	5
34	Valve lapping compound (silicon carbide) -rough	Kg	1	5
35	Rustoline	Ltr	40	250
36	Silicon sealant RTV compound, loctite 596 superflex red high temp. rtv	Nos	20	100
37	Araldite paste	Nos	16	80
38	Champion-39 non-metallic gasket, thickness-3 mm	Kg	40	200
39	Champion-39 non-metallic gasket, thickness-1.5 mm	Kg	40	200
40	Taflon tape 1/2 in size.	Nos	40	260
41	Emery paper roll -Rough	Mtr	20	160
42	Emery paper roll -Fine	Mtr	20	125
43	M-seal	Kg	20	135
44	Fevicol SR 998	Ltr	4	20
45	Loctite adhesive 406	Nos	5	30
46	Hylomer oil jointing compound.(parting plane sealing compound)	Nos.	1	2
47	Loctite-638,bearing retainer compound	Bottle	1	2
48	Loctite 246 thread locker, part no. 29515,bottle 250 ml	Bottle	1	2
49	Petrol	Ltr	20	112
50	Paint brush 50mm	Nos	24	180
51	High speed hexo blade size: 12"	Nos	10	50
52	Flexible hose wire breaded pipe-3/4"	Mtr	50	250
53	Diesel	Ltr	16	80
54	Oxygen for cutting	Bottle	50	250
55	Acetylene for cutting	Bottle	25	125



56	Asbestos Rope -6 MM	Kg	10	50
57	asbestos Rope -8 MM	Kg	10	50
58	Vulcanizing solution(cold joint work/patch up work)	Ltr	16	80
59	2.5 sq mmx3 core copper flexible cable	Meter	100	1200
60	CRC 2-26 Power Spray : For, Electro maintenance and protection	Nos	4	50
61	Carbon cleaner	Nos.	4	50
62	Cable Tie (V100)	Packet	5	60
63	Cable Tie (V200)	Packet	5	60
64	Cable Tie (V300)	Packet	1	15
65	HT rubber tape, width 20mm	Meter	10	120
66	PVC Insulation tape , standard make	Nos	50	600
67	Silicon Sealant, 200Gram	Nos	15	130
68	Wire Brush	Nos	2	25
69	Detergent powder, Wheel	Kg	1	12
70	1.5 sqmm pin type copper lug	Nos	50	600
71	2.5 sqmm pin type copper lug	Nos	25	300
72	4 sqmm pin type Aluminum lug	Nos	10	120
73	6 sqmm pin type Aluminum lug	Nos	10	120
74	10 sqmm pin type Aluminum lug	Nos	10	120
75	16 sqmm pin type Aluminum lug	Nos	10	120
76	2.5 sqmm Straight type copper lug	Nos	10	120
77	4 sqmm Straight type copper lug	Nos	10	120
78	2.5 sqmm ring type copper lug	Nos	5	60
79	4 sqmm ring type copper lug	Nos	5	60
80	6 sqmm ring type copper lug	Nos	5	60
81	10 sqmm ring type copper lug	Nos	5	60
82	16 sqmm ring type copper lug	Nos	5	60
83	4 sqmm ring type Aluminum lug	Nos	10	120
84	6 sqmm ring type Aluminum lug	Nos	20	240
85	10 sqmm ring type Aluminum lug	Nos	20	240



86	16 sqmm ring type Aluminum lug	Nos	20	240
87	Aluminum Foil Tape	Nos	15	130
88	500W Halogen fitting with 30 mtr long cables	Set	5	60
89	EP#3 Grease	Kg	10	120
90	Moly coat grease	Kg	1	12
91	Petroleum jelly	Kg	0.5	6
92	Nuts and bolts upto 10mm dia (bolt inner dia)	Kg	1	12
93	All types of fuses up to 16Amp	Nos	150	1800
94	LT winding varnish spray 250ml bottle	Nos	2	24
95	Contact Cleaner-2621 OKS Make	Nos	2	25
96	9 Volt Battery For Multimeter	Nos.	5	60
97	Rubber hose pipe (size 1"x25 Mtr.)	Nos	15	15
98	Broom	Nos	20	60
99	Phenyl	bottle	5	60
100	Naphthalene ball	Kg	2	25
101	Detergent powder	Kg	10	120
102	Empty polythene bags (capacity-50 kg /bag	Nos	200	500
103	Gum boot	Pair	10	100

**Note**

1. If any consumables items, except the list mentioned herein above, if required to carry out any job, shall then be arranged by the successful bidder for which the payment shall be done by GMDC team at mutually agreed rates.
2. All the unused consumables on completion of the contract shall be handed over to the GMDC.
3. Bidder must maintain above consumables items in own store and day to day update.

## Annexure I: Manpower Deployment for O&M Work

The deployment of manpower for various activities under this contract shall be as under:

S. No.	Designation	Qualification	Min. Experience (in Years)	General Shift	Daily Shift (A+B+C)	Total Indicative Manpower (exc. Relievers)
<b>A. Supervisors</b>				<b>2</b>	<b>0</b>	<b>2</b>
1	Resident Manager	BE (Mech/Elect)	12-20 years relevant experience in MHP O&M and site administration	1	0	1
2	Manager (O&M In-Charge & Planning)	BE/DIPLOMA (Mech/Elect)	8-12/12-14 years relevant experience in MHP O&M execution and planning	1	0	1
<b>B. Operations</b>				<b>11</b>	<b>90</b>	<b>101</b>
1	Shift In-Charge (Operations)	BE (Mech/Elect) / Diploma (Mech/Elect)	5-7/10-11 years relevant experience	0	3	3
2	PLC/Desk Operator	BE (Mech/Elect/C&I) / Diploma (Mech/Elect/C&I)	3-5/6-10 years relevant experience	3	6	9
3	Field Operator	ITI/Experienced	3-5 relevant experience	8	78	86
4	Electrician (Shift Operations)	Diploma (Elect)	5-7 relevant experience	0	3	3
<b>C. Mechanical Maintenance</b>				<b>39</b>	<b>30</b>	<b>69</b>
1	Mechanical In-Charge	BE/DIPLOMA (Mech/Elect)	6-8/10-12 years relevant experience in MHP maintenance execution and planning	2	0	2
2	Shift In-Charge (Mech. Maint.)	BE/DIPLOMA (Mech/Elect)	4-6/8-10 years relevant experience in MHP maintenance execution and planning	0	3	3
3	Field Engineer	BE/DIPLOMA (Mech/Elect)	3-5/5-7 years relevant experience in MHP maintenance execution and planning	2	0	2
4	Foreman	Diploma	3-5 years relevant experience in MHP equipment maintenance	1	0	1
5	Mill Wright Fitter	ITI/Experienced	3-5 years relevant experience in MHP equipment maintenance	2	0	2
6	Fitter	ITI/Experienced	2-4 years relevant experience in MHP maintenance	6	6	12
7	Welder	ITI/Experienced	2-5 years relevant experience in MHP maintenance	6	6	12
8	Rigger	Experienced	2-3 years relevant experience in MHP maintenance	10	6	16
9	Helper	Experienced	2-3 years relevant experience in MHP maintenance	9	9	18
10	Belt jointer	Experienced	5-7 years relevant experience in belt jointing activities	1	0	1
<b>D. Electrical and C&amp;I Maintenance</b>				<b>17</b>	<b>0</b>	<b>17</b>
1	Electrical and C&I In-Charge	BE/DIPLOMA (Elect/Instrumentation)	6-8/10-12 years relevant experience in MHP E&I O&M execution and planning	1	0	1
2	Electrical Engineer	BE/DIPLOMA (Elect/Instrumentation)	6-8/10-12 years relevant experience in MHP electrical maintenance	1	0	1
3	C&I Engineer	BE/DIPLOMA	6-8/10-12 years relevant experience in MHP C&I	1	0	1



