

**TENDER DOCUMENT SERVICES**

**Operation & Maintenance of CHP and AHP**

**At**

**CPP540 MW (4X135 MW)**

**&**

**CPP 1200 MW (4x300 MW)**

**TENDER NO: BALCO/COM/ AR/02/19- CHP and AHP**

**SEND YOUR OFFER WITHIN 7 DAYS THROUGH E-MAIL**

To,

**Head Commercial**

**Bharat Aluminum Company Ltd.**

Commercial Office Admin Building, 1<sup>st</sup> Floor BALCO NAGAR

**KORBA – 495684**

Chhattisgarh State India

tender.korba@vedanta.co.in

## **INDEX**

**Attached herewith is our Tender Document for the details are attached below:**

- 1. Instruction to the Bidder.**
- 2. Offer letter.**
- 3. Scope of Work & Bill of quantities.**
- 4. Balco General Terms & Condition.**

We are looking forward to an extended relationship and are open to negotiate long term contracts if that is mutually beneficial.

Please note that completion of the response, in terms of the Formats to be filled and data to be furnished, will be one of the criteria for evaluation of the vendors.

We will be happy to assist you with the process. Feel free to reach out to any of the people listed below.

### **For Clarifications:**

**Commercial:** Mr. Rohit Singour, Mob. No: 9179038516

**Mr. Ashish Raghuwanshi** Mob. No: 9589338228

## 1) INSTRUCTION OF BIDDERS

**Vedanta Resources plc** (“Vedanta”) is a LSE listed FTSE 100 Company with a market cap including that of its listed subsidiaries of about \$ 50 billion. We operate across the following core business sectors: Zinc-Lead-Silver, Copper, Aluminum, Iron Ore and Energy, with operation located in geographies spanning India, Australia, UAE, Zambia, South Africa, Namibia and Ireland. Over the past 5 years the group has displayed exemplary appetite for organic and inorganic growth-with an industry leading organic growth program of \$ 20billion nearing completion.

**Bharat Aluminium Company Limited (BALCO)**, a Member of Vedanta India is a fully integrated Aluminium producer with an installed capacity of 245 ktpa aluminium and 810 MW of power. We are currently implementing expansion projects, which includes a 650 ktpa capacity Aluminium smelter (1st phase 3.25 ktpa) and 1200 MW Power Plant. With the completion of these projects, BALCO will have a total installed metal capacity of 1 mtpa and 2010 MW of power. Our metal business currently produces 75 ktpa rolled products & 200 ktpa wire rods & with completion of 1st phase metal expansion, rolled products & wire rods capacity shall increase to 80 ktpa & 500 ktpa respectively. Our businesses also include a coal mines and operating Bauxite mines.

### **What BALCO is looking forward with this contract:**

- ❖ 100% adherence to all the deliverables.
- ❖ High Level of Service quality.
- ❖ Ensuring an accident free environment while work.
- ❖ 100% reporting of all the near miss incidents and corrective measures for all to ensure no accident due to the unsafe conditions.
- ❖ Increased availability of all the equipment's and the total system to ensure better efficiency and higher levels of productivity.
- ❖ Ensuring higher productivity through introduction of innovative ideas and better Operating Procedures.

***Information / Credential of Service Providers / Bidder Provide us the credentials as per attached excel sheet***

The following information is Compulsory and should be furnished completed in all aspects along with your offer.

- I. Brief history of organization, along with organization chart, mentioning the Name, Designation & Tel. Nos of the contact persons in your company holding all key positions.
- II. Client list, with copies Contracts of your Top 5 clients.
- III. Banker's name and your Company's annual audited report / Balance Sheet for last 3 years.
- IV. The details of Machinery and Equipment available with you which are in working condition are to be furnished.
- V. If the space provided in the registration form is not sufficient, please attach separate
- VI. Sheets and give Annexure reference number on the attached sheet.
- VII. Registration Details
- VIII. Registration No. and date (Kindly attach a photocopy of registration certificate)
- IX. Membership to any body
- X. Any other Statutory Registration.
- XI. Registration details with taxation authorities:
  - a. Permanent Income Tax A/c No.
  - b. Service tax Registration
- XII.** For any new agency participating first time in BALCO tendering, must register their company as new service vendor on our SRM Portal at [www.balcoindia.com/vendorzone](http://www.balcoindia.com/vendorzone)

## 2) **FORMAT FOR OFFER LETTER**

Head            Commercial Bharat Aluminum Company Ltd. Commercial Office Admin  
Building BALCO NAGAR  
Korba – 495684

Offer reference N.: /.....dt.      **2019:**

Sir,

1.    We hereby undertake to perform the scope of work as defined in the condition of Bharat Aluminum Co. Ltd., Tender Ref no:....., dated.....2018 at the prices and within the period stated in the attached schedules & in conformity with all the conditions is included therein.

2.    This offer is valid for a minimum period of 180 days.

3.    We agree that any Contract placed as result of this offer will be in accordance with the terms & conditions in the said offer. We declare that any other terms or conditions of the contract or any general reservations which may be printed on any correspondence of documents emanating from us in connection with tender shall not form part of any resulting contract unless specifically agreed to by BALCO and included in this contract.

4.    We also enclose herewith the following documents:

A.    Schedule of compliance with

1.    Acceptance of contract conditions.
2.    Schedule of prices (Price Formats to be completed)
3.    The offer should contain all the details like Service Tax Reg. No. etc.

B.    Documents required by BALCO as mentioned in **“Instructions to Bidders”**.

M/s (Name and Address of the Company)

Signature of the authorized Signatories

### **3) INTERPRETATIONS**

In this Agreement, unless the context or subject matter otherwise requires:

- a) The singular includes the plural and vice versa;
- b) Words importing one gender include the other gender and words importing persons include corporations and unincorporated bodies of persons and vice-versa;
- c) References to clauses, schedules and appendices are references to clauses, schedules and appendices of this Agreement;
- d) References to agreements and deeds include all renewals, extensions and amendments thereof; and
- e) Any reference to a statutory provision or provisions of the License includes that provision as from time to time modified or amended or re-enacted applies or is capable of applying to this Agreement
- f) Engineer-In-Charge (EIC) means – the representative from BALCO.

### **4) SCOPE OF WORK & BILL OF QUANTITIES:**

#### **4. A. Scope of Work for O&M of CHP - CPP 540MW**

**Scope of Work:** O&M Agency shall be responsible for entire Operation & Maintenance of Coal Handling Plant. The brief scope of work is outlined below.

**1a. O&M Agency Scope:** O&M Agency scope shall be as mentioned but not limited to as follows:

- Operation & Maintenance of all Mechanical, Electrical, Instrumentation equipments from Track hopper area to Boiler Bunker for both bunkering path & Stacking/reclaim path.
- Specialized services such as
  - Cold Vulcanizing of Conveyor belts.
  - Electrical motor rewinding (All motors except H.T motors)
  - Stone picking from running conveyor belts etc.
- Shifting of stones to designated area is in inside plant Service Provider's scope.
- Stacking & Feeding of coal from coal yard to Boiler Bunkers as per the 'Mix' required by Balco from time to time through stacker & reclaimer and inclusive management of all coal yards (As per EIC instructions).
- Operation & Maintenance of all mentioned equipments are in the scope of O&M Agency. From Track Hopper bottom area, Hoist/sprinkling system etc up to Coal Bunker top floor. In Track hopper area lighting, hoist and BOBRN Compressor Preventive maintenance activity is in Service Provider scope.
- Timely calibrations of Belt weigh scale etc and cross checking of the same by standard test (by third party) etc for authenticity.
- Housekeeping of Entire CHP.
- O&M Agency has to ensure housekeeping system is in place.
- House keeping all areas in the CHP like Buildings/CHP / Drains /Conveyors/ Support areas like Weigh bridge etc also to be taken care by O&M agency on regular basis.
- Additional resources / manpower required to maintain the plant in good condition and smooth functioning of all systems in view of seasonal variation like during rainy season etc is in the scope Service Provider.
- Shifting of spares & other materials to the working location in the Service

Provider's scope (from Stores, work shop etc).Hydra and shifting vehicle is to be provided by Service Provider for shifting of materials form stores and for handling heavy materials.

- O&M Agency shall appoint full time, coal yard manager for planning and managing of coal yard.
- □One common Mobile and number has to be provided to operation for effective communication and daily reporting to be done to EIC and all HOD's
- Preventive Maintenance, Condition monitoring all equipments along with submission of Equipment healthiness report, Equipment history to EIC (Critical equipments like Stacker & Reclaimer, Crusher, Paddle feeders, all conveyors, motors and its gear box etc as decided by EIC). CBM activities to be carried out with proper schedule, Vibration analysis to be done and reports to be submitted on monthly basis. All the equipments will be provided by Service Provider.
- O&M Agency has to follow all standards for ISO systems (like check lists & SOPs etc).
- Maintenance of all equipments for amenities like A/Cs, Water coolers etc in CHP is in Service Provider's scope, all materials and compressor gas is in Balco scope.
- Water sprinkling in coal yard to prevent fire in coal stacks, helping fire service in case of any fire incidents in CHP.
- Lighting of material gate Weigh Bridge will be under the CHP/AHP Service Provider scope. Lighting a rea includes bulker weigh bridge street lights, HIMUS towers, yard 2 and C-7 tail end.
- O&M Service Provider should have hydraulic expert for Stacker Reclaimer Hydraulic system.
- General Purpose O&M Consumables as per the enclosed Annexure but not limited to which go permanently into machines.
- Sufficient Walkie Talkies for effective communication.
- O&M Agency shall appoint full time, qualified safety Officer who will ensure safety aspects in all activities of CHP.
- Sufficient number of Manpower and lifting tools and tackles is to be provided for Operation and Maintenance activities. List of Manpower to be approved from Balco
- All statutory requirements to be followed by Service Provider.
- All the Patch works of Chute

**1b. Balco Scope:** Balco's Scope shall be limited to as follows:

- Free Power/water/air supply for operation & maintenance of CHP
- Required number of Dozers.
- Lubricants/Greases for CHP& AHP earth moving equipment
- Spares for Balco Facility for CHP, AHP & earth moving equipment
- Supply of steel required for improvement/modification works.
- Tarpaulin for coal yard.
- Diesel for all earth moving equipments required for CHP/AHP

#### **4. B.Scope of work for O&M of AHP– CPP 540MW**

**1. Scope of Work:** O&M Agency shall be responsible for entire Operation & Maintenance of Ash Handling Plant. The brief scope of work is outlined below.

**1a. O&M Agency Scope:** O&M Agency scope shall be as mentioned but not limited to as follows:

- Operation & Maintenance of all Mechanical, Electrical, Instrumentation equipments from ESP (knife gate valve), Hoppers/Vessel Isolation Valves to Silo to Ash Dyke and Bottom Ash Scrapper to Ash Dyke.

- Maintenance of all equipments for amenities like A/Cs, Water coolers etc in AHP is in Service Provider's scope, all materials and compressor gas is in Balco scope.
- Housekeeping of Entire AHP (Including buildings, all drains of AHP & ESP area)
- Bottom Ash hydraulic gates & trough seal piping/valves etc
- Shifting of spares & other materials to the working location in the Service Provider's scope (from Stores, work shop etc) Hydra and shifting vehicle is to be provided by Service Provider for shifting of materials from stores and for handling big materials.
- Preventive Maintenance, Condition monitoring of all equipments along with submission of Equipment healthiness report, Equipment history to EIC (Critical equipments like GEHO Pump, Bottom Ash scrapper conveyor, Charge pump & HP/LP pumps, Geho feeding system, Geho discharge line up to ash dyke etc as per EIC decision)
- Periodic cleaning/replacement of filter bags of Ash Silo.
- Service Provider has to follow all standards for ISO systems (like check lists & SOPs etc).
- General Purpose O&M Consumables as per the enclosed Annexure but not limited to which go permanently into machines.
- Trench cleaning in ESP area in Service Providers' scope.
- Slurry and sump pit in AHP should be clean in twice in a year in Service Provider's Scope.
- Consumable like grease nipple, Gland rope, etc. for AHP in Service Provider's scope.
- Material shifting and returning from and to store in Service Provider's scope.
- Boiler bottom ash trench maintenance in Service Provider's scope.
- DE System on silo top in Service Provider's scope.
- All the equipments should be in cleaned condition.
- Break down failure report in Service Provider's scope.
- De-metering of pipe line (Thickness measurement of GEHO discharge line & slurry pump discharge line) in AHP in Service Provider's scope one in a year.
- Completion of all safety regarding point in Service Providers scope.
- Sufficient Walkie Talkies for effective communication.
- O&M Agency shall appoint full time, qualified safety Officer who will ensure Safety aspects in all activities of AHP.
- Sufficient number of Manpower and lifting tools and tackles is to provided for Operation and Maintenance activities. List of Manpower to be approved from Balco
- All statutory requirements to be followed by Service Provider.
- One common Mobile and number has to be provided to operation for effective communication and daily reporting to be done to EIC and all HOD's
- Due to any fault in the system with respect to material failure, unavailability of spares mechanical isolation of line (dummy) is in Service Provider's scope.
- Any minor repair work in operator's room, cabin, workshop, stores and storage yards is in Service Provider's scope.

**1b. Balco Scope:** Balco's Scope shall be limited to as follows:

- Free Power & Water Supply for operation & maintenance of AHP.
- Lubricants/Greases
- Spares for Balco Facility
- Supply of steel required for improvement/modification works
- Insulation and cladding materials are in BALCO's scope.
- Complete replacement of pipe/structure, chutes etc.
- All special type of welding electrodes.

## **SAFETY/HIHE/5S**

O&M Agency shall appoint full time qualified safety Officer (certified diploma or degree in industrial safety) who will ensure safety aspects in all activities of CHP and AHP.



Service Provider to ensure Safety at workplace, obey safety rules, adopt Work permit system, proper check sheets, placing of danger board, men on work board. All contract employees shall identify and report any hazard/incident/accident and shall work on to eliminate all identified/possible hazards and incidents. Strictly follow proper tagging, LOTO system. Service Provider has to supply torch light in confined areas during working. Service Provider has to improve and maintain the workplace for achieving good score in 5S. The Service Provider should take care of the safety for employees and Machinery. For that the Service Provider should arrange the required earth rods, hand gloves (15 KV, 33KV), helmet, earplug, safety shoe, fuse Pullers, Torch light and insulated tools etc.,

Compliance of all safety norms and audit points is in Service Providers scope. Service Provider to follow Safety rules regarding Safety PPEs and their usage, Rope & Sling safety rules, Technological vehicle safety rules and other BALCO safety rules as applicable in CHP /AHP area. Service Provider to follow all guidelines of Welding, Gas handling inside plant as given by Safety Dept. of BALCO. All statutory requirements to be complied by the Service Provider. No child labour shall be engaged by the Service Provider as per statutory rule of Govt. of India.

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#### **HOUSEKEEPING –**

Service Provider is to ensure 100 % cleaning of all areas of CHP starting from Track Hopper, BOBRN Compressor House, Ground Hopper, Conveyor Belts area, Crusher Building, Bunker Floor, Stacker & Reclaimers, Settling Ponds, Sampler area, CHP Office Building, Dozer maintenance Sheds . All coal spilled in Conveyor Belts, Crusher Building, Bunker Area, and Stacker & Reclaimer bay, Take up area of all belts , is to be cleaned on regular basis. If the spilled coal is not cleaned within five days, the same will be lifted and charged by deputing some other agency by BALCO and cost of same will be debited to Service Provider's bill.

Cleaning of Coal water settling pond and rain water settling pond is to be done by service provider as per the direction of EIC.

All Drains (surface water drain, storm water drain) and drain pits of CHP/AHP area are to be cleaned on monthly basis and in Rainy Season (July-October); drains are to be cleaned on weekly basis. Coal found in cleaning of drains is to be processed and charged or shifted to any place in CHP as per the direction of EIC. Coal recovered from Coal Settling pond and rainwater settling pond will also be processed and charged or shifted to any place in CHP/AHP as per the direction of EIC and other materials found from drains, Coal Settling pond and rainwater settling pond will be disposed to a location inside BALCO Plant as per the direction of EIC, except due to high stock/excess quantity stocked in yard.

