छत्तीसगढ नाज्य विद्युत उत्पादन कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821



No.-03-03/SE:W-I/MW-429/ 3989

Raipur Date- 28/01/2022

## **CORRIGENDUM - I**

Online bid invited through CSPCL e-bidding system (SAP SRM) for "Work contract for co-ordination in operation, monitoring and maintenance of coal handling plant with all sub system / auxiliaries including wagon unloading work of 2X500 MW, ABVTPS, CSPGCL, Marwa" issued vide Tender No. MW-429, Rfx No. 8100024059 is amended regarding due date of submission of bid upto 11.02.2022.

## (1) Due Date of bid submission is hereby extended upto 11.02.2022 15:00 hrs. :-

S.N.	Tender No. / Rfx No.	Online Tender fee (Rs.)	Online E.M.D. (Rs.)	Due date & time for bid submission	Bid opening date & time (EMD, Tech. Bid)
1.	MW-429/ 8100024059 (With RLA)	5900/- (5000/- +GST @18%)	5,00,000/-	11.02.2022 Upto 15:00 Hrs.	11.02.2022 at 15:30 Hrs.

Tender schedule, scope of work, contract period (Clause no. 05, Page no. 19 of tender booklet), extension clause (Clause no. 16 (a), Page no. 13 of tender booklet) and Price variation clause (Clause no. (iii), Page no. 41 of tender booklet) is also revised as below and it will override the previous clauses:-

#### (2) TENDER SCHEDULE (REVISED):-

Sl. No.	Derticulous	04	UoM	To be quoted online only	
	Particulars	Qty.		Rate (Rs.)	Amoun t (Rs.)
1(a)	Maintenance of Coal Handling Plant of 2X500 ABVTPS Marwa with all the sub system along-with safety appliances, Entire mechanical, Electrical, C&I including PLC, Hydraulic system, dust extraction & suppression etc. Co-ordination assistance in 24X7 operation of CHP, fire fighting in coal stock yard, stone picking, rainy season work etc. as per detailed scope of work as contained in tender documents <b>excluding</b> <b>unloading of coal wagons.</b> Housekeeping of entire CHP, tunnels, stacker reclaimer, conveyor galleries, transfer points, stockyard, bunker floor etc. auxiliaries.	365 (For 1 <sup>st</sup> Year)	Days		

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1(b)	Maintenance of Coal Handling Plant of 2X500 ABVTPS Marwa with all the sub system along-with safety appliances, Entire mechanical, Electrical, C&I including PLC, Hydraulic system, dust extraction & suppression etc. Co-ordination assistance in 24X7 operation of CHP, fire fighting in coal stock yard, stone picking, rainy season work etc. as per detailed scope of work as contained in tender documents <b>excluding unloading of coal wagons.</b> Housekeeping of entire CHP, tunnels, stacker reclaimer, conveyor galleries, transfer points, stockyard, bunker floor etc. auxiliaries.	365 (For 2 <sup>nd</sup> Year)	Days	
2	Crusher overhauling	08	Nos.	
3	Overhauling of Trippers	16	Nos.	
4	LT motor from overhauling as per annexure 6G	48	Nos.	
5	ILMS overhauling	08	Nos.	
6	Suspended Magnet servicing & overhauling	04	Nos.	
7	Lift /Elevator overhauling & certification	04	Nos.	
8	Overhauling of Paddle Feeders	08	Nos.	
9(a)	Unloading of Coal from BOBRN wagons into Track Hopper at ABVTPS Marwa for 365 days period (1 <sup>st</sup> Year).	250000	MT	
9(b)	Unloading of Coal from BOBRN wagons into Track Hopper at ABVTPS Marwa for 365 days period (2 <sup>nd</sup> Year).	250000	MT	

#### Note:-

- (i) The contract shall be awarded initially for one year and thereafter for balance period of one year on satisfactory performance basis.
- (ii) For line item no. 01 in O&M contract of coal handling plant. Bidder must provide the price breakup on various heads such as:
  - (a) Man power deployment for O&M & housekeeping.
  - (b) Expert services.
  - (c) Oil Filtration.
  - (d) Consumables.
  - (e) Engine hauling charges and Demurrage charges & other major heads on yearly basis.
- (iii) Tentative quantity of coal for unloading at track hopper is 05 LMT for two year which may increase/decrease to any extent. The payment shall be made on actual basis i.e. Railway Receipt (RR) basis.
- (iv) The bidder is requested to go through the complete scope of work thoroughly and also visit the site before making the bid.
- (v) L-1 bidder will be decided on composite basis of offered price for two year for all items of tender schedule.

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#### (3) SCOPE OF WORK (REVISED) :-

## **Technical Specifications- Coal Handling Plant**

Coordination in Operation, Monitoring and Maintenance of Coal Handling Plant with all the sub systems/auxiliaries of 2X500 MW at MTTPP, Janjgir-Champa.

#### **1. INTRODUCTION:**

1.1. Chhattisgarh State Power Generation Company Limited (CSPGCL) has setup 2x500 MW Coal based thermal Power Plant at village Marwa-Tendubhata in District- Janjgir-Champa. Commercial operation from both the units has been started w.e.f 31.03.2016 and 31.07.2016 respectively. CSPGCL intends to award a contract for coordination in Operation, monitoring and maintenance of entire Coal Handling Plant including wagon unloading.

#### 2. SCOPE OF WORK:

#### 2.1. SCOPE - GENERAL:

- 2.1.1. Preparing and putting into implementation an effective coordination in Operation, monitoring and preventive maintenance program after approval from CSPGCL.
- 2.1.2. Standard Operation Plans will be provided by CSPGCL. Standard Maintenance Plans, routine service maintenance, preventive maintenance, condition monitoring, check lists are to be submitted by the contractor, joint protocol approval of the same from CSPGCL and implementation as per approved procedures.

#### 2.1.3. Commencement of contract:-

- 2.1.3.1. Contract is said to commence as soon as LOA/Order is issued and accepted by the agency.
- 2.1.4. Contractor has to develop, submit and get approval on Annual Maintenance and Spares Plan for all equipment under the Scope of Work.
- 2.1.5. Coal stock yard management (including receipt, unloading, stacking for proper measurement, feeding, bunkering, measurement, and preventive measures for reducing coal losses). This shall include but not limited to:
- 2.1.5.1. Visual inspection of coal on receipt.
- 2.1.5.2. Verification of physical condition of the coal
- 2.1.5.3. Unloading operation of coal through track hopper from BOBRN Wagons.
- 2.1.5.4. Assisting manpower for measurement of coal quantity receipt
- 2.1.6. General guidelines on unloading, stacking, storing-
- 2.1.6.1. Contractor shall ensure that during unloading process, fugitive dust emission is controlled through dust suppression and dust extraction systems so that this is within permissible limit as laid down by Statutory Environment bodies.
- 2.1.6.2. To assist CSPGCL during stacking of coal in the allotted area of the coal yard.
- 2.1.6.3. Stacking shall conform to the Standards being followed such as height, shape, direction etc. so as to ensure that the losses during stacking on account of wind losses, carpet

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losses, losses on account of spontaneous ignition are kept minimum, so as to achieve the benchmark parameters.

- 2.1.6.4. Removing of burning coal/preventing fire.
- 2.1.6.5. Contractor is also responsible to collect the samples mechanically/ through auto samplers depending upon the availability of collection equipment conforming to Indian Standards.
- 2.1.6.6. During monsoon, agency shall take all the precautions so that the moisture/rain water gets drained and the coal does not remain submerged in water.
- 2.1.6.7. The criteria for quantity losses and the formula for arriving at the same are described in the clause no. 2.3.16.
- 2.1.6.8. During unloading/stacking/storage, the contractor shall ensure that none of the steel structure gets encased with the coal which may result into accelerated corrosion of the same.
- 2.1.7. Importance of maintaining quality standards –
- 2.1.7.1. Controlling of fugitive dust emission is of paramount importance from environmental angle as well it can impact the performance of other nearby equipments in the scope of CHP contractor.
- 2.1.8. Reports and MIS -
- 2.1.8.1. Daily report The contractor is expected to sign off the joint daily report of quantity of coal received, coal fired with CSPGCL.
- 2.1.8.2. Daily report should also indicate the status of major equipment/ auxiliaries/major incidents.
- 2.1.8.3. Weekly report- Weekly report shall indicate the status of all maintenance activities carried out and pending, unresolved technical issues along with the reasons thereof. Unresolved technical issues in particular shall be reviewed and closed by designated officer of the Contractor.
- 2.1.8.4. Monthly report- Monthly report shall cover the following issues- coal received over the month, coal consumed over the month, coal stored/stacked over the month, planned maintenance and break down maintenance activities, major technical issues (resolved and unresolved) etc.
- 2.1.8.5. Contractor shall also submit a summary sheet on the key deliverables indicated in the Key deliverables' (annexure- 2) for review and analysis of CSPGCL. This shall be submitted monthly along with the supporting documents and reasons for variation if any. CSPGCL shall review these documents and furnish their observations / admissibility of the key deliverables submitted by the contractor within 7 days of the receipt of these documents. Contractor should note that the monthly payments are linked to the approval of the key deliverables report by CSPGCL.
- 2.1.8.6. Monthly report on all parts/ equipments sent out for repairs. The report to include all the details such as part description, category, quantity, returnable/ nonreturnable gate passes details etc.
- 2.1.8.7. Monitoring of performance vis- a-vis benchmark performance and submissions of monthly reports thereof.
- 2.1.8.8. Failure root cause analysis.-
- 2.1.8.8.1. In case of failure of any part/equipment, the contractor shall submit the root cause analysis of the failure for review of CSPGCL. For any premature failure/ recurring

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failure, CSPGCL may at its discretion debit the total cost of the new part/ equipment to the contractor.

- 2.1.8.8.2. CSPGCL expects contractor to ensure quality of repair of such part / equipment to be of high standards so that it lasts till its natural life cycle without any deterioration in the performance.
- 2.1.8.9. The contractor shall also submit various report as per Annexure 6A to Annexure 6G and as desired by Engineer –In-Charge.
- 2.1.9. Stand- by Equipment vis- à- vis Plant availability
- 2.1.9.1. Plant Availability should be 100%. This is based on the assumption that stand- by equipment wherever provided remains stand- by all the time and is used only for such a period that the running equipment is out of service.
- 2.1.9.2. The above mentioned clause shall not be applicable when stand- by equipment is taken in service as per the routine changeover guidelines.
- 2.1.10. Spares utilization-
- 2.1.10.1. As per the key deliverable, contractor has to submit the annual spares plan to CSPGCL for validation. CSPGCL shall furnish the validated list to the contractor along with budgeted quantities and amounts.
- 2.1.10.2. Contractor shall ensure that the equipment under his scope are to be maintained in such a way that utilization of spares is restricted to the budgeted quantity/amount as intimated by CSPGCL from year to year unit wise.
- 2.1.11 Policy decisions –
- 2.1.11.1. During the course of operation of contract various policy decisions are taken by the Senior Management of CSPGCL in consultation with the contractor and agreed for implementation by the contractor.
- 2.1.11.2. Implementation of the above mentioned policy decision as agreed shall be mandatory and any failure to adhere to this schedule shall be viewed seriously by CSPGCL and this may lead to even termination of the contract.
- 2.1.12. Suggestions/ Recommendations Agency out of their experience of working in this field may suggest improvements / modifications in the equipments/scheme. These shall be discussed in monthly meetings and decision of CSPGCL shall be intimated. CSPGCL is however not bound to accept such suggestions and contractor cannot claim any benefit/ cannot take any excuse on non- performance whatsoever in case for non implementation of such suggestions/improvements.
- 2.1.13. Consumable supply and management- As per clause no 5.
- 2.1.14. Assisting in spares indenting, approval and shifting of spares to work location.
- 2.1.15. Supply, Maintenance and Testing & Certification of Lifting Tools and Tackles (Own as well as CSPGCL).
- 2.1.16. Arranging Expert services and required AMCs for all the equipment /systems. In case where special expertise is not arranged /organized on time, CSPGCL shall arrange the same and the respective expenses shall be recovered from the Contractor.
- 2.1.17. Setting up & Management of contractor's office and store.
- 2.1.18. Oiling / greasing of mechanical equipment such as pumps / gear drives, lubrication of drives and associated equipments. The quantity of oil / grease in various pumps, couplings, and gear units should be inspected periodically, and maintained strictly as per the requirements. NAS value of Hydraulic Oil of Hydraulic Power Pack must be

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maintained up to NAS 07. Minimum 15nos. filtration machine of minimum capacity 10LPM are required.

- 2.1.19. Replacement / top- up of all lubricants as per the recommendation of the manufacturer or instruction of the EIC.
- 2.1.20. Waste oil to be returned in our O&M Store.
- 2.1.21. Dewatering required in work area and maintenance of dewatering pumps.
- 2.1.22. Operation and Maintenance of EOT cranes / hoists installed in Coal handling plant.
- 2.1.23. Operation and Maintenance of Earth Moving Equipments/skid steer loader machine for coal unloading, shifting and feeding. HSD, Lube oil, coolant and Spares for the Bull Dozer/skid steer loader machine provided by CSPGCL will be given by CSPGCL to operate these equipments for optimum usage per effective running hour. Contractor shall submit the weekly consumption report.
- 2.1.24. Maintenance of Water sprinkling system, dust settlement system and waste water dewatering systems of CHP area.
- 2.1.25. Maintenance of facility amenities like; ventilation system, AC system water coolers (including recharging of refrigerant) etc. Modifications for proper locking of Equipment enclosures, Electrical / Instrument panel doors, Breakers, Modules.
- 2.1.26. Process related jobs such as removal of jamming / choke up in Coal Bunkers, coal chutes, trippers, paddle feeders, crushers VGF etc.
- 2.1.27. Breaking of large coal, shale / stone boulder removal from running conveyor belts, Grizzly feeder / Tippler's grill / Track hopper grill and bunker grill and coal yard. Separating / stocking /shifting of stone boulders. Collected shales, stones and stones boulders shall be stored at one location for survey of quantity once in a fortnight. The storage area preparation is included in the scope of work. The location of the storage area shall be discussed and finalized with CSPGCL. Disposal of such collected material immediately after every survey over a 5 Km lead is included in the scope of work. Disposal location shall be discussed and agreed with CSPGCL.
- 2.1.28. Collection and Shifting of spilled over coal.
- 2.1.29. Complete Housekeeping (including pest and rodent control) of Coal Handling Plant / System. This includes area cleaning, floor cleaning, equipment cleaning, and Toilets cleaning by using disinfectant etc.
- 2.1.30. Regular as well as need based cleaning of all major equipments, pumps, instruments, electrical equipments and panels of Coal handling plant. Proper attention is to be given towards running equipments during cleaning so that it does not cause any adverse effect on the equipments. If necessary, cleaning of running equipments is to be carried out in presence of CSPGCL representatives.
- 2.1.31. Cleaning of sumps, mud sumps. Dewatering of stagnated water and removal of coal from trenches of coal handling plant. O&M of Coal sump pit for zero discharge of water from CHP.
- 2.1.32. Segregating and removing the scraps from each site after completion of work to ensure housekeeping. Shifting of waste oil drums and scraps material to scrap yard.
- 2.1.33. Training and Skill development of contractor's own team.
- 2.1.34. Implementing safety standards of CSPGCL Safety Section to ensure safety compliance in all activities of CHP O & M. Sufficient safety officers per day to be deployed for the same.

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- 2.1.35. Ensuring smooth and reliable CHP operation during Monsoon period like; covering of coal stock by tarpaulin, de- choking from any of the coal handling equipments, chutes etc. Hardships, if any experienced during monsoon is deemed to have been considered in the scope and no commercial claims shall be entertained
- 2.1.36. Data Management, Work Scheduling and Report Generation.
- 2.1.37. The contractor shall maintain daily logging of the progress made during each shift which includes preventive / breakdown / shutdown / faults attended during the shift.
- 2.1.38. If any shortfall in performance of different components of Coal handling system is observed, it is to be attended by the contractor on top priority and he is to intimate adequate measures to be taken to overcome actual or likely shortfall in performance maximizing CHP utilization factor for achieving optimum auxiliary power consumption.
- 2.1.39. Furnishing adequate technical back up from the contractor's head office including periodic visits to the site by its senior engineers / management team to ensure smooth, safe and reliable operation and maintenance of the plant.
- 2.1.40. Coordination in Operation, Monitoring & Maintenance of any additional equipment added in future (as a part of CHP) shall be in the scope of the CHP O & M contractor on mutually agreed terms
- 2.1.41. Any activities not mentioned in the scope, yet are required for successful completion of the job are within the purview of this comprehensive contract.
- 2.1.42. Any miscellaneous work not mentioned in scope but is essential for smooth, safe and efficient operation of any equipment in the scope shall be deemed to be in the scope of contractor.