		(Elect/Instrumentation)	maintenance with exposure to PLC troubleshooting			
4	Electrical Technician	ITI (Elect)	2-5 years relevant experience in MHP electrical maintenance and should possess valid class-A electrical license	5	0	5
5	C&I Technician	ITI (Instrumentation)	2-5 years relevant experience in MHP C&I maintenance	2	0	2
6	Electrical Helper	ITI (Elect)	2-5 years relevant experience in MHP electrical maintenance and should possess valid class-A electrical license	5	0	5
7	C&I Helper	ITI (Instrumentation)	2-5 years relevant experience in MHP C&I maintenance	2	0	2
<b>E. Administration and Misc Staff</b>				<b>5</b>	<b>3</b>	<b>8</b>
1	Safety Officer	Diploma in Safety	2-5 years relevant experience in safety	1	0	1
2	Store Keeper	Graduate/Diploma/Suitable	2-5 years relevant experience in site stores management activities	1	0	1
3	Store Assistant	Graduate/Diploma/Suitable	1-2 years relevant experience in site stores management activities	2	0	2
4	Office Assistant	Graduate/Diploma/Suitable	2-5 years relevant experience in site HR/IR/Accounts activities	1	0	1
5	Security Staff	Experienced	3-5 years relevant experience	0	3	3
<b>F. Housekeeping</b>				<b>30</b>	<b>0</b>	<b>30</b>
1	Housekeeper/sweepers	Experienced	2-3 years relevant experience	30	0	30
<b>Total (A+B+C+D+E+F)</b>				<b>104</b>	<b>123</b>	<b>227</b>

**Note:**

1. The above qualification and experience shall be required for all the manpower.
2. 01 (One) Fire Watcher to be added in each shift for observation and control
3. Any person, supervisor and above shall be taken only after due technical assessment from GMDC.
4. No person must be relieved from site, without competent-suitable reliever and approval from GMDC.



5. The indicative list of manpower requirement for O&M of various regions is given below:

S. No.	Designation/Particulars	Designation/Particulars	NWD/GEN	Daily Shift (A+B+C)	Total Indicative Manpower (exc. Relievers)
<b>A. Supervisors</b>					
1	Overall MHP & AHP Head	Resident Manager	1	0	1
2	Overall MHP & AHP O&M In-Charge	Manager (O&M In-Charge & Planning)	1	0	1
	<b>Sub-total (A)</b>		<b>2</b>	<b>0</b>	<b>2</b>
<b>B. Operations of lignite handling plant</b>					
1	Dump hopper	Field Operator	0	3	3
2	Apron feeder, DC, Sizer-1	Field Operator	0	3	3
3	CBF 1, Flap gate 1-2	Field Operator	0	3	3
4	CBF 2-3, Flap gate 3-4	Field Operator	0	3	3
5	C-1A-1B, MD-1, 2, ILMS-1, 2, Sizer 2-3	Field Operator	0	3	3
6	C-2A-2B, MD-3-4, ILMS 3-4	Field Operator	0	3	3
7	UFF 1-2, Impactor 1-2	Field Operator	0	3	3
8	C-3A-3B, MD 5-6, ILMS 5-6	Field Operator	0	3	3
9	RSC 1-2, Screen house hoppers	Field Operator	0	3	3
10	RPG 3-10, UBF 3-10, Screen 1-8	Field Operator	0	3	3
11	BF 1-11	Field Operator	0	3	3
12	CR 1, SCH hopper	Field Operator	0	3	3
13	Flap gate 5-8, C-4A-4B, MD 7&8	Field Operator	0	6	6
14	C-5A-5B, TT 1-2, bunkers	Field Operator	0	6	6
	<b>Sub-total (B)</b>		<b>0</b>	<b>48</b>	<b>48</b>
<b>C. Operations of lime handling plant</b>					
1	LM Apron feeder, LM DC, LM Sizer-1, LM -01 conveyor	Field Operator	1	0	1
2	LM C-1A-1B, UBF 1-2, LM MD 1-2, LM ILMS 1-2, LM surge hopper	Field Operator	1	0	1
3	LM RPG 01-02, LM UBF 3-4, LM IMP 1-2	Field Operator	1	0	1
4	LM C2A-2B	Field Operator	1	0	1
5	LM TT 1-2, LM Bunker	Field Operator	1	0	1
	<b>Sub-total (C)</b>		<b>5</b>	<b>0</b>	<b>5</b>



<b>D. Operations of ash handling plant</b>					
1	U 1-2 buffer hopper & IMBA silo	Field Operator	1	6	7
2	ESP 1-2 and compressor	Field Operator	1	3	4
3	Silo area	Field Operator	1	9	10
	<b>Sub-total (D)</b>		<b>3</b>	<b>18</b>	<b>21</b>
<b>E. Operations of MHP (lime, lignite) &amp; AHP control room</b>					
1	Control room and field	Shift In-Charge (Operations)	0	3	3
2	Control room (MHP)	PLC/Desk Operator	1	3	4
3	S/R Machine	Field Operator	0	3	3
4	MCC	Electrician (Shift Operations)	0	3	3
5	Control room & field (AHP)	PLC/Desk Operator	2	3	5
	<b>Sub-total (E)</b>		<b>3</b>	<b>15</b>	<b>18</b>
<b>F. Mechanical maintenance of lignite, lime, ash handling plants</b>					
1	Lignite and Lime Handling Plants	Mechanical In-charge	1	0	1
		Shift In-Charge (Mech. Maint.)	0	3	3
		Field Engineer	2	0	2
		Foreman	1	0	1
		Mill Wright Fitter	2	0	2
		Fitter	4	3	7
		Welder	4	3	7
		Rigger	8	6	14
		Helper	7	6	13
	<b>Sub-total (F1)</b>		<b>30</b>	<b>21</b>	<b>51</b>
2	Ash Handling Plant	Mechanical In-charge	1	0	1
		Fitter	2	3	5
		Welder	2	3	5
		Rigger	2	0	2



		Helper	2	3	5
	<b>Sub-total (F2)</b>		<b>9</b>	<b>9</b>	<b>18</b>
	<b>Sub-total (F)</b>		<b>39</b>	<b>30</b>	<b>69</b>
<b>G. Electrical and C&amp;I maintenance of lignite, lime, ash handling plant</b>					
1	Lignite, Lime, Ash Handling Plants	Electrical and C&I In-Charge	1	0	1
		Electrical Engineer	1	0	1
		C&I Engineer	1	0	1
		Electrical Technician	5	0	5
		C&I Technician	2	0	2
		Electrical Helper	5	0	5
		C&I Helper	2	0	2
	<b>Sub-total (G)</b>		<b>17</b>	<b>0</b>	<b>17</b>
<b>H. Administration and miscellaneous staff</b>					
1	Administration and miscellaneous staff	Safety Officer	1	0	1
2		Store Keeper	1	0	1
3		Store Assistant	2	0	2
4		Office Assistant	1	0	1
5		Security Staff	0	3	3
	<b>Sub-total (H)</b>		<b>5</b>	<b>3</b>	<b>8</b>
<b>I. Housekeeping</b>					
1	Housekeeping	Housekeeper/sweepers	30	0	30
	<b>Sub-total (I)</b>		<b>30</b>	<b>0</b>	<b>30</b>
	<b>Total (A+B+C+D+E+F+G+H+I)</b>		<b>104</b>	<b>115</b>	<b>218</b>