All Panels of CHP area PLC Room in AHP/CHP is to be cleaned by domestic Vacuum cleaner. Service Provider to depute one full time Housekeeping Supervisor to ensure complete housekeeping in entire CHP/AHP area.

Charging of coal in belts coming out of Bulk Remover and Collection and shifting of stones coming out of Bulk remover to any place inside BALCO Plant as per direction of EIC is to be done by Service Provider.

Cleaning of all Sump Pits in entire CHP area on Monthly basis is to be done by Service Provider.

Shifting of All foreign material removed while cleaning of sump pits to any place inside BALCO Plant as per direction of EIC is to be done by Service Provider.

Collection and Removal of tramp Iron coming through Magnetic Separator in CHP area, iron pieces lying in conveyor gallery, transfer towers and shifting of same to any place inside BALCO Plant as per direction of EIC is to be done by Service Provider.

Collection and Removal of all debris coming while cleaning of entire CHP area and shifting of same to any place inside BALCO Plant as per direction of EIC is to be done by Service Provider

## **DELIVERABLES OF CONTRACT TO BE ENSURED BY SERVICE PROVIDER:**

- Feeding of coal from Track hopper, ground hopper, Coal yard to Bunkers through stacker reclaimer as per the required mix in order to ensure uninterrupted Power Generation.
- Minimum 95% availability of all equipments along with PM Compliance shall be ensured at least one stream for coal feeding.
- 100 % compliance of all SOP/SMP's and ISO systems/standards.
- Supervision of unloading of coal from trucks through road movement if any and feeding of the same from stacked location through stacker & reclaimer
- GEHO system has to be maintained properly and at least one stream has to be available all the time for proper ash conveying at ash dyke.
- Prompt response in case of any breakdown irrespective of time.
- Submission of Root Cause Analysis and Failure analysis report
- 100 % compliance of Balco safety norms.

### **Common Scope for CPP 540 MW & CPP 1200MW**

#### **1. Cable laying and panel works:**

If the existing system cable /panel got damaged then the cable laying and panel work will be in O&M scope.

2. In existing pipe line (Fly Ash, bottom Ash, water line) any bends or a length of pipe to be replaced due to erosion, repair and replacement of the same will be under O&M scope.
3. Assistance for OEM will be in O&M scope.
4. Temporary platforms /scaffolding for maintenance works (Except for Scaffolding for Dewatering Bin) will be in O&M scope.
5. Cash purchase items up to Rs.10, 000/- (Rs.5000 for 540 mw + Rs.5000 for 1200mw)/ month will be in Service provider's scope.
6. Assistance for pulley lagging will be in Service provider's scope.
7. Loto quality circle asset optimization. 5s, Kaizen, SAP ISO to the adopted up to the mark by O&M Service Provider.
8. GEHO pipe line rotation will be in Service provider's scope according to demetering inside the plant area.
9. Repairing and patching of GEHO line up to ASH DYKE.
10. Hydra -1 No & Tractor-1 No (Common for both CPP 540 MW and CPP 1200 MW) must be available round the clock at site.
11. **Safety:** All machine guarding/pulley guarding and conveyor railing must be put back after maintenance work.
12. Reward against P.M, safety, Equipment availability on sustainable basis and PLF.
13. In CHP/AHP all fire fighting line routine maintenance work is in Service Provider's scope, major modification/replacement is in Balco's scope.

#### **PENALTIES TOWARDS NON -FULFILLMENT OF DELIVERABLES:**

- 1) If O&M Service provider fails to feed the coal as per plant requirement, then penalty @ Rs. 100 per MT for the shortfall quantity shall be levied to the Service Provider. The plant requirement to be properly communicated to the agency through a documented system from time to time as per mutually agreed period.
- 2) If unloading of coal from rakes gets delayed beyond the Railway free time, for the reasons attributable to the O&M Agency, demurrage on account of such delays shall be in the Service provider's account. The demurrages shall be deducted from the Service provider's Monthly Bills, and reconciliation would be done at the end of each quarter.
- 3) The Overall penalty shall be limited to 10% on Monthly Contract Value under any circumstances.

#### **4. C Operation and Maintenance of CPP 1200 MW CHP/AHP**

##### **CHP/AHP Area, system and associated sub system:-**

Track Hopper area top to bottom (Paddle Feeder to bunker floor) Coal Feeding systems including Stacker cum Re-claimer, screen, crusher, DE System, DS system connected with conveyor, Coal Yard, vibro feeder, vibrating screen, ILMS, ventilation system, sump pumps, sampling system, dynamic circle chain, Emergency Bin, transfer towers and conveyors, bulk remover and buffer drum system, hoist system, interconnection with 540, BOBRN Compressor house, CHP control room, plough unloader-diverter system, auto Coal Sampler etc.

Ash Handling Plant from bottom of ESP field 1,2 & Bag filter field 3,4 &5 ( knife edge gate valve ) vessel/isolation valve to silo to ash dyke & bottom ash scraper chain conveyor to Ash dyke including Economizer hopper/APH hopper to complete discharge point up to Ash Pond including GEHO Pumps, Dry Ash Conveying system, Silo, Bag Filter of silo, ART, screw conveyor, Submerged Scraper Chain Conveyor , Ash Slurry Pump and system, Clinker Grinder, Dewatering Bin, Weigh feeder, Conveyor, Fresh Water, settling tank Pond and HP LP Pumps, BAWR system, AHP air Compressor, dryer, Blower, heater, Fire Fighting and PLC Monitoring system , all control room of AHP & CHP etc.

##### **System Over view:-**

Coal will come in wagons/trucks, which will be unloaded by coal unloading agency at track hopper. Coal evacuate from track hopper with four number of paddle feeder. Two streams of belt will take this coal either to bunker or yard. Two stacker and reclaimer will perform stacking and reclaiming. There is an interconnection with CPP 540 also which can be used in emergency through flap gate and plough feeders

Compressors are available for BOBRN unloading.

Fly ash conveying is available from ESP/AHP/ECONOMIZER hoppers to silo through compressed air. Bottom ash will be conveying to DB through SSC and ash slurry pump.

Bottom ash and fly ash to be dispose to ash pond through HCSD system. Ash bulker or open truck ash disposal are also possible. Compressors are available for fly ash conveying.

For each activity various measuring instruments and remote PLC /HMI control system along with Local control panels are available.

CHP MV switchgear contains two 6.6kV bus sections with bus-coupler and is charged through two sections from 6.6kV station switchgear. CHP switch gear feeds 2X2MVA (6.6/0.415kV) Transformer to meet LV loads, Two numbers stacker cum reclaimer, eight numbers HT Motors and spare 6.6kV feeder.

AHP PCC is charged through two source breaker from station switchgear through 2 X 2MVA (6.6/0.415 kV) transformer carrying load of Silo MCC, HCSM MCC, FOPH MCC, Sewage MCC.

### **Scope of Work for CHP (Operation) - 1200MW**

O&M Agency shall be responsible for entire Operation of Coal Handling Plant. The brief scope of work is outlined below.

- Operation of all equipments from bottom of track hopper/ Dozing point of truck hopper area BOBR Compressors/ Hoists/sprinkling systems / conveyor belt safe guard) to Boiler Bunker for both bunkering path & Stacking/reclaiming path.
- Stacking, feeding & dozing of coal from truck hopper top to boiler bunkers/coal yards. O&M of all equipments from truck hopper top, Vibro feeders, conveyor belts, chute, CBMS (cross belt magnetic separator), ventilation fan etc.
- Stacking & Feeding of coal from coal yard to Boiler Bunkers as per the 'Mix' required by BALCO from time to time through stacker & reclaimer and inclusive management of all coal yards (As per EIC instructions).
- Dozers (4 nos. , BEML BD-230) required for yard management would be provided by BALCO. Dozer Maintenance Shed, Fuel, Spares will also be provided by BALCO. Operation and Maintenance of Dozer is under scope of Service Provider. 24 Hrs skilled dozer operators to be provided by service provider.
- Manual Water Injection through hose pipes in coal heaps of all coal yards to prevent fire in coal, helping fire service in case of any fire incidents in CHP will be done by Service Provider. Service provider to ensure zero incidents of fire caused by coal in all CHP area
- Sprinkling to be done during summer for coal yards.
- Service Provider will supervise all the movement of truck inside plant for shifting of coal from one area/yard to other area/yard/ dozing point and to supervise the movement/unloading of coal received by trucks at the coal yard. Service Provider to ensure proper management of coal yard such as stacking, reclaiming and proper heap preparation as per the requirement of Balco. All Yards/Heaps/areas is to be prepared for PV by 25th of every month. All loose material to be charged, stones to be arranged as per direction of EIC
- Service Provider will be assisting the coal PV by providing manpower, one shovel and bucket welding as required by EIC at the time of PV.
- All equipment in CHP area shall be operated as per the SOP and the instruction of EIC.
- Service Provider to ensure 95% availability of all DE & DS system. Coal Dust Bag Hopper in entire CHP area is to be drained on daily basis and is to be fed on belt/to be shifted to any location inside Plant as per instruction by EIC.
- Stone Picking from Conveyors on continuous basis in all three shifts in a day is to be done by Service Provider.
- Service Provider has to ensure zero foreign particles in coal charged to Bunkers.
- As and when required, continuous hammering and cleaning of paddle feeder, transfer chutes is in scope of Service Provider. Manpower of same has to be arranged by service provider as and when required for this job. All necessary tools required for this job are to be provided by Service Provider.
- HMV (Dozer) O&M Vehicle will be in the scope of service provider ( Dozer mechanic & helper provided by service provider & OEM will be called by service provider as and when required & cost will be charged to BALCO as per actual).
- Electrical work like lighting, AC in Weigh Bridge which is related to coal handling plant inside the premises will be in the scope of service provider.
- Electric work in auto sampler, coal sampling room & and **worker rest room** will in scope of service provider.

All related maintenance (Mechanical, electrical) of coal sampling preparation equipments

(Jaw crusher, Pulverizer) will be in the Service Provider's scope. Spares of equipment will be provided by BALCO.

### **Scope of work for Operation of AHP – 1200 MW**

O&M Agency shall be responsible for entire Operation of Ash Handling Plant. The brief scope of work is outlined below.

- Operation of all Mechanical, Electrical, Instrumentation equipment of dry ash system of bottom of ESP field 1, 2 & Bag filter field 3, 4 & 5 (knife edge gate valve) vessel/isolation valve (Including APH & ECO Hopper/Vessels) up to Silo and Ash dyke, wet Ash system from boiler bottom scraper chain conveyor to Ash Dyke, associated equipments such as blower, GEHO, HP-LP Pumps, slurry pumps, submerged scrapper chain conveyor etc.
- O&M of level probe, fluidizing pad, vent line from vessel to hopper of ESP/Bag filter will be in the scope of service provider. ( Bag filter O&M not in CREW's scope)
- Operation of ash conveying from of bottom of ESP field 1, 2 & Bag filter field 3, 4 & 5 (knife edge gate valve) & GEHO pump PLC or local panel is in contractor's scope.
- Silo unloading operation is in contractor's scope.
- Periodic cleaning of Ash Silo filters bags as and when required.
- Supply of Hose pipe for water spraying & Air blowing in AHP area is in contractors scope .Cleaning frequency should be scheduled on daily basis.
- Ash should not accumulate on ESP trench, Surface water trench & storm water drain (surrounding the Ash handing plant), cleaning the same is in contractor's scope.
- Ash evacuations from all ECO hoppers (4 Nos.), APH hoppers (8 Nos.), ESP hoppers (8 Nos.) & Bag filter hoppers (12 Nos.) in each unit are in contractor's scope.
- During annual overhauling, cleaning of bottom Ash sump pit of all the units is in contractor's scope.
- Yearly cleaning of fresh water tank, settling tank and GEHO mixing tank is in contractor's scope
- Weekly cleaning of sump pits at a) Bottom of silo, b) GEHO pump area, c) Near fresh water tank, d) Bottom of ESP area are in contractor's scope
- Fresh water tank level control has to be done to avoid overflow of water.
- GEHO pump discharge pipe line inspection and area cleaning (grass cutting) as per need of maintenance.
- Discharge Ash density to be controlled as instructed by EIC.
- DE System operation on silo top is in Contractor's scope.
- Total two nos. of mobile phones should be provided by contractor (one for operation in charge & another for shift in charge) for better communications with other departments.
- Each and every equipment should be in cleaned condition.
- Only Routine maintenance of fire fighting system (fire hydrant, delude valve spray system, fire alarm & detection system) in CHP & AHP area will be in the scope of service provider.
- All ASH handling & BOBRN compressors (14 nos. for ASH conveying, 2 nos. for BOBRN, small compressors for dust extraction system).
- If residual ASH generated due to operation problem then removed by service provider.
- O&M of 2 nos. Outside ash silo (near SEPCO gate) & their related system will be in the scope of service provider.
- Rotation of GEHO discharge pipe line of outside of the plant will be in the scope BALCO. Supervision will be in the scope of service provider.
- Regular maintenance and assistance during trial of firefighting and alarming system ( in CHP/AHP area only)

### **Scope of Work for Mechanical Maintenance of AHP/CHP - 1200MW**

O&M Agency shall be responsible for Mechanical Maintenance (Preventive, Predictive, Corrective, and Breakdown) of CHP/AHP. The brief scope of work is outlined below (but not limited to):

- Maintenance of all Mechanical equipments in AHP/CHP area of 1200MW.

- The Scope includes Cold Vulcanizing of Conveyor belts
- Additional resources / manpower if required during emergency and in major breakdown to be arranged by the contractor to complete the job on time.
- Temporary plant form/scaffolding for maintenance work except Dewatering Bin is in service provider scope.
  
- Contractor has to do condition based monitoring as per best maintenance practices(vibration analysis, oil analysis etc CBM activities to be carried out with proper schedule, analysis reports to be submitted. Frequency will be once in a month. ) for all critical equipments listed in Annexure.
- Healthiness of standby and spare equipments to be ensured. Spares required for repair work will be provided by BALCO. Spare forecasting is to be given by the contractor time to time.
- Supply of general Purpose O&M Consumables will be in contractor's scope. Tentative list as per Annexure
- Sufficient tools and tackles are to be provided for Operation and Maintenance activities.
- Replacement of filter bags on Ash Silo as and when required and replacement of fluidizing pad of the bottom of ESP hopper & vessel.
- Service provider has run leakage prevention activity rigorously. These activities include leakage of water, coal, ash, compressed air, oil in entire CHP/AHP area and for all equipment and structures (hopper, silo, pipe lines etc)
- Regular maintenance and timely PM (preventive Maintenance) of dewatering bin with its complete maintenance such as decanter pipe replacement.
- Overhauling will be done by OEM, necessary man power support shall be given by service provider. For the equipment of GEHO, Pumps, Hydraulic System, Stacker cum reclaimers, compressors, Dozers etc OEM/EXPERT cost will be paid by BALCO.
- Boiler bottom ash trench maintenance in contractor's scope.
- AHP related Valves minor welding work and inside the plant transportation like BALCO work shop to and fro will be in service provider scope. Inside the plant machining will be done by BALCO at their work shop.
- Any kind of machining of the valve outside the plant will be done by service provider and actual cost (machining and transportation) will be reimbursed from BALCO
- Geho pump discharge line replacement & rotation work inside the plant in contractor's scope according to De-metering.
- De-metering of pipe line (Thickness measurement of GEHO discharge line) at least once in a year is in contractor's scope (if required partial De-metering of GEHO or other lines of AHP to be done before plant shutdown).
- In existing pipe line (fly ash, bottom ash, water line) any bends or a length of pipe to be repaired/replaced due to erosion will be in the scope of service provider scope.
- Online sealing of any leakage (if pipeline isolation is not possible) is in contractor's scope.
- ESP Hopper fluidizing pad maintenance and replacement is in contractor's scope.
- Due to any fault in the system with respect to material failure and unavailability of spares
- Mechanical isolation of line (dummy) is in contractor's scope.
- Service provider has to do every maintenance job; however OEM Service engineer's visits to be organized by service provider at actual cost to be borne by BALCO (covered in scheduled item).
- Chute repairing like patching will be in contractor scope.