#### **2.2.** SCOPE - MAINTENANCE:

- 2.2.1 The maintenance work will cover total Mechanical / Electrical / C & I related/PLC system. Routine, Preventive, and Predictive, Breakdown maintenance of the system, Sub Page systems and equipments as per list mentioned hereafter. The system shall work on the principle of minimum breakdown maintenance.
- 2.2.2 Execution of equipment overhauls.
- 2.2.3 The maintenance work will include servicing / replacement, internal checking, trouble shooting and rectification of defects of these equipments as per instructions of Engineer in charge (EIC).
- 2.2.4 During any short or long shutdown the defect rectification and preventive maintenance responsibility is covered in the scope of this contract.
- 2.2.5 At the time of annual overhauling of the units, the contractor will carry out overhauling of all the equipments of CHP as required at no extra cost except item no. 2,3,4,5,6,7 & 8 mentioned in tender schedule. Requirement of spares and consumables will have to be assessed well in advance and submitted to the EIC or his representative. A bar chart / program will have to be submitted for monitoring progress.
- 2.2.6 Regular walk- through audit of all areas and identification of defects & leakages. Attending all leakages & defects in time.
- 2.2.7 Arresting Coal / water / oil / air leakages from piping / valve / flanges / inspection door / bonnet / stuffing box / union / coupling / tees / by gasket replacement / by O ring replacement / by caulking the asbestos thread / applying putty / gland packing replacement / tightening of fasteners / tightening of gland follower / welding etc.

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Attending leakages of Drain and Impulse lines. Replacement of Drain and Impulse line valves and piping

- 2.2.8 Replacement and Servicing of all type of valves, Flap valves, Diverters, Knife gate valves, pneumatic / oil operated Servomotors, Safety valves, NR valves, Butterfly valves, Pilot valves, Air valves and Test valves. Valve seats lapping & blue matching, slide / seat replacement, seal replacement to achieve leak free tightness.
- 2.2.9(a) Servicing, Setting and tuning of flap operating levers / linkages/gates.
- 2.2.9(b) Replacement & Servicing of hydraulic Power Pack, auxiliaries, hydraulic pump, hydraulic motors, brake system, oil tank, Valve, Pipe lines, Hoses, coolers etc. Maintaining NAS value of oil as per manufacturer recommendation.
- 2.2.10 Removal & Refitting / Replacement of Electrical / Pneumatic Actuators. Repairing / Servicing of Electric / Pneumatic Actuators.
- 2.2.11 Replacements of valves, flanges, fasteners, orifices, pipe fittings, traps, filter elements etc. Cutting & welding work required for the same.
- 2.2.12 Cleaning of all Filters and Strainers of air / water / oil circuits.
- 2.2.13 Draining of oil / removal of old grease required for maintenance and re- filling the same / new on completion of maintenance activity. Replacement of complete lubricant after thorough cleaning of reservoir of the equipment whenever required.
- 2.2.14 Separate storing and centrifuging of used oil for future use.
- 2.2.15 Servicing / overhauling of oil pumps, mud pumps, and exhaust fans, air blowers, bag filters and other auxiliaries covered under CHP
- 2.2.16 Repair of coal chutes, hoppers etc.
- 2.2.17 Periodic performance monitoring of all types of pumps (water pumps, mud pumps, compressors & blowers and replacement of damaged parts. If required, complete overhauling of these equipments to be carried out.
- 2.2.18 Complete overhauling of pump, Inspection of Pump bearing, and replacement of bearing, servicing / replacement of mechanical seal, inspection & servicing of hydraulic coupling. Pump Motor coupling inspection, coupling replacement, Element / Bushing replacement, Lubrication. Shifting / placement & alignment of drive motor.
- 2.2.19 Hot, cold & special (steel cord) Belt vulcanizing, Pulley lagging including lagging material and vulcanizing solutions shall be in contractor's scope. Repairing consumable kits will be arranged by contractor.
- 2.2.20 Cleaning, tightening, greasing, oil topping up, control circuit checking of HT / LT modules, HT / LT breakers, HT / LT motors, assist in Testing of relays, checking interlock & protection circuit of transformers / motors, calibration of all the electrical equipments like; Winding Temperature Indicator / Winding Temperature Recorder of transformer etc, Insulation & Earth meggering and other complete test of motors/ transformers, calibration of all volt meters / ammeters / energy meter /transducers.
- 2.2.21 Repair / replacement of indicating lamp, lamp cover, push button, rotary switches, fuses, fuse base, electrical & electronic components and limit switches in local and MCC panels.
- 2.2.22 Changing / Servicing of Switch Fuse Unit / Power contactor / Overload relay /Potential Transformer / Current Transformer of LT Modules.
- 2.2.23 Complete overhauling & servicing of HT / LT Motor control module.
- 2.2.24 Changing / Servicing of Control switch / Cam switch / Timer / Aux. Contactor / MCB/ Push button / Pilot lamp / Fuse base of LT Switch gear.

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- 2.2.25 Repair / servicing / replacement of contacts & arc chutes, closing coil & its mechanism, tripping coil & its mechanism, spring charging system and operating system of LT breakers.
- 2.2.26 Repair / replacement of bus bars, bushing, CT, PT, Bus bar cable chamber, breaker chamber, space heater in LT switchgears.
- 2.2.27 Maintenance of HT / LT motors including replacement of bearings & its assembly, fan, fan cover, terminals etc. as required. Dismantling of HT / LT Motor for checking of stator and rotor and re- assembly. Greasing of motor bearing at regular interval. Overhauling of LT motors. Replacement pump's motors, its temperature scanners and cables, cleaning of motor cooler tubes
- 2.2.28 Replacement/ Laying of HT/LT cables
- 2.2.29 Outside workshop repairing of equipments / components.
- 2.2.30 O&M/Calibration of load cells, belt weighers etc.
- 2.2.31 Repair / replacement of HT / LT Motor cable glands, terminal block and re- lugging as per requirement
- 2.2.32 Repair / replacement of HT / LT Motor temperature gauge, space heater, earthing connection.
- 2.2.33 Changing of HT / LT Motor. Lifting & shifting of motors & pumps for maintenance, alignments, coupling of the pumps with motors.
- 2.2.34 Repair / replacement and cleaning of ceiling fan, exhaust fans.
- 2.2.35 Repair / replacement of lamps, igniters, ballast, capacitor, starter, control gear box, lamp holders well glass, wire guard, ceiling rose, lighting cable, lighting switch & socket.
- 2.2.36 Dressing/ connection & disconnection/ termination & connection/ indoor and outdoor straight through joining of all type of cables. Laying of lighting cables, control & signal cables including cables in conduits.
- 2.2.37 Repair/replacement of electronic card, electronic components like thyristor/transistor/ diode/resistor/capacitor etc.
- 2.2.38 Repair/replacement of incoming switch, changeover switch, AC/DC contactor, indicating lamps, push button, power & rectifier fuses, thrysistor, freewheeling diodes, thermal overload relay, ammeter, voltmeter & electronic cards etc.
- 2.2.39 Cable disconnection, reconnection, termination, jointing etc at MCC / ACDB / DCDB incoming end and within the entire CHP
- 2.2.40 Maintenance of MCC / DCDBs their modules, bus bars, LPB stations etc.
- 2.2.41 Necessary arrangement for supply of electric power, lighting, etc. required for maintenance job.
- 2.2.42 Maintenance and testing of all the electrical interlocks; protection, control & instrumentation including PLC system etc.
- 2.2.43 Maintenance of MCC & Breakers.
- 2.2.44 Maintenance of control supply system, battery & charger and DC Supply.
- 2.2.45 Preventive and breakdown maintenance for maintaining availability of the C & I equipment associated with main and auxiliary equipment in the Coal Handling Plant.
- 2.2.46 Maintenance of the instruments like pressure gauges, solenoid valves, push buttons etc
- 2.2.47 Troubleshooting in automation systems for problems in sequential operations, protections, interlocks, process controls, and interface with electrical systems etc.

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- 2.2.48 Troubleshooting of control logics and programming for simulation & changes. All simulations and changes in logics must be done with permission from concerned CSPGCL engineers.
- 2.2.49 Keeping backups of the PLC software and data.
- 2.2.50 Accuracy & Reliability of the measurements through periodic calibrations
- 2.2.51 Removal and replacement of C & I equipment as per requirements of the plant.
- 2.2.52 Documentation & records: Maintaining the documents & records related to the work carried out. These include calibration reports, wiring /logic change records, maintenance history, spares / consumables usage, etc
- 2.2.53 Calibration of instrument like belt weigher scale etc. and cross the check by standard test for authenticity.
- 2.2.54 Calibration & repairing of various types of gauges, switches and other sensing elements installed for measuring process parameters like temperature, pressure, flow, level, positions, vibrations, etc. Preparation of calibration reports and their submission to CSPGCL engineers for certification. Assistance in calibration of temperature switches and all transmitters however calibration shall be done by CSPGCL
- 2.2.55 Servicing, repairs and stroke adjustments of pneumatic and motorized actuators, pneumatic power cylinders, solenoid valves, etc.
- 2.2.56 Maintenance of all PLCs ( pedal feeder and stacker reclaimer etc.) including CHP control room PLC hardware. Maintenance of control and annunciation panels, HMI, local control panels, Remote input output panels, pneumatic control panels, etc. for equipment like air compressors, blowers.
- 2.2.57 Complete uploading of PLC program in work stations in case of abnormalities. Maintaining the backup PLC programs
- 2.2.58 Rectifications and changes in pneumatic lines (copper/PU/SS tubing).
- 2.2.59 Maintenance of UPS and battery bank.
- 2.2.60 Removal & replacement of Control System components, PLCs and peripherals, control system PC & its components, Human- Machine- Interface (HMI), Operator Work Station (OWS), etc.
- 2.2.61 Balancing, Condition Monitoring and corrective actions.
- 2.2.62 Lubrication of gears & wire rope of EOT crane, brake liners replacement and setting of brakes, replacement of wire rope, servicing of gearboxes.
- 2.2.63 Servicing and lubrication of monorails / chain blocks / trolleys of CHP area.
- 2.2.64 Replacement of belts, belt tension adjustment, alignment of pulleys.
- 2.2.65 Fabrication of patches for leakage arresting from metal sheets, fabrication of shims for alignment, preparation of asbestos / rubber / metal gaskets from sheet, fabrication of jigs & fixtures for maintenance.
- 2.2.66 Reconditioning of worn out spares, hard facing.
- 2.2.67 Heating / Cutting of fastener / bearing / coupling whenever required during the maintenance.
- 2.2.68 Repairing of metal structure / floor grills / ladders / doors & windows of Coal Handling Plant area / building.
- 2.2.69 Transportation of spares / material from CSPGCL stores to work site return back to CSPGCL stores.
- 2.2.70 Unpacking, unloading / Loading of equipment / component on return / sending for outside repairing / development purpose.

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- 2.2.71 Necessary guarding of tools, tackles, spares, dismantled components, scrap materials during carrying out of maintenance jobs.
- 2.2.72 Work area cleaning and Scrap removal after completion of maintenance activity.
- 2.2.73 Erecting Safe scaffolding and approaches to work whenever and wherever required and immediate removal of the same on completion of maintenance work.
- 2.2.74 Touch up painting with corrosion resistance grade paint for the equipments (as and when required) including material supply (paints, consumables etc.). Painting for sign boards, nomenclature of equipments etc in contractor scope.
- 2.2.75 All maintenance work of IMWB control room, i.e. electrical maintenance, computer accessories, AC, Batteries, UPS etc except weighment system installed by M/s Rise Lake weighing system (P) LTD at IMWB control room.
- 2.2.76 All maintenance work of power supply, lightning, AC etc. of S&T building except S&T system.
- 2.2.77 All the maintenance work of equipments installed in Coal Sampling Cell of CHP.
- 2.2.78. Round the clock deputation of service engineer of M/s Maha hydraulic OEM of hydraulic conveyor drive system installed in CHP. If OEM has denied then round the clock deputation of service engineer with minimum 05 year experience in the same system is considerable.

#### 2.3. SCOPE – ROUND THE CLOCK ASSISTANCE IN OPERATION:

- 2.3.1. Round the clock assistance in operation of, Track hopper, stacker reclaimer, round the clock operation of dozers, water sprinkling system, crushers, conveyors, paddle feeders, motorized diverters, trippers of Unit # 1&2, operation of dozers skid steer loader machine.
- 2.3.2. Maintaining wagon unloading rate and coal feeding rate to maintain bunker levels full and demurrage nil. Continuous monitoring of coal bunker levels, Coal yard stock, Coal in transit and unit operating requirements.
- 2.3.3. Start / stop of belts and ensuring trouble free running. Checking & rectification of faults causing belt tripping. Removal of boulder / metals prior to restart.
- 2.3.4. Checking proper placement of wagon on track hopper.
- 2.3.5. Opening / closing / changing position of paddle feeders, trippers, flap valves, diverters as required and as per instructions received.
- 2.3.6. The routine & emergency operation as well as necessary isolations of system /circuit / equipment.
- 2.3.7. The job of Field staff provided to assist in operation will include vigilant monitoring of all equipment functioning in surrounding area by taking rounds, taking note of any abnormal sound, identifying leakages / abnormality of equipments, watching field instrumentation readings and reporting deviations from desired / running parameters, finding of change in vibration / temperature of equipment bearings,prompt updating control room engineers about any abnormalities, taking corrective actions and giving feedback to control room engineers.
- 2.3.8. Filling the log books for all equipment / system regarding maintenance.
- 2.3.9. Electrical/mechanical isolation & normalization of equipments / system.
- 2.3.10. Local line up of equipment / system as per standard operating procedure and giving clearance to control room for start / stop of the equipment.
- 2.3.11. Top up of lubricating / control oil, filling of grease.

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- 2.3.12. Co- ordinate with CHP maintenance team and main plant operation.
- 2.3.13. Not Used.
- 2.3.14. Online stone / shale picking by deploying specialized agency at least two points of each running conveyor. Collected shales, stones and stone boulders shall be stored at one location for survey of quantity once in a fortnight. The storage area preparation is included in the scope of work. The location of the storage area shall be discussed and finalized with CSPGCL. Disposal of such collected material immediately after every survey over a 5 Km lead is included in the scope of work. Disposal location shall be discussed and agreed with CSPGCL.
- 2.3.15. Anytime manual emptying out and recovering of coal from conveyor and shifting of coal to stock yard is included in the scope of work.
- 2.3.16. Quantity reconciliation Following methodology will apply-
- 2.3.16.1. Monthly Quantity received = "X"Tons as recorded jointly at the CSPGCL weighbridges on daily basis if weigh bridge is out, invoice quantity shall be considered.
- 2.3.16.2. Monthly Quantity of shales, stones and stone boulders = "Y" Tons as per the measurement illustrated under 2.1.28 and 2.3.14 and jointly recorded on daily basis.
- 2.3.16.3. Handling losses, wind losses, carpet losses and storage losses = "L1"
- 2.3.16.4. Net Monthly Quantity fed into the bunkers = "Z" actual quantity recorded by the belt- weighers before delivery to the bunkers
- 2.3.16.5. Difference of coal under storage to be verified during the monthly physical survey = "S"
- 2.3.16.6. Losses shall be calculated as below-
- 2.3.16.6.1. L1 = X (Y + Z + S)
- 2.3.16.6.2. Contractor shall sign off wagon weighment sheets rake- wise with CSPGCL's logistics, Railway and CHP Head on daily basis

#### **2.4. EXCLUSIONS:**

- 2.4.1 Rewinding of HT motors.
- 2.4.2 Rail electrification maintenance.
- 2.4.3 Any de- railment of de- railed locomotive or wagons is excluded from the scope of work. However, de-railment of de-railed locomotive or wagon at track hopper due to not clearance of rail track or any other reason is in contractor scope.
- 2.4.4 Coal recovery from any derailed wagons outside the plant boundaries.

#### 3. LIST OF SYSTEMS / EQUIPMENT TO ASSIST TO OPERATE AND MAINTAIN:

This list is indicative and any additional equipments as per actual erection will also considered included.

3.1	Coal Unloading equipment: Track Hoppers, Paddle Feeders(4 nos.), Compressed Air system(4 sets), DSS System.	
3.2	Coal Storage equipments: Bucket wheel stacker / reclaimer (2 nos.), Bull Dozers ,Skid steer loader machine	
3.3	Conveyor system: Conveyor 1 to Conveyor 12 belt conveyors, intermediate conveyors, boom conveyors driven by hydraulic drive, Belt feeder 1 to 4	
3.4	Coal Processing equipment: Crusher (4 sets) and VGF (4 sets).	