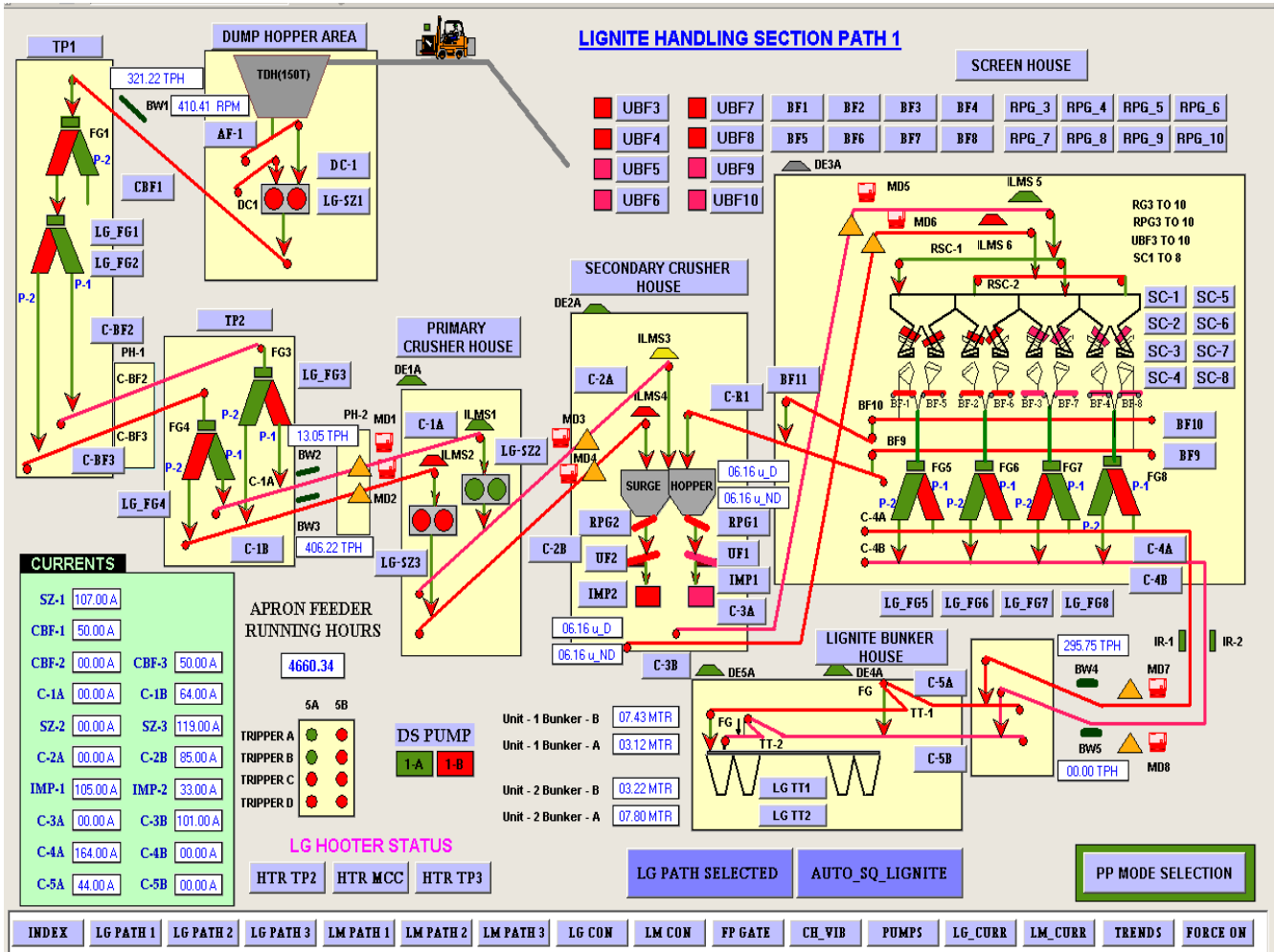


*Note: Above is only an indicative list of manpower required. The successful bidder must ensure smooth operations and maintenance of MHP and AHP and related auxiliaries as described in the detailed scope of work. For the same, extra manpower is required, the successful bidder is expected to ensure sufficient manpower without any cost burden on GMDC.*

# Annexure J: Flowcharts

## Lignite flow chart

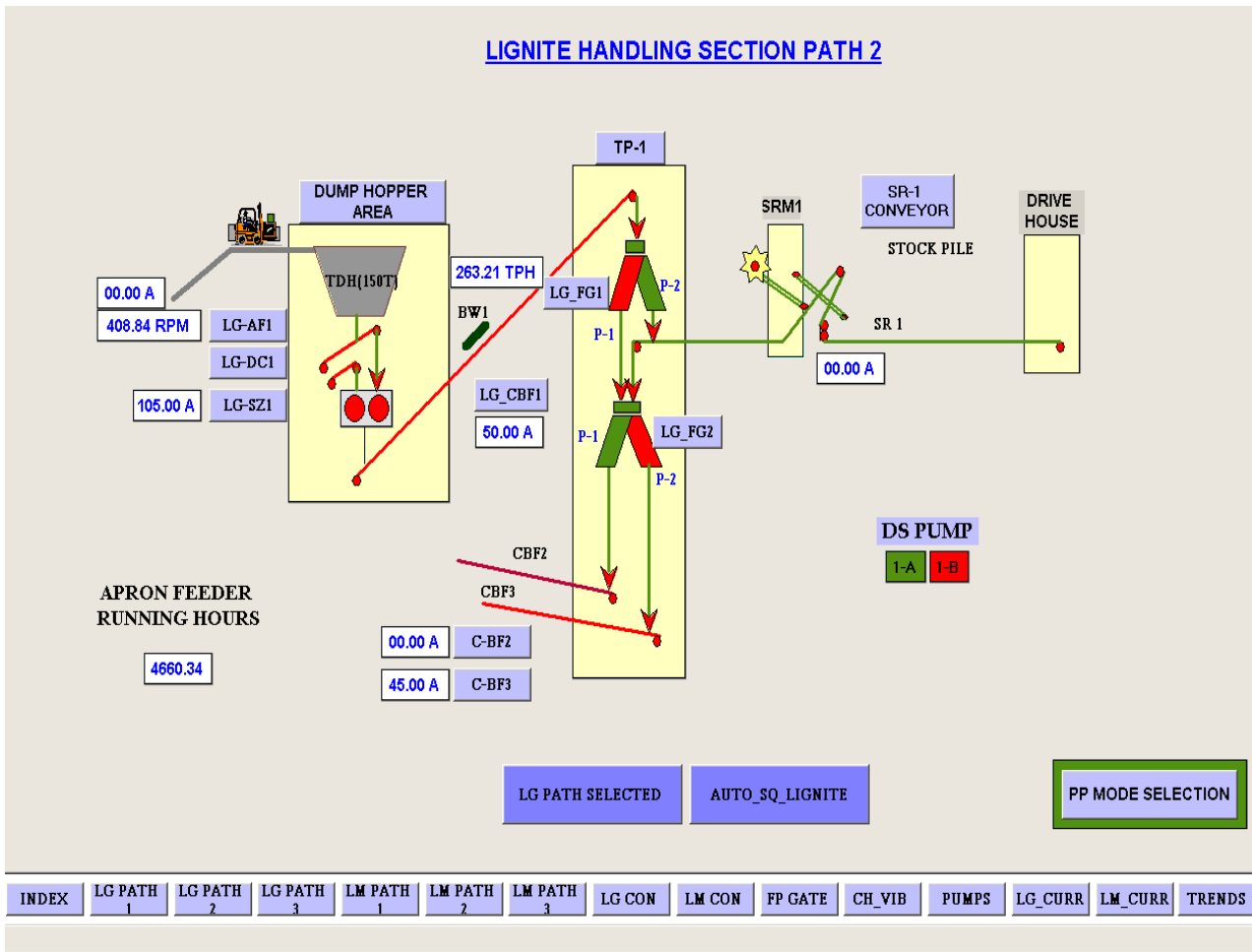
### Path: 01 (Direct feeding)



### Lignite crushing sequence

- Incoming lignite lump size 1200MM
- First crushing from 1200 MM to 300MM (Sizer-01)
- Second crushing from 300MM to 75MM (Sizer-02/03)
- Third crushing from 75MM to 6 MM (Impactor-01/02)
- After screening final out put 6 MM and bellow 6MM size (Screen-01 to 08)
- After screening final output 6MM feed in bunker.