### **Scope of Work for ELECTRICAL & C&I Maintenance of AHP/CHP - 1200MW**

O&M Agency shall be responsible for Electrical and C&I Maintenance (Preventive, Predictive, Corrective, and Breakdown) of CHP/AHP. The brief scope of work is outlined below (but not limited to):

- Preventive, predictive, shutdown and breakdown maintenance for entire

- AHP/CHP areas equipments-instruments and their internal /accessories.
- Up keep of all the electrical and C&I PLC /SCADA/HMI, AB VFD, ABB VFD etc. Agency will have to tie up with OEMs (Allen Bradley, Siemens etc) for maintenance of PLC. However OEM Service engineer's visits to be organized by service provider at actuals cost to be borne by BALCO.
- Final decision to call OEM will be of Head CPP 1200 MW.
- Regular collection of logic and graphics backup, upkeep of logic.
- Communication checking, data transfer, collection, loop and continuity check.
- Modification, forcing and bypassing not allowed. (Without getting it approved through Change Order note - system. In emergency if such activity if required must be done with written consent of Balco engineer.
- Any alteration (Hard/soft) can only be done by written consent of BALCO Engineer in charge.
- Condition monitoring of control system and instruments.
- Calibration of belt scale by external agency half yearly
- Upkeep of all the IT equipment provided by Balco (PC/IP phone/Network switch etc)
- Maintenance of Nucleonic density meter in GEHO Pump discharge line.
- Maintenance of actuator and rewinding of actuator motor
- Spare forecasting and consumption report, reconciliation status.
- Upkeep of indoor and outdoor panel
- Rain and dust proofing of outside instruments and panels.
- Replacement of Control & power cable laying, jointing, lugging, termination/tray laying, dressing ferruling as and when required
- Earth Pit maintenance, Maintenance of Equipment earthing.
- Upkeep of OFC network and communication up to BTG CCR. Upkeep of HME/SCADA/Server in main BTG CCR related to CHP & AHP.
- OFC cable splicing if required.
- Maintenance of Master calibration instruments related to CHP/AHP provided by BALCO. Routine and Breakdown maintenance of lab facilities like MCB's Sockets, Heaters and Owens, etc.
- LHSC cable maintenance.
- Maintenance of Public Annunciation System
- All kind of testing of existing Transformers/ HT Motors. Testing of HT Motors with Megger ( Megger make HT & LT insulation tester, Fluke multi meter will be in contractor scope). Testing of winding resistance, Hipot test will be done by service provider ( Kit will be provided by BALCO) control and power cable laying, cable termination, cable jointing is in service provider scope as per maintenance practice/SMP.
- Vibration and Displacement Checks as per need with kit will be in service provider scope. LT motor rewinding only with entire transportation inside and outside Balco will be in the scope of the service provider.
- CBM of HT/LT motor which includes cleaning, checking, repairing, replacement/ topping of lubricant, Bearing heating/ removal/ replacement, removal/ fixing of motor earthing, rotar removal and thread in; tightness checking of terminal connection, lugging and crumping of controle and power cables; varnishing of stator, checking of stator wedge tightness, rewedging , replacement of motor; checking, testing and replacement of winding and bearing RTDs, Circuit Breaker or starter operations, earth connections , control and power cable laying & termination, cable jointing. Jointing kit will be provided by BALCO.
- Maintenance of EOT, Monorail, Hoists along with Tightness checking of pantograph, termination of control and power cable, laying & jointing, limit switch checking and adjustment.
- Periodical replacement of fused bulbs, chokes, ballasts, starters, battery of entire lighting system. Cleaning and checking of fixtures/tightness of control circuits/photo lighting system/sockets, LDB/SLDB/Testing of ELCB and other portable equipment's regularly. The same will be provided by BALCO.

- Exhaust fans Replacement in CHP/AHP area. Spares will be provided by BALCO
- Lightening arrester checking and testing of CHP/ AHP area. All type of ladders and approach to work at heights/street lights to be arranged by O&M service provider.
- Maintenance of HVAC System including window AC, split AC and Centralized air conditioners, water coolers and purifiers of CHP-AHP area and offices. Cleaning, checking, repair and replacement of Air filters/ fans/ replacement of compressor replacement and jointing of copper pipe ( Copper pipe will be provided by BALCO ) AC control circuit checking and replacement of cards.
- Testing of all lifting tools & tackles and certificate of fitment once in year.
- Liaisoning along with cost incurred with Electrical inspector will be under the scope of the contractor and the actual cost will be reimbursed from BALCO.
- Supply of consumable as listed in Annexure
- Supply of tool tackles as listed in Annexure

**Scope of Work Common for Operation and Maintenance of AHP/CHP (Every Department)**

- Maintenance of all equipments for amenities like A/Cs, Water coolers, Offices, Labour Shed, etc in AHP/CHP is in contractor's scope. All type of piping and plumber related work will come under contractor scope.
- O&M Agency has to follow all standards for ISO systems. Service provider has to prepare documents related QMS, OHSAS, EMS, and any other data or document as required for any internal and external audits to be conducted in BALCO. Report generation and documentation ( FAR/ daily/ monthly/ safety/ history/ RCA/FMEA etc.) SAP to be used for PP, PM and MM modules. Filled logbook duly signed by the supervisor should be submitted to BALCO engineers daily. However the completed log book should be handed over to BALCO for future reference. Daily report preparation & reporting to be done to respective EIC and all HOD's in BALCO prescribed format and methods.
- At the end of all shifts, feedback for progress of work and plan for next day is to be discussed and submitted in writing. Shift wise operational reporting, Preparation of shift logbook, filling of data sheet, check list and all other relevant stationeries required for the job is to be provided by service provider.
- Shifting, Loading, Unloading of materials inside the plant premises such as, movement from store/workshop to workplace, central store to local store, and vice versa, with arrangement of hydra, lifting tools and suitable vehicle will be in contractor scope.
- Assistance for material inspection at site/store.
- Sufficient and skilled Manpower (In-charge, Engineer, Supervisor, Operator, Helper, Technician, Draftsman, Welder, Fitter, Rigger, Safety officer) to be provided for operations/maintenance activities to handle General and A/B/C shift to meet deliverables
- Contractor should have electrical contract license (class A) from Chhattisgarh Government and license holder technicians/supervisors for working in LT and HT electrical system up to 6.6KV.
- Common Mobile and Phone Number has to be provided to operation for effective Communication and daily reporting to EIC along with sufficient number of Walkie Talkies.
- Any damage to Balco assets including civil structure at CHP/AHP area due to contractor mishandling will be repaired by contractor himself within 15 days.
- Any minor repair work in operator's room, cabin, workshop, stores and storage yards is in contractor's scope. Modification jobs (outsourced by owner) supervision shall be done by agency. All modification jobs are to be entered in to the master drawings and modified part drawing must be pasted on the respective panel. One set of manual and drawings to be handed over to the contractor.
- Maintaining the local store with the history of spare issued and used; proper



tagging and health card/testing date to be fixed. Testing of spare parts before use. Maintaining the defective parts, damaged batteries, used grease. Monthly reconciliation status of spares, lubricants, motors, bearings, consumables to be provided to owner. Defective parts only be declared as scrap with the approval of owner.

- Service provider has to follow all rules related to safety (industrial, personal, vehicle, road safety etc). Any instruction by BALCO EIC regarding safety is obligatory for service provider.
- Painting for safety and 5S improvement and compliance, equipment protection (excluding structural painting) along with the supply of Paints and related tools will be in service provider's scope.
- Housekeeping of Entire AHP/CHP (Including buildings, all drains of AHP & ESP area and ash bulker weighbridge, conveyor area, bunker floor, track hopper, yard, unloading area, offices, etc on daily basis or as instructed by BALCO EIC ).
- New Fly Ash conveying and associated system under construction common for CPP -2 and 1200MW will be in the scope of service provider.

- **SAFETY/HIHE/5S**

O&M Agency shall appoint full time qualified safety Officer (certified diploma or degree in industrial safety) who will ensure safety aspects in all activities of CHP/AHP. Any Violation in safety will lead to penalty.

Contractor to ensure Safety at workplace, obey safety rules, adopt Work permit system, proper check sheets, placing of danger board, men on work board. All contract employees shall identify and report any hazard/incident/accident and shall work on to eliminate all identified/possible hazards and incidents. Strictly follow proper tagging, LOTO system.

Contractor has to supply torch light in confined areas during working. Contractor has to improve and maintain the workplace for achieving good score in 5S. The contractor should take care of the safety for employees and Machinery. For that the contractor should arrange the required earth rods, hand gloves (15 KV, 33KV), helmet, earplug, safety shoe, fuse Pullers, Torch light and insulated tools etc.,

Compliance of all safety norms and audit points is in Contractors scope. Service Provider to follow Safety rules regarding Safety PPEs and their usage, Rope & Sling safety rules, Technological vehicle safety rules and other BALCO safety rules as applicable in CHP/AHP area. Service Provider to follow all guidelines of Welding, Gas handling inside plant as given by Safety Dept. of BALCO. All statutory requirements to be followed by contractor.

No child labour shall be engaged by the Contractor as per statutory rule of Govt. of India.

Painting for safety and 5 s improvement and compliance, equipment protection (excluding structural painting) along with the supply of Paints and related tools will be in service provider's scope.

- **HOUSEKEEPING –**

Service Provider is to ensure 100 % cleaning of all areas of CHP/AHP starting from Track Hopper, BOBRN Compressor House, Ground Hopper, Conveyor Belts area, Crusher Building, Bunker Floor, Stacker & Reclaimers, Settling Ponds, Sampler area, CHP/AHP Office Building, Dozer maintenance Sheds and any other working area in CHP/AHP.

All coal spilled in Conveyor Belts, Crusher Building, Bunker Area, and Stacker & Reclaimer bay, Take up area of all belts and all other working areas, is to be charged on daily basis. If the spilled coal is not cleaned within five days, the same will be lifted and charged by deputing some other agency by BALCO and cost of same will be debited to Service Provider's bill.

Cleaning of Coal water settling pond and rain water settling pond is to be done by service provider as per the direction of EIC.

All Drains (surface water drain, storm water drain) and drain pits of CHP/AHP area are to be

cleaned on monthly basis and in Rainy Season (July-October), drains are to be cleaned on weekly basis. Coal found in cleaning of drains is to be processed and charged or shifted to any place in CHP/AHP as per the direction of EIC. Coal recovered from Coal Settling pond and rainwater settling pond will also be processed and charged or shifted to any place in CHP/AHP as per the direction of EIC and other materials found from drains, Coal Settling pond and rainwater settling pond will be disposed to a location inside BALCO Plant as per the direction of EIC. ( Except High stock/ stocking of excess quantity in the yard )

All Panels of CHP/AHP area is to be cleaned by domestic Vacuum cleaner.

Service Provider to depute one full time Housekeeping Supervisor to ensure complete housekeeping in entire CHP/AHP area.

Charging of coal in belts coming out of Bulk Remover and Collection and shifting of stones coming out of Bulk remover to any place in CHP area as per direction of EIC is to be done by Service Provider.

Cleaning of all Sump Pits in entire CHP/AHP area on Monthly basis is to be done by Service Provider. And in rainy season Cleaning of all Sump Pits in entire CHP/AHP area on weekly basis is to be done by Service Provider. Shifting of All foreign material removed while cleaning of sump pits to any place inside CHP/AHP area as per direction of EIC is to be done by Service Provider.

Collection and Removal of tramp Iron coming through Magnetic Separator in CHP area ,iron pieces lying in conveyor gallery, transfer towers and shifting of same to any place inside plant as per direction of EIC is to be done by Service Provider.

Collection and Removal of all debris coming while cleaning of entire CHP/AHP area and shifting of same to any place inside BALCO Plant as per direction of EIC is to be done by Service Provider.

### **Balco Scope:**

BALCO Scope shall be limited as follows

Free Power Sources/water Source/air supply source for Operation & Maintenance.

Providing open space for Office, Stores

Required numbers of earth moving equipment such us Dozers, Hywa, Dumpers Etc

Lubricants/Greases/Spares for BALCO facility.

Supply of steel required for improvement/modification works, special welding electrode for CHP& AHP.

Diesel for all earth moving equipments required for CHP/AHP

Fabrication/replacement of new chute

6.6 KV HT motors rewinding

Refrigerant gas for ACs., compressors, copper tubes control systems, fans etc.

6.6 KV Relay and HT Transformer testing.

### **DELIVERABLES OF CONTRACT TO BE ENSURED BY SERVICE PROVIDER:**

- Feeding of coal from Track hopper, Truck hopper, Coal yard to Bunkers through stacker reclaimer as per the required mix in order to ensure uninterrupted Power Generation.
- Minimum 95% availability of all equipments along with PM Compliance shall be ensured & 98% availability to be ensured at least one stream for coal feeding.
- 100 % compliance of all SOP/SMP's and ISO systems/standards.
- 100% House Keeping compliance of all areas of CHP/AHP except Road and Toilet.
- Supervision of unloading of coal from trucks through road movement if any and feeding of the same from stacked location through stacker & reclaimer
- GEHO system has to be maintained properly and at least each Phase, one stream has to be available all the time for proper ash conveying at ash dyke. ( Phase –I means Unit #1,2 & Phase –II means Unit 3,4)
- Prompt response in case of any breakdown irrespective of time.
- Submission of Root Cause Analysis and Failure analysis report within 48 hours of failure.
- 100 % compliance of Balco safety norms.

**PENALTIES TOWARDS NON-FULFILLMENT OF DELIVERABLES:**

- 1) If O&M agency fails to feed the coal as per plant requirement, then penalty @ Rs. 100 per MT for the shortfall quantity shall be levied to the Service Provider. The plant requirement to be properly communicated to the agency through a documented system from time to time as per mutually agreed period.
- 2) If unloading of coal from rakes gets delayed beyond the Railway free time, for the reasons attributable to the O&M Agency, demurrage on account of such delays shall be in the Service provider's account. The demurrages shall be deducted from the Service provider's Monthly Bills, and reconciliation would be done at the end of each quarter.
- 3) The Overall penalty shall be limited to 10% on Monthly Contract Value at any circumstances.

**LD and Bonus Clause**

Parameters	Target Value	Penalty Bonus Clause	Remarks
<b>Mobilization Time</b>	30 days	Contacto r has to ensure mobilization of site within 30 days from the date of Order/Notice for Mobilization.	
<b>Response Time</b>	2 Hours	The contractor has to ensure mobilization with in max of 2 hours for the breakdown Jobs. Contractor site in charge and engineer to be available on mobile phone 24x7	
<b>Quality of Job</b>	Redundancy & Standby Equipment Availability	The O&M Contractor has to ensure the Individual Critical Standby Equipment Availability of 95% other than Preventive Maintenance on monthly basis.	<b>List of Critical Equipment</b> a. Coal Crusher b. Screens c. Stacker & Reclaimer d. P a d d l e feeder e. GEHO Pump f. HP pumps g. LP Pump h. Blowers i. Slurry pumps j. Charge pump k. Dozer
	Schedule Jobs	if the schedule Job is repeated with in 6 months, same job will be done free of cost.	
	Damage of belt, mill feeder	Any damage in belts due to ferrous particle in coal will be repaired/ replaced by Service Provider. Any incidence of coal charged with foreign particles resulting in mill/feeder/ any	

		other equipment will result in penalty on instance basis@Rs.1000/instance.	
	Poor House Keeping	In any case if spillage is found left in any area for more than five days, , the same will be lifted and charged by deputing some other agency by BALCO and cost of same will be debited to Service Provider's bill .	
	No Rework	If the Quality of Job is so bad that a Rework is needs to be done immediately causing non availability of any equipment of system for a Longer time creating Probability of generation loss or any other Financial loss. A deduction amounting to twice the value or the the job will be decocted from the monthly bill of the contractor	
<b>Contractor score card (AO)</b>	85%	(a) <85% score : Rs. 25,000/- Penalty (b) 85-90% score : Rs. 10,000/- Bonus (c) 90-95% score : Rs. 15,000/- Bonus (d) 95%> scope : Rs. 25000/- Bonus	As per Balco Standard Contractor Score Card.
<b>Safety score Cared</b>	90%	(a) <85% score : Rs. 15,000/- Penalty (b) 85-90% score : Rs. 5,000/- Penalty (c) 90-95% score : Rs. 10,000/- Bonus (d) 95%> scope : Rs. 15000/- Bonus	As per Balco Standard safety Score Card
<b>Quality Circle</b>	5 Teams	Penalty of Rs - 5000 if teams are not active On winning national level event in QC, Contractor will be rewarded by Rs. 25.000/- (Rs. Twenty five thousand only) per team with a upper limit of Rs. 1,00,000/- (Rs. One Laths only) for the Financial year.	Training will be given by Balco, Clause will be applicable after forming Quality Circle
<b>Man power deployment</b>	80%	Penalty will be imposed if the Daily Deployed manpower is below 90% on monthly basis. If the requisite manpower falls by more than 20% of the required strength, then Balco will deduct the payment for the number of people found short @ of per Man-day cost of Manpower	

## **5. OTHER TERMS AND CONDITIONS:**

### **Communication**

Service Provider Site In charge Area In Charge and Shift in Charge have to be available on mobile phone on 24x7.