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3.5	Iron Removing equipments: Suspended Magnet, Inline Magnetic separators, Metal
	Detectors.
3.6	Sampling equipments: As received sampling device, As fired sampling device
3.7	Weighing equipments: Belt scales,
3.8	Safety & Protection systems: Pull cord switches, Belt sway switches, Zero speed
	switches,
3.9	Other equipment: Tripper, scrappers, Belt vulcanizer, Hydraulic lifting platform, Air
	Compressor etc.
3.10	All Dust suppression and Extraction and DFS systems, Roof ventilators installed in
	CHP area, ventilation supply system, ventilation extraction system.
3.11	All Cranes, Hoists, Mono rails, chain pully blocks, trolleys installed for above
	equipments.
3.12	All Mud pumps installed near to above equipments.
3.13	All Flap gates, manual gate valves, NRVs, solenoid valves, RPG &RG, slide gate
	valves, butterfly valves, pressure relief valves of CHP area.
3.14	All Piping, Hanger & Supports, Fittings, Filters/Strainers, Coolers, Valves,
	Servomotors, Suction filters, Silencers, Rubber expansion joints associated with above
	equipments.
3.15	All metal structure / flooring / ladder / doors & windows of CHP area.
3.16	All Special Tools & Tackles of CHP.
3.17	All maintenance add- on equipments like; portable filters / centrifuges / ELCs,
	Dewatering pumps, Circulation pumps, Transfer pumps of CHP.
3.18	Potable Water system and Water coolers of CHP.
3.19	Complete compressed air system of CHP.
3.20	Ventilation systems of CHP.
3.21	Water sprinkling, water draining and dewatering systems of CHP. Coal settling ponds
	and water recovery system.
3.22	All Electrical equipments, systems, components of CHP: Including but not limited to -
	CHP related electrical equipments / accessories like; HT / LT switchgear, Transformers,
	PC, PCC, PMCC, MCC, HT / LT motors, VFDs, Motorized valves, CHP and Battery
	banks & chargers, DCDB and network, Electric Hoists, Exhaust fans, Limit switches,
	Cabling system, Local control panels, Power and Control supply cabling network,
	Earthing system, Lighting system (including associated SLDBs, junction boxes, LPB
	stations cabling, conduits, receptacles, lighting fixtures with gear boxes), Street
	lighting, control room illumination, conveyor belt area and coal yard area illumination,
	PA system, Suspended and inline magnet, complete electrical control circuit of all HT
	& LT Switchgear, elevator etc.
3.23	All C & I equipments, systems, components of CHP:
	Including but not limited to - control room PLC, remote IO panel, Control Desk Panel,
	HMI, Local control panels and PLCs, UPS, Battery banks, Battery chargers, Protection,
	Interlocks and Logic system, Bearing RTDs, cables, control panels, control circuits,
	hard wire alarm annunciation panels, pressure gauges, flow switches, level gauges,
	level switches, transmitters, CCTV system, protective switches and flap gate, PA
2.24	System etc
3.24	Mechanical battery limits:

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Starting from Track Hopper to each coal bunker outlet pipe flange connected to motorized valve, all intermediate system / equipments are included in the scope. Coal bypass pipe from bunker outlet is also included. Coal stock yard, CHP control building, Stacker Reclaimers, Bulldozers, Dozer shed, Sprinkler & waste water pump house, all weigh bridges of the power plant are also included in this scope. All Dust suppression / ventilation / extraction systems, all dewatering systems of CHP area are also included in this scope. Electrical battery limits: Dedicated 11/6.6 KV CHP switch gear section A, B and on ward connected all CHP loads are included in the scope. For supply sourced for other areas (Ash handling, Ash water recycling, Oil Pump house etc) from 11/6.6 KV CHP switch gear section, the outgoing feeder onwards maintenance is excluded from CHP scope of work. For HT CHP auxiliaries having supply directly coming from the Station switch gear or Unit switch gear (i.e. not through dedicated 11/6.6 KV CHP switch gear sections), the CHP O & M scope starts from the feeder outgoing from respective switch gear for CHP auxiliaries. Station switch gear / Unit switch gear maintenance is excluded. For LT CHP auxiliaries (not sourced from CHP 11/6.6 KV switch gear) having dedicated supply coming from Station / Unit 11 /6.6 KV switch gear through transformer, the CHP O & M scope starts from outgoing feeder of switch gear covering onwards transformer, PC / PCC / PMCC and connected loads. For LT CHP auxiliaries having supply coming from common PC / PCC / PMCC / MCC (common means supply is also going to other area equipments), the CHP O & M scope starts from the feeder outgoing from the respective common PC /PCC / PMCC / MCC for CHP auxiliaries. Common PC / PCC / PMCC / MCC maintenance is excluded. All DC supply for CHP from CHP DCDB including DCDB. C & I battery limits: All C & I control & systems, instruments, C & I cables connected to CHP system are included. Central / local control room equipments of CHP and related C & I cabling are included.

#### 4. TOOLS & TACKLES TO BE BROUGHT BY SERVICE PROVIDER:

The contractor shall arrange all tools and tackles required for execution of the contract at his own cost. CSPGCL shall provide only some special tools supplied along with equipment. In their offer Contractor is required to submit a complete list of tools & tackles proposed to be supplied and maintained during the contract period by him. However, during actual execution of works if some additional T & P is required for qualitative / quantitative completion of job, the contractor shall have to arrange the same at no extra cost and decision of Engineer- in- Charge will be final and binding in this regard. Before/ during the execution of works, Engineer- in- Charge will be at liberty to check the availability of T&P and may levy a penalty in case of discrepancy. In case any T&P issued by CSPGCL is lost/damaged, shall be made good by the party

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or cost of T&P along- with overhead shall be recovered from him as decided by Engineer in Charge. **The indicative (not exhaustive) list Contactor's T&P is mentioned hereafter** however arrangement of all T & P required for timely completion of the job shall be the responsibility of the Contractor.

- 4.1. Individual Tool Bags for each Technician, Electrician shall have insulated hand tools. Powerful torch for each Technician and Supervisor.
- 4.2. DE Spanner sets Box Spanner sets, Slogging spanner sets, Ring Spanner sets, Allen Key sets, Pipe Wrench sets, Torque Wrench, Gas cylinder keys, Center Punches, Hole punch, Marking tool, Screw Drivers, All type of files, Chisels, Wedges, Nose pliers.
- 4.3. Hack saw, Tin cutters, Cir- clip pliers, Gasket cutters, Hole Punch set, Oil Canes.
- 4.4. Drill bits, Tap set, Reamers, Mounted wheels & Rotary Burrs, Oil stones.
- 4.5. Bearing Scrappers, Plumb bob. Cooper tube cutter & bender.
- 4.6. Copper bars, Wooden hammer, Sledge Hammers, Ball Pan Hammers.
- 4.7. Induction type Bearing Heater, Bearing mounting sleeve set, all sizes of bearing pullers (hydraulic / pneumatic), Coupling pullers, Temp Sticks, Temp Gun.
- 4.8. Welding machines, Gas cutting sets (torch, hoses, flashback arrestors, gas regulators), Electrode Heaters, Welding cables and Electrode Holder, Welding screen, Welding Shield & Goggles, Welding Aprons & Gloves, TIG welding kit, Gas cylinder trolley.
- 4.9. Portable welding machine.
- 4.10. Grease gun. Torque wrench. Letter punch set. Number punch set.Cir- clip pliers.
- 4.11. Screw and Hydraulic jacks of various capacities.
- 4.12. Electrical flash lights, Hand lamps, Extension boards and 24V transformers.
- 4.13. Flexible Grinding machines, Hand Drill machines, Electric / Pneumatic straight /Angel Grinding machines, Hitachi hand grinders, Drill Machine with magnetic base, Pistol Drill machine and pipe cutting machine.
- 4.14. Lifting tools and tackles, Wire ropes / Slings, D- shackles, Eyebolts, Tripod, Chain pulley blocks, Hook chuck, Tommy bars, Craw Bars, Cotton rope etc.
- 4.15. Surface plates, Straight Edged bars, lapping discs, valve seat grinding machine.
- 4.16. Measuring instruments like; Vernier Caliper, Micrometer, Feeler gauges, Thread gauge, dial gauges, Bore gauge, Telescopic gauge, Depth gauge, Measuring Scales, Measuring Tapes, small Weighing Scale, Slip gauge, Bevel Protector, Level bottles, Inside & Outside calipers.
- 4.17. Flexible hose pipes for cleaning by air / water, Vacuum cleaner, Air Blower.
- 4.18. Wooden Blocks, Wooden Sleepers, Cup lock scaffolding material, Wooden planks, Metal planks, Bamboo, Pipe Clamps etc.
- 4.19. Hydraulic test pump, Pressure gauges of different range, thermometers.
- 4.20. Man cooler fans and exhaust fans.
- 4.21. Condition monitoring equipments like; Vibration meter, balancing instrument etc.
- 4.22. Halogen lamps, Flood lights.
- 4.23. All necessary Tools & Tackles related to Electrical and C & I maintenance like; Multimeters, Clamp on meters, insulated hand tools, crimping tools, meager, test lamps,fuse pullers, earth rods, soldering iron & de soldering pump, motor checker, dead weight tester, Earth tester etc.

## 5. CONSUMABLES TO BE SUPPLIED BY SERVICE PROVIDER:

The contractor shall provide all the consumables required for maintenance jobs. Consumables shall have to be of approved quality/ brand as decided by Engineer-in-

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Charge. An indicative list of consumables in Contractor's scope is mentioned hereafter, above list is not comprehensive. Other consumables not explicitly mentioned above shall also be supplied & maintained by the contractor.

- 5.1 General purpose MS fasteners up to 12 X 50mm like; bolt, nut, screw, washer etc. (except SS fasteners, Special fasteners, higher sized fasteners and HT fasteners).
- 5.2 Nails, Split pins, Binding wire, Insulation screws, hose clamps, SS and Brass Shims.
- 5.3 Bulbs wire holders for Hand lamps, Dry cell for torches.
- 5.4 First Aid kits and medicines.
- 5.5 Stationary for Contractors own use.
- 5.6 Gas filled cylinders of Oxygen, DA and Argon.
- 5.7 Lead wire, Piano wire, Chalk stick, Permanent Markers, Paint Markers.
- 5.8 Petrol, Diesel, Kerosene, mineral turpentine, Rustoline, CTC, Linseed Oil, Electrical Contact Cleaners, Acetone, Pen Oil, Petroleum jelly, CRC- 226
- 5.9 Deleted.
- 5.10 Emery Papers of different fineness, Sand paper, Emery tape, Grinding wheels, Cut off wheels, Drill bits, Mounting point tools, Wire / Nylon Brushes, Hacksaw blades Tap bits etc.
- 5.11 Electrical PVC tapes, Teflon tape, M seal putty, Steel putty.
- 5.12 Cotton waste, cleaning cloth, net cloth, marking cloth, coir rope, asbestos cloth.
- 5.13 Cable ties, 24 volt hand lamps with transformer and bulbs. Plugs. Cable lugs of various: sizes (up to 415 V.A.C.) etc.
- 5.14 Electric Bulbs, wires & holders for temporary lighting at work place.
- 5.15 Diamond lapping compounds of different grade.
- 5.16 DP test kits, Engineer's Blue paste & liquid, liquid shop.
- 5.17 General purpose welding electrodes, cutting & gauging electrodes, dissimilar metal electrodes, Soldering and brazing materials.
- 5.18 Sealants and glues, Thread sealant, Gasket sealant, O- ring sealant and jointing compounds. Loctite, bearing retainer compound, Ana bond 202 / 666 / 610 / 596, Shellac compound, Araldite etc.
- 5.19 Holdite, Neverseiz, RTVs and Silicon sealants.
- 5.20 Compressed Asbestos fiber gasket sheet of different rating & thickness for oil / water / steam application.
- 5.21 Rubber Gaskets and Neoprene Rubber sheets, Oil Paper gasket
- 5.22 Graphited & non- graphited Asbestos thread, Asbestos tape, different sized gland packing & gland packing ropes, Graphite powder.
- 5.23 Consumables for tools & tackles brought by the contractor like, hacksaw blade etc.
- 5.24 PPEs and safety appliances, asbestos & rubber Gloves, face shields, gumboots, special aprons and first aid kit.
- 5.25 Tape (PVC / Para / Empire / Fiber- glass / Glass mica / Cotton, Teflon)
- 5.26 Polythene, Tarpaulin (excluding for coal covering)
- 5.27 Conveyor belt vulcanizing kit (hot and cold) for each size and type of conveyor belt, ILMS belt, pulley lagging with adequate rubber lagging sheet.

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#### 6. SUGGESTED TYPE OF MANPOWER TO BE DEPLYOED BY THE CONTRACTOR TO EXCUTE THE COORDINATION MONITORING AND MAINTENANCE WORK OF CHP 2X500 MW ABVTPS:

POSITION	
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Transfer Point (TP-1, TP-2, TP-5	
to TP-9) etc. /Conveyors (Conv.01	
to 12), Belt Feeder 1to4)	
Helpers - Operation	
TOTAL MAN POWER	
S N F S S S S C V E C V E C V E S S S T t t t t	Bite in charge & Coordinator    Anager- Maintenance &      Planning    Planning      Bafety- in- Charge    Supervisors – Maintenance      Dozer Mechanic    Mintenance      Dozer Mechanic    Mill write fitter      Pitter    Planning      rane operator/ Rigger    Planning      Velder    Planning      Electrician    C & I technician      C & I technician    Store keeper      Helpers – Maintenance    Supervisor Co-ordination      Deperator – Dozer Driver    Staff to assist in operation – at      Stransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Oransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Stransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Stransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Stransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Stransfer Point (TP-1, TP-2, TP-5    Staff to assist in operation – at      Staff to assist in operation – at    Staff to assist in operation – at      Staff to assist in operation – at    Staff to assist in operation – at      Staff to assist in operation – at    Staff to assist in operation – at

- 6.1. Manpower deployed by Contractor shall be suitably qualified, multi skilled experienced and competent in respect of the services to be rendered hereunder. The manpower shall be capable for Operation and Maintenance of assigned system. Contractor to submit manpower resource plan for the one year period to carry out all the activities listed under scope of work.
- 6.2. Site in charge shall be responsible for overall Coordination, monitoring & maintenance activities as per scope given. Site in charge must have degree/diploma (mechanical/electrical) qualification and minimum 3 years experience for degree holders/5 years experience for diploma holders. Coordination of Coal handling plant of unit size 200 MW or higher. Site in charge shall be fluent in verbal and written communication in English & Hindi.
- 6.3. Contractor to provide the staff to assist in operation at TP-1, TP-2, TP-5 to TP-9 including Conveyer 11-A and Compressor / Pump House 24x7 days.
- 6.4 Qualification of Supervisor shall be Diploma (mechanical /electrical) or higher, and must have minimum 5 years/3 years experience of power plant Coal handling plant operation/maintenance in unit capacity more than 200MW. Contractor is required to deploy specialists for dozer maintenance, crusher maintenance and hydraulic maintenance of stacker reclaimer etc.

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- 6.5. Qualification of Fitter Dozer Mechanic/Fitter, Electrician, C&I technician, Welder/Junior fitter shall be ITI (mechanical automobile/ electrical/C&I/welding ) or higher with minimum 7 years/5 years/3 years experience of power plant maintenance in unit capacity more than 200 MW.
- 6.6. Qualification of Helper shall be minimum 8th standard with minimum 1 year's experience of working in power plant.
- 6.7. All qualification and experience related documents are to be submitted to Engineer in charge while applying for the entry pass. The suitability of the all Technicians shall be decided by personal interview by Engineer in charge. Contractor shall be abiding for prompt replacement of the any person found not suitable by the Engineer in charge.
- 6.8. Above manpower is indicative only, the contractor will deploy sufficient manpower to execute jobs timely as a part of this lump sum contract.
- 6.9. Shift wise deployment of manpower under normal circumstances shall be decided mutually and for all unplanned work necessary manpower arrangement will be done by the contractor as and when required with no extra claim.

#### 7. SPECIAL CONDITIONS OF CONTRACT:

- 7.1. The bidder shall have proven track record in coordination, monitoring and maintaining similar type and capacity of equipments. This will be major qualifying criteria for him.
- 7.2. Prior to bidding the bidder should visit the site to get acquainted with the quantum/ nature of job and to assess the actual requirement of man power for the assigned contract.
- 7.3. The contractor must have valid electrical license from competent authority.
- 7.4. This is Coordination; Monitoring & Maintenance contract to take full care of complete Coal handling plant as and when required. Hence, bidder is required to furnish his planning for manpower deployment, list of consumables, list of T&P and detailed justification for the amount quoted.
- 7.5. The contractor shall deploy adequate working personnel in such a way that the maintenance work is carried out effectively & without any delay round the clock including Sundays and holidays. The work shall have to start immediately as per the instructions of Engineer- in- Charge (EIC). The contractor has to mobilize the working force as per the quantum of work and should be capable of executing maintenance work simultaneously at number of fronts depending upon the site requirements without any additional payment claim.
- 7.6. Due to the varying nature of job, contractor is required to maintain availability of additional manpower which may required at short notice. In short the contractor should have sufficient manpower at all the times at his disposal. It is suggested not to employ all the manpower from same region / caste / religion to avoid shortage of manpower at any point of time due to absenteeism.
- 7.7. Any unskilled labor required for the work should be engaged from the locally available people in line with R&R policy of CG govt.

#### 7.8. Security-

- 7.8.1. In case of pilferage of any equipment under contractor scope, the cost of the same shall be recoverable from the contractor.
- 7.8.2. It is the responsibility of the contractor to get entry pass/Gate pass for each and every staff. For this purpose the contractor shall submit the list of all the staff along with

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relevant details and photographs in prescribed format to CSPGCL Discipline Head for his approval. Only upon this approval the gate pass shall be issued by HR / Security of CSPGCL. In case the contractor's security staff is removed/ leaves the job, it shall be the responsibility of the contractor to return the gate pass to CSPGCL failing which the contractor is liable for penal action. No staff shall be allowed inside the CSPGCL premises without a valid Gate pass issued by CSPGCL.