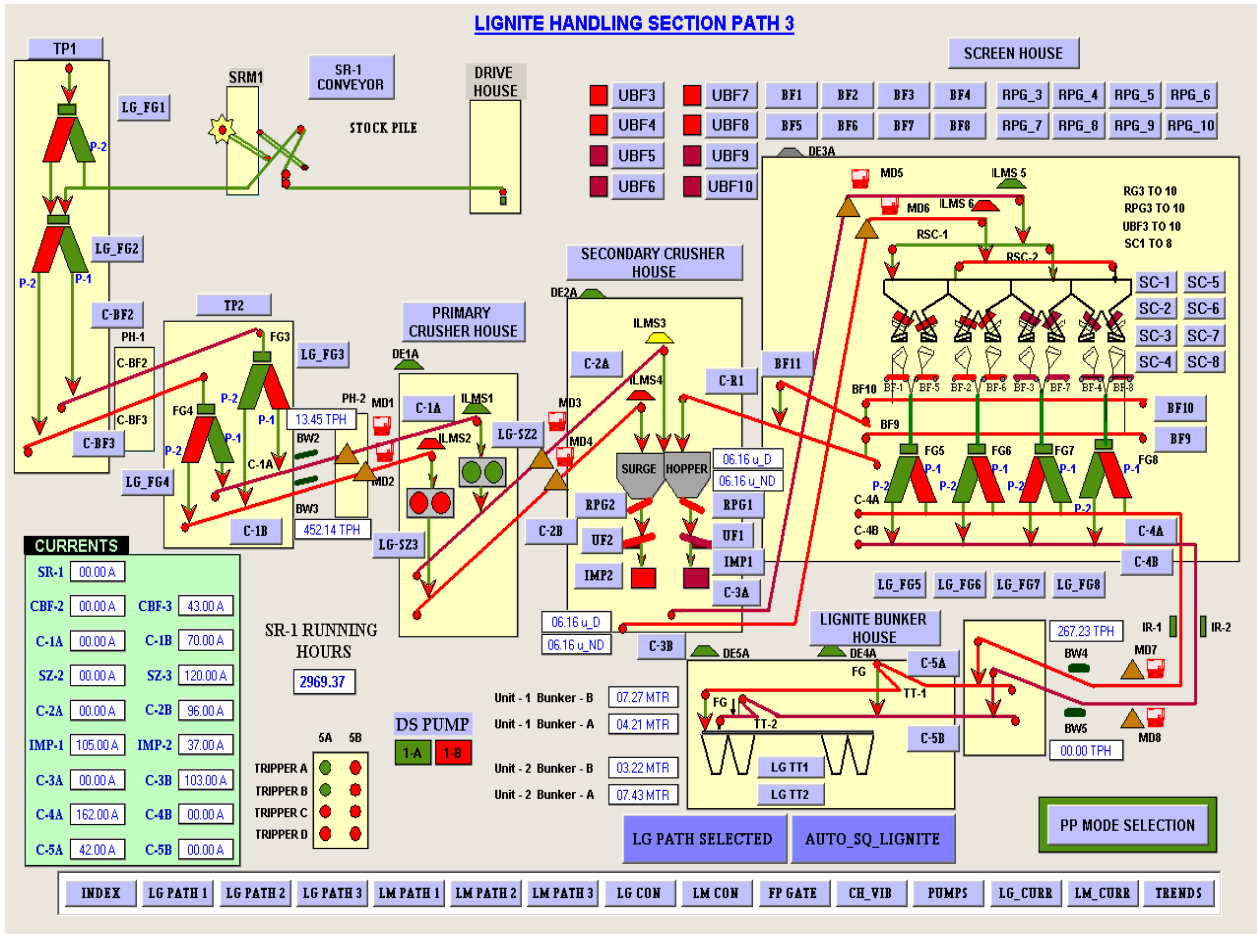
**Path:02 (Lignite stacking path)**



**Lignite crushing sequence**

- Incoming lignite lump size 1200MM
- First crushing from 1200 MM to 300MM (Sizer-01)
- Stacking in stacker yard through stacker-Reclaimer 300MM.

**Path:03 (Lignite feeding through stacker-reclaimer machine)**

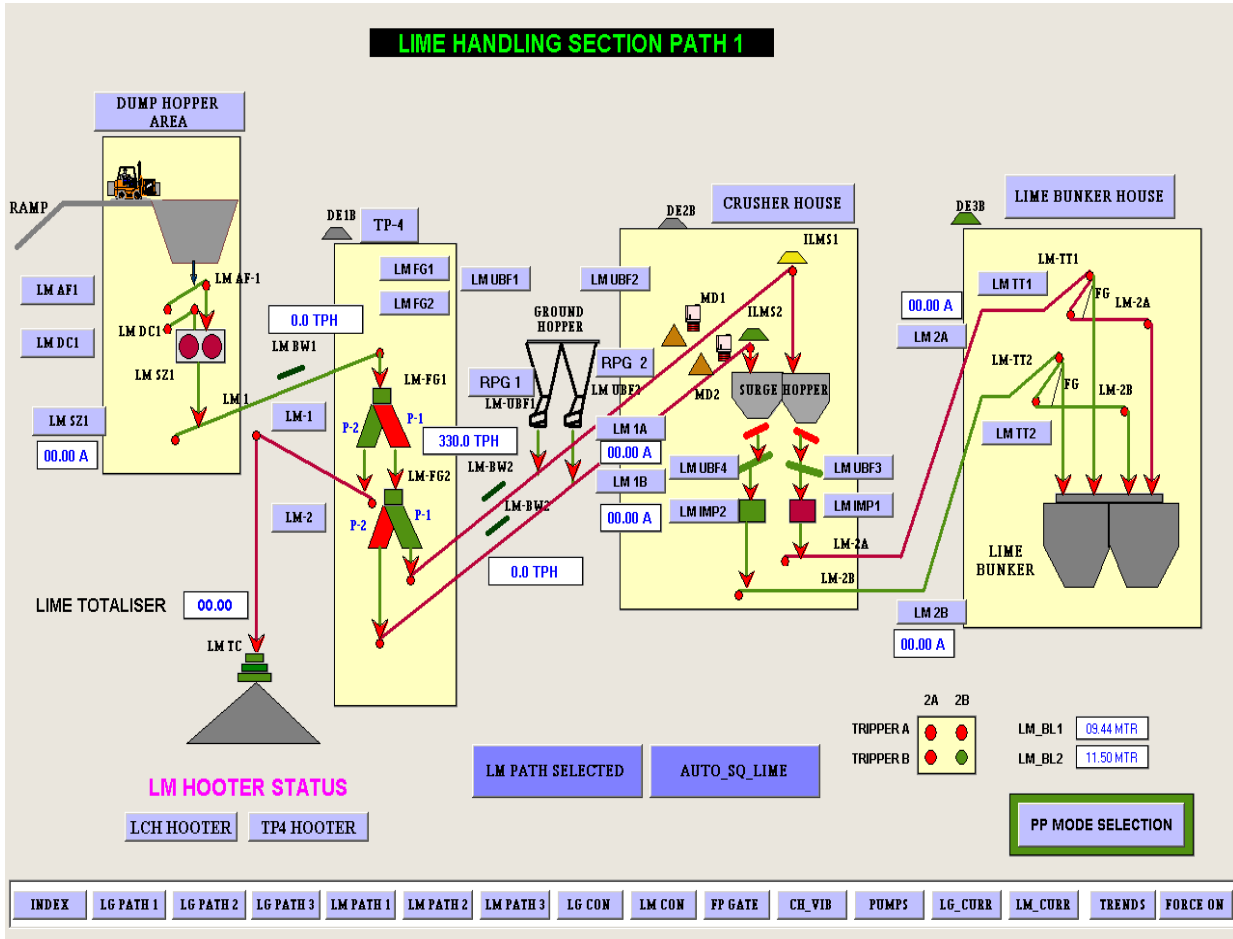


**Lignite crushing sequence**

- Stacker yard material reclaimed through stacker-Reclaimer 300MM
- Second crushing from 300MM to 75MM (Sizer-02/03)
- Third crushing from 75MM to 6 MM (Impactor-01/02)
- After screening final out put 6 MM and bellow 6MM size (Screen-01 to 08)
- After screening final out put 6MM feed in bunker.