#### a. Safety:

1. Service Provider has to strictly follow the safety work permit system and safety rules of BALCO.
2. All the Service Provider persons working in site are required to have proper PPE failure to comply with it will attract a penalty of RS. 100 per person per day.
3. For work to be executed at height, Service Provider has to make proper arrangement an approach to satisfaction of EIC before start of execution of any job. The job can not be started without consent of EIC in such cases.
4. The Service Provider has to provide safety full body harness and safety net wherever applicable and that is to be certified by EIC before start of job

#### b. General :

Service Provider has to keep the work place clean and shift the scrap generated after the maintenance to the nearby scrap bin

### **Experience & Qualification Criteria For Manpower:**

The O&M Agency shall deploy the sufficient number of suitably skilled man power to fulfill the delivery of the desired services/deliverables/commitment as per the overall scope of work of the contract.

The Agency shall comply with the Experience/Qualification criteria as mentioned below:

1. Site in charge / Project Manager: Service Provider will depute qualified graduate/diploma engineer with minimum 10-15 years relevant experience in thermal power plants.
2. Safety Officer: Service Provider will depute a qualified safety officer at site to lead the Service Provider's safety team.
3. Shift & general shift supervisors for each shift. Qualification will be minimum diploma engineers with an experience of at least 5-10 years in thermal power plants.
4. Adequately computer trained persons for record keeping.
5. Adequate no. of min. ITI trained technicians with a min. experience of 3-5 years.
6. Semiskilled technicians with working experience of 3-5 years in thermal power plant or similar industry like steel/aluminum plant.
7. Service Provider will envisage the adequate nos. of total working team to manage the shift as well as general shift maintenance, modifications, up gradation and overhauling.

**Annexure II**

**List of Consumables for CPP 540 MW**

Ana Bond	Holdite liquid sealants
Araldite	Hose clamps
Baniam Cloth	Jointing sheets
Battery (Pencil)	Insulation screws
Battery Torch cell	Insulation tape
Brush	Kerosene
Bulbs (60W / 24V)	Lead wire
Chalkpieces	Lugs (Aluminium)
Coir rope	Loctite (Flange sealant, Thread sealant, Bearing retainer)
Conical grinding stone	M Seal
Coton tape roll	M.S. Fasteners like Bolt/nut/washer
Cotton waste	Welding electrodes
CRC 2-26	O Ring / Chord
CTC	PVC solution
Cutting nozzle	Paintbrush
DA gas, oxygen gas	Pendant holder
Drill bits	Petrol, Diesel
Emery sheet (Coarse and Fine)	Petroleum jelly
F.G. Tape varnished roll	Precision blue paste
Fevicol	Raval plugs
Fevifold	Rustolene
Fibre glass sheet	Sand paper
Ferrules of different sizes	All kinds of washers
Fibre sleeve	Shellac
Gaada cloth	Shims
Gasket (rubber)	Soldering paste
Gasket oil sheets	Soldering rod
Gaskets	Spark Lighter
Gasket oil papers	Steam gasket sheets
Gland rope	Teflon tape
Gouch screws	Twine
Grinding paste (coarse and fine)	Varnish
Grinding wheel (Cutting/Buffering)	Welding glasses German / white)
Hacksaw Blade	Welding holders
Hand Gloves (Leather/Cotton/Rubber/Asbestos)	Wire brush
Holdite Graphite compound	Wood screws
	All kinds of general purpose nut/bolts/washer/screws up to above M32
<p align="center">Remark: The above list is not comprehensive. Other Consumables also shall be supplied &amp; maintained by the Service Provider.</p>	

**List of minimum Consumables for CPP 1200 MW:**

**List of Consumables Mechanical & E&I**

1	Ana Bond	42	Loctite (Flange sealant, Thread
2	Araldite	43	M Seal
3	Banian Cloth	44	M.S. Fasteners like Bolt/nut/washer
4	Battery (Pencil)	45	Welding electrodes
5	Battery Torch cell	46	O Ring / Chord
6	Paint Brush	47	PVC solution
7	Bulbs (24V)	48	Pendant holder
8	Chalk pieces	49	Petroleum jelly
9	Coir rope	50	Precision blue paste
10	Conical grinding stone	51	Raval plugs
11	Cotton tape roll	52	Rustolene
12	Cotton waste	53	All kinds of washers
13	CRC 2-26	54	Shellac
14	CTC	55	Shims
15	Cutting nozzle	56	Soldering paste
16	DA gas, oxygen gas	57	Soldering rod
17	Drill bits	58	Spark Lighter
18	Emery sheet (Coarse and Fine)	59	Teflon tape
19	F.G. Tape varnished roll	60	Twine
20	Fevicol	61	Varnish
21	Fevifold	62	Welding glasses German / white)
22	Ferrules of different sizes	63	Welding holders
23	Gaada cloth	64	Wire brush
24	Gland rope	65	Wood screws
25	Gouch screws	66	All kinds of general purpose
26	Holdite liquid sealants	67	24 V hand lamps with Transformer
27	Hose clamps	68	Paints
28	Jointing sheets	69	Plug and Socket Commercial 5 Amp
29	Insulation screws	70	Plug and Socket Industrial 5 Amp
30	Grinding paste (coarse and fine)	71	Plug and Socket Commercial 15 Amp
30	Grinding wheel (Cutting/Buffering)	72	Plug and Socket Industrial 15 Amp
31	Hacksaw Blade	73	Electronic component cleaner
32	Hand Gloves(Leather/Cotton/Rubber/Asbesto	74	All Insulation tape (PVC/Para/Empire/Fibre-
33	Holdite Graphite compound	75	Lugs upto 25sqmm cu & al
34	Extension board with cable & top	76	1.5v-9v battery
35	Halogen	77	100w bulb
36	Hand lamp With Frame	78	Bulb holder with Pin and Ring fitting
37	Silicon sealant	79	Sand paper
38	Putty		
39	Kerosene, diesel, petrol and rustolene.		

40	Lead wire		
41	Petroleum jelly		

**List of minimum TOOLS & TACKLES for CPP 1200 MW:**

**This list is only indicative and not exhaustive. Arrangement for any other T & P required for timely completion of the job shall be the responsibility of the Service Provider and shall be arranged by him at his own cost.**

SL. No.	Item description	SL. No.	Item description
<b>Welding &amp; Cutting Tools</b>		<b>Power tools:</b>	
1	Welding machine 2 phase	1	Hand drilling machine (concrete)
2	Welding machine portable 1 phase	2	Air blower
3	Welding rectifier 3 phase with remote	3	Hot air gun
4	Cutting torch	4	Angle grinder AG 4
5	Oxygen regulator	5	Angle grinder AG 7
6	LPG Regulator	6	Hand drilling machine 10 mm
7	DA regulator	7	Hand drilling machine 13 mm
8	Flash back arrestor FR18	8	Flexible shaft grinder (FF2 machine)
9	Flash back arrestor Protex RO,RA	<b>Hand tools:</b>	
10	Cutting hose set 8 mm (red & blue)	1	D/E spanner 6-32
11	Welding oven	2	Slag Spanner S/E 34
12	Bug Cutting Machine with track	3	Slag Spanner S/E 36
13	Oxygen checking gauge	4	Slag Spanner S/E 40
14	Bench Wise	5	Slag Spanner S/E 46
<b>Lifting Tools</b>		6	Slag Spanner S/E 50
1	Chain pulley block 2 ton x 3 mtr	7	Slag Spanner S/E 55
2	Chain pulley block 3 ton x 6 mtr	8	Ring spanner 6-32
3	Chain pulley block 5 ton x 8 mtr	9	Slag Spanner ring 34
4	Lever block 3 ton x 1.5 mtr	10	Slag Spanner ring 36
5	Pulling & Lifting machine 2.6 ton x 12 mtr	11	Slag Spanner ring 40
6	Hook Chuck 3 ton x 20 mtr	12	Slag Spanner ring 46
7	D shackle 2 ton	13	Slag Spanner ring 50
8	D shackle 3 ton	14	Slag Spanner ring 55
9	D shackle 5 ton	15	Adjustable spanner 6"
10	D shackle 7 ton	16	Adjustable spanner 8"
11	Single rope pulley 5 ton	17	Adjustable spanner 12"
12	Manila rope pulley single 3/4"	18	Combination plier 6"
13	Manila rope pulley double 3/4"	19	Combination plier 8"
14	Manila rope pulley single 1"	20	Combination plier 10"
15	Manila rope pulley double 1"	21	Side cutting plier 8"
16	Wire rope pulley single	22	Circlip plier internal 7"
17	Wire rope pulley double	23	Circlip plier internal 13"
18	Wire rope sling 1/2" x 1 mtr	24	Circlip plier external 7"
19	Wire rope sling 1/2" x 2 mtr	25	Circlip plier external 13"



20	Wire rope sling 1/2" x 3 mtr	26	Pincer 8"
21	Wire rope sling 3/4" x 1 mtr	27	Screw driver 842
22	Wire rope sling 3/4" x 2 mtr	28	Screw driver 824
23	Wire rope sling 3/4" x 4 mtr	29	Screw driver 827
24	Web sling 5 ton x 6 mtr	30	Screw driver 937
25	Web sling 5 ton x 3 mtr	31	Screw driver 938
26	Belt sling 3 ton x 1 mtr	32	Nut driver 6mm to 12mm
27	Belt sling 5 ton x 2 mtr	33	Magnetic Screw driver set
28	Belt sling 10 ton x 2 mtr	34	Screw driver 829
29	Belt sling 10 ton x 3 mtr	35	Screw driver (champion set)
30	PP rope 12mm	36	Box spanner (mm) set
31	PP rope 16mm	37	Tubular spanner 6-32 with tommy bar
32	PP rope 18mm	38	Allen key (mm) set
33	PP rope 25mm	39	Allen key (inch) set
34	Wire steel rope 12mm	40	Allen key 12 mm
35	Wire steel rope 16mm	41	Allen key 14 mm
36	U' Clamp 12mm	42	Allen key 16 mm
37	U' Clamp 16mm	43	Allen key 18 mm
38	Drill pit 4mm to 12mm	44	Allen key 19 mm
39	Drill pit 14mm to 26mm	45	Allen key 20 mm
40	Drill pit 30mm	46	Allen key 22 mm
41	Tap setmm 4mm to 12mm	47	Bearing puller 3 way x 6"
42	Tap setmm 14mm to 26mm	48	Bearing puller 3 way x 10"
43	Centre punch 150mm lg	49	Bearing puller 3 way x 14"
44	Hole punch	50	Tin cutter 8"
45	Number punch	51	Tin cutter 14"
46	Shovel	52	Wire stripper 6"
47	C Clamp 8"	53	Torque wrench TW 100
48	C Clamp 12"	54	Torque wrench TW 160
49	Forke clamp	55	Torque wrench TW 250
50	Grease gun	56	Flat chisel 8"
51	Grease gun 10kg	57	Pipe wrench 12" (heavy duty)
52	Grease gun 25kg	58	Pipe wrench 450mm (heavy duty)
53	Compressor 5kg	59	Pipe wrench 900mm (heavy duty)
54	Hose 12mm	60	Crimping tool
55	Hydralick jack 100 ton/pump/accessories	61	Aluminium ROD
56	Hydralick jack 50 ton/pump/accessories	62	Copper ROD
57	Hammar 2 pound	63	Cutting plier
58	Hammar 4 pound	64	Safety belt (double hook type)
59	Hammar 8 pound		
60	Hammar 16 pound	1	Vernier caliper 12"
61	Hammar fibre	2	Micro meter 100 to 400
62	Tools box	3	Micro meter 0 to 25
63	Try square 4"	4	Dail Gauge
64	Try square 6"	5	Dail Gauge Stand
65	Try square 9"	6	Steel role 1'

66	Vacuum cleaner (hand held)	7	Steel role 2'
67	Hacksaw frame (mini)	8	Steel role 3'
68	Hacksaw frame 12"	9	Feeler gauge 4"
69	Saw (wooden cutter)	10	Feeler gauge 6"
70	Flat File (smooth & rough)	11	Thread Gauge mm
71	Half round File (smooth & rough)	12	Mesuring Tap 3m
72	Round File	13	Mesuring Tap 5m
73	Needle File	14	Mesuring Tap 15m
74	Sprit level 12"	15	Mesuring Tap 30m
75	Aluminium ladder A type		Standard bearing heater
76	Aluminium ladder 6 metre		Standard bearing inserting pipes
77	Aluminium ladder 3 metre		Vacuum cleaner (earth moving for office)

S. No.	Item description (E&I)	S. No.	Item description (E&I)
1	Temperature Gun (Non contact type)	14	Paint Brush
2	Techo Meter (Non contact type)	15	Torch Light with rechargeable battery
3	Screw Drivers all size	16	Hand Megger 500V
4	Digital Multimeters with mA/mV	17	Hand Megger 2.5 KV
5	Vibration Meter	18	Digital Lux Meter
6	Motor Checker (Meter)	19	Blow lamp
7	Megger 5 kv (Analog Meter-Hand & battery operated))	20	Tester
8	Earth megger (earth tester)	21	Continuity tester
9	Soldering Iron with iron and paste	22	Ferrule Printer with all types of consumables
10	Tong Tester (20-700 AMP)	23	Electrical hand glove LT AND HT
11	Screw Spanners 4 to 12"	24	Tube Bender upto 8mm.
12	Milli amps injector		
13	Phase sequence meter		

**Indicative List of mechanical equipments in CPP 1200 MW:**

EQUIPMENT LIST AHP			
S. NO	DESCRIPTION	QUANTIT Y	DESCRIPTION
1	MASER AV PUMP,ECO	4	FLY ASH SYSTEM
2	"SLAV MD PUMP,ECO"	8	FLY ASH SYSTEM
3	"OUTLET AV PUMP-1,ECO"	4	FLY ASH SYSTEM
4	OUTLET AV PUMP	8	FLY ASH SYSTEM
5	"MASTER MD PUMP,APH"	4	FLY ASH SYSTEM
6	"SLAV MD PUMP-1A,APH"	24	FLY ASH SYSTEM
7	"MASTER MD PUMP,ESP"	16	FLY ASH SYSTEM
8	"OUTLET MD PUMP,ESP"	16	FLY ASH SYSTEM
9	"MASTER MD PUMP,FF"	12	FLY ASH SYSTEM
10	"SLAV MD PUMP,FF"	24	FLY ASH SYSTEM