- 7.9 The contractor team shall inspect jobsite / equipments and record & communicate defects on regular basis.
- 7.10 The Contractor shall plan, schedule and carry out the maintenance work as per OEM recommended schedule. Also contractor shall have to satisfy himself with the isolations made before start of work.
- 7.11 The contractor or his workmen should strictly observe all the instructions relating to the work issued from time to time by the Engineer- in- Charge. It is the responsibility of the contractor to carry out & supervise all the maintenance jobs.
- 7.12 The contractor site in charge, his supervisor or authorized personnel shall be available at the site at all the times to receive instructions from Engineer- in- Charge. The time limits permitted for replacement of contractor's personnel in case of leaving the job :
  - a) Site In- charge Within 45 days
  - b) Others- within 30 days

This time limit nevertheless shall be understood as the maximum time permitted to install a new and competent candidate(s) as replacement and the absence will however be treated for penalties under the conditions stipulated under Key Deliverables.

- 7.13 The contractor's representative has to interact with the area engineer continuously on daily basis for work permit, work instructions, trial run of equipment.
- 7.14 The contractor shall complete the entire work within the stipulated time.
- 7.15 The contractor shall have to carry out the work to the entire satisfaction of the Engineer- in- Charge.
- 7.16 If the Engineer in Charge is not satisfied with the rate of progress of the work or the quality of the materials that have been used or the workmanship, he may call another contractor or employ daily laborer to dismantle bad / substandard work, and to renew and complete the said work, and may pay the cost to such new contractor or daily laborers for such dismantling / renewing or completion of work. If such cost is more than the original contract rates / amount, in such cases the differential cost will be charged to the original contractor in addition to recovery of original contract rates. Repeating of such instance will attract termination of the Contract Agreement without any compensation in lieu off.

## 7.17 Termination -

- **7**.17.1 The CSPGCL shall be entitled to terminate this LoI/contract agreement on occurrence of any of the following conditions:
  - a) Notwithstanding anything contained herein and without prejudice to any other remedy for breach of contract, CSPGCL reserves their right to terminate or rescind this Agreement by a written notice of 90 days to Contractor if:
    - i. Contractor, in the sole judgment of CSPGCL has failed to or has reason to believe that it would fail to fulfill any part of its obligation(s) under this

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Agreement or failed to adhere to any term and conditions/key deliverables of this Agreement.

- ii. Contractor failed to perform in time or has improperly/inadequately performed any part of its obligation hereunder.
- iii. Contractor or any person deployed by it has, in the sole discretion of CSPGCL, engaged in any activity which is detrimental to the interests of CSPGCL or results in loss or damage to the business operations, profitability or reputation of CSPGCL.
- b) In the event of termination of this Agreement by CSPGCL pursuant to Sub Clause (a) hereof, without prejudice to other rights open to it, CSPGCL will be immediately entitled to invoke the Performance Bank Guarantee provided by the Contractor.
- Notwithstanding anything contained herein, either Party may terminate this **c**) Agreement or any part thereof by a written notice of 90 days to the other party for whatsoever reason, except in case of either party going bankrupt or in liquidation.
- During the first 60 days of the above said notice period of 90 days, the d) contractor shall prepare handover documents of the completed and ongoing works to facilitate handing over to the incoming contractor from day 61 till day 90. The handing over formality shall be duly completed with documents signed off jointly between the contractor, CSPGCL and the incoming contractor. The signed off handing over documents stated as above will be considered as one of the prerequisites for the final settlement of accounts with the contractor.
  - e) The contractor shall also retain their existing key personnel for a minimum period of 30 days beyond the completion of 90 days notice period for smooth transfer of information and skill to the incoming contractor. The personnel to be retained during the above said 30 day period are as under:
    - Plant Head.  $\geq$
    - $\triangleright$ Maintenance Head.
    - Administrative Head.
    - Planning Manager.
    - Industrial Relations Manager.
- 7.18 Award of subcontract by Main Contractor-
- 7.18.1. Main contractor is required to obtain prior permission before awarding any contract under his scope. Such permission shall be granted only after verifying the credentials of the subcontractor. Number of such subcontractors shall be limited to minimum.
- 7.18.2. On some of the occasions agency may be required to take out some part /equipment for repairs. Prior to taking out such part/equipment, prior permission of concerned discipline Head shall be obtained. While carrying out any repairs/ rectification on such part/equipment taken outside, the details of repairs including the parts necessitating the replacement shall be clearly intimated to respective Discipline Head and no additional part beyond this intimation shall be replaced/ repaired. The status of the part/equipment being taken out for repairs and after receipt of repairs shall be jointly signed off between contractor and the respective Discipline Head of CSPGCL.

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- 7.18.3. In case of requirement of any specific job needed to be awarded to specialized agency for a specific work/ period, prior approval of CSPGCL Plant Head is necessary. Pre-approved service providers' list will be furnished by CSPGCL to the contractor.
- 7.19 It is expected that agency should establish in- house repair facility so that the jobs required to be taken out for repair are kept minimum.
- Emergency/Disaster management –
  Contractor shall submit the emergency/disaster management Plan to be implemented in case of emergent situations such as Flood, Fire, accidents, etc.this shall contain details of man power and resources proposed to be available/utilized during such situation. This shall be submitted within 60 days of LOI / Work order.
- 7.21 All the expenses related to part/equipment repairs (in- house or external) are to be borne by the contractor.
- 7.22 The contractor is required to maintain a logbook for the work carried out and attendance for their employees, which should be presented to the Engineer- in-Charge whenever demanded.
- 7.23 During the execution of the work in pursuance of the contract, the contractor shall at his own cost submit regular progress report to the EIC. Such progress reports shall be in the format, as may be required by the EIC.
- 7.24 The contractor shall provide all the consumables required for coal handling operation & maintenance jobs. The consumables shall have to be of approved quality / brand as decided by EIC.
- 7.25 Spares required for the operation and maintenance of the CHP shall be procured by CSPGCL on the basis of the detailed plans to be submitted by the Contractor initially during the mobilization period and thereafter at least 60 days prior to the commencement of each year.
- 7.26 A list of Spares received by the CSPGCL along with the equipment will be delivered to the Contractor and the spares shall be held in the custody of the CSPGCL to be made available to the Contractor against specific requisition. Annual maintenance plan and Spares procurement plant to be given by O&M contractor. If the contractor fails to provide detailed plans of the spares required to run the CHP & the outage of equipments occurs, then the outage will be considered as the responsibility of contractors and penalty as per Annexure-2 shall be imposed.
- 7.27 The contractor shall ensure that spares utilization shall be done in such manner that the proximate useful life of the spare is always achieved and the maintenance care taken to avoid excess consumption of spares emanating from any repeated type of failures.
- 7.28 All the required material / spares issued by CSPGCL shall have to be handled safely with good engineering practices and any unused material shall be returned after completion of job. The material shall be issued / returned as per procedure/practice of CSPGCL. The contractor shall maintain and submit time to time the record of issue, consumption and return of material / spares provided to him by CSPGCL.
- 7.29 The contractor shall make his own arrangement of Hydras, mobile cranes, Tractor trailers, Trucks, Hand trolleys, manpower, lifting tools & tackles etc. for all types of material handling job inside CSPGCL's plant area at his own cost. Fuel, lube oil, Grease and spares and maintenance of these equipments shall be in the scope of contractor. These equipments may be utilized for loading, unloading and transportation of the material / spares inside plant working area for maintenance work, issue of

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materials / spares from stores to site of work, return of material back to stores, disposal of scrap & old unused material – from site of work to workshop - from site of work to stores - from the site to the scrap yard / place as specified by the Engineer- in-Charge. The contractor shall also carry out the work of loading /unloading of material being sent for repairs or received after repair to / from outside of CSPGCL at his own cost.

- 7.30 Establishing stores and office for contractor's use in the space provided by CSPGCL will be in the contractor's scope. The safety and security aspects related to his stores and office will be also in contractor's scope.
- 7.31 The electricity, water, compressed air etc., shall be provided free of cost at fixed points by CSPGCL as available in the plant. However, further extension cabling/hoses/piping etc. shall have to be arranged by contractor.
- 7.32 The contractor should approach the Engineer in charge for electric supply point(s) and all electric connections and circuits shall be drawn with his approval. In case of non-compliance of the above, or in case of any mishap or accident Contractor solely shall be responsible for all consequences.
- 7.33 Any scaffolding required for doing the job shall have to be erected by the contractor. Material for the same shall be arranged by contractor.
- 7.34 The contractor shall arrange all tools and tackles required for execution of the contract at his own cost. CSPGCL shall provide only special tools supplied along with equipment by OEM.
- 7.35 In case any T & P issued by CSPGCL is lost / damaged, shall be made good by the contractor or cost of T & P along- with overhead shall be recovered from him as decided by EIC.
- 7.36 In case of damage to any CSPGCL property during execution of the job the Contractor shall have to repair / replace the same at their own cost & arrangement.
- 7.37 The contractor will attend co- ordination meetings which includes Daily Planning meeting. Weekly Preventive Maintenance works scheduling and execution meetings. Monthly performance evaluation meeting. Overhauling meetings. Spare review meetings. Emergency meetings on occurrences and as called by EIC or his representative. The contractor may also request for issue based meetings, if any.
- 7.38 The Contractor shall provide inputs to the EIC from time to time on the CHP for any improvements that could result in better performance or result in reduction of operation & maintenance costs.
- 7.39 The contractor shall ensure deployment of experience staff for coordination, monitoring & maintenance of Coal Handling Plant for smooth operation and feeding of requisite quantity of coal.
- 7.40 Unauthorized occupation / possession of Quarters / Shop / Plot of land of CSPGCL by the bidder will be treated as a disqualification and tender submitted / Contract awarded is liable to be rejected / cancelled, as the case may be, at any stage if the renderer is found to be having such unauthorized occupation / possession.
- 7.41 All provisions of the Factory Act 1948, The Chhattisgarh Factory Rules 1950, Indian Electricity rules 1956, and other rules and regulations should be strictly adhered to.
- 7.42 Contractor should provide all safety equipments to their workers such as safety shoes, helmets, goggles, welding screen, safety belts, appropriate hand gloves etc. Good and

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approved quality appliance shall be arranged and replaced by new ones as soon as worn out by Contractor at his cost.

- 7.43 Each and every portable tool is to be used with three plugs and three wire systems only, so as to avoid electrical shock while working. Proper earthing to be checked both at supply end at tools end by qualified electrician before commencement of work. Color coding of three wire systems should be: Red Live, Grey / Black Neutral, Green Earth.
- 7.44 Three wire sockets and properly insulated electrical boards with earth leakage circuit breakers (ELCB) are to be used by Contractor. ON/OFF switch should be connected in phase wire and not in neutral wire. This should be ensured by qualified electrician.
- 7.45 The Contractor will have to keep ready two buckets of water, while carrying out welding work. One bucket is to be used for quenching fire, if occurred. Second bucket with water is to be used for dropping the last bit of electrodes so that red hot tip does not cause any fire or injury to any person.
- 7.46 Cover / curtain are to be provided in hazardous area so that the hot spatters / molten metal do not cause fire. This is to be ensured before starting of work particularly when carrying out cutting, welding work at higher elevations, on grills, coal handling plants etc
- 7.47 Single piece cable (without joints) to be used during welding work to avoid the fire through cable joint if at all a joints is unavoidable, proper connector be used.
- 7.48 Earthing should be done at a spot nearest to the welding work in hand. For this it is necessary to keep earthing cable as long as welding cable.
- 7.49 Hand lamp should be of 24 Volt only. No hand lamp should be there without protective grill and plastic cover. Hand lamps should be unbreakable and with isolation transformer.
- 7.50 Proper housekeeping is a must during entire work period. Hazardous material and inflammable material should be handled so as not to cause harm to the plant or people.
- 7.51 Adequate supervision must be ensured during execution for compliance of safety measures.
- 7.52 Contractor should maintain a history register of their lifting tools and tackles such as chain pulley blocks, Slings etc. and these are to be tested by competent person as defined in The Chhattisgarh Safety Rules 1950. Copy of the test certificate should be submitted to Safety Section.
- 7.53 In case of injury to person, the incidence is to be reported to concerned section without delay and all legal formalities completed at earliest by seeking help from Safety Section.
- 7.54 Contractor should deploy competent workers for the particular job and should authorize his workers for carrying out electrical works such as welding, grinding and other works carried out by electrical appliances. Contractor should submit the list of his workers deployed for the job and the list of workers who are authorized for carrying electrical works to the concerned Sectional Head for verification of competency of their workers starting the work as per IE Rules 1956.
- 7.55 If any of CSPGCL safety officers finds that Contractor is not following the Safety Rules and regulations including use of personal protective equipment at site, he is authorized to stop your work immediately. In case of violation of rules after issue of

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warning letter contractor shall be liable to penalty as decided by the concerned /safety section.

- 7.56 Safety of the workers to be engaged in the job is Contractor's responsibility and CSPGCL will not be responsible for any type of compensation to Contractor's worker, if any accident occurs during the work and Contractor will be liable for all payments, maintenance etc. to the worker / workers' family as per statute or rule in force in the State or the Country as a whole.
- 7.57 In case of any ambiguity / dispute about any conditions of contract, Special Conditions of Contract will prevail over General Condition of Contract.
- 7.58 Any subletting of the tendered work without prior written approval of the Engineer in charge is not allowed.
- 7.59 The decision of EIC shall be final in regard to all matters relating to this contract.
- **8. PENALTIES:** As explained in the key deliverables (Annexure 2)
- 9. **BOQ** : O&M cost should be indicated in tender schedule.
- **10.** Contractor to submit the Preventive Maintenance Schedule within 15 days from the issue of LOI. CSPGCL to validate the Preventive Maintenance Schedule submitted by contractor and both CSPGCL and contractor to sign off the Final preventive maintenance schedule mutually agreed.

#### 11. HEALTH, SAFETY CODE OF CONDUCT FOR THE CONTRACTOR:

As a policy of **CSPGCL** the points as mentioned below are also a part of selection criteria for any job to be awarded to any contractor /vendor. Before submitting their quotation, the contractors/vendors shall be required to go through the following points thoroughly so that the eligible contractor/vendor, who qualifies themselves for award of contract, shall follow the code of conduct without fail and if any violation thereof is observed during execution of the jobs at the CSPGCL, then the Management reserves the right to terminate the contract or charge penalty as deemed fit.

#### 11.1. STATUTORY COMPLIANCE

The contractor shall ensure compliance with all the Acts like factories act 1948, contract Rules contract labor regulation act, payment of wages act, minimum wages act, provident fund and miscellaneous provisions act, employment exchange, compulsory notification act, apprentice act 1961 etc. Under these acts the required registers/returns documents to be furnished along with yearly reconciliation and as & when required by CSPGCL. The contractor should ensure compliance to regulations pertaining to Health, Safety as applicable from time to time.

## 11.2. INSURANCE OF THE WORKMEN

The contractor shall insure all his workmen for payment of compensation in case of any accident under the provision of Workmen's Compensation Act/ESI Act. The supporting papers/documents in this regard shall have to be submitted before starting up of the job.

#### 11.3. APPOINTMENT OF SAFETY OFFICER

The contractor shall have to appoint qualified Safety Officer(s) who shall be responsible for organizing, coordinating safety activities. The no. of Safety Officers to be appointed shall be as per our advice. In case of any small value contract, where engagement of qualified Safety Officer by the contractor is not possible, then a senior responsible person has to be nominated by the contractor to act as designated Safety Officer.

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## 11.4. SUPPLY OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

The contractor shall provide all necessary personal protective equipment such as safety helmet, safety shoes, goggles, double life line full body harness safety belt, ear plug, hand gloves etc. and any other personal protective equipment as per the job requirement to all the persons working under him and the PPE should confirm to relevant Indian /European standard.

#### 11.5. SAFETY PRACTICE & PROCEDURE

The contractor shall follow all the safety system & practice as are in force in our plant. The contractor shall plan and execute work in such a way that all the necessary safety practice and procedure will be followed so as to prevent accident/injury.

## 11.6. SAFETY INDUCTION & TRAINING

All the persons to be deployed by the contractor have to undergo safety induction before being engaged in any job and moreover they have also to undergo safety training regularly.

#### 11.7. PRE EMPLOYMENT AND PERIODICAL MEDICAL CHECK UP

The contractor has to ensure that all the persons to be deployed by him have to undergone pre- employment medical checkup before being engage in any job and subsequently periodical medical checkup every year or as and when found necessary.

#### 11.8. HOUSE KEEPING

The contractor shall ensure good housekeeping at the work place to keep the area clean & tidy and be responsible to clear the site by removing all the debris/scrap after completion of the work.