**Lime flow chart**

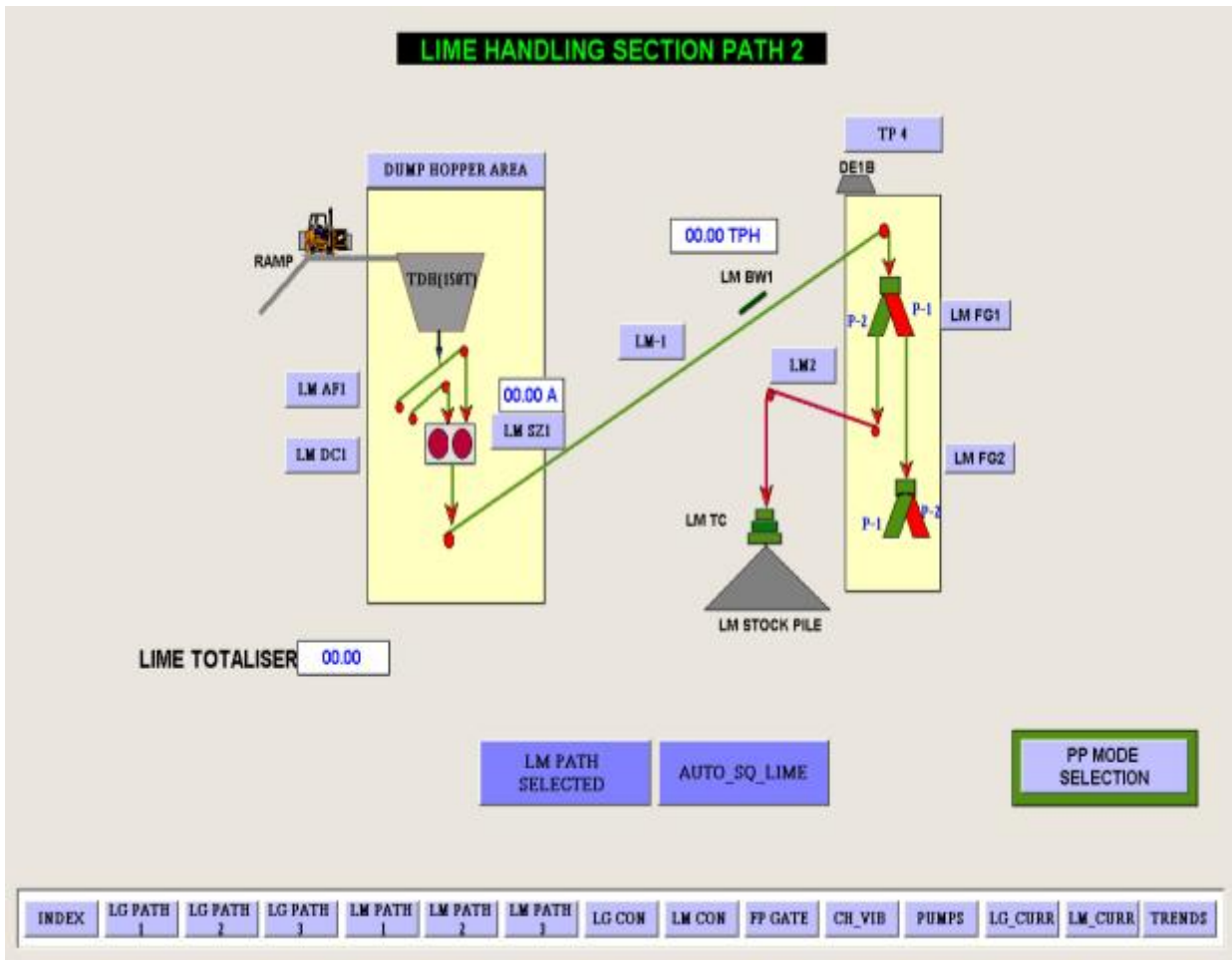
**Path: 01 (Direct feeding)**



**Lime crushing sequence**

- Incoming lime lump size 1200MM
- First crushing from 1200 MM to 300MM (Sizer-01)
- Second crushing from 300MM to 25MM (Impactor-01/02)
- After Impactor-01/02 crushing final out put 20MM around feed in bunker.

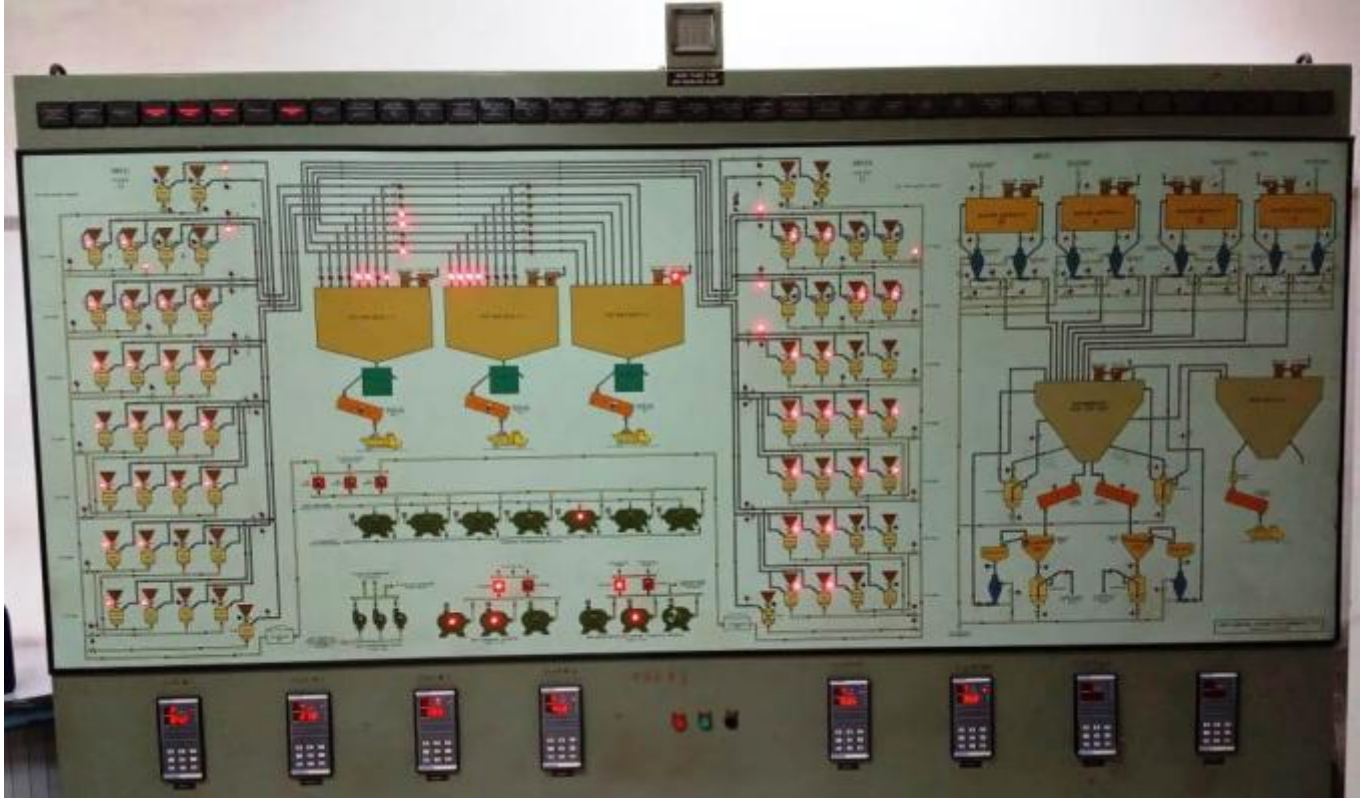
**Path:02 (Lime stacking path)**



- Incoming lignite lump size 1200MM
- First crushing from 1200 MM to 300MM (Sizer-01)
- Stacking in stacker yard through Telescopic chute 300MM.