11	"OUTLET MD PUMP,FF"	12	FLY ASH SYSTEM
12	ASH SILO FLUIDIZING FAN	6	FLY ASH SYSTEM
13	ELECTROMAGNETIC BIN VIBRATOR DB	6	BOTTOM ASH SYSTEM
14	VIBRATORY SCREEN DB	2	BOTTOM ASH SYSTEM
15	CLINKER CRUSHER DB	2	BOTTOM ASH SYSTEM
16	ASH CONDITIONER	4	ASH DISPOSAL SYSTEM
17	"AGITATOR - 1 ,ART	4	ASH DISPOSAL SYSTEM
18	"SLUDGE PUMP ,SETTLING TANK"	4	ASH DISPOSAL SYSTEM
19	DOSING SCREW CONVEYOR	4	ASH DISPOSAL SYSTEM
20	"HCSD PUMP,HYDRAULIC PISTON DIAPHRAGM"	4	ASH DISPOSAL SYSTEM
21	"CHARGE PUMP ,CENTRIFUGAL PUMP"	4	ASH DISPOSAL SYSTEM
22	CERM	8	FLY ASH SYSTEM
23	PLATE HEAT EXCHANGER	4	BOTTOM ASH SYSTEM
24	INLINE PUMP	4	BOTTOM ASH SYSTEM
25	BOTTOM ASH SLURRY PUMP	8	BOTTOM ASH SYSTEM
26	BOTTOM ASH SCRAPER CHAIN CONVEYOR	4	BOTTOM ASH SYSTEM
27	BOTTOM ASH CLINKER GRINDER	4	BOTTOM ASH SYSTEM
28	BELT CONVEYOR DB	4	BOTTOM ASH SYSTEM
29	VIBRATING FEEDER DB	6	BOTTOM ASH SYSTEM
30	WET ASH UNLOADER SILO	4	BOTTOM ASH SYSTEM
31	BIN VIBRATOR DB	6	BOTTOM ASH SYSTEM
32	CENTRE DECANTING PIPE-DB	6	BOTTOM ASH SYSTEM
33	"ESP, HOPPER FLUIDISING BLOWER"	8	FLY ASH SYSTEM
34	DOUBLE PADDLE MIXER-FA SILO	4	FLY ASH SYSTEM
35	DRY ASH UNLOADER FA SILO	4	FLY ASH SYSTEM
36	FABRIC FILTER FA SILO	8	FLY ASH SYSTEM
37	SEWAGE PUMP FA SILO	4	FLY ASH SYSTEM
38	BA STIRRER SLURRY SUMP	4	BOTTOM ASH SYSTEM

			SYSTEM
39	HP PUMP 1, SETTLING TANK1	4	BOTTOM ASH SYSTEM
40	LP PUMP 1, SETTLING TANK1	4	BOTTOM ASH SYSTEM
41	ASH CONVEYING COMPRESSOR	14	AHP COMPRESSOR
42	ASH CONVEYING COMPRESSOR- DRYER	14	AHP COMPRESSOR
43	SEWAGE PUMP	24	MISCELLANEOUS
44	HOIST	18	MISCELLANEOUS

### EQUIPMENT LIST CHP

S. NO	DESCRIPTION	QUANTIT Y	DESCRIPTION
1	C-0 VIBRO FEEDER	1	CHP TRUCK HOPPER
2	C-0 CONVEYOR BELT	1	CHP TRUCK HOPPER
3	C-0 BELT TYPE MAGNETIC SEPARATOR	1	CHP TRUCK HOPPER
4	TRUCK HOPPER SUMP PUMP	1	CHP TRUCK HOPPER
5	C-0 DS SYSTEM		CHP TRUCK HOPPER
6	PADDLE FEEDER	4	CHP TRACK HOPPER
7	C1-A CONVEYOR BELT	1	CHP TRACK HOPPER
8	C-1-A BELT TYPE MAGNETIC SEPARATOR	1	CHP TRACK HOPPER
9	C1-B CONVEYOR BELT	1	CHP TRACK HOPPER
10	C-1-B BELT TYPE MAGNETIC SEPARATOR	1	CHP TRACK HOPPER
11	TRACK HOPPER SUMP PUMP	4	CHP TRACK HOPPER
12	VENTILATION SYSTEM	2	CHP TRACK HOPPER
13	FLAP GATE	400	CHP TRACK HOPPER
14	C1A DS SYSTEM		CHP TRACK HOPPER
15	TRACK HOPPER HOIST	2	CHP TRACK HOPPER
16	MANUAL SINGLE-BEAM HOIST	2	CHP TRACK HOPPER

17	CHAIN BLOCK	2	CHP TRACK HOPPER
18	MONORAIL TROLLEY	2	CHP TRACK HOPPER
19	C2-A CONVEYOR BELT	1	CHP TRANSFER TOWER
20	C2-B CONVEYOR BELT	1	CHP TRANSFER TOWER
21	COAL SAMPLER UNIT	2	CHP TRANSFER TOWER
22	ELECTRIC MONORAIL HOIST	1	CHP TRANSFER TOWER
23	CHAIN BLOCK	2	CHP TRANSFER TOWER
24	MONORAIL TROLLEY	2	CHP TRANSFER TOWER
25	C2-A HANG TYPE MAGNETIC SEPERATOR	1	CHP TRANSFER TOWER
26	C2-B HANG TYPE MAGNETIC SEPERATOR	1	CHP TRANSFER TOWER
27	C2-A DYNAMIC CIRCLE CHAIN	1	CHP TRANSFER TOWER
28	C2-B DYNAMIC CIRCLE CHAIN	1	CHP TRANSFER TOWER
29	C1B DS SYSTEM		CHP TRACK HOPPER
30	C2B DE SYSTEM		CHP TRANSFER TOWER
31	C2A DE SYSTEM		CHP TRANSFER TOWER
32	C2A DS SYSTEM		CHP TRANSFER TOWER
33	TRANSFER TOWER-1 SUMP PUMP	2	CHP TRANSFER TOWER
34	TRANSFER TOWER-1 HOIST	1	CHP TRANSFER TOWER
35	CHAIN BLOCK	6	CHP TRANSFER TOWER
36	MONORAIL TROLLEY	6	CHP TRANSFER TOWER
37	C3-A CONVEYOR BELT	1	CHP TRANSFER TOWER
38	C3-B CONVEYOR BELT	1	CHP TRANSFER TOWER
39	CRUSHER HOUSE BULK REMOVER	2	CHP CRUSHER HOUSE
40	CRUSHER HOUSE VIBRATING FEEDER/SCREEN	2	CHP CRUSHER HOUSE

41	CRUSHER HOUSE BUFFERING DRUM	2	CHP CRUSHER HOUSE
42	RING HAMMER CRUSHER	2	CHP CRUSHER HOUSE
43	CRUSHER HOUSE DS PUMP	2	CHP CRUSHER HOUSE
44	CRUSHER HOUSE HOIST	4	CHP CRUSHER HOUSE
45	HAND OPERATED MONORAIL HOIST	10	CHP CRUSHER HOUSE
46	HAND OPERATED MONORAIL WHEEL	10	CHP CRUSHER HOUSE
47	TT-2 SUMP PUMP	2	CHP TRANSFER TOWER
48	TT-2 HOIST	2	CHP TRANSFER TOWER
49	HAND OPERATED MONORAIL HOIST	10	CHP TRANSFER TOWER
50	HAND OPERATED MONORAIL WHEEL	10	CHP TRANSFER TOWER
51	C3A DS SYSTEM		CHP TRANSFER TOWER
52	C3A DE SYSTEM		CHP TRANSFER TOWER
53	STACKER RECLAIMER	2	STACKER RECLAIMER
54	C4-A CONVEYOR BELT	1	STACKER RECLAIMER
55	BOBRN COMPRESSOR	2	CHP TRACK HOPPER
56	C5-A CONVEYOR BELT	1	CHP TRANSFER TOWER
57	C5-B CONVEYOR BELT	1	CHP TRANSFER TOWER
58	TT-3 SUMP PUMP	2	CHP TRANSFER TOWER
59	TT-3 HOIST	1	CHP TRANSFER TOWER
60	HAND OPERATED MONORAIL HOIST	10	CHP TRANSFER TOWER
61	HAND OPERATED MONORAIL WHEEL	10	CHP TRANSFER TOWER
62	C5A DS SYSTEM		CHP TRANSFER TOWER
63	C5A DE SYSTEM		CHP TRANSFER TOWER
64	C6-A CONVEYOR BELT	1	CHP TRANSFER TOWER

65	C6-B CONVEYOR BELT	1	CHP TRANSFER TOWER
66	C6-A HANG TYPE MAGNETIC SEPERATOR	1	CHP TRANSFER TOWER
67	C6-B HANG TYPE MAGNETIC SEPERATOR	1	CHP TRANSFER TOWER
68	C6-A DYNAMIC CIRCLE CHAIN	1	CHP TRANSFER TOWER
69	C6-B DYNAMIC CIRCLE CHAIN	1	CHP TRANSFER TOWER
70	C2B DS SYSTEM		CHP TRANSFER TOWER
71	C3B DS SYSTEM		CHP TRANSFER TOWER
72	C4-B CONVEYOR BELT	1	STACKER RECLAIMER
73	C6A DS SYSTEM		CHP TRANSFER TOWER
74	BUNKER BAY T.T HOIST	1	COAL BUNKER
75	CHAIN BLOCK	4	COAL BUNKER
76	MONORAIL TROLLEY	4	COAL BUNKER
77	MANUAL SINGLE-BEAM HOIST	1	COAL BUNKER
78	C7-A CONVEYOR BELT	1	COAL BUNKER
79	C7-B CONVEYOR BELT	1	COAL BUNKER
80	V- PLOUGH UNLOADER BUNKER	80	COAL BUNKER
81	C7A DS SYSTEM		COAL BUNKER
82	C7B DS SYSTEM		COAL BUNKER
83	BUNKER HOIST	1	COAL BUNKER
84	BEML DOZER	4	CHP MISCELLANEOUS

Technical Data For Conveyors:

Convey or Type	Convey or Width (mm)	Coal Density (t/mm <sup>3</sup> )	Convey or capacity (t/h)	Convey or Speed (m/s)	Lump size to be flow (mm)	Type of Fabric used	Total length of conveyor (m)	Belt
C-0	1000	0.8	500	2	300	EP /Fire-Resistant	75	EP-200-1000X5(4.5+1.5)

C-1	1400	0.8	1500	2.5	300	EP /Fire- Resista nt	1195	EP-300- 1400X4(4.5 +1.5)
C-2	1400	0.8	1500	2.5	300	EP /Fire- Resista nt	A= 585m B= 575m	EP-300- 1400X6(4.5 +1.5)
C-3	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	425	EP-300- 1400X4(4.5 +1.5)
C-4 A	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	700	EP-300- 1400X4(4.5 +1.5)
C-4 B	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	700	EP-300- 1400X4(4.5 +1.5)
C-5	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	498	EP-300- 1400X4(4.5 +1.5)
C-6	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	1425	EP-300- 1400X6(4.5 +1.5)
C-7	1400	0.8	1500	2.5	30	EP /Fire- Resista nt	1180	EP-300- 1400X4(6.0 +1.5)

**List of critical equipments for which CBM is required at CPP 1200 MW:**

<b>Equipments for CBM</b>	
<b>S.No</b>	<b>CHP Equipment</b>
1	Vibro Feeder/ Conveyor Gear Boxes/ Paddle Feeder/ Electric Hoists/ Vibrating screen/ Crusher/
2	Stacker Reclaimer
<b>S.No</b>	<b>AHP Equipment</b>
1	Geho Pump/HP PUMP/Agitaor/Ash mixer/charge pump/silo blower
<b>S.No</b>	<b>Electrical Equipment</b>
.	HT motor,LT motor

List of equipments for which expert visits are required (CPP 1200 MW)



Engine of Dozers/stacker reclaimer/compressor AHP/compressor BOBRN/Geho pump
AB PLC/Siemens PLC/PLCC and associated SCADA
VFD-ABB/VFD-AB

Indicative list of E&I equipments at CPP 1200 MW

C&I instruments	<p>All actuators motorized and pneumatic, regulating and on off.</p> <p>Hydraulic components, SOVs, servo motors, etc</p> <p>Nucleonic Density meter, Weigh Feeders, Belt Scales, Solid flow meter, Magnetic flow meter etc</p> <p>All field instruments e.g. PG, PS, PT, RTC, TC, TG, DPT, Limit switch, Temp tx, Level switch, Level sensor and controller, LVDT, Flow switch, Proximity, Speed sensor, Techo, VFD, Pull chord, Zero speed switch, vibration sensors, Flame Detectors, belt tear detectors, temperature scanners, IR camera, LHSC cable and controller, PLCC module etc</p> <p>Display and monitors, HMI, PLC (allen bradly and Siemense) and Controllers</p> <p>Indoor and outdoor panel and component, Power supplies, indicators, fan, Push Buttons, lock etc.</p> <p>Pneumatic system Impulse piping, FRL, SOV etc</p>
6.6KV CHP Switchgear	Supplies power to all pumps & fans related to CHP. 6.6KV Motors above 1000KW fed from VCB and between 200KW to 1000KW by fuse vacuum contactor. Transformers above 1000KVA are fed from VCB and equal to and below 1000KVA are fed from fuse vacuum contactor.
6.6KV HT Motors and 415V Motors	Total 22 numbers of 6.6KV motors consist two 710KW Crusher, four 250KW Conveyor6, two 400KW conveyor2 and fourteen number 385KW air compressor motor. Large number of LT motors; most of are induction motors with DOL starters and some are fed through VFDs. 950KW HCSD motor is fed through ABB ACS VFD.
6.6/0.415KV Dry type T/F	4X 2MVA, 2X0.4MVA, 4X1.6MVA (6.6/0.71kV)
415V PCCs & MCCs and LT Motors	ACBs are provided for rating more than 400A. MCCBs are provided for <=400A. Motors above 75KW fed from PCC & <=75KW are fed from MCCs.
SCADA and PLCC	Protections, Breaker status, feedback, controls, logics for 6.6KV Switchgear, 415V Switchgear system, Emergency system are hooked to SCADA. PLCC for Paddle feeder.
DCDB	DC systems have two independent sections at 220V. Each unit will have 2X100% VRLA battery & 2X100% float cum boost charger. Each set has 110batteries.
Lighting/AC/Ventilation/ECU	Lighting/AC/Ventilation/ECU scope starts from the end of ID fan area to entire AHP and CHP area which includes equipment lighting, street light, road light, switchgear and Panel Room light, office light , Control room, Building

	lights, Tower lights, High Mast light etc. Ventilation system, AC (Split and Window), Chiller of CHP and AHP area including control room and offices.
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## Bill of quantity

### ANNEXURE 1 COMMERCIAL PRICE & PAYMENT TERMS

#### I. Contract Price (Basic):

##### A. CPP 540 MW:

S. No.	Contract Period	UOM	Qty	Unit Rate (Rs) (Per Month)	Amount (Rs)
1	First Year	Months	12		
2	Second Year	Months	12		
3	Third Year	Months	12		

##### B. CPP 1200 MW:

S. No.	Contract Period	UOM	Qty	Unit Rate (Rs) (Per Month)	Amount (Rs)
1	First Year	Months	12		
2	Second Year	Months	12		
3	Third Year	Months	12		

#### II. Payment Terms:

i) 100 % payment along with applicable taxes and duties within 30 days after submission of Monthly RA bills duly certified by BALCO EIC.

ii) Bank Guarantee/Security Deposit:

Bank Guarantee in Balco's Standard format equivalent to 10% of the Annual Contract value with claim period of 3 months shall be submitted by the vendor OR 5 % Security Deposit & 15% of wages amount shall be withheld against Monthly RA Bills

## 5) STANDARD TERMS AND CONDITION

### 1. DEFINITIONS

- 1.1. In the Agreement, the following words and expressions shall, unless the context otherwise requires, have the following meanings:

“**Affiliate**” shall mean with respect to any person, any other person that, directly or indirectly, controls, is controlled by or is under common control of such specified person. For the purposes of this definition, “control” means the direct or indirect beneficial ownership of more than fifty percent (50%) of the issued share capital, stock or other participating interest or the legal power to direct or cause the direction of the general management of the company, partnership or other person in question, and “controlled” shall be construed accordingly;

“**Agreement**” shall mean the Agreement between the Company and the Service Provider to which this Schedule is attached. “**Fees**” shall mean the prices and/or rates payable by the Company in respect of the Services and/or as specified in the relevant Purchase Order.