# 11.9. SPECIFIC SAFETY INSTRUCTIONS TO BE TAKEN IN FOLLOWING JOBS/ACTIVITIES

#### 11.9.1. Vehicle movement

- 11.9.1.1. Provision of seat belt, back horn in all four wheeler has to be made.
- 11.9.1.2. Drivers' eyesight has to be checked to ensure it is normal for driving the vehicle.
- 11.9.1.3. Provision of helper in every heavy vehicle should be made.
- 11.9.1.4. If the material loaded on the vehicle is projected beyond the side of the body of the vehicle, arrangement of red flag in day time and red light or red color fluorescent sticker during night time needs to be made.
- 11.9.1.5. Driver of the truck/heavy vehicle should not reverse it, unless assisted by the helper.
- 11.9.1.6. Speed of any vehicle moving inside the plant area should not exceed 20 km/hr.
- 11.9.1.7. In no circumstances the helper shall drive the vehicle.
- 11.9.1.8. Tractors and trucks should not be used for transporting personnel.
- 11.9.1.9. Drivers shall always check the overhead and side clearance while driving.
- 11.9.2. Excavation
- 11.9.2.1. Sides of all excavations must be sloped to a safe angle not steeper than the angle of repose of particular soil. If it is not possible to give a proper slope, the sides of the excavated area, where there is danger of fall or collapse of soil, should be securely supported by proper shoring.
- 11.9.2.2. No excavation or earthwork below the foundation level of an adjoining building shall be taken up unless adequate steps are taken to prevent against damage to the existing structure or fall of any part.

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- 11.9.2.3. Every accessible part of an excavated area, pit or opening in the ground into which there is chance of falling of person shall be suitably fenced / barricaded to prevent from falling of any person.
- 11.9.2.4. No material including excavated soil should be stacked near the edge of the excavated area. The excavated material shall not be dumped within 5 feet of the trench or half of the depth of the trench, whichever is more.
- 11.9.2.5. Cutting shall be done from top to bottom. No undercutting of sides of excavation shall be allowed.

#### 11.9.3. Working at Height

- 11.9.3.1. The person(s) to be engaged for working at height should have medical check up to ensure normal blood pressure and heart functioning.
- 11.9.3.2. Proper safety induction has to be given before sending him for working at height.
- 11.9.3.3. Work permit system has to be followed without fail.
- 11.9.3.4. All requisite personal protective equipment such as double life line full body harness safety belt, fall arrester, helmet etc., safety net as and when applicable have to be used by the persons at the site.
- 11.9.3.5. Toe guard and hand railing have to be provided at the working platform to prevent falling from height.

#### 11.9.4. Working in confined space/vessel

- 11.9.4.1. Safety induction has to be given to the persons before entry
- 11.9.4.2. Confined space entry permit should be followed without fail
- 11.9.4.3. It is to be ensured that the oxygen level should not be less than 19% in any confined space/vessel before allowing anybody to enter into the same.
- 11.9.4.4. Hand lamp of 24V only should be used by the persons working in confined space. The contractor has to ensure availability of sufficient no. of 24 volt transformers and 24 volt lamp at site.
- 11.9.4.5. Confined space/vessel should be free from any toxic gases and it should be properly ventilated.

#### 11.9.5. Scaffolding/ladder

- 11.9.5.1. Scaffolding should be of suitable strength and adequate support and confirm relevant specification/Indian Standard.
- 11.9.5.2. Scaffolding made of wooden material, bamboo is strictly prohibited and it should be made of steel tube as per the relevant standard/specification.
- 11.9.5.3. In case of use of ladder, extra person should be engaged to hold the ladder.
- 11.9.5.4. Ladder should not be painted so that any crack, hole etc. in the ladder can be seen easily.

#### 11.9.6. Lifting appliances

- 11.9.6.1. The material to be lifted should not exceed the Safe Working Load (SWL). The SWL should be properly mentioned in legible manner.
- 11.9.6.2. In addition to the operator, a signal man should be engaged in case of use of crane and other lifting appliances.
- 11.9.6.3. Operator of the crane or other lifting appliance should be properly qualified and experienced.
- 11.9.6.4. When not in use, the boom of the crane or other lifting appliances should be lowered to the horizontal position.

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11.9.6.5. All the lifting appliances should have test certificate duly certified by a Competent Person.

#### 11.9.7. **HOT work such as welding, gas cutting, grinding etc.**

- 11.9.7.1. Hot work permit has to be followed in case of any hot work to be carried out in fire prone area.
- 11.9.7.2. Oxygen & DA cylinders must be stored away from open flame and other sources of heat.
- 11.9.7.3. All cylinders should be provided with protection cap and kept in cylinder trolleys.
- 11.9.7.4. Flash back arresters should be provided in the gas cutting set at both the ends.
- 11.9.7.5. All the welding machines should be provided with body earthing and ELCB.
- 11.9.7.6. Two welding cables should be used for connection from the power supply source to the welding machines.
- 11.9.7.7. The LPG to be used in gas cutting and/or torching job shall be commercial cylinder only.
- 11.9.7.8. The grinding wheel should not be used after its expiry date.

#### 11.9.8. Electrical job

- 11.9.8.1.The contractors have to ensure that all the electrical equipment/gadget used by them are IS marked only.
- 11.9.8.2. All the electrical work should be carried out as per the norms in the Indian Electricity Act, 2003 and Indian Electricity Rules, 1956.
- 11.9.8.3. All types of electrical equipment should be provided with ELCB & body earthing.
- 11.9.8.4. Periodic checking of all ELCB has to be done and its records have to be maintained.
- 11.9.8.5. Only authorized persons should be engaged for any kind of repair, maintenance job.
- 11.9.8.6. All the necessary personal protective equipment such as safety shoes with fiber toe cap only, rubber hand gloves with resistant to high voltage etc. has to be used by the electrician during work. All the personal protective equipment has to conform to relevant Indian/European standard.
- 11.9.8.7. No aluminum ladder has to be used for any electrical maintenance work.

#### 11.9.9. Chemical handling work

- 11.9.9.1. The persons to be engaged in handling acid, alkali material should be properly skilled and experienced.
- 11.9.9.2. Wearing personal protective equipment such as acid, alkali proof aprons, face piece, fume mask, hand gloves etc. is mandatory while handling the chemicals.
- 11.9.9.3. The contractor has to ensure availability sufficient quantity of personal protective equipment as mentioned above and it has to be maintained properly by the concerned contractor.

#### 11.9.10. Miscellaneous points

- 11.9.10.1. As and when required proper barricading tape, warning sign etc. has to be put in the work place to make people aware about the hazards.
- 11.9.10.2. Immediate corrective action has to be taken against any unsafe condition or unsafe practice if observed in your area of work to prevent any accident/injury. In addition to the above the contractor has to comply with the points on safety as will be advised by the Safety Dept. of CSPGCL from time to time.

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#### 11.10. PERSONAL CONDUCT

- 11.10.1. Entering of any of your person into the factory under influence of alcohol/drugs is strictly prohibited.
- 11.10.2. Using mobile phone by any of your worker inside the plant is strictly prohibited.
- 11.10.3. Horseplay or fighting by your workers in the plant is strictly prohibited.
- 11.10.4. No shelter is to be taken under the equipment/vehicle or anywhere in the plant and sleeping in the plant is also strictly prohibited.
- 11.10.5. Smoking, spitting inside the plant is strictly prohibited.

#### 11.11. **PENALTY**

In case of any violation of any safety norm such as non- use of PPEs, nonadherence to safety rules, regulation& safety practices etc. or any accident met by the contractor's person in the plant premise, penalty will be charged to the concerned contractor, the amount of which shall be decided by the Management.

#### 11.12. Accidents -

In case of any fatal accidents, Contractor shall deposit Rs. 10,00,000/within 48 hours for settling the issue as payment towards compensation and related expenses. Upon appropriate settlement, the balance amount shall be refunded to/paid by the Contractor. Value of final compensation will be outside the cap of 10% penalty.

In case of non- fatal accidents, a token amount of Rs. 1,50,000/- shall be payable by the Contractor. Safety Head, HR and IR personnel of CSPGCL shall decide the final compensation under the existing rules and resolve.

#### 11.13. ENGAGEMENT OF SUB- CONTRACTOR

In case of engagement of any Sub- contractor by you, the same safety code of conduct shall also be applicable to him also.

#### 11.14. CONTRACTOR'S LIABILITY

In the event of any accident, any implication thereof shall be liability of the contractor concerned and the Management shall be absolutely free from any obligation, what so ever.

#### LETTER OF ACCEPTANCE

(The contractor is required to return this letter of acceptance with his signature to CSPGCL)

#### **RFQ NO - - - -**

#### **DATE - - -**

We have gone through the code of conduct on health & safety which was enclosed with the request for the quotation vide no. & date as mentioned above and we shall abide by all the points as mentioned therein; otherwise we are liable to be penalized by the Management.

Name :

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Date :

Signature of contractor

S.No.	PARTICULARS	Qty.
2	Complete Overhauling, of Elecon Make Coal Crushers (Model No. <b>EKK 48'' X 114''</b> Ring Granulator) of CHP As per scope of work.	8 Nos.

## <u>SCOPE OF WORK : -</u>

## A. REPLACEMENT OF COMPLETE LINER SET:

- 1. Dismantling of top covers.
- 2. Removal of damaged liner plates in all around the body of crushers, corners & curved liners of crushers, side inspection doors.
- 3. Refitting of new liner plates in all around the crusher body, corners & curved liners of crushers, side inspection doors an tramp iron pocket etc.
- 4. In case any liner pieces are not available the same has to be fabricated from new MS plate.

## **B. REPLACEMENT OF BREAKER PLATE**

1. Dismantling of top cover, back cover plate, removing of clamps and damaged breaker plate.

2. Erection of new breaker plate and clamp with nut & bolt. Distance of new breaker plate to be

- adjusted as required.
- 3. Refitting of top cover & back cover plate.

## C. REPLACEMENT OF COMPLETE HAMMER SET (76 Nos.)

- 1. Shifting of hammers from store to site.
- 2. Dismantling of top cover, back cover plate.
- 3. Removing of old hammers and new hammers to be fitted one by one row.
- 4. Check the balancing & freeness of rotor.

#### D. REPLACEMENT OF SCOOP COUPLING ESC 1030

- 1. Dismantling of coupling guard.
- 2. Dismantling of Scoop coupling.
- 3. New Scoop coupling to be fitted.
- 4. Alignment of Scoop coupling motor & rotor of Ring Granulator to be done.

#### E. REPLACEMENT OF NDE BEARING 22244CCK WITH PLUMBER BLOCK

- 1. Dismantling of plumber block side labyrinth, top cover.
- 2. Lifting of crusher rotor, removing of bearing & plumber block.
- 3. Re-fitting of new bearing & plumber block, greasing of bearing and box up plumber block.
- 4. Check the freeness of crusher rotor and trial taken. Rectification of the faults if any found

during trial.

#### F. REPLACEMENT OF DE BEARING 22244CCK WITH PLUMBER BLOCK

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- 1. Dismantling of coupling guard, shifting of motor from foundation.
- 2. Dismantling of couplings from rotor and hub from motor shaft.
- 3. Dismantling of plumber block side labyrinth, top cover.
- 4. Lifting of crusher rotor, removing of bearing & plumber block.
- 5. Re-fitting of new bearing & plumber block, greasing of bearing and box up plumber block.
- 6. Check the freeness of crusher rotor. Re-fitting of couplings on the rotor and motor shaft.
- 7. Alignment of motor with rotor assembly to be done and trial taken. Rectification of the faults
  - if any found during trial.
- 8. Fitting of coupling guard after smooth running of crusher.

#### G. REPLACEMENT OF CAGE FRAME COMPLETE ASSEMBLY.

- 1. Dismantling of top cover, back cover plate.
- 2. Remove curved cage liners, straight cage liners and breaker plate.
- 3. Remove cage frame. In case new cage frame is not available the contractor will have to repair the old/damaged cage frame from MS plate by cutting, welding.
- 4. Erection of new/repaired cage frame to be done. Breaker plate, curved cage liner, straight cage liner refitted. Top cover and back side plate refitted.

#### H. REPLACEMNT OF UPPER SCREEN & LOWER SCREEN.

- 1. Dismantling of top cover, back cover plate.
- 2. Remove the curved cage clamps and old/damaged cage bars.
- 3. Erection of new upper screens & lower screens by bolting.

#### I. REPLACEMENT OF ROTOR ASSEMBLY:

- 1. If any erosion seen on the rotor end discs & centre discs the same is to be repaired.
- 2. If rotor shaft, suspended arms & end discs are found damaged replacement of rotor assembly is to be carried out.

#### **CSPGCL SCOPE:**

1. CSPGCL will provide required spares like new bearings, Gear box, couplings, sprocket, gear oil, grease HT bolts, Electrical spares and also will provide electricity facility free of cost.

#### **CONTRACTOR SCOPE:**

- 1 All tools, tackles & consumables, cutting gas, Welding Electrodes etc. and transportation of material required for execution of above job are to be arranged by the contractor at his own cost.
- 2 The work should be carried out as & when required basis and contractor is bound to mobilize their resources within 48 Hrs. of intimation on phone.
- 3 Contractor shall arrange the transportation of men, material and machine.

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4 The contractor have to remove the scrap from work place and return to site store / scrap yard as per instruction of EIC.

**WORK PERIOD** – Crusher- Each job should be completed within 10 Days from the site clearance.

## **PENALTY:-**

(a) If contractor fails to mobilize their workers within 2 Hrs of intimation as & when required as per plant emergency then penalty of Rs. 500/- per Hr max up to 50% of job cost shall be deducted from the bill of contractor as deemed fit to EIC.

(b) If work is not completed within stipulated time will attract a penalty @  $\frac{1}{2}$ % per day maximum 10% shall be deducted from contractors bills.

(c) If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.

(d) **SAFETY PENALTY:** - If contractors labour or supervisor is observed not following safety rules as per factory act and Industrial health & safety department of Govt., a penalty as deemed fit but not exceeding Rs.500/-per day per person may be imposed on the contractor.

S.No.	PARTICULARS	Qty.
3	Complete Repairing/Overhauling, fabrication and commissioning of Trippers in rail structure of coal conveyor 9A/B/C/D & 10 A/B/C/D of CHP As per scope of work.	

#### **SCOPE OF WORK** -

- 1. Repairing of the damage parts by cutting, welding or pulling work including structure, pulley and wheels etc.
- 2. The steel structure frame, defective components to be fabricated and made as similar to old structure.
- 3. Over hauling of gear box to be done. Any parts which are not repairable to be replaced with new one.
- 4. The bearings of shaft, pulleys are to be cleaned & checked if found damaged the same are to be replaced by new one.
- 5. Over hauling/replacement of manual rail clamp, electromechanical rail clamp and thruster brake is to be done as per requirement.
- 6. Fitting of pulleys and alignment of all the structures, channels, angles should be done properly for smooth running of trippers.

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- 7. Over hauling of the electrical system including Motor, power contractors, thermals, power switches, limit switches, indicating lamps, power cable and energy chain system to be done.
- 8. Replacement of defective rollers & roller stands are to be done.
- 9. Alignment of rail track in the tripper traveling length to be done.
- 10. Flap Gate bearings and liners are to be checked and replaced if required.
- 11. After completion of assembly no load trial of tripper to be taken without coal for smooth operation & reliability. If any problem arises, it is to be rectified.
- 12. Trial of machine as complete assembly on load to be taken.
- 13. Other works which are necessary for smooth running of the feeders which are not covered in this scope of work to be done by the Contractor.
- 14. After completing the assembly work painting (One coat with red oxide and two coat with paint) to be done with reputed make paint.
- **15.** Any other works which is necessary for smooth running of above auxiliaries but not covered in this scope of work are also to be done by the contractor as per instruction of Engineer In Charge.

#### SPECIFIC TERMS AND CONDITIONS -

#### **CSPGCL SCOPE:**

CSPGCL will provide required spares like new bearings, Gear box, couplings, sprocket, gear oil, grease HT bolts, Electrical spares and also will provide electricity facility free of cost.

#### **CONTRACTOR SCOPE:**

All tools, tackles & consumables, cutting gas, Welding Electrodes etc. and transportation of material required for execution of above job are to be arranged by the contractor at his own cost.

The work should be carried out as & when required basis and contractor is bound to mobilize their resources within 48 Hrs. of intimation on phone.

Contractor shall arrange the transportation of men, material and machine.

The contractor have to remove the scrap from work place and return to site store / scrap yard as per instruction of EIC.

#### WORK PERIOD -

(a) Tripper- Each job should be completed within 10 Days from the site clearance

#### **PENALTY:-**

(a) If contractor fails to mobilize their workers within 48 Hrs of intimation as & when required as per plant emergency then penalty of Rs. 500/- per Hr max up to 50% of job cost shall be deducted from the bill of contractor as deemed fit to EIC.

(b) If work is not completed within stipulated time will attract a penalty  $@ \frac{1}{2}\%$  per day maximum 10% shall be deducted from contractors bills.

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(c) If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.

(d) <u>HUMAN SAFETY:</u> All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any mishap and its compensation thereof will remain on the contractor himself as per Govt. laws.

(e) SAFETY PENALTY:- In case the contractor's labour or supervisor is found not following safety rules and regulation as per factory act and Industrial health & safety department of Govt., a penalty fit but not exceeding Rs.300/- per day per person may be imposed on the contractor by the Engineer-In-Charge or the company's safety officer.

(f) SAFETY OF EQUIPMENTS:- Further, the contractor shall be accountable for any damage to the equipment of Board and for any negligence or poor workmanship of the work and shall have to compensate the above loss from any payment due to the CSPGCL. The job is to be carried out taking full care of the safety of the equipments and its parts and any damage to any part will have to be fully rectified by the contractor at his own risk and cost.