**Ash Handling Plant**

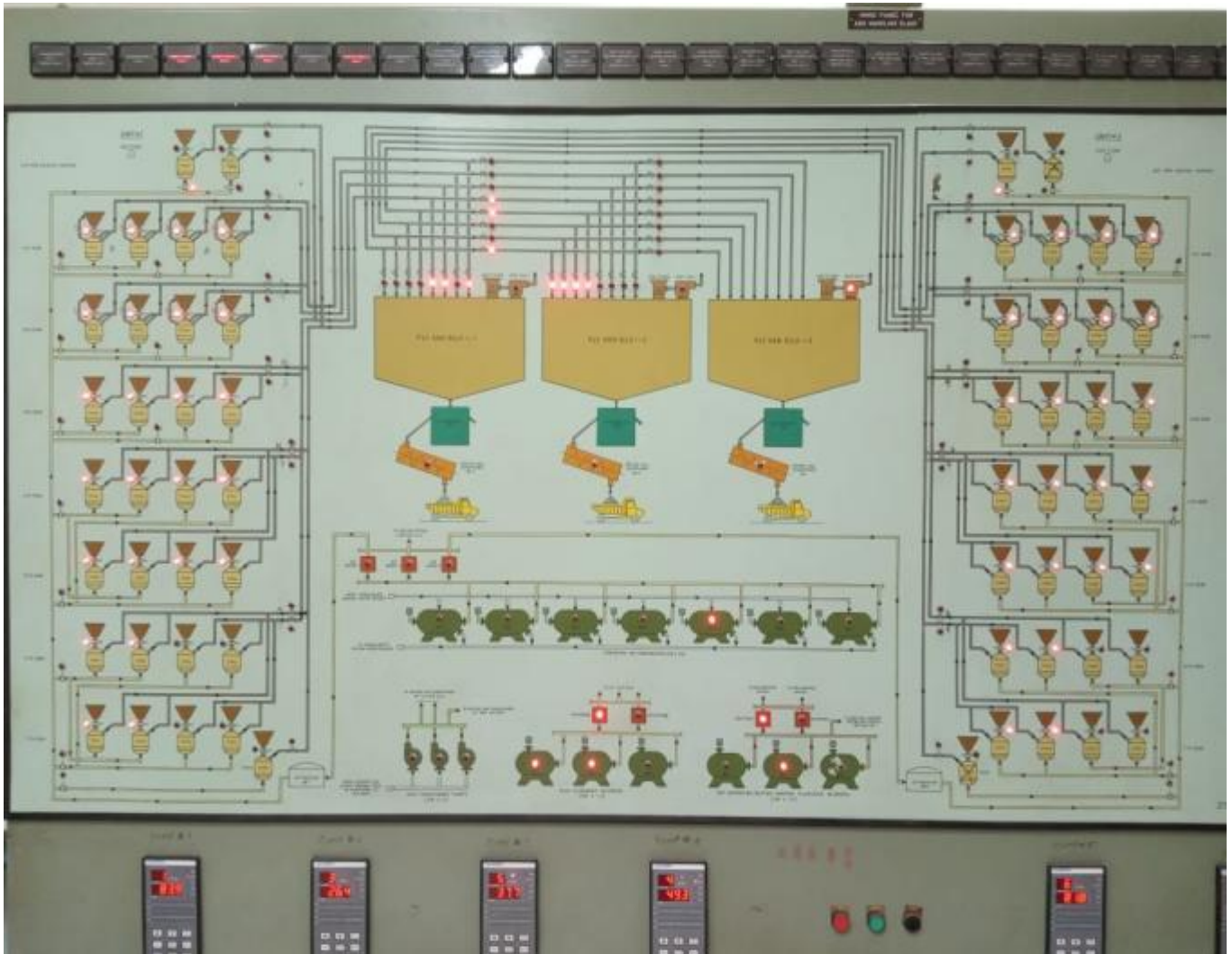
**Over view for Fly ash and bottom ash system**



Ash Handling Plant capacity:

1. Fly ash each ESP conveying capacity: 110TPH.
2. Bed ash conveying capacity each unit:  $12.5 \times 2 = 25$ TPH
3. Bed ash conveying capacity from IMBA silo to Main Bed ash silo :  $25 \times 2 = 50$  TPH

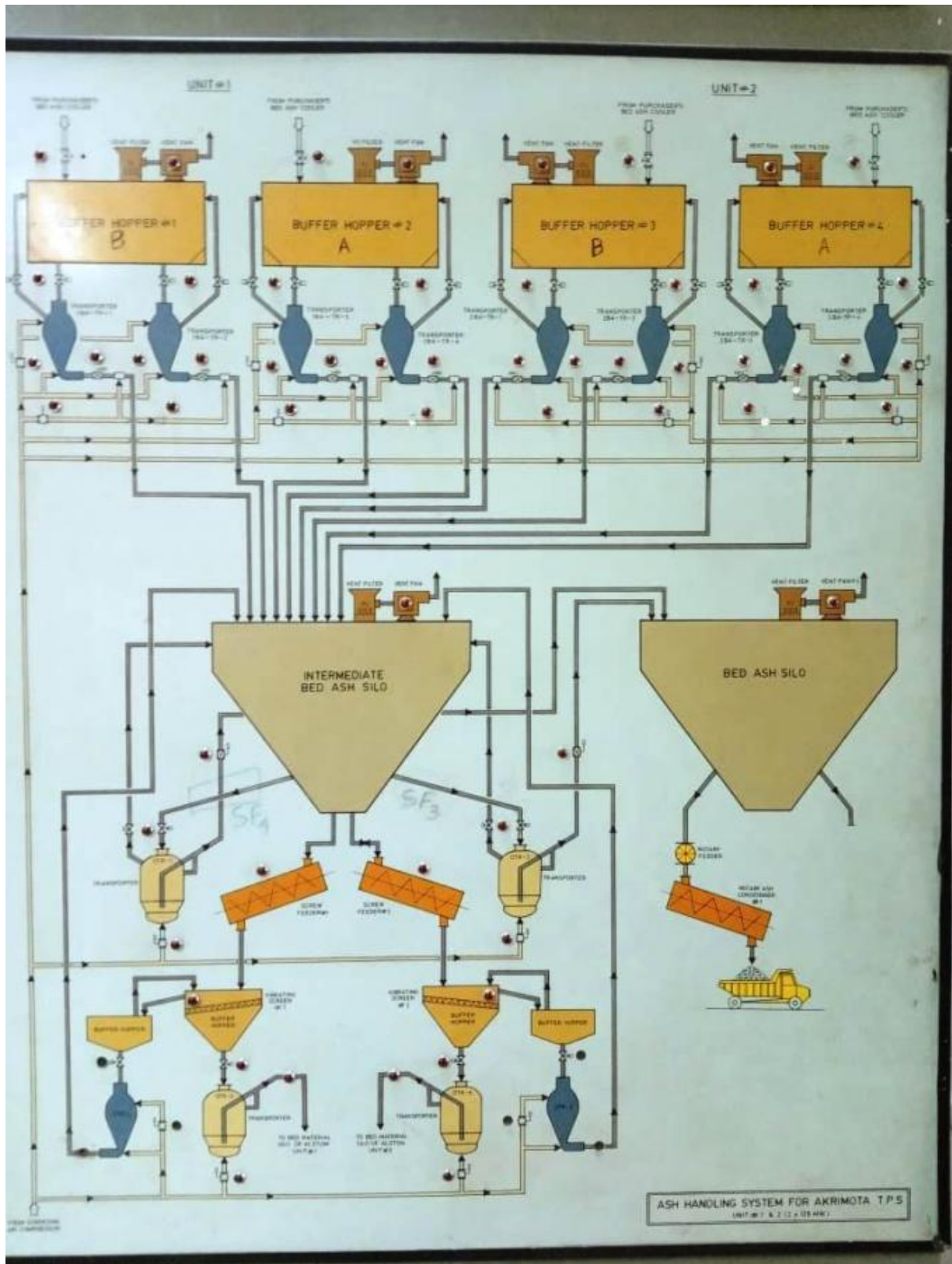
### Dry Dense Phase Fly Ash Handling system.