“**Purchase Order**” shall mean the document recording the specific Services to be carried out under this Agreement, from time to time.

- 1.2. Unless otherwise stated, any and all references in the Agreement to Clauses are references to the Clauses of the Agreement.
- 1.3. The headings in the Agreement are used for convenience only and shall not govern or affect the interpretation of the Agreement.
- 1.4. Words denoting the singular shall include the plural and vice versa, where the context requires.
- 1.5. Except as expressly identified, any reference to statute, statutory provision or statutory instrument shall include any re-enactment or amendment thereof for the time being in force.
- 1.6. Unless expressly stated otherwise, all references to days, weeks, months and years shall mean calendar days, weeks, months and years.

### 2. SCOPE OF CONTRACT

- 2.1. The terms and conditions of the Agreement shall apply from the Effective Date and shall remain valid for the Term unless this Agreement is terminated earlier by the Company in accordance with Clause 10 below (Standard Terms and Conditions).
- 2.2. Subject to the provisions of this Agreement, the Parties agree that upon request of the Company in terms hereof, the Service Provider shall perform the Services at such locations and for such periods as may be agreed with the Company.
- 2.3. From time to time, the Company may issue a Purchase Order to the Service Provider. In such case, the terms and conditions of this Agreement shall apply to each such Purchase

Order as if repeated in total.

- 2.4. The Service Provider shall commence the Services on the scheduled commencement date stated under this Agreement or in the relevant Purchase Order and shall continue such Services for the Term or the duration of the Purchase Order as applicable unless terminated earlier in accordance with terms and conditions hereunder. Each Purchase Order is subject to agreement on a case by case basis.

### **3. SERVICES**

- 3.1. The Service Provider shall perform the Services with all due skill, care and diligence in a safe, competent and timely manner and in accordance with the requirements of the Agreement and/or the relevant Purchase Order. If Company notifies the Service Provider of any defect in the performance of the Services, the Service Provider shall rectify such defect at its own expense.
- 3.2. Except to the extent that it may be legally or physically impossible, the Service Provider shall comply with the Company's instructions and directions in all matters relating to the Services consistent with the provisions hereunder.
- 3.3. The Service Provider shall agree with the Company in the relevant Purchase Order from time to time as regards the personnel who will perform the Services and shall:
- (a) only provide such personnel who possess appropriate experience, skills and qualifications necessary for the Services to be performed in accordance with this Agreement;
  - (b) not remove or replace such personnel without the prior written consent of the Company (not to be unreasonably withheld); and
  - (c) Nominate a senior manager or director of the Service Provider to have overall responsibility for the provision of the Services in terms stated under this Agreement and/or the relevant Purchase Order, which person shall attend any meetings with the Company on reasonable prior notice.
- 3.4. The Company shall be entitled to request the Service Provider to replace any of its
- 3.5. personnel providing the Services, where in the Company's reasonable opinion such person is incapable and or unsuitable for performing the Services required by this Agreement. The Service Provider shall promptly replace such person at no additional cost to the Company.
- 3.6. Without prejudice to any other rights of the Company under the Agreement or at law, if the Service Provider fails to perform the Services in accordance with the provisions of this Agreement, the Company may use alternative means to perform the Services and the Service Provider shall be liable for any additional cost incurred by the Company in using such alternate means.
- 3.7. The Service Provider hereby represents and warrants that it has all corporate authorisations and all other approvals, statutory, regulatory or other consents, licenses, waivers or

exemptions required to enter into and perform its obligations under the Contract and is not restrained, enjoined or otherwise prohibited or made illegal by any applicable law, from executing and performing this Contract.

**4. FEES**

- 4.1. The Company shall pay for the Services performed in accordance with the prices as per Attachment 2 to Schedule I and/or rates specified in the relevant Purchase Order.
- 4.2. In case of contingency assignments, the agreed fees for such onetime Services shall be payable on completion of the relevant assignment as per the terms agreed under this Agreement and/or the relevant Purchase Order.

**5. SERVICE PROVIDER'S GENERAL OBLIGATIONS**

- 5.1. The Service Provider shall, and the Service Provider shall ensure that its employees and representatives shall, in performing its obligations under this Agreement, comply in all respects with all relevant laws, statutes, regulations and orders for the time being in force.
- 5.2. Where any of the Service Provider's employees or representatives is present at any of the Company's premises for the purposes of this Agreement, the Service Provider shall at all times remain responsible for the conduct and safety of such employee or representative.
- 5.3. The Service Provider shall not, in performing its obligations under this Agreement, hold itself out or permit any person to hold it out as being authorized to bind the Company in any way and will not commit any act which might reasonably create the impression that it is so authorized.
- 5.4. The Service Provider shall ensure that it has in place and maintains in place for the duration of this Agreement sufficient insurance to comply with all applicable laws and to cover its potential liabilities under this Agreement and shall provide evidence of such insurances to the Company on request. The Service Provider undertakes that such insurances shall contain waivers of any rights of recourse including, in particular, subrogation rights against the Company arising out of or in connection with the performance of this Contract to the extent of liabilities assumed by the Service Provider hereunder;
- 5.5. Notwithstanding the provision of the information by the Company, the Service Provider shall be deemed to have satisfied itself in respect of all relevant matters pertaining to the Services, including, but not limited to, the Scope of Work, the nature of the Services, access to the site, local facilities, climatic, sea, other water and weather conditions, working hygiene and working environment conditions and/or all other matters which may affect the performance of the Services. Any failure by the Service Provider to take into account any of the aforementioned matters shall not relieve or excuse the Service Provider from any of its responsibilities, liabilities or obligations hereunder or entitle the Service Provider to any extra payment.
- 5.6. The Service Provider may not subcontract any of its obligations under this Agreement without the prior written consent of the Company. The Service Provider shall not be relieved from any of its obligations or liabilities under the Agreement by virtue of any

subcontract and the Service Provider shall be responsible for all Services, acts, defaults or omissions of its subcontractors (and its or their employees and consultants) as though they were the services, acts, defaults or omissions of the Service Provider.

- 5.7. In performing the Services, the Service Provider shall:
- (a) give preference to the purchase and use of goods manufactured, produced or supplied in India provided that such goods are available on terms equal or better than imported goods with respect to the timing of delivery, quality, quantity required, price and other terms;
  - (b) subject to Clause 5.5, employ Indian subcontractors having the required skills or expertise to the maximum extent possible insofar as their services are available on comparable standards with those obtained elsewhere and at competitive prices and on competitive terms, provided that where no such subcontractors are available, preference shall be given to non-Indian subcontractors who utilize Indian goods to the maximum extent possible, subject to the proviso in Clause 5.6(a) above; and
  - (c) Subject to Clause 5.5, co-operate with and assist Indian companies as subcontractors to enable them to develop skills and technology to service the petroleum industry.
- 5.8. The Service Provider shall maintain proper and accurate records in relation to the Services and shall provide copies of the same to the Company on request. The Company (or its appointed representative) shall have the right to audit the relevant books and accounts of the Service

Provider in relation to any reimbursable charges paid for by the Company under this Agreement. Such audit right shall survive for a period of 2 (two) years following the expiry or termination of the Agreement. Any incorrect payments identified by such audit shall be adjusted between the Parties as appropriate.

## **6. INTELLECTUAL PROPOERTY RIGHTS**

Notwithstanding anything to the contrary contained in this Agreement, it is hereby agreed between the Parties that any Intellectual Property Rights arising out of, from or in relation to this Agreement including those created during the course of performance of the Agreement, shall belong to and vest in the Company and in this regard, the Service Provider hereby waives any right, title or interest in the same.

For the purposes of this clause Intellectual Property Rights includes but is not limited to all vested, contingent and future intellectual property rights including: (i) all inventions, compounds, compositions, substances, methods, processes, techniques, know-how, technology, data, information, discoveries, and materials including ideas, concepts, formulas, assays, practices, software, devices, procedures, designs, constructs, plans, applications, research, regulatory information, manufacturing process, scale-up and other technical data, reports, documentation and samples, including chemical, physical, analytical, safety, manufacturing and quality control data and information, as well as study designs and protocols; and any patents, trade secrets, confidential information, proprietary processes, or industrial rights directly or indirectly deriving therefrom; (ii) all trademarks, service marks, copyrights, designs, trade styles, logos, trade dress, and corporate names, including all goodwill associated therewith; and (iii) any work of authorship, regardless of copyrightability, all compilations and all copyrights and includes also includes any

inventions, made, to be made, discovered, conceived or reduced to practice whether or not patentable.

- 6.2. Notwithstanding anything to the contrary in this Agreement, in no event shall either Party be liable to the other, whether arising under Agreement, tort (including negligence), strict liability or otherwise, for any indirect, consequential, special, punitive, exemplary or incidental loss or damages of any nature arising at any time from any cause whatsoever.

## **7. THIRD PARTY CLAIMS AND LIMITATION OF LIABILITY**

- 7.1. The Service Provider shall be liable for and shall defend, indemnify and hold the Company harmless from and against any and all claims, liabilities, costs, damages and expenses (including court costs and legal fees) in connection with:

- (a) any claim made by any third party (including, but not limited to, any claim made by any governmental or statutory authority) against the Company arising out of or in connection with the performance by the Service Provider of its obligations under this Agreement.
- (b) any infringement (whether actual or alleged) of any patent or other intellectual property right arising out of or in connection with the performance of this Agreement by the Service Provider.

## **7. VARIATIONS**

- 7.1. At any time during this Agreement, the Company may request the Service Provider to vary, amend or otherwise alter the Services (a "Variation Request").
- 7.2. Upon the receipt of a request from the Company pursuant to Clause 7.1, the Service Provider shall, within 7 days, notify the Company of the effect of the Variation Request on the Fees and/or other terms under this Agreement and/or the relevant Order.
- 7.3. If following receipt of the Service Provider's response pursuant to Clause 7.2, the Parties are in agreement on the Variation Request and the adjustments to be made to the Services under this Agreement and/or the relevant Purchase Order, the Parties shall execute a variation order (a "Variation Order") to reflect such agreement.
- 7.4. The Services shall not be varied, amended or otherwise altered and/or the Fees shall not be adjusted until such time as a Variation Order is executed by both Parties.

## **8. PAYMENT**

- 8.1. In addition to any requirements set out in the relevant Purchase Order, if any, each invoice shall:
- (a) be in duplicate;
  - (b) bear the Contract Number stated on the cover sheet to the Agreement;
  - (c) state the name, e-mail address, mobile telephone number of the Company's Representative; and

(d) be accompanied by supporting evidence and itemized in accordance with the Company's requirements.

Invoices to the Company shall be sent to the address set out in the Agreement. Service Provider must ensure that all invoices for services performed or goods delivered are submitted to the Company within 90 days.

Specifically, the Service Provider shall submit the following information/ documents to the Company unless specifically exempted by the Company representative in writing:

- (i) Latest tax residency certificate of the Service Provider as issued by the tax / revenue authorities of Service Provider's country of residence, stating specifically that the Service Provider is tax resident of country as mentioned in such tax residence certificate.
- (ii) Copy of the Permanent Account Number ('PAN') card issued by the Indian Tax authorities,
- (iii) Copy of registration certificates under applicable Indian tax/other laws including but not limited to GST, Excise, import export code etc., as applicable.
- (iv) Copy of the withholding tax certificate issued by Indian tax authorities, enabling the Company to make payments to the Service Provider after deduction of such taxes as per prescribed rate in the withholding tax certificate.

8.2. The Company shall make payment of a correct invoice within 45 days of receipt to the Service Provider's nominated bank account. Any invoice not complying with the provisions of this Agreement will be returned by the Company and the Service Provider shall submit a rectifying invoice.

- 8.3. The Company may dispute any amount on an invoice and withhold the disputed amount provided that:
- (a) the Company makes payment of any undisputed portion of the invoice and notifies the Service Provider of the disputed amount within 45 days of receipt of the relevant invoice;
  - (b) if the dispute is resolved in favour of the Service Provider, the Company shall pay the disputed amount within fifteen (15) days of the date of the resolution of the dispute or forty-five (45) days of receipt of the invoice, whichever is later.

If the dispute is resolved in favour of the Company, the Service Provider shall forthwith issue a credit note for the disputed amount.

8.4. The Company shall be entitled to set-off / adjust / deduct from any invoice under this Agreement, any payment due from the Service Provider to the Company or any of its Affiliates.

## **9. TAXES**



## **9.1. Definitions**

For the purposes of this Clause 9 (Taxation):

- (a) "Tax" or "Taxes" means taxes, levies, duties, fees, charges and contributions as amended from time to time and any interest or penalties thereon;
- (b) "Government Authority" or "Government Authorities" means any local or national government or authority of any country, competent to levy any Tax;
- (c) "Goods & Services Tax" or "GST" shall include Central Goods & Service Tax ("CGST"), State Goods & Service Tax ("SGST"), Integrated Goods & Service Tax ("IGST"), Union Territory Goods & Service Tax ("UTGST") & GST Compensation Cess.

## **9.2. Person Responsible for payment of Taxes**

### **9.2.1. General**

Except as may be expressly set out in this Contract, the Service Provider shall be responsible for:

- (a) the payment of all Taxes now or hereafter levied or imposed on the Service Provider or its subcontractors or on the personnel of the Service Provider or its subcontractors by any Government Authority in respect of any wages, salaries and other remuneration paid directly or indirectly to persons engaged or employed by the Service Provider or its subcontractors (hereinafter referred to as "Personal Income tax");
- (b) the payment of all Taxes now or hereafter levied or imposed by any Government Authority on the actual/assumed profits and gains made by the Service Provider or its subcontractors (hereinafter referred to as "Corporate Income tax");
- (c) the payment of all GST now or hereafter levied or imposed by any Government Authority on the supply of goods or services, if any, provided to the Company by the Service Provider or its subcontractors;
- (d) the payment of all Taxes now or hereafter levied or imposed by any Government Authority on the mentioned goods only, namely, petroleum crude, HSD, Petrol, Natural Gas & ATF, if any, sold to the Company by the Service Provider or its subcontractors (hereinafter referred to as "Sales tax/VAT/CST");
- (e) the payment of all Taxes now or hereafter levied or imposed by any Government Authority on the mentioned goods only, namely, petroleum crude, HSD, Petrol, Natural Gas & ATF, if any, manufactured by the Service Provider or its subcontractors for sale to the Company (hereinafter referred to as "Excise Duty"); and
- (f) the payment of any other Taxes now or hereafter levied or imposed by any Government Authority on the Service Provider or its subcontractors as a result of the performance of this Agreement.

### **9.2.2. Exception to General:**

Prior to commencing the Services, the Service Provider shall notify the Company whether or not it has Fixed Establishment in India. If the Service Provider notifies the Company that it does not have Fixed Establishment in India, then, any Indian GST chargeable on the services provided by the Service Provider under this Agreement shall be paid by the Company directly to the relevant Government Authority.

**9.2.3. Reimbursement of Taxes to the Service Provider**

It is acknowledged that responsibility for payment of Taxes to the Government Authority will be governed as per clause 9.2.1 and 9.2.2, the Service Provider will be reimbursed only for such Taxes which will be agreed to be reimbursed in the Compensation Schedule or any of the Purchase Order(s) issued under the Agreement.

**9.2.4. Pricing**

The Parties agree that details of Taxes included in, or excluded from, the Service Provider's prices and/or rates shall be as stated in the Compensation Schedule to the Agreement and nothing in this Clause 9 shall be construed to affect or prejudice such details as stated in the Compensation Schedule.

**9.3. Withholding taxes and Withholding certificates**

**9.3.1.** The Company shall, at the time of its payments due to the Service Provider, withhold the necessary taxes at such rate as is required by any Government Authority, unless and to the extent that the Service Provider shall produce to the Company any certificate issued by a Government Authority (having authority to issue such certificate) entitling the Service Provider to receive the payments under the Agreement for a prescribed period without deduction of any tax or deduction at a lower rate.

**9.3.2.** The Company shall provide the necessary withholding tax certificates to the Service Provider within the time stipulated by the relevant law to enable the Service Provider to file the same with the Government Authority as a proof of payment of such taxes.