S.No.	PARTICULARS	Qty.
4	Overhauling of LT Motors 30 KW & above installed at CHP as per (Annexure-6G)	48 Nos.

## SCOPE OF WORK : -

- 1. Work permit shall be taken from EE(CHP-Opn.) before starting of work.
- 2. Supply of all the required material like CTC/Petrol, winding varnish, gaskets, seal rings, nuts, bolt, tools and tackles etc. in contractor scope.
- 3. Complete removal of LT cable and earthing from motor, removal of motor foundation bolt, removal of floor grating, Motor shed for operation of Hoist/crane, shifting motor from site to Unloading bay/maintenance bay for overhaul.
- 4. Dismantling of complete motor, threading out the coupling, taking out the rotor, cleaning of stator winding and rotor with CTC/Petrol.
- 5. Checking of rotor bars, rings and cooling fan etc. for any crack or damaged brazed joints. Replacement/repair of damaged part if any like motor terminals, cable lugs of motor shall also be checked and replaced if necessary.

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- 6. Checking of bearing, cleaning of bearing with CTC/Petrol, checking of bearing by filler gauge, replacement of bearing if required and applying grease if required. Checking/changing of Lube Oil for white metal bearing.
- 7. Checking of stator wedge tightness, spacer tightness, checking of breading and bracket, over hang portion of stator coil winding, motor lead and necessary repair/replacement if required.
- 8. Reassembly of motor, after checking of IR, drying & heating of stator, insertion of rotor, fitting of bearing grease cover etc. The contractor shall also provide and replace old gaskets, seal rings, O rings/Rubber flats, provided in the end cover.
- 9. Shifting of motor after overhaul to site and making all connection for trial run of motor including earthing, space heater connection etc.
- 10. Sealing gasket and cords of suitable size shall be fixed with proper adhesive and the same shall be provided by the contractor.
- 11. In case of loss or damage to motor or motor parts during overhaul, the contractor has to repair/ replace the same free of cost.
- 12. Bearings/ lugs/ grease etc shall be provided by CSPGCL, all other consumables like petrol/ diesel/ CTC/ LT tapes etc shall be arranged by the contractor.
- 13. The contractor has to align motor with its associated mechanical auxiliary up to satisfaction of Engineer in Charge. All instrument and T&P for alignment work shall be in contractor's scope. Any minor modification grinding, chipping for matching of base plate-sole plate shall be in contractor's scope.
- 14. Any other work which is necessary but not covered in this scope of work, has to be carried out by the contractor as per the instruction of engineer-in-charge.
- 15. WORK PERIOD Each job should be completed within 02 Days from the site clearance.
- 16. **PENALTY:-** If contractor not completed the work within stipulated time contractor have to start the work within 2 Hrs after issue of work permit then penalty of Rs. 200/- per Hr shall be deducted from the bill of contractor. If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.
- 17. **HUMAN SAFETY:-** All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any

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mishap and its compensation thereof will remain on the contractor himself as per Govt laws.

18. **SAFETY PENALTY:** - If contractors labour or supervisor is observed not following safety rules as per factory act and Industrial health & safety department of Govt., a penalty as deemed fit but not exceeding Rs.500/-per day per person may be imposed on the contractor.

	S.No.	PARTICULARS	Qty.
F	5	Overhauling & Servicing of ILMS	08 Nos.

## SCOPE OF WORK :-

- 1. Work permit shall be taken from EE(CHP-Opn.) before starting of work.
- 2. Supply of all the required material like CTC/Petrol, gaskets, seal rings, nuts, bolt, tools and tackles etc etc. in contractor scope.
- 3. Complete removal of AC, DC power and control supply, shifting ILMS from site to Unloading bay/maintenance bay for overhaul.
- 4. Cleaning of complete magnet, separator motor, pulley and belt etc.
- 5. Oil leakage checking and sealing of leakage if found from any place.
- 6. Checking, Cleaning and lubrication of hanging arrangement.
- 7. Checking and complete cleaning of control and power supply panels with CTC/Petrol.
- 8. Separator pulley bearing and pedestal checking, cleaning, greasing and replacement if required.
- 9. Separator belt tightness/replacement if required.
- 10. Painting of complete body of ILMS and supply panel.
- 11. Reassembly of ILMS and separator motor, after taken of insulation resistance and winding resistance. The contractor shall also provide and replace old gaskets, seal rings, O rings/Rubber flats, provided in the terminal cover.
- 12. In case of loss or damage of suspended magnet or suspended magnet parts during overhaul, the contractor has to repair/ replace the same free of cost.
- 13. Connection of AC & DC power supply in ILMS and Motor.
- 14. Any other work which is necessary but not covered in this scope of work, has to be carried out by the contractor as per the instruction of engineer-in-charge.
- 15. WORK PERIOD Each job should be completed within 03 Days from the site clearance.
- 16. **PENALTY:-** If contractor not completed the work within stipulated time contractor have to start the work within 2 Hrs after issue of work permit then penalty of Rs. 200/- per Hr shall be deducted from the bill of contractor. If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.

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- 17. **HUMAN SAFETY:-** All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any mishap and its compensation thereof will remain on the contractor himself as per govt laws.
- 18. **SAFETY PENALTY:** If contractors labour or supervisor is observed not following safety rules as per factory act and Industrial health & safety department of Govt., a penalty as deemed fit but not exceeding Rs.500/-per day per person may be imposed on the contractor.

S.No.	PARTICULARS	Qty.
6	Overhauling & Servicing of Suspended Magnet	04 Nos.

## SCOPE OF WORK :-

- 1. Work permit shall be taken from EE(CHP-Opn.) before starting of work.
- 2. Supply of all the required material like CTC/Petrol, gaskets, seal rings, nuts, bolt, tools and tackles etc etc. in contractors scope.
- 3. Complete removal of DC power and control supply, shifting suspended magnet from site to Unloading bay/maintenance bay for overhaul.
- 4. Cleaning of complete suspended magnet body.
- 5. Oil leakage checking and sealing of leakage if found from any place.
- 6. Checking, Cleaning and lubrication of hanging arrangement.
- 7. Checking and complete cleaning of control and power supply panels with CTC/Petrol.
- 8. Painting of complete body of suspended magnet and supply panel.
- 9. Reassembly of suspended magnet, after taken of insulation resistance and winding resistance. The contractor shall also provide and replace old gaskets, seal rings, O rings/Rubber flats, provided in the terminal cover.
- 10. In case of loss or damage of suspended magnet or suspended magnet parts during overhaul, the contractor has to repair/ replace the same free of cost.
- 11. Connection of DC power supply.
- 12. Any other work which is necessary but not covered in this scope of work, has to be carried out by the contractor as per the instruction of engineer-in-charge.
- 13. **WORK PERIOD** Each job should be completed within 03 Days from the site clearance.
- 14. **PENALTY:-** If contractor not completed the work within stipulated time contractor have to start the work within 2 Hrs after issue of work permit then penalty of Rs. 200/- per Hr shall be deducted from the bill of contractor. If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.

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- 15. **HUMAN SAFETY:-** All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any mishap and its compensation thereof will remain on the contractor himself as per govt laws.
- 16. **SAFETY PENALTY:** If contractors labour or supervisor is observed not following safety rules as per factory act and Industrial health & safety department of Govt., a penalty as deemed fit but not exceeding Rs.500/-per day per person may be imposed on the contractor.

S.No.	PARTICULARS	Qty.
7	Lift/Elevator overhauling & certification	04 Nos.

### **SCOPE OF WORK : -**

- 1. Work permit shall be taken from EE (CHP-Opn.) before starting of work.
- 2. Supply of all the required material like CTC/Petrol, nuts, bolt, tools and tackles etc etc. in contractor scope.
- 3. Checking, Cleaning and tightness of complete elevator body.
- 4. Checking, cleaning and terminal tightness of control and power supply panels motors, brake, limit switch, resistance box etc with CTC/Petrol.
- 5. Checking of electrical motor and brake for any crack or damaged. Replacement/repair of damaged part if any like motor terminals, cable lugs of motor shall also be checked and replaced if necessary.
- 6. Checking of motor bearing, cleaning of bearing with CTC/Petrol, replacement of bearing if required and applying grease if required.
- 7. Complete checking of VFD system.
- 8. Complete checking of power trailing cable repairing/ replacement if required.
- 9. Alignment of rack and pinion, tightness of rack, brake liner checking.
- 10. Alignment of gearbox, leakage checking from gearbox, oil top-up on gearbox.
- 11. Cleaning and greasing of complete rack.
- 12. Any other work which is necessary but not covered in this scope of work, has to be carried out by the contractor as per the instruction of engineer-in-charge.
- 13. **WORK PERIOD** Each job should be completed within 10 days from the site clearance.
- 14. **PENALTY:-** If contractor not completed the work within stipulated time contractor have to start the work within 2 Hrs after issue of work permit then penalty of Rs. 200/- per Hr shall be deducted from the bill of contractor. If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.

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- 15. **HUMAN SAFETY:-** All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any mishap and its compensation thereof will remain on the contractor himself as per govt laws.
- 16. **SAFETY PENALTY:** If contractors labour or supervisor is observed not following safety rules as per factory act and Industrial health & safety department of Govt., a penalty as deemed fit but not exceeding Rs.500/-per day per person may be imposed on the contractor.

S.No.	PARTICULARS	Qty.
8	Complete Repairing/Overhauling, fabrication and commissioning of Elecon make Paddle Feeders in rail structure of coal conveyor 1A/B (Below hopper) of CHP As per scope of work.	

#### Scope of Work:-

- 1. Complete Repairing, Overhauling fabrication and commissioning of Elecon make Paddle Feeders No.1, 2, 3 & 4 on rail structure of coal conveyor 1A/B (Below Track hopper) to be done, for which paddle feeders are to be dismantled in their components, over hauling of components, fabrication of structure components and re-erection & commissioning of equipments are to be done for smooth running of the feeders.
- 2. Cleaning of exterior equipments and complete machine to be done during overhaul. All settings of pressure parts and relays are to be kept as per original settings.
- 3. Checking & overhauling of hydraulic system to be done for which following parts are to be checked and repaired if any defect observed;
  - a. Directional control valves, check valves, Pressure relief valves & relief valves.
  - b. Pressure switches, air breathers & oil filters .
  - c. Axial piston pumps
- 4. Checking & overhauling of Electrical power supply & control supply system to be done for which following parts are to be checked and repaired if any defect observed;
  - a. Hydraulic pump motors (55KW), Traverse drive motors (0.57/1.5)KW, Hydraulic oil cooling Fan motors (1.5KW).
  - b. Power switches, Power contactors, O/L Thermals, Timers, Push Buttons & indicating lamps.
  - c. Dressing of power cables & wires inside the panels. Sealing of cabinet doors & cable entries.
- 5. Checking & overhauling of Mechanical system to be done for which following parts are to be checked and repaired if any defect observed;
  - a. Blades, mounting of motors, discharge chutes, thrust plates & skirt board.
  - b. Bearings & bushes.
  - c. Pendulum rollers, CCRD/PCRD drums alignment, checking Platform, ladders & railings.

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- 6. After completion of assembly no load trial of paddle feeders are to be taken without coal for smooth operation & reliability. If any problem arises, to be rectified.
- 7. Trial of machine as complete assembly on load duly blade fitted for coal feeding to be taken.
- 8. Other works which are necessary for smooth running of the feeders which are not covered in this scope of work to be done by the Contractor.
- 9. After completing the assembly work painting (One coat with red oxide and two coat with paint) to be done with reputed make paint

## **CSPGCL SCOPE:**

1. CSPGCL will provide required spares like new bearings, Gear box, couplings, sprocket, gear oil, grease HT bolts, Electrical spares and also will provide electricity facility free of cost.

## **CONTRACTOR SCOPE:**

- 1 All tools, tackles & consumables, cutting gas, Welding Electrodes etc. and transportation of material required for execution of above job are to be arranged by the contractor at his own cost.
- 2 The work should be carried out as & when required basis and contractor is bound to mobilize their resources within 48 Hrs. of intimation on phone.
- 3 Contractor shall arrange the transportation of men, material and machine.
- 4 The contractor have to remove the scrap from work place and return to site store / scrap yard as per instruction of EIC.

## WORK PERIOD -

(a) Paddle Feeder-Each job should be completed within 10 Days from the site clearance.

## **PENALTY:-**

- a. If contractor fails to mobilize their workers within 48 Hrs of intimation as & when required as per plant emergency then penalty of Rs. 500/- per Hr max up to 50% of job cost shall be deducted from the bill of contractor as deemed fit to EIC.
- b. If work is not completed within stipulated time will attract a penalty @ 1/2% per day maximum 10% shall be deducted from contractors bills.
- c. If the work is not found satisfactory and if it is felt necessary by engineer in charge, the work will be got carried out by other agency solely at the cost and risk of the contractor and payment of the work with 24% supervision charges shall be recovered from contractor.
- d. <u>HUMAN SAFETY:</u> All the safety appliances required for execution of job must be made available to the workers of the contractor by himself. The sole responsibility of any mishap and its compensation thereof will remain on the contractor himself as per Govt. laws.
- e. **SAFETY PENALTY:-** In case the contractor's labour or supervisor is found not following safety rules and regulation as per factory act and Industrial health & safety

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department of Govt., a penalty fit but not exceeding Rs.300/- per day per person may be imposed on the contractor by the Engineer-In-Charge or the Board's safety officer.

f. **SAFETY OF EQUIPMENTS:**-Further, the contractor shall be accountable for any damage to the equipment of Board and for any negligence or poor workmanship of the work and shall have to compensate the above loss from any payment due to the CSPGCL. The job is to be carried out taking full care of the safety of the equipments and its parts and any damage to any part of Stacker cun Reclaimer on account of slew ring replacement work will have to be fully rectified by the contractor at his own risk and cost.. The comprehensive Insurance Policy for transportation dismantling erection upto testing & commissioning of the equipment and machineries will be in the contractors scope.

## ANNEXURE- 1

### **GENERAL TERMS & CONDITIONS**

#### 1. Tenure and Period :

The Tenure of the contract will be 1 year (365 days) from the date of award. However, the same can be extended for further period of one year on the basis of satisfactory performance.

- Mobilization will start from the date of first "Notice to proceed". Contractor to mobilize the tools and tackles, manpower and consumables etc. as required.
- Contractor to submit the detailed resource mobilization plan (Manpower chart, T&P list and consumables) for all the above mentioned scenarios separately to the Owner for prior approval along with the quote.
- Contractor to work out the actual manpower required to ensure smooth functioning of O&M (Co-ordination, Monitoring & Maintenance) in line with scope of work given in the tender specification. The agreed manpower count will be considered as the minimum manpower count to be made available at the Site at all times.
- Organization Flow Chart to be provided by the Contractor indicating the manpower count against the respective O&M (Co-ordination, Monitoring & Maintenance) Package under consideration.
- Man-day rates against the following four categories to be submitted along with the quote:
  - a. Plant In Engineers/Supervisors/Admin Staff
  - **b.** Skilled manpower
  - c. Unskilled manpower
  - **d.** charge
- Familiarization period
  - a. Familiarization period will be 1 month from the date of "Notice to proceed".
  - **b.** Deleted
  - c. Contractor shall familiarize with all the equipment and systems under the scope.
  - **d.** Contractor shall coordinate with CSPGCL to receive all the required documents to satisfactorily perform the scope of work. The same shall be acknowledged in writing.
  - **e.** Contractor shall coordinate with CSPGCL and prepare all formats with respect to key deliverables (Annexure-2) required to be delivered under the scope and finalize the same.
- 2. <u>Key Deliverables:</u> Refer to Annexure-2

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3. Compliance of Chhattisgarh Government IR policy : As per C.G. Govt.

## 4. Facilities to be provided by CSPGCL

• Space for office & contractor's store will be provided by CSPGCL. Contractor to arrange for their own infrastructure.

### 5. Payment Schedule:

### Monthly invoice amount will be divided into 3 parts -

- **5.1.** 85% of the invoice amount—will be processed and paid within 45 days from the date of receipt of invoice (duly certified by CSPGCL Site Head) at CSPGCL HO.
- **5.2.** 15% of the invoice amount-will be released at the end of the respective quarter subject to compliance to the key deliverables by submitting the reports duly signed by Site Heads of Contractor and CSPGCL. In case of non-compliance, payment will be released subject to deduction of penalties.
- **5.3.** Contractor shall provide Performance Bank Guarantee for 15% of the Annual O&M fee (as per the format given by CSPGCL) subject to the following conditions:
- 5.3.1. BG will be submitted within 7 working days from the date of award
- 5.3.2. BG to be renewed on annual basis.
- **5.3.3.** BG to act as security against non-performance and may be invoked as per the provisions of termination clause mentioned below.

### 6. <u>Reports and MIS:</u>

- Daily, weekly and monthly reports to be given by the contractor.
- Accidental and incidental reports on occurrence to be given by the contractor-Frequency of submission will be as stipulated under the statutory guidelines
- Monthly reports on the key deliverables (signed jointly by Site Heads) to be given by the contractor by 7th of succeeding month.
- Annual reports to be submitted by contractor 15 days from annual contract conclusion date.
- Any other report as required by CSPGCL to be submitted by the contractor
- Monthly Review meetings involving contractor's site head, CSPGCL site Head and contractor's Project Manager based at their HO. To be held not later than 10th of every month
- Meeting at CSPGCL Raipur as and when required.