Ash Handling Plant capacity:

1. Fly ash each ESP conveying capacity: 110TPH.
2. Bed ash conveying capacity each unit:  $12.5 \times 2 = 25\text{TPH}$
3. Bed ash conveying capacity from IMBASilo to Main Bed ash silo :  $25 \times 2 = 50\text{ TPH}$

### Bottom Ash handling System





**FORM PA**

**CHECK LIST OF DOCUMENTS ENCLOSED WITH TENDER**

**TECHNICAL BID**

<b>Sr. No.</b>	<b>Document</b>	<b>Declaration (Strike out whichever is not applicable)</b>
1.	Tender Processing Fee	Yes/No
2.	EMD	Yes / No
3.	Form–PA (check list of documents enclosed with tender)	Yes / No
4.	Form–PB (Status of the Bidder)	Yes / No
5.	Form–PC-(CA Certification for Financial Details and work carried out during the last seven years of bidder))	Yes / No
6.	Form-PD (Declarations)	Yes / No
7.	Form- PE (Undertaking of Genuineness of Document)	Yes / No
8.	Form PF (Undertaking of Indemnity)	Yes / No
9.	Form PG (Site Visit)	Yes / No
10.	Power of Authority to sign the documents (Duly Notarized on Stamp paper of Rs. 300)	Yes / No

**PRICE BID**

<b>1</b>	Online Price bid submission in <b>Form-PP</b>	Yes / No
----------	---	----------



**FORM PB**

**STATUS OF THE BIDDER**

<b>Particulars</b>	<b>Details</b>
Name of the Bidder:	
Address :	
Registered office :	
For correspondence :	
Telephone No.	
Fax No.	
E-mail Address	
Attested copies of Deeds, Articles of association to be enclosed	
Name & contact number of person holding power of attorney (Attested copy of power of attorney to be enclosed)	
Names of Partners with their Present and permanent address	
Name of Bankers with full address and Telephone No& Bank Account Details (Cancelled Cheque to be enclosed)	
PAN of Bidder	
GST Registration No. of Bidder	
PF Registration No.	
Whether enlisted in other dept., if yes, then furnish the details pertaining to class and the amount qualified to tender	
Was the applicant or its partners or Directors black listed in past by any Govt. or any other body.	
Details pertaining to the work incomplete, if any	
Details of the litigation, court cases and arbitration either completed or under progress during last 10 years by/ against any partner/proprietor of present entity in any capacity.	

Signature and Stamp of the Bidder



## FORM PC

### 1. Turnover and Net Worth

On the basis of the **audited books of accounts** produced before us by M/s. \_\_\_\_\_, we certify that as per the books of account Net worth and Turn Over of the firm M/s \_\_\_\_\_ are as under:

1.1 Net Worth= Rs. \_\_\_\_\_ for the Year ended on 31.03.2021  
Rs. \_\_\_\_\_ for the Year ended on 31.03.2022  
Rs. \_\_\_\_\_ for the Year ended on 31.03.2023

**Average Net Worth Rs.** \_\_\_\_\_

1.2 Turn Over = Rs. \_\_\_\_\_ for the Year ended on 31.03.2021  
Rs. \_\_\_\_\_ for the Year ended on 31.03.2022  
Rs. \_\_\_\_\_ for the Year ended on 31.03.2023

**Average Turnover of Rs.** \_\_\_\_\_

### 2. Details of Work Carried Out by the Bidder During the Last Seven Years (i.e. period from: 01/09/2016 to 31/08/2023)

Sr. No.	Description of work with Work place	Name of client with postal address	Work Order number and date	Contract Period		Actual Quantity worked	Amount without GST of work order	Work experience certificate attached
				From (Date)	To (Date)			
								Yes/No
								Yes/No
								Yes/No
								Yes/No

Signature and Stamp of the Bidder

Signature and Stamp of the CA

**TO BE CERTIFIED BY CHARTERED ACCOUNTANT SHOWING MEMBERSHIP NO/ FIRM REGISTRATION NO**



## FORM PD

### Declaration

(On letter head of the Bidder)

DATE:

To,

The General Manager (Power),

Gujarat Mineral Development GMDC Ltd.,

“KhanijBhavan”, 132 ft. Ring Road,

University Ground, Vastrapur,

Ahmedabad-380015

Dear Sir,

I/we here by solemnly declare that

1. Any of our Directors or Partners, jointly or severally and/or individually or our firm/GMDC have not been black listed by the Central Govt. or the State Govt. or its undertakings.
2. We have not put any condition in our offer with respect to Tender No. \_\_\_\_\_,
3. We have accepted all the terms and conditions, including Annexure, Corrigendum if any, as specified in the Tender Document No. \_\_\_\_\_ unconditionally.

I/we here by further declare that, if the declaration is found untrue, the GMDC shall be entitled to take any action against us severally and/or individually or our firm/GMDC in this regard in any manner that may be deemed fit by GMDC.

Yours faithfully,

\_\_\_\_\_  
Signature and Stamp of the Bidder



**FORM PE**

**(Format for Affidavit)**

**A F F I D A V I T**

**Undertaking Regarding Geniuses Of Documents  
(On Non-Judicial Stamp Paper Of Rs 300/-)**

I/We, \_\_\_\_\_, Partner/Director/Legal Attorney/Accredited  
Representative of M/s. \_\_\_\_\_ solemnly declare that:

1. I/We are submitting Tender for the work \_\_\_\_\_  
\_\_\_\_\_ against Tender No. \_\_\_\_\_
2. None of the Partners/Directors of our firm/GMDC is relative of employee of GMDC.
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 it is found at any point of time that our documents are not genuine then in that case our tender will be rejected, earnest money deposited by us will be forfeited and we will be debarred from participating in further/future GMDC tenders and/or any action as deemed fit by GMDC may be taken against us, including termination of the contract, forfeiture of all dues including Earnest Money / Security deposit and banning/delisting of our entity and all related persons etc.

**SIGNATURE OF THE BIDDER**

**WITH SEAL**

Dated .....



## FORM PF

### Undertaking Of Indemnity (On Letter head of the Bidder)

To,

The General Manager (Power)  
Gujarat Mineral Development Corporation Ltd.  
Khanij Bhavan  
132' Ring Road, University Ground,  
Vastrapur,  
Ahmedabad.

Dear Sir,

We M/s. ----- hereby undertake that, we shall at all times, indemnify and keep indemnified that GMDC Limited from any and all liability for damages resulting from or arising out of or in any way connected with the operations covered by the Tender No. \_\_\_\_\_. We shall be responsible for all risk arising in connection with or on account of the operations covered by the contract covered by the above tender and shall make good all losses and damages arising there from. In case, the GMDC Limited shall incur any cost or expense or suffer any loss on account of any claim demand or course of action brought against us and arising out of the operations covered by the Bidder/tender, the GMDC Limited shall have the power (without being bound to do so) to defend, contest or compromise any such claim demand or cause of action. Any amount that may become payable by GMDC Limited and any cost expense etc. that may be incurred by the GMDC Limited in this behalf, shall also be recoverable from us, without prejudice to your other rights.