**9.4. Person Responsible for filing of returns / information to Government Authorities**

**9.4.1.** The Service Provider shall be responsible for filing all necessary Tax returns (including, without limitation, returns for Corporate Income tax, Personal Income tax, GST, Sales tax and Excise Duty) with the relevant Government Authorities in accordance with all applicable statutory requirements and shall be responsible for providing all information requested by such Government Authorities.

**9.4.2.** The Service Provider shall also ensure that its subcontractors file such returns as stipulated by the relevant Government Authorities and furnish such information as requested for by the relevant Government Authorities.

**9.4.3.** The Company, with respect to the tax withheld from the Service Provider in accordance with Clause 9.3 (Withholding Tax and Withholding Tax Certificates), shall be responsible for filing the withholding tax returns with the relevant Government Authorities in accordance with applicable statutory requirements.

**9.5. Company's rights, if treated as representative assessee by Government Authorities**

In certain situations, a Government Authority may treat the Company as the representative assessee of the Service Provider and/or its subcontractors and recover the Taxes due to the Government Authority by the Service Provider or its subcontractors from the Company. In such situations, the Company shall have the following rights:

- (a) The Company shall be entitled to recover from the Service Provider, the Taxes paid on behalf of the Service Provider or its subcontractors (together with any costs and expenses incurred by the Company in connection therewith) or to retain the same out of any amounts to be paid to the Service Provider or its subcontractors that may be in its

possession (whether due under this Agreement or otherwise) and shall pay only the balance, if any, to the Service Provider;

and

- (b) If the Company is required to furnish any details or documents in such capacity, the Company shall request the details documents to be furnished to it by the Service Provider and the Service Provider shall immediately furnish the same to the Company. If the Service Provider fails to comply with the foregoing, any penalty/interest levied on the Company for non-filing or late filing of details or documents in this regard shall be recoverable from the Service Provider

#### **9.6. Indemnity**

The Service Provider shall defend, indemnify and hold the Company Group harmless from and against any and all claims, liabilities, costs, damages and expenses (including court costs and legal fees) in connection with any Taxes which may be levied or imposed on the Service Provider or its subcontractors by any Government Authority arising out of or in connection with the performance of this Agreement.

#### **9.7. Changes in Law**

If, after the date of execution of this Agreement, there is any change in law which results in a change in the rate of any Tax included in the Service Provider's prices or rates or the introduction of a new Tax and such change results in an increase or decrease in the cost to the Service Provider of performing this Agreement then the Parties shall agree to a revision in pricing to reflect such change provided that:

- (a) the Party requesting such revision shall promptly (and in any case prior to submission of the Service Provider's final invoice under this Agreement) notify the other Party that such change in law has arisen; and
- (b) the Party requesting such revision shall provide the other Party with documentary proof of such change in cost to the reasonable satisfaction of the other Party; and
- (c) the provisions of this Clause 9.7 shall not apply to changes in Personal Income tax or Corporate Income tax or to changes in non-Indian Taxes.

#### **9.8. GST Compliances by Service Provider**

9.8.1. Notwithstanding anything contained hereinabove, the Service Provider shall strictly and in a timely manner, adhere to and undertake all acts, omissions and compliances required under the applicable GST laws to ensure that the Company is able to avail the Input Tax Credit/set off/rebate/refund of the GST (along with cesses and surcharges, if relevant) as applicable on the Services or any supplies if applicable made by the Service Provider under this Agreement to the fullest extent possible under law. In this regard, without limiting the generality of the foregoing obligation in any manner whatsoever, Company reserves the right to specify to the Service Provider, particulars including but not limited to the following:

- (a) whether Service Provider should charge IGST or CGST-plus-SGST;
- (b) GST registration number of the Company;
- (c) whether the Service Provider should be responsible to generate the E-Way Bill;
- (d) the format of invoices/credit and debit notes/advance receipt vouchers;
- (e) the requirement for maintenance of a 'GST compliance rating score' above a specified threshold; etc. and
- (f) the relevant timelines for such compliances based on the applicable GST laws.

- 9.8.2. The Service Provider acknowledges that any failure in the foregoing obligations (including undertaking the ones specifically instructed by the Company, if any) can cause significant losses to the Company in the form of loss of GST credit, statutory interest liability on such credit loss (under applicable GST laws) and adverse impact on the 'GST compliance rating score' and thus, undertakes to carry out this foregoing obligation with sincerity, due diligence and without any delay or demur.
- 9.8.3. The Parties agree that the Company reserves the right to reimburse the GST component on supplies received only when the corresponding credit has become available in the electronic credit ledger of the relevant GST registration of Company.
- 9.8.4. Without prejudice to any other indemnification obligation under this Agreement, the Service Provider agrees to, at all times, to hold harmless and indemnify Company from and against all claims, liabilities, expenses, proceedings, costs and losses that may be suffered or incurred by Company which may arise out of or in connection with any failure by the Service Provider to adhere to its obligations including but not limited to its obligations under clause 9.9.1 above. In this regard, the Service Provider also hereby indemnifies Company from any costs, claim or liability arising out of any claim or action or omission by any employee or consultant or agent or outsourced staff or subcontractor of the Service Provider.

## **10. TERMINATION**

- 10.1. Either Party may, at any time and without cause, terminate all or part of this Agreement by giving no less than [30] days' prior written notice to the other Party. Provided that, if any Services under this Agreement, or any Purchase Order issued hereunder, have already been initiated and the work is in progress, then the Company shall have the right to cancel/terminate all or any part of the Service under the Agreement or the relevant Purchase Order without cause and with immediate effect.
- 10.2. In addition, the Company may terminate all or part of this Agreement with immediate effect by written notice to the Service Provider if one of the following circumstances occurs:
- (a) if the Service Provider breaches any provision of this Agreement, provided that where remediable, the Company has notified the Service Provider of such breach and the Service Provider has upon receipt of such notice, failed to immediately and thereafter continuously proceed to remedy such breach to the Company's reasonable satisfaction; or
  - (b) if the Service Provider becomes insolvent or bankrupt or makes a composition or arrangements with its creditors; or
  - (c) if the Service Provider is wound up or a resolution for its winding up is made (other than for the purposes of an amalgamation or reconstruction whilst solvent); or
  - (d) if the Service Provider has a liquidator, provisional liquidator, receiver, administrator or an administrative receiver or manager of its business or undertaking appointed; or
  - (e) if the force majeure under Clause 14 continues for more than thirty (30) days.

- 10.3. In the event of cancellation/ termination of all or part of this Agreement for any reason, the Company's sole liability to the Service Provider in respect of such cancellation/ termination shall be to make payment of the Fees properly due under this Agreement up to the date of termination.
- 10.4. The expiry or termination of this Agreement shall be without prejudice to the rights and obligations of the Parties up to and including the date of expiry or termination and shall not affect or prejudice any term of this Agreement that is expressly or by implication provided to come into effect on, or continue in force after, such expiry or termination.

## **11. CONFIDENTIALITY**

- 11.1. The Company and the Service Provider shall keep any information which either Party learns about or receives from the other pursuant to this Agreement in strict confidence and will not disclose the same to any third party without the prior written consent of the other Party. The foregoing restriction shall not apply in respect of information which the Company requires to disclose for the purpose of performing Services or which was in the possession of the disclosing party prior to this Agreement or which is required to be disclosed by any law, rule or regulation of any governmental agency or court order or information which was already within the public domain or which was developed by either Party, independently of and without reference to the Confidential Information and the receiving party has evidence of such independent development. The provisions of this Clause shall survive the expiry of termination of the Agreement for a period of 3 years.
- 11.2. The Service Provider shall not disclose such Information(s) to any potential subcontractors until such time and in manner agreed by Company in writing. The decision of the Company will be final and binding on the Service Provider in this regard.
- 11.3. The Service Provider shall use best endeavours to prevent the authorised disclosure of the all information hereunder. Where any information is required to be disclosed under Clause 11.1, the Service Provider shall give prompt notice to the Company and shall use its best commercial endeavours to limit the extent of any such disclosure.

## **12. NOTICES**

- 12.1. Any notice or other communication required or given under this Agreement shall be delivered in writing either by hand or by courier, registered mail with acknowledgment due, or fax to the address of the relevant Party set out in the Agreement (or such other address as may be notified by the relevant Party from time to time).
- 12.2. If a notice is delivered by hand or courier during normal business hours of the intended recipient it shall be deemed to have been received at the time of delivery otherwise on the next business day of the recipient. A notice sent by facsimile shall be deemed to have been received at the time when the sender's facsimile machine acknowledges transmission provided however that if the time of acknowledgement of transmission is after 5.00pm on a business day of the recipient it shall be deemed to have been received on the next business day of the recipient.
- 12.3. All notices or other communications between the Parties shall be in the English language.

### **13. GENERAL LEGAL PROVISIONS**

- 13.1. The Company shall be entitled to assign this Agreement to an affiliate/subsidiary or on giving written notice to the Service Provider. Save as aforesaid, the Service Provider shall not be entitled to assign this Agreement or any part or any benefit or interest in or under it without the prior written approval of the Company which the Company may at its sole discretion accept or refuse.
- 13.2. This Agreement shall not be amended or modified except by mutual agreement in writing between the Parties.
- 13.3. This Agreement and the all Schedules and Attachments annexed hereto contains the whole agreement between the Parties relating to the subject matter of this Agreement, and supersedes any previous understandings, commitments, agreements or representations in respect of the subject matter. No terms or conditions endorsed upon, delivered or contained in Service Provider's quotation, acknowledgement or acceptance of the Agreement, specification or similar document will form part of the Agreement and Service Provider waives any right it otherwise might have to rely on such terms and conditions. No variation to any terms or conditions of this Agreement shall be valid unless expressly agreed in writing by both parties.
- 13.4. No delay or failure on the part of either Party to enforce from time to time all or any part of the terms and conditions of this Agreement shall be interpreted as a waiver of such terms and conditions.
- 13.5. Nothing in this Agreement shall, or shall be deemed to, create an agency, a partnership or a relationship of employer and employee between the Parties. For the avoidance of doubt, nothing in this Agreement shall prevent or restrict the Company from entering into parallel Agreements with other parties for services similar or related to the Services.
- 13.6. Unless otherwise specifically stated, both the Company and the Service Provider shall retain all rights and remedies, both under the Agreement and at law, which either may have against the other.
- 13.7. Each Party represents and warrants to the other that (i) it has been duly registered and organised and is a validly existing legal entity under the laws of the jurisdiction of its incorporation and that it has full power, authority and capacity to enter into and to carry out its obligations under the Agreement and (ii) by performing the Services it will not be in breach of any other Agreement, agreement, license or permit or in violation of any law and (iii) it shall at all times act in accordance with applicable laws and regulations.
- 13.8. The Service Provider shall comply with all safety instructions of the Company consistent with the provisions of the Agreement including, without limitation, the safety instructions of any of the Company's other Service Providers. Such instructions shall, if the Service Provider so requires, be confirmed in writing by the Company's Representative, so far as practicable.
- 13.9. The Service Provider shall not be entitled, without the written consent of Company, to make any news release or public announcement concerning the subject matter of the Agreement or to refer to the Company, use its name or logo, in print or electronic forms

for marketing or reference purposes.]

- 13.10. If any provision of this Agreement is prohibited, invalid or unenforceable in any jurisdiction, that provision will, as to that jurisdiction, be ineffective to the extent of the prohibition, invalidity or unenforceability without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of that provision in any other jurisdiction, unless it materially alters the nature or material terms of this Agreement.
- 13.11. The provisions of this Agreement are solely for the benefit of the Parties. No other person are intended to have, nor will have, any rights whatsoever, under this Agreement, whether for injury, loss or damage to person(s) or property or for economic loss.
- 13.12. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Agreement and all of which, when taken together, will constitute one and the same instrument.

#### **14. FORCE MAJEURE**

- 14.1. Neither the Company nor the Service Provider shall be responsible for any failure to fulfil any term or condition of the Agreement if and to the extent that fulfilment has been delayed or temporarily prevented by a force majeure occurrence such as any (a) Act of God, (b) fire, flood, earthquake, (c) war, riot, insurrection and civil commotion, mobilization or military, call up of a comparable scope, which has been notified in accordance with this Clause 14 and which is beyond the reasonable commercial control and without the fault or negligence of the party affected and which, by the exercise of reasonable diligence, the said party is unable to provide against. For the avoidance of doubt, any strikes caused by the Service Provider (which includes its subcontractors) shall not be considered as a force majeure occurrence.
- 14.2. In the event of a force majeure occurrence, the party that is or may be delayed in performing the Agreement shall notify the other party without delay giving the full particulars thereof and shall use reasonable endeavours to remedy the situation without delay.
- 14.3. Save as otherwise expressly provided in the Agreement, no payments of whatever nature shall be made in respect of any period where Services are not carried out as a result of a force majeure occurrence.
- 14.4. Following notification of a force majeure occurrence in accordance with Clause 14.2, the Parties shall meet without delay with a view to agreeing a mutually acceptable course of action to minimise any effects of such occurrence.

#### **15. BUSINESS ETHICS**

- 15.1. The Service Provider shall declare any conflicts of interest with the Company including relationship or financial interest of any nature whatsoever with employees, managers, other suppliers, vendors or stakeholders of the Company.
- 15.2. The Service Provider shall not use the services of any of the employees of the Company, directly or indirectly or enter into any sort of monetary transaction with the employees of the Company. The Service Provider undertakes that he has not given, offered or promised to give directly or indirectly any bribes, commission, gift, consideration, reward, or

inducement to any of the employees of the Company or their agent or relatives for showing or agreeing to show favor or disfavor to any person in relation to this Agreement or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the aforesaid undertaking, by the Service Provider, or his partners, agent or servant or any one authorized by him or acting on his behalf.

- 15.3. The Service Provider agrees to comply with the provisions of the Company's Supplier Code of Conduct which includes Anti-bribery and Corruption requirements (a copy of which is also available at [http://www.vedantalimited.com/media/104182/supplier\\_code\\_of\\_conduct\\_-\\_december\\_2016.pdf](http://www.vedantalimited.com/media/104182/supplier_code_of_conduct_-_december_2016.pdf)) and the Company's Human Rights Policy (a copy of which is available at [http://www.vedantalimited.com/media/80325/vedanta\\_human\\_rights\\_policy.pdf](http://www.vedantalimited.com/media/80325/vedanta_human_rights_policy.pdf)) including the Modern Slavery Act 2015 and in case of breach thereof, the same shall be treated as a breach of this Agreement.

**OR**

15.3 The Service Provider agrees to comply with the provisions of the Company's Supplier Code of Conduct which includes Anti-Bribery and Corruption requirements (a copy of which is also available at <http://www.vedantalimited.com/media/104182/>

[supplier\\_code\\_of\\_conduct\\_-\\_december\\_2016.pdf](http://www.vedantalimited.com/media/104182/supplier_code_of_conduct_-_december_2016.pdf)) and the Company's Human Rights Policy (a copy of which is available at [http://www.vedantalimited.com/media/80325/vedanta\\_human\\_rights\\_policy.pdf](http://www.vedantalimited.com/media/80325/vedanta_human_rights_policy.pdf)) including the Modern Slavery Act and in case of breach thereof, the same shall be treated as a breach of this Agreement.

The Service Provider acknowledges and agrees that the Company is subject to the Modern Slavery Act 2015. In performing its obligations under the Agreement, the Service Provider represents and warrants that neither the Service Provider nor any of its employees performing the Services:

- (a) have been convicted of any offence involving slavery and human trafficking;
- (b) have been or are the subject of any investigation, inquiry or enforcement proceedings by any governmental, administrative or regulatory body regarding any offence or alleged offence of or in connection with slavery and human trafficking;
- (c) shall indulge in performance of any activity of slavery of human trafficking;

During the course of this Agreement, the Service Provider shall promptly notify the Company as soon as it becomes aware of:

- i. an act which may lead to the Company being in any breach, or potential breach, of the Modern Slavery Act 2015; or
  - ii. any actual or suspected act of slavery or human trafficking in connection with this Agreement.
- 15.4. The Service Provider shall maintain records and provide to the Company upon request such records and evidences, as the Company may reasonably require, confirming the



Service Provider's compliance with the obligations under this clause.