### 7. <u>Subcontracting:</u>

Unless and until there is a prior consent in writing from CSPGCL, the contractor cannot sublet any part or complete job to an outside vendor.

### 8. Other Terms:

- Contractor shall comply with the CSPGCL HR& IR policies.
- Contractor shall comply with the CSPGCL safety policies and guidelines
- Contractor shall comply with the Environment norms and procedures as per the State and Central Government bodies.
- Contractor shall ensure compliance with respect to working in the active ERP system of CSPGCL
- Contractor shall comply with the policy decisions taken by CSPGCL from time to time. The actions taken by contractor for the implementation of these policy decisions shall be a part of Monthly Review meetings involving contractor's site head, CSPGCL site Head and contractors Project Manager based at their HQ.

### 9. <u>Safety requirements / facilities by the Contractor.</u>

The contractor in order to meet any medical exigency must have round the clock medical assistance facility in their office at site. The contractor shall ensure safety and security of all its personnel working at different places in discharge of their duties as per the contract and shall be responsible for the same.

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The contractor shall have to provide all safety tools and tackles such as helmets, goggles, gas masks, respiratory masks, gumboots, industrial shoes safety belts, aprons etc and ensure to use these personal protection equipment's by his/their employees, contract labors without fail. The contractor shall also ensure safety and security of all CSPGCL employees/personnel/visitors at site.

#### 10. Contractor's Obligation

- Accommodation, transport and canteen for their contractor's labor and employees to be arranged by the Contractor
- Project Affect Persons (PAPS) The contractor shall employ PAPS as per Govt. policy
- Govt. /Statutory obligations/policies to be fulfilled/met for the employment of PAPS.
- 11. <u>Termination</u>: Refer to clause number 7.17 under technical specifications.

## ANNEXURE- 2

S. No.	Activity / Parameter	Bench mark	Penalty	Remarks
1	Delay in unloading of wagons & delay of railway engine	Free time allowed by Railways	i.e. demurrages charges,	Railway standard norms.
2	Availability of coal in bunker	more than 60% (less than 10 meter empty)		more than 50% in rainy season (less than 12 meter empty)
3	Minimum manpower deployment		1.25 times the manday rates	
4	Housekeeping shortfalls		Rs. 20,000/- per week	
5	Safety Violations		As decided by plant head, CSPGCL	Up to max. Rs. 10,000/- per violation. Above penalty does not cover fatal and non-fatal accidents.
6	Default in statutory compliances		Rs. 10,000 for every week delay for each compliance	

### **REVISED KEY DELIVERABLES**

<u>Note:</u> - ABVTPS Marwa receives the coal from SECL & its captive mine GP-III by railway rakes. The unloading of GP-III rakes is carried out by M/s Adani Ltd.. If the rakes delayed due to big lumps, oversize coal or stones then the penalty ((Demurrage charges & Engine hire charges) is borne by M/s Adani ltd.. However if penalty occurs due to unloading delay because of outage of auxiliaries of CHP or CHP plant related problems then the contractors who is executing the comprehensive contract of CHP shall be considered as responsible for the delay

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and will bear the railways penalty (i.e. EHC & demurrages) and any other charges applicable as per railways norms.

Unloading of SECL rakes shall be in the scope of contractor & if the delay in unloading of rakes occur due to any reason beyond the free time then the penalty as per railway norms will be applicable on the contractor including EHC & Demurrages charges and any other penalty if applicable.

The rates of EHC & demurrage charges get revised time to time and shall be applicable with the revised rates of Indian Railways as per notification.

## <u>ANNEXURE – 3</u>

#### Tools & Plants (T&P)

## **TOOLS & TACKLES TO BE BROUGHT BY CONTRACTOR**

#### An indicative list of Tools and Tackles to be supplied as follows:

- 1. Individual Tool Bags for each Technician, Electrician shall have insulated hand tools. Powerful torch for each Technician and Supervisor.
- 2. DE Spanner sets Box Spanner sets, Slogging spanner sets, Ring Spanner sets, Allen Key sets, Pipe Wrench sets, Torque Wrench, Gas cylinder keys, Center Punches, Hole punch, Marking tool, Screw Drivers, All type of files, Chisels, Wedges, Nose pliers.
- 3. Hack saw, Tin cutters, Cir-clip pliers, Gasket cutters, Hole Punch set, Oil Cans.
- 4. Drill bits, Tap set, Reamers, Mounted wheels & Rotary Burrs, Oil stones.
- 5. Bearing Scrappers, Plumb bob. Cooper tube cutter & bender.
- 6. Copper bars, Wooden hammer, Sledge Hammers, Ball Pan Hammers.
- 7. Induction type Bearing Heater, Bearing mounting sleeve set, all sizes of bearing pullers (hydraulic / pneumatic), Coupling pullers, Temp Sticks, Temp Gun.
- 8. Welding machines, Gas cutting sets (torch, hoses, flashback arrestors, gas regulators), Electrode Heaters, Welding cables and Electrode Holder, Welding screen, Welding Shield & Goggles, Welding Aprons & Gloves, TIG welding kit, Gas cylinder trolley.
- 9. Portable welding machine.
- 10. Grease gun. Torque wrench. Letter punch set. Number punch set. Cir-clip pliers.
- 11. Screw and Hydraulic jacks of various capacities.
- 12. Electrical flash lights, Hand lamps, Extension boards and 24 V transformers.
- 13. Flexible Grinding machines, Hand/Bench Drill machines, Electric / Pneumatic straight / Angel Grinding machines, Hitachi hand grinders, Drill Machine with magnetic base, Pistol Drill machine and pipe cutting machine.
- 14. Lifting tools and tackles, Wire ropes / Slings, D-shackles, Eyebolts, Tripod, Chain pulley blocks, Hook chuck, Tommy bars, Craw Bars, Cotton rope etc.
- **15.** Surface plates, Straight Edged bars, lapping discs, valve seat grinding machine.
- **16.** Measuring instruments like; Vernier Caliper, Micrometer, Feeler gauges, Thread gauge, dial gauges, Bore gauge, Telescopic gauge, Depth gauge, Measuring Scales, Measuring Tapes, small Weighing Scale, Slip gauge, Bevel Protector, Level bottles, Inside & Outside calipers.
- 17. Flexible hose pipes for cleaning by air / water, Vacuum cleaner, Air Blower.
- **18.** Wooden Blocks, Wooden Sleepers, Cup lock scaffolding material, Wooden planks, Metal planks, Bamboo, Pipe Clamps etc.
- **19.** Hydraulic test pump, Pressure gauges of different range, thermometers.

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- 20. Man cooler fans and exhaust fans.
- 21. Condition monitoring equipments like; Vibration meter, balancing instrument etc.
- 22. Halogen lamps, Flood lights.
- **23.** All necessary Tools & Tackles related to Electrical and C & I maintenance like; Multi meters, Clamp on meters, insulated hand tools, crimping tools, meager, test lamps, fuse pullers, earth rods, soldering iron & de soldering pump, motor checker, dead weight tester, Earth tester etc.
- **24.** All the tools & tackles along with rope/slings, D-shackles etc. should be properly tested & test certificate should be produced whenever demanded.
- 25. All the welding equipment should be well certified with safety norms as applicable for Plant safety norms. This list is indicative only and other tools and Plants not explicitly mentioned above shall also be supplied & maintained by Contractor

## <u>ANNEXURE – 4</u>

### LIST OF CONSUMABLES TO BE SUPPLIED BY CONTRACTOR

#### An indicative list of Consumables to be supplied as follows:

- **1.** General purpose MS fasteners up to 12 X 50 like; bolt, nut, screw, washer etc. (except SS fasteners, Special fasteners, higher sized fasteners and HT fasteners).
- 2. Nails, Split pins, binding wire, Insulation screws, hose clamps, SS and Brass Shims.
- 3. Bulbs wire holders for Hand lamps, Dry cell for torches.
- 4. First Aid kits and medicines.
- 5. Stationary for Contractors own use.
- 6. Gas filled cylinders of Oxygen, DA and Argon.
- 7. Lead wire, Piano wire, Chalk stick, Permanent Markers, Paint Markers.
- 8. Petrol, Diesel (for maintenance purpose only), Kerosene, mineral turpentine, Rustoline, CTC, Linseed Oil, Electrical Contact Cleaners, Acetone, Pen Oil, Petroleum jelly, CRC-226.
- **9.** Emery Papers of different fineness, Sand paper, Emery tape, Grinding wheels, Cut off wheels, Drill bits, Mounting point tools, Wire / Nylon Brushes, Hacksaw blades etc.
- **10.** Electrical PVC tapes, Teflon tape, M seal putty, Steel putty.
- **11.** Cotton waste, cleaning cloth, net cloth, markine cloth, coir rope, asbestos cloth.
- **12.** Cable ties, 24 volt hand lamps with transformer and bulbs. Plugs, Cable lugs of various: sizes (up to 415 V.A.C.) etc.
- 13. Electric Bulbs, wires & holders for temporary lighting at work place.
- 14. Diamond lapping compounds of different grade.
- **15.** DP test kits, Engineer's Blue paste & liquid, liquid shop.
- **16.** General purpose welding electrodes, cutting & gauging electrodes, dissimilar metal electrodes, Soldering, brazing materials as well as special purpose electrodes required for execution of maintenance work.
- **17.** Sealants and glues, Thread sealant, Gasket sealant, 0-ring sealant and jointing compounds, Loctite, bearing retainer compound, Ana bond 202/666/610/596, Shellac compound, Araldite etc.
- 18. Holdite, Neverseiz, RTVs and Silicon sealants, mecatec express etc.
- **19.** Compressed Asbestos fiber gasket sheet of different rating & thickness for oil/water/ steam application.
- 20. Rubber Gaskets and Neoprene Rubber sheets, Oil Paper gasket.
- **21.** Graphite & non-graphite Asbestos thread, Asbestos tape, different sized gland packing & gland packing ropes, Graphite powder.

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- 22. Consumables for tools & tackles brought by the contractor like, hacksaw blade etc.
- **23.** PPEs and safety appliances, asbestos & rubber Gloves, face shields, gumboots, special aprons and first aid kit.
- 24. Tape (PVC / Para / Empire / Fiber-glass / Glass mica / Cotton, Teflon).
- 25. Polythene, Tarpaulin (excluding for coal covering).
- **26.** Conveyor belt vulcanizing kit (hot and cold) for each size and type of conveyor belt, ILMS belt, pulley lagging with adequate rubber lagging sheet.
- 27. Refrigerant for AC, capacitor, sensor, coil contactor etc.

This list is indicative only and Other Consumables not explicitly mentioned above shall also be supplied & maintained by Contractor.

## ANNEXURE - 5

## **Manpower Deployment Compliances**

#### HR Compliance - General Terms and conditions for Manpower deployment

The following General Terms and Conditions shall apply in relation to manpower deployed for the performance of the Scope of Work under the Contract and shall be in addition to and not in derogation of any other terms and conditions stipulated in the Contract:

The Contractor shall, in respect of the Scope of Work under the Contract and the personnel deployed for the performance thereof, fulfill the following obligations:

- 1. Code/alb-code number under the Employees' Provident Funds& Miscellaneous Provisions Act, (the rate of contribution shall be @ 12% of basic wages per month)
- 2. Code under the Employees' State Insurance Act, if applicable
- **3.** If the Employees' State Insurance Act is not applicable, obtain a valid insurance policy covering all the personnel at all times by Contractor, under a suitable workmen compensation policy for accidents occurring in the course of and out of employment for an amount depending upon the skill category.
- 4. Observe and comply, at all times, with the provisions of all applicable labour laws and rules made or notifications issued there under, including but not limited to the following:
- a) Employees' Provident Funds & Miscellaneous Provisions Act, 1952
- b) Payment of Wages Act, 1936
- c) Equal Remuneration Act, 1976, if applicable
- **d**) Pay to all the personnel deployed, not less than the minimum wages as fixed by competent authority of the Government from time to time.
- **5.** Strictly adhere to the following work practices: For the effective performance of the scope of work under the contract, Contractor shall strictly adhere to the following work practices:
  - a) Commence or perform work only in terms of and under a valid work order issued by the Owner;

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- **b**) Before commencement of the Scope of Work, intimate in writing the actual date of commencement of the work and similarly, upon completing the Scope of Work, intimate the date of completion.
- c) Ensure a proper antecedent check is done on personnel to be deployed so that their deployment is not detrimental to the interests of the Owner or to the performance of the scope of work;
- d) Ensure that persons below 18 years of age are never deployed or employed on any part of the scope of work.
- e) Ensure that drivers engaged for driving vehicles deployed inside the site holds valid driving license and furnish copy of the same to Owner's HR Department.
- **f**) Ensure that the vehicles not having valid registration certificate or insurance or number plates are not brought inside site or used in the performance of the Scope of Work.
- **g**) Take full responsibility for and ensure:

Good behavior and conduct of the personnel deployed

- i. no personnel deployed engages in any act detrimental to the interests of the Owner
- **ii.** be in continuous co-ordination with Owner's designated representatives to report the progress of the scope of work.
- **6.** Safety-related obligations:

Contractor shall, at all times, fulfill the following obligations in relation to safety in the performance of scope of work:

- **a**) Obtain work permit from Owner's safety department and adhere to all safety regulations, including those prescribed by the Owner.
- **b)** Issue identity cards to all personnel deployed on the Scope of Work, with the photo, name, blood group and contact phone number in case of emergency, under the seal and signature of the Contractor and ensure that the personnel do wear it without fail while performing the Scope of Work.
- c) Ensure safety and security of all personnel deployed and strict adherence by such personnel of all the safety rules & regulations and safe work practices under law or that may be prescribed by the OWNER.
- d) In case of any accident to any of the Contractor's personnel while on duty, pay due compensation under law.
- e) Provide to all personnel, at Contractor's own cost, personal Protective Equipments such as Helmets and Safety Shoes as prescribed by Owner.

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- 7. Contractor shall raise the Monthly bills along with on the actual deployment of site personnel on this assignment.
- 8. All payment of wages shall be made on a working day at the work premise and during the working time and on a date notified in advance. In case the work is completed before the expiry of the wage-period, final payment shall be made within 48 hours of the last working day.
- **9.** Owner will not assume any responsibility for loss / damage sustained by Contractor to its property or personnel on any account whatsoever, including in case of any accident, if the same is for reasons not attributable to the Owner.
- 10. Owner shall be entitled, at its absolute discretion and without assigning any reason whatsoever therefore, refuse entry or seek removal forthwith of any personnel deployed by Contractor whom Owner may, at its sole discretion, find unsuitable or not complying with the requirements stipulated under this Contract. The Contractor shall thereupon provide a substitute or substitutes for the personnel so refused or sought to be removed and ensure that no part of the Scope of Work hereunder or the scheduled date of completion suffers thereby.
- 11. The deployment, employment and supervision and the control of work done by the Contractor's personnel shall and shall always be construed to be that of the Contractor. The Owner or its Directors / Officers shall in any way be concerned with or be responsible for the same or any aspect of the same.
- **12.** Contractor shall designate and notify to Owner a person or persons who shall be the point(s) of contact for the Owner on all aspects of the Scope of Work and communication to such designated person(s) shall be conclusive in nature.
- 13. Notwithstanding anything contained herein, there shall be no privity of contract whatsoever between Owner and the personnel deployed by the Contractor or any other agency engaged by the Contractor, on any aspect whatsoever and Owner shall not entertain any claim whatsoever from them on any account.
- 14. Contractor shall observe the same holidays as that declared by Owner and in case of emergency deploy manpower irrespective of any holiday.
- **15.** All payments by Owner to Contractor under the Contract will always be subject, *inter alia*, to fulfillment and production of proof thereof by Contractor of its statutory obligations in relation to performance of the Scope of Work hereunder, including but not limited to those stipulated hereinabove.
- 16. Consequences of non-fulfillment of obligations:

In the event of failure of Contractor to fulfill its obligations stipulated here in above or in the Contractor:

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)

Office of Chief Engineer (S&P: Gen.), CSPGCL, 5th Floor, Vidyut Seva Bhawan, Dangania, Raipur (C.G.)-492013 Phone: 0771-2574451; Fax: 0771-2574458; Email: cesnp.cspgcl@cspc.co.in; Website: www.cspc.co.in/cspgcl

छत्तीसगढ वाज्य विद्युत उत्पादन कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821



a) Contractor shall be liable to indemnify and keep indemnified and hold harmless the Owner, its directors, officers, employees, agents, affiliates and representatives from and against any and all third party liability or injuries (including death), direct and actual damages, liabilities, fines, penalties, or expenses (including reasonable legal expenses) of any kind or nature whatever as may be payable under applicable law arising out of resulting from or relating to such failure.