Yours faithfully,

For -----

(Signature & Stamp of the Bidder)



---

## **FORM PG**

### **Declaration**

(On letter head of the Bidder)

#### **Site Visit**

We \_\_\_\_\_ hereby certify that we have fully understood the site condition in respect of Tender No. \_\_\_\_\_ for all the works mentioned above at \_\_\_\_\_. We have obtained all relevant details, information, data, existing working conditions, existing industrial environment etc. We have also studied the working conditions as proposed in the tender and availability of power supply, water supply, man power, machineries, transportation facility etc.

We hereby agree and undertake not to raise any dispute and/or objection at any stage on any ground whatsoever, during the currency of the contract if awarded to us.

#### **SIGNATURE OF THE BIDDER WITH SEAL**

Dated .....



## PRICE BID FORM – PP

(To be submitted online)

Sr. No.	Description	Total amount per month (INR, Excluding GST)	Total amount per year (INR, Excluding GST)
1	Operation and maintenance of Lignite and Ash Handling including weighbridges (excluding HEMM)		
2	Operation and maintenance of Lime Handling System		
3	Deploying Excavator 01 No. (20 MT Operating Capacity) with Fuel (Diesel) and Operator with all terms and conditions as mentioned in scope of work		
4	Deploying Wheel Loader 01 No. (3 Cu. Mtr. Bucket Capacity) with Fuel (Diesel) and Operator with all terms and conditions as mentioned in scope of work		
5	Deploying Skid Loader 02 No. (Each having 1.5-ton Bucket Capacity & 5-ton Load carrying Capacity) with Fuel (Diesel) and Operator with all terms and conditions as mentioned in scope of work		
6	Deploying Hydraulic Double Differential Dumper 04 No. (Each having capacity of 18 MT) with Fuel (Diesel) and Operator with all terms and conditions as mentioned in scope of work		

GST shall be reimbursed extra as per prevailing and applicable rates on submission of proof thereof.



**Please note the following details for Compulsory e-confirmation for Bank Guarantee through ICICI Bank through SFMS under our:**

Gujarat Mineral Development Corporation Limited (GMDC)  
132 Ft Ring Road, Near University Ground Vastrapur, Ahmedabad.  
Bank Name: ICICI Bank Ltd  
IFS Code: ICIC0000024  
UIC GMDC530265584 for Field 7037 MT760

**FORMAT OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT  
(EMD)**

(On Non-judicial Stamp paper to be submitted along with submission of bids)

..... (Name of the Bank)  
Address.....  
Guarantee No.....  
A/C Messrs..... (Name of Bidder)  
Date of Expiry.....  
Limit to liability (currency & amount).....  
Invitation For Tender No..... Dated.....( bidding document )  
For..... (Name of Facilities)

**Subject:** Earnest Money Deposit Bank Guarantee.

Date.....2023

To,

Gujarat Mineral Development Corporation Ltd.  
132 Ft Ring Road,  
Near University Ground  
Vastrapur,  
Ahmedabad.

Dear Sir,

In consideration of Gujarat Mineral Development Corporation (hereinafter called "GMDC") which expression shall unless repugnant to the subject of context include his successors and assigns having agreed to exempt M/s..... (herein after called "Bidder") from demand



under the terms and conditions of “Technical Bid Document” ( hereinafter called the said “Bidding Document”) issued by the GMDC vide Tender No. \_\_\_\_\_ for the work \_\_\_\_\_

( Name of the facilities ) from Earnest Money Deposit (EMD) of Bid for the due fulfillment by the Bidder of the terms and conditions contained in the said Bidding Document on production of Bank Guarantee for INR \_\_\_\_\_

( \_\_\_\_\_ only ) ( figure in words).

- 1.** We the \_\_\_\_\_ ( Name of Bank ) hereinafter referred to as “Bank” having our registered office at \_\_\_\_\_ ( address of Bank ) do hereby undertake and agree to indemnify and keep indemnified GMDC to extent of INR \_\_\_\_\_ ( \_\_\_\_\_ only ) ( figures in words ) against any losses, damage cost, charges and expenses caused to or suffered by or that may be caused or suffered by GMDC by reason of any breach or breaches by the Bidder of any of the terms and conditions contained in the said Bidding Document and unconditionally pay the amount claimed by GMDC on demand and without demur to the extent aforesaid.
- 2.** We \_\_\_\_\_ (Name of Bank) do hereby undertake to pay the amounts due and payable under the guarantee without any demur merely on a demand by you stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by you by reason of any breach by the said Bidder of any of the terms or conditions contained in the said Bidding Document by reason of the Bidder’s failure to fulfill the conditions of said Bidding Document. Any such demand on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding INR \_\_\_\_\_.
- 3.** We \_\_\_\_\_ ( Name of Bank ) further agree that GMDC shall be the sole judge of and as to whether the Bidder has committed any breach or breaches of terms and conditions of the said Bidding Document and the extent of loss, damages, costs, charges and expenses caused to or suffered by or that may caused to or suffered by GMDC on account hereof to the extent of the Bid Security required to be deposited by the Bidder in respect of the said document and the decision of GMDC that the Bidder has committed such breach or breaches and as to the amount or amounts of loss, damages, costs, charges, and expenses caused to or suffered by or that may be caused to or suffered by GMDC shall be final and binding on us.
- 4.** We \_\_\_\_\_ (Name of Bank) further agree that guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance on the said Bidding Document and that it shall continue to be enforceable till you certify that terms and conditions of the said Bidding Document have been fully and properly carried out by the said Bidder and accordingly discharge the guarantee. Unless a demand or claim under this guaranteed is made on us in writing on or before the (date) \_\_\_\_\_ we shall be discharged from all liability under this guarantee.
- 5.** We \_\_\_\_\_ ( Name of Bank ) further agree with you that you have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Bidding Document or to extend time of performance by the said Bidder from time to time or to postpone for any time or from time to time any of the powers exercisable by you against the said Bidder and to forbear or enforce any of the terms and conditions relating to the said Bidding Document and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Bidder or for any forbearance act or omission on your part or any indulgence by you to the said Bidder or any such matter or thing whatsoever under the law relating to sureties would but for this provision have effect of so relieving us.



- 6.** It shall not be necessary for GMDC to proceed against the Bidder before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank, notwithstanding any security which GMDC may have obtained from the Bidder at this time when proceeding are taken against Bank hereunder be outstanding or unrealized.
- 7.** We \_\_\_\_\_ (Name of Bank) further undertake to unconditionally pay the amount claimed by GMDC merely on demand and without demur to the extent aforesaid.
- 8.** We, the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of GMDC in writing.
- 9.** This Guarantee will not be discharged due to the change in the constitution of the Bank or the said bidder.
- 10.** The Bank has under its constitution power to give this guarantee and \_\_\_\_\_ Mr. \_\_\_\_\_ who has signed it on behalf of the Bank have authority to do so.

Yours faithfully

For.....

(Name of the Bank)

Notwithstanding anything contained hereinabove

- (I) Our liability under this Bank Guarantee shall not exceed Rs \_\_\_\_\_/- (**Rupees \_\_\_\_\_ only**)
- (II) This Bank Guarantee is valid up to \_\_\_\_\_ (Date).
- (III) We are liable to pay the guarantee amount or any part thereof under this bank Guarantee only and only if you serve upon us a written claim or a demand on or before \_\_\_\_\_ (date).
- (IV) This bank guarantee is operative only when accompanied with SFMS advice from us.

Yours faithfully

For \_\_\_\_\_(Name of the Bank)

**Yours faithfully**

**For.....**

**(Name of the Bank)**