	Monthly Oil Filtration Report of Power Pack installed at CHP								
Sl No.	Power Pack	Filtration Started	Filtration Completed	NAS Value of Oil Before Filtration	NAS Value of Oil After Filtration	Remarks			
1	Conveyor1A/B								
2	Conveyor2A/B								
3	Conveyor3A/B								
4	Conveyor4A/B								
5	Conveyor5A/B								
6	Conveyor6A								
7	Conveyor6B								
8	Conveyor7A/B								
9	Conveyor8A/B								
10	Conveyor9A/B								
11	Conveyor9C/D								
12	Conveyor10A/B								
13	Conveyor10C/D								
14	Conveyor11A1								
15	Conveyor11A2								
16	Conveyor11B1								
17	Conveyor11B2								
18	Conveyor12								
19	Paddle Feeder 1								
20	Paddle Feeder 2								
21	Paddle Feeder 3								
22	Paddle Feeder 4								

## ANNEXURE- 6 A

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)

छत्तीसगढ नाज्य विद्युत उत्पाढ्न कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक CIN: U40108CT2003SG

Undertaking) क उपक्रम) GC015821		सी एस पी जी सी C∳PGC
	T	

23	S/R-1 luffing			
24	S/R-1 Boom conveyor			
25	S/R-1 Bucket Sleeve			
26	S/R-1 Intermediate Conveyor			
27	S/R-2 luffing			
28	S/R-2 Boom conveyor			
29	S/R-2 Bucket Sleeve			
30	S/R-2 Intermediate Conveyor			

Signature of CSPGCL Representative

Signature of Contractor

Name of Month

#### ANNEXURE- 6 B

Monthly Report for greasing of pulleys & other equipment of CHP

Pulleys Sl Location Remarks Bend Drive Snub Take-No. Snub **Tail pulley** Pulley pulley pulley up 1 Conveyor1A 2 Conveyor1B 3 Conveyor2A 4 Conveyor2B 5 Conveyor3A 6 Conveyor3B 7 Conveyor4A 8 Conveyor4B 9 Conveyor5A 10 Conveyor5B 11 Conveyor6A 12 Conveyor6B 13 Conveyor7A 14 Conveyor7B 15 Conveyor8A 16 Conveyor8B 17 Conveyor9A 18 Conveyor9B 19 Conveyor9C 20 Conveyor9D 21 Conveyor10A

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)

छत्तीसगढ वाज्य विद्युत उत्पादन कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821

22	Conveyor10B				
23	Conveyor10C				
24	Conveyor10D				
25	Conveyor11A				
26	Conveyor12 (ERH)				
27	S/R - 1				
28	S/R - 2				
29	Paddle Feeder 1				
30	Paddle Feeder 2				
31	Paddle Feeder 3				
32	Paddle Feeder 4				
33	Crusher 1				
34	Crusher 2				
35	Crusher 3				
36	Crusher 4				
37	VGF-1				
38	VGF-2				
39	VGF-3				
40	VGF-4				
41	Pump's				
42	Tripper				
43	Belt feeder 1				
44	Belt feeder 2				
45	Belt feeder 3			 	
46	Belt feeder 4				

Signature of CSPGCL Representative

Signature of Contractor

छत्तीसगढ नाज्य विद्युत उत्पादन कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821



# ANNEXURE- 6 C

Weekly TP's Cleaning Report of CHP							
CI		Area					
SI No.	Location	Power Pack floor	Head End floor	Flap gate floor	Ground floor	Remarks	
1	TP-1						
2	TP-2						
3	Crusher House						
4	TP-3						
5	TP-4 &10						
6	TP-5						
7	TP-6						
8	TP-7						
9	TP-8						
10	TP-9						
11	Drive house-1						
12	Drive house-2						
13	S/R - 1						
14	S/R - 2						
15	Paddle Feeder 1						

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16	Paddle Feeder 2			
17	Paddle Feeder 3			
18	Paddle Feeder 4			

Signature of CSPGCL Representative

Signature of Contractor

	W	eekly Conveyor	Cleaning R	eport of CH	IP	
SI			A	Irea		
No.	Location	Drive End	Tail End	Take-up	Middle Area	Remarks
1	Conveyor1A					
2	Conveyor1B					
3	Conveyor2A					
4	Conveyor2B					
5	Conveyor3A					
6	Conveyor3B					
7	Conveyor4A					
8	Conveyor4B					
9	Conveyor5A					
10	Conveyor5B					
11	Conveyor6A					
12	Conveyor6B					
13	Conveyor7A					
14	Conveyor7B					
15	Conveyor8A					
16	Conveyor8B					
17	Conveyor9A					
18	Conveyor9B					
19	Conveyor9C					
20	Conveyor9D					
21	Conveyor10A					
22	Conveyor10B					

### ANNEXURE- 6 D

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)

छत्तीसगढ नाज्य विद्युत उत्पादन कंपनी मर्यादित

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23	Conveyor10C			
24	Conveyor10D			
25	Conveyor11A			
26	Conveyor12 (ERH)			
27	S/R - 1			
28	S/R - 2			
29	Paddle Feeder 1			
30	Paddle Feeder 2			
31	Paddle Feeder 3			
32	Paddle Feeder 4			

Signature of CSPGCL Representative

Signature of Contractor

## ANNEXURE- 6 E

### Monthly Status Report of Protection System of CHP-C&I

Sl.No	Name of Auxiliaries	Name of Equipments / Items					
А	Stacker/Reclaimer-1	PC S	BS S	Remarks			
1	Boom Conveyor & its power pack						
2	Intermediate Conveyor & its power pack						
3	Long Travel						
4	Luffing Sytem & its power pack						
5	Slewing System & its power pack						
6	CCRD Over & Under Tension						
7	PCRD Over & Under Tension						
В	Stacker/Reclaimer-2						
1	Boom Conveyor & its power pack						
2	Intermediate Conveyor & its power pack						
3	Long Travel						
4	Luffing Sytem & its power pack						
5	Slewing System & its power pack						
6	CCRD Over & Under Tension						

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7	PCRD Over & Under Tension		]
			I
С	Paddle Feeder-1	Limit Switch and its Feed Back	Remarks
1	Power pack System		
2	Long Travel		
3	CCRD under Tension		
4	CCRD Over Tension		
5	PCRD under Tension		
6	PCRD Over Tension		
D	Paddle Feeder-2	Limit Switch and its Feed Back	Remarks
1	Power pack System		
2	Long Travel		
3	CCRD under Tension		
4	CCRD Over Tension		
5	PCRD under Tension		
6	PCRD Over Tension		
Е	Paddle Feeder-3	Limit Switch and its Feed Back	Remarks
1	Power pack System		
2	Long Travel		
3	CCRD under Tension		
4	CCRD Over Tension		
5	PCRD under Tension		
6	PCRD Over Tension		
F	Paddle Feeder-4	Limit Switch and its Feed Back	Remarks
1	Power pack System		
2	Long Travel		
3	CCRD under Tension		

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4	CCRD Over Tension						
5	PCRD under Tension						
6	PCRD Over Tension						
			-	-			
G	Conveyors System & Hyd. Power Pack and its C&I Items	PC S	BS S	ZS S	Temp. Scanner of HT Motors	Limit Switch and C&I Items its Feed Back	Remarks
1	BCN-1A						
2	BCN-1B						
3	BCN-2A						
4	BCN-2B						
5	BCN-3A						
6	BCN-3B						
7	BCN-4A						
8	BCN-4B						
9	BCN-5A						
10	BCN-5B						
11	BCN-6A						
12	BCN-6B						
13	BCN-7A						
14	BCN-7B						
15	BCN-8A						
16	BCN-8B						
17	BCN-9A						
18	BCN-9B						
19	BCN-9C						
20	BCN-9D						
21	BCN-10A						

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22	BCN-10B				
23	BCN-10C				
24	BCN-10D				
25	BCN-11A				
26	BCN-11B				
27	BCN-12				
28	Belt Feeder-1				
29	Belt Feeder-2				
30	Belt Feeder-3				
31	Belt Feeder-4				
	·	•	•		

н	CRUSHER & Its Scoop System	Temp. Scanner of HT Motors	Scoop System Limit Switch and its Feed Back	Remarks
1	CRUSHER-1			
2	CRUSHER-2			
3	CRUSHER-3			
4	CRUSHER-4			

J	UPS 10KVA, 15KVA & 3KVA Battery Status	Battery Staus (Volt Reading per Cell)	Remarks
1	57 AH Batt. Bank for UPS 10KVA		
2	45 AH Batt. Bank for UPS 15KVA		
3	18 AH Batt. Bank for UPS 3KVA of S/R-1		
4	18 AH Batt. Bank for UPS 3KVA of S/R-2		

K	Fire Alarm & Detection System	Deluge Valve Feed back	M CP Fee d bac k	Infra Red Detector	LHS Cable Feed back	Remarks
1	TP-1					
2	TP-2					

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3	Crusher House			
4	TP-3			
5	TP-4			
6	TP-5			
7	TP-6			
8	TP-7			
9	TP-8			
10	TP-9			
11	Transformer Yard (11/6.6KV of CHP)			
12	BCN-1A			
13	BCN-1B			
14	BCN-2A			
15	BCN-2B			
16	BCN-3A			
17	BCN-3B			
18	BCN-4A			
19	BCN-4B			
20	BCN-5A			
21	BCN-5B			
22	BCN-6A			
23	BCN-6B			
24	BCN-7A			
25	BCN-7B			
26	BCN-8A			
27	BCN-8B			
28	BCN-9A			
29	BCN-9B			
30	BCN-9C			
31	BCN-9D			
32	BCN-10A			

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(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821



33	BCN-10B			
34	BCN-10C			
35	BCN-10D			

Signature of CSPGCL Representative

Signature of Contractor

#### ANNEXURE- 6 F

### Monthly Report of CHP-Electrical, ABVTPS

SI.	Name of Auxiliaries	Status	Remarks			
Α	Stacker/Reclaimer					
1	S/R-01 Transformer, Trailingcable, PMCC, Breakers, Motors, Long travel system wirh CCRD & PCRD					
2	S/R-02 Transformer, Trailingcable, PMCC, Breakers, Motors, Long travel system wirh CCRD & PCRD					
B	Paddle Feeder					
1	PF-01 Electrical Panel Cleaning, Tightnes, Motors, Long travel with CCRD & PCRD					
2	PF-02 Electrical Panel Cleaning, Tightnes, Motors, Long travel with CCRD & PCRD					
3	PF-03 Electrical Panel Cleaning, Tightnes, Motors, Long travel with CCRD & PCRD					
4	PF-04 Electrical Panel Cleaning, Tightnes, Motors, Long travel with CCRD & PCRD					
С	Crusher & Its Scoop S	System				
1	Crusher-1 Motor ,Scoop system, Panel cleaning and Tightnes					
2	Crusher-2 Motor ,Scoop system, Panel cleaning and Tightnes					
3	Crusher-3 Motor ,Scoop system, Panel cleaning and Tightnes					
4	Crusher-4 Motor ,Scoop system, Panel cleaning and Tightnes					
D	Travelling Tripp	er				
1	TTR-9A Electrical panel cleaning tightnes, Travel motor, Rail Clamp, limit switchs					

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)

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1 1						
2	TTR-9B Electrical panel cleaning tightnes,Travel motor, Rail Clamp, limit switchs					
3	TTR-9C Electrical panel cleaning tightnes, Travel motor, Rail Clamp, limit switchs					
4	TTR-9D Electrical panel cleaning tightnes,Travel motor, Rail Clamp, limit switchs					
5	TTR-10A Electrical panel cleaning tightnes,Travel motor, Rail Clamp, limit switchs					
6	TTR-10B Electrical panel cleaning tightnes,Travel motor, Rail Clamp, limit switchs					
7	TTR-10C Electrical panel cleaning tightnes, Travel motor, Rail Clamp, limit switchs					
8	TTR-10DElectrical panel cleaning tightnes,Travel motor, Rail Clamp, limit switchs					
Е	Magnets					
1	Suspended Magnet-01 & 02					
2	ILMS-01,02,03,04					
F	Battery Charger Electrical Switchgear					
1	Float Charger					
2	Float Cum Boost Charger					
G	Battery Bank					
1	Battery Bank					
Н	Electrical Switchgear					
1	CHP Service Transformer RKST-03 & 04					
2	6.6KV OCC Bus and Breakers					
3	Bunker PMCC and CLST-01 & 02					
4	CHP PMCC and CLST-03 & 04					
5	Track Hopper PMCC and CLST-05 & 06					
6	CHP MLDB's					

Signature of CSPGCL Representative

Signature of Contractor

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.) Office of Chief Engineer (S&P: Gen.), CSPGCL, 5th Floor, Vidyut Seva Bhawan, Dangania, Raipur (C.G.)-492013 Phone: 0771-2574451; Fax: 0771-2574458; Email: cesnp.cspgcl@cspc.co.in; Website: www.cspc.co.in/cspgcl

छत्तीसगढ वाज्य विद्युत उत्पादन कंपनी मर्यादित

(A Govt. of Chhattisgarh Undertaking) (छत्तीसगढ़ शासन का एक उपक्रम) CIN: U40108CT2003SGC015821



## ANNEXURE- 6 G

#### **Quarterly HT/LT Motor Report of CHP-Electrical, ABVTPS**

S.No	Name of Auxiliaries	KW Rating	Terminal Checking	Greasing	Remarks
А		Н	T Motors		
1	BCN-2A	275KW			
2	BCN-2B	275KW			
3	BCN-3A	400KW			
4	BCN-3B	400KW			
5	BCN-4A	224KW			
6	BCN-4B	224KW			
7	BCN-5A	224KW			
8	BCN-5B	224KW			
9	BCN-6A1	330KW			
10	BCN-6A2	330KW			
11	BCN-6B1	330KW			
12	BCN-6B2	330KW			
13	BCN-7A	250KW			
14	BCN-7B	250KW			
15	BCN-8A	180KW			
16	BCN-8B	180KW			
17	BCN-9A	250KW			
18	BCN-9B	250KW			
19	BCN-9C	250KW			
20	BCN-9D	250KW			
21	BCN-10A	250KW			

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22	BCN-10B	250KW					
23	BCN-10C	250KW					
24	BCN-10D	250KW					
25	BCN-11A1	275KW					
26	BCN-11A2	275KW					
27	BCN-11B1	275KW					
28	BCN-11B2	275KW					
29	BCN-12	250KW					
30	Crusher-1	750KW					
31	Crusher-2	750KW					
32	Crusher-3	750KW					
33	Crusher-4	750KW					
B	LT Motors						
1	BCN-1A	132KW					
2	BCN-1B	132KW					
3	Belt Feeder-01	37KW					
4	Belt Feeder-02	37KW					
5	Belt Feeder-03	30KW					
6	Belt Feeder-04	30KW					
7	Paddel Feeder Drive Motor-01	55KW					
8	Paddel Feeder Drive Motor-02	55KW					
9	Paddel Feeder Drive Motor-03	55KW					
10	Paddel Feeder Drive Motor-04	55KW					
11	Compressor Motor-01	75KW					
12	Compressor Motor-02	75KW					
13	Compressor Motor-03	75KW					
14	Compressor Motor-04	75KW					
15	VGF-01	30KW					
16	VGF-02	30KW					
17	VGF-03	30KW					
18	VGF-04	30KW					
19	Crusher House DE System	160KW					
20	S/R-01	90KW					

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छत्तीसगढ नाज्य विद्युत उत्पाढ्न कंपनी मर्यादित

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	Boom/Bucket/Intermediate			
21	S/R-02 Boom/Bucket/Intermediate	90KW		
22	Sprinkler Motor for Stock Yard	75KW		
23	Track Hopper Spray Pump	45KW		
24	Service Water Pump	37KW		

Signature of CSPGCL Representative

Signature of Contractor

(4) **EXTENSION ORDER** :- Extension Order Clause no. 16 (a), Page no. 13 of tender booklet is hereby amended as:-

"CSPGCL reserves the right to place an extension order upto 50% additional quantity within the contract period or extended period, if any, on the same rate, terms & conditions".

This clause shall override any other extension clause in the tender.

(5) **CONTRACT PERIOD** :- Contract period clause no. 05, Page no. 19 of tender booklet is hereby amended as:-

"Contract period shall be for two years from the date of commencement of work. However in the  $1^{st}$  phase, order shall be placed for one year and after satisfactory completion of  $1^{st}$  year, order for  $2^{nd}$  year shall be placed. The period of contract may be extended for 50% of time period at the discretion of the Company, on the same rates, terms and condition as that of the main contract. The contract may also be awarded for a lesser period on the quoted rates".

This clause shall override any other contract period clause in the tender.

(6) **PRICE VARIATION** :- Price variation clause no.(iii), Page no. 41 of tender booklet is hereby amended as :-

"The rates quoted shall be firm for 02 years contract period and extension, if any and Price variation clause no. (iii) under 'Special Conditions for Work Contracts for Two Years (1 Year + 1 Year)', Page no. 41 of tender booklet shall be treated Null & Void".

This clause shall override any other price variation clause in the tender.

Other terms & conditions of the tender shall remain unchanged.

-Sd-Chief Engineer (S&P: Gen.) C.S.P.G.C.L, RAIPUR

#### **"SAVE ELECTRICITY"**

Regd. Office : "Vidyut Seva Bhawan " Dangania Raipur (C.G.)