- 15.5. The Company shall have a right to initiate "audit proceedings" against the Service Provider to verify compliance with the requirements under this clause. Such audit may be carried out by Company or by a reputed agency to be appointed by Company at the sole discretion of Company. The Service Provider shall extend full cooperation for smooth completion of the audit mentioned herein.
- 15.6. Notwithstanding anything in this agreement, Company shall have right to terminate the Agreement forthwith and recover from the Service Provider, the amount of any loss arising from such termination in case, it is found that the Service Provider has failed to comply with requirements under this clause including any corrupt practices. A decision of the Company or his nominee to this effect that a breach of the undertaking had been committed shall be final and binding on the Service Provider.
- 15.7. If at any time during execution or performance of this Agreement the Service Provider becomes aware of any unethical practices or is faced with any undue demand, request for gratification or favor from any employee of the Company or a person connection with such employee, the Service Provider must report the same immediately to the Group Head-Management Assurance at the following address:

Group Head – Management Assurance, Vedanta, 75 Nehru Road Vile Parle (E), Mumbai 400 099

'Complaints' can also be sent to the designated e- mail id:

[Balco.whistleblower@vedanta.co.in](mailto:Balco.whistleblower@vedanta.co.in)

## **16. GOVERNING LAW AND DISPUTE RESOLUTION**

- 16.1. This Agreement shall be governed by, construed and enforced in accordance with the laws of New Delhi, India.
- 16.2. Any dispute or difference whatsoever arising between the parties out of or relating to the interpretation, meaning, scope, operation or effect of this Agreement or the existence, validity, breach or anticipated breach thereof or determination and enforcement of respective rights, obligations and liabilities of the parties thereto shall be amicably settled by way of mediation. If the dispute is not conclusively settled within a period of twenty-one (21) days from the date of commencement of mediation or such further period as the parties shall agree in writing, the dispute shall be referred to and finally resolved by arbitration under the Arbitration and Conciliation Act, 1996 (as amended from time to time), which are deemed to be incorporated by reference into this clause. The arbitration shall be conducted as follows:
- (i) A sole arbitrator shall be appointed in case the value of claim under dispute is less than ₹ 50,00,000 (Rupees Five Million Only) and in any other event by a forum of three arbitrators with one arbitrator nominated by each Party and the presiding arbitrator selected by the nominated arbitrators.
- (ii) The language of the mediation and arbitration proceedings shall be English. The seat of arbitration shall be Korba, Chhattisgarh, India and the venue shall be Korba, Chhattisgarh,

India.

(iii) The award made in pursuance thereof shall be final and binding on the parties. The right to arbitrate Disputes under this Agreement shall survive the expiry or termination of the Agreement.

#### **Other Terms and conditions**

#### **17. STATUTORY COMPLIANCES & CLEARANCES**

- a) The Service Provider shall be solely liable for Statutory Compliance in respect of all applicable laws of land existing as on the date of the Agreement as well as those notified by the Central/ State Government from time to time including but not limited to compliance of provisions of Contract Labour (Regulation and Abolition) Act, 1970, Employees State Insurance Act, 1948, Employees Provident Funds and Miscellaneous Provisions Act, 1952, Minimum Wages Act, 1948, Payment of Bonus Act, 1965, Payment of Gratuity Act, 1972, Payment of Wages Act, 1936, Employees Compensation Act, 1923, Interstate Migrant Workmen (regulation of Employment and Conditions of Service) Act, 1979 etc. in respect of all employees employed by the Service Provider, directly or indirectly or through any sub-contractor. The Service Provider shall be solely responsible for maintenance of records and filing of various forms/ returns prescribed under all applicable Central/State Labour laws and Regulations/Rules made thereunder in respect of Workmen employed or engaged by it.
- b) The Company shall be entitled to deduct/adjust from amount payable to the Service Provider, any dues, wages, compensation on accident or death, expenses incurred for benefits, provision for amenities and amounts paid or payable by the Company in compliance with the applicable laws, in respect of workmen/employees of the Service Provider.
- c) The Service Provider shall ensure compliance under the Safety Provisions of the applicable State/ Central laws and shall ensure that its employees are trained, competent, physically and mentally fit for the assignment and are not suffering from any chronic or contagious disease.

The Service Provider is responsible for the safety and security of all men and materials employed by him. The Service Provider shall provide all safety equipment (such as tools & tackles, aprons, gloves, safety shoes etc.) to all Service Provider team members. The Service Provider shall provide adequate coverage against any accident met by the Service Provider's team during the period of the Agreement. The Service Provider shall indemnify the Company and its officers against any claim, dispute and litigations arising in this regard. Further no separate consideration shall be payable by the Company for the same.

The Service Provider shall take all the required clearances under the applicable laws which includes but is not limited to Environment Protection Act, CG Land Revenue Code, CG Municipal Corporation Act etc. for successful discharge of all its obligations under the scope of work.

#### **18. SUSPENSION**

No compensation for alteration of schedule or suspension of work: If at any time after the

award of the Agreement, the Company shall for any reason whatsoever not require the whole work done or part thereof as specified in the acceptance of the contract, the Company shall give notice in writing of the same to the Service Provider and the Service Provider shall not be entitled to any compensation and / or damage of any kind whatsoever, nor the contractor will be entitled to any claim for compensation for re-scheduling of the delivery period.

**19. RELATIONSHIP BETWEEN THE SERVICE PROVIDER AND THE COMPANY**

Personnel engaged/employed by the Service Provider shall be deemed employees of the Service Provider and will not for any purpose be considered employees or agents of the Company. Except as may otherwise be provided in this Agreement, each Party shall be solely responsible for the supervision, daily direction, and control of its employees and payment of their salaries/wages, benefits, provision for amenities, compensation, disability benefits and the like.

**20. SERVICE PROVIDER'S OBLIGATIONS/LIABILITIES**

a) The sole responsibility of the performance of the sub-contractor rests with the Service Provider and the Service Provider shall be liable for any work done by its sub-contractor, agents, employees or officials. However, the Company reserves the right to claim damages and enforce rights on the sub- contractor solely or jointly with the Service Provider but such enforcement will not absolve the Service Provider from any liability. b) The Service Provider shall advise the Company regarding, compliances, if any to be made by the Company. c) The Company shall, without prejudice to its other rights be entitled to deduct/ adjust from any dues payable to the Service Provider or any security, all amount(s) which the Company may be liable to pay, incur or sustain as a result of the performance or non-performance, observance or non- observance of any of the terms of this Agreement by the Service Provider.

**21. SERVICE PROVIDERS'S WARRANTIES & REPRESENTATIONS**

The Service Provider hereby, warrants and represents that: a) The Services under this Agreement shall be strictly in accordance with the agreed terms. b) The Services to be provided under this Agreement shall not infringe any third party intellectual property rights. c) The Service Provider hereby represents to the Company that, as of the date of signing of the Agreement, the Service Provider has received no notification of any rightful patent infringement claim which would prejudice the Company's right to use or maintain the Plant

**22. PENALTY FOR VIOLATION OF SAFETY MEASURES**

In case of any violation of safety measures and or on non-compliance of safety PPE by the Service Provider or its employee(s), the Company may penalise the Service Provider as follows: Rs 500/- First time Rs 1000/- Second time onwards If the Service Provider continues failing to provide the safety &/or PPE, the Company reserves its right to terminate the Agreement. At any point of time, the safety compliance will be checked by the Company's Safety Department or Execution Department. The Service Provider shall immediately upon knowing of any accident, damage or losses, in which it is involved on the site, inform the area-in-charge. The Service Provider shall take all safety precautions and provide adequate supervision by competent persons in order to do the job safely and without damage to plant, personnel, equipment, and the environment.

**23. DISCIPLINE AT WORK AREA**

The Service Provider shall maintain discipline at work area. It shall keep the area neat and clean after the work is over. All the spares, waste material like oil grease etc. shall be kept at the designated area and the work place shall be cleaned after the job is over. In case, maintenance activities are found to be suffering due to non-performance by Service Provider's employees or job negligence, suitable punitive action shall be taken by the Company for the same.

**24. EMERGENCY**

The Service Provider shall ensure that its workers follow the following instructions: 1. Contact fire control room on telephone No. 5333, 5219,5393,2333,242033 and inform name, location and brief of the emergency. If telephone is not available, break the glass of nearest manual call point of fire alarm or use the nearby portable fire extinguisher if you know the operation of the extinguisher. 2. Rush to the location of Emergency and assess the situation. Combat the Emergency with the help of the available people using fire hydrant and fire extinguisher. 3. Rush to nearby assembly point [displayed in the department] in case of an extreme emergency.

4. As soon as any Emergency call occurs, the Fire control room operator will immediately ask the Turn out no.1 available at Fire Station plant-I to rush at the emergency spot. 5. He will simultaneously inform to Main Security Gate of respective plants

**25. OCCUPATIONAL HEALTH & SAFETY (OH & S):**

The Service Provider shall be responsible to take all precautions to ensure safety of the labours / workers at work. The Service Provider will supply its labours / workers safety equipment as per the rules. If the Service Provider brings its own equipment to carryout the job inside the plant, such equipment shall be subject to hazard identifications and risk assessment prior to commencing of the work.

The persons engaged by the Service Provider shall be given appropriate awareness on OH&S. Those personnel who will carry out jobs affecting OH&S shall be properly trained and made competent for the job performed by them. During emergency situations in the plant, the Service Provider's personnel shall move to the emergency shelters and shall not spread any rumour. An OH&S booklet is available in Safety Department and is required to be signed by the Service Provider agreeing to comply with the same.

**26. DAMAGE TO COMPANY'S PROPERTY:**

Any loss / damage to the Company due to negligence or wilful attitude of the Service Provider or its employees while execution of the Agreement shall be recovered from the Service Provider's pending bills.

**27. VEDANTA SUSTAINABILITY CLAUSES**

**27.1 HEALTH, SAFETY AND ENVIRONMENT (HSE) SYSTEMS**

Designation of Supervisor: The Service Provider shall specify one of its employee as the Site HSE Supervisor who shall be responsible for attending HSE matters at all levels at the site of work, including emergency response.

Attendance of Service Provider: The Service Provider shall ensure that its site HSE supervisor is present at the place of work and performs supervisory functions at all times whenever four or more workers of the Service Provider or its sub- Service Providers are present at the place of work.

Statutory Compliance: Service Provider shall identify, document and comply with all pertinent Health, Safety and Environment (HSE) laws and regulations, approvals, licenses and permits which are applicable to the services and conduct of activities.

Service Provider shall conduct internal inspections and record to ensure full implementation of requirements and compliance with the system at the site. Service Provider shall provide documentary evidence that it has complied with the system, on the Company's demand.

Service Provider Site Management Plan: The Service Provider shall comply with its submitted plan in the bid document on how to manage and improve the work site.

## **27.2 HAZARD AND RISK ASSESSMENT**

Pre and post Job Safety assessments: The Service Provider shall be responsible and accountable for ensuring effective procedures and assessment systems are in place to meet all HSE conditions.

Prior to the commencement of any operation/activity, the Service Provider must undertake a hazard and risk assessment, such as a job safety analysis or job risk analysis including control and mitigation process. The risk assessment shall cover the following aspects of workplace:

1. General Safety and Environmental Management Procedures
2. Waste Disposal
3. Equipment Decommissioning
4. Water Discharges
5. Material Storage/Spills
6. Storm Water Management
7. Use of Asbestos, Lead, CFCs and other objectionable chemicals.
8. Hot working, gas welding, etc.
9. All electrical works
10. Work at heights including scaffolding
11. Demolition
12. Construction work of any kind

13. Transport management
14. Tank cleaning or testing
15. Confined space, etc.

### **27.3 AWARENESS,COMPETENCY AND BEHAVIOUR**

Awareness: Before commencement of any Services, the Service Provider shall, at its own expense, ensure that its personnel have been given necessary HSE training including training in hazard identification, risk analysis, safe working behavior etc. The HSE training shall include a briefing explaining the nature of the part of the Services they will be performing, a job safety analysis and description of the hazards, which may be encountered during the performance of the particular tasks, which they are required to perform. During such training, the Service Provider shall emphasize the fact that each person has an obligation to stop an act or task if it is unsafe. The Service Provider shall ensure that its personnel attend refresher courses to maintain familiarity with current procedures. The Service Provider shall provide evidence of completion of all training and competency assessments upon request by the Company.

All Service Providers' personnel arriving on the site shall attend the Service Provider's or Company's HSE inductions including a review of the site's safety procedures including Permit to Work and evacuation.

The Service Provider shall ensure safety meeting schedule, including but not limited to pre shift safety meetings, safety toolbox meeting, safety committee meetings and management review meetings.

Competency: The Service Provider shall ensure that all of its supervisory personnel performing work possess any specific competencies or qualifications, experience, responsibility and authorities required by applicable occupational health and safety laws, and shall provide proof of same satisfactory to company upon request.

Behavior: The Service Provider shall provide adequate guidance so that the Service Provider's personnel work to reduce workplace incidents and improve safe performance at all times. The Service Provider shall ensure that its staff conducts in a fit and proper manner whilst on site. Failure to do so may result in the removal or exclusion of such personnel from the site.

### **27.4 CHANGE IN MANAGEMENT**

If there is a change in the site supervisor and Service Provider management personnel, it shall be notified to the designated Service Provider manager as a part of Management of Change (MOC) process. This also includes reassessment of hazards and risk where the changes occur to the work scope, plant and equipment and the working environments.

### **27.5 INCIDENT REPORTING**

Reporting: Any accident, injury, near misses, fire, explosion, spill of chemicals, environment degradation etc. involving the Company or Service Provider's personnel, property or any third party property shall be reported immediately to the Company,

irrespective of whether injury to a person or damage to property or equipment resulted.

Access to site: If the Company exercises its right to conduct its own investigation, the Service Provider shall provide the Company with all reasonable assistance to allow and to complete the investigation.

Learnings: The Service Provider shall implement the learnings from incident to prevent a recurrence. The Service Provider must share the lessons learnt with its personnel.

#### **27.6 SAFETY INTERACTION**

The Service Provider must conduct regular safety interactions of its personnel in accordance with the Company's safety interaction process. The number and frequency of safety interactions to be performed will be at the discretion of the Company Representative. Quality assessments of the safety interactions will be undertaken by the Company's HSE Personnel.

The Service Provider must conduct investigations into incidents, accidents and injuries by its Personnel or involving its equipment and property in accordance with the Company's incident investigation process. Action items must be created to prevent recurrence and be closed out before due dates.

#### **27.7 EMERGENCY DRILLS**

The Service Provider shall participate in emergency response drills to test the effectiveness of its emergency procedures and equipment and the knowledge and proficiency of Service Provider's personnel.

The Service Provider shall provide its emergency response plan (ERP) which must be adaptable to suit the site.

#### **27.8 CARDINAL RULE**

The Service Provider shall ensure that all Service Providers' personnel follow the following safety cardinal rules:

“Do not override or interfere with any Safety Provision nor let anyone else override or interfere regardless of seniority.”

“Personal Protective Equipment (PPEs) applicable to the given task must be adhered to.”

“Always follow isolation and lock out procedure” “No person will be allowed to work if under the influence of alcohol or drugs.

“Report all injuries and illness.”

“On violation of cardinal rules, yellow card will be issued by the Service Provider to the concerned personnel and disciplinary action will be taken by the Service Provider which may result in suspension of personnel also.”

“Always follow SOP while working.”

“Always report any unsafe act/condition or any near miss incidents.”

“Carry out all activities with a valid work permit.” “Always wear proper PPEs while working.” “Always drive within speed of 30 KMPH.”

“Always wear crash helmet (two wheelers) & safety belt (four wheelers) while driving.”

“Don’t smoke in plant premises.”

“Never work under the influence of alcohol or drugs.”

“Never park any vehicle in the no parking areas.” “Never sleep while on duty.”

#### **27.9 PERSONAL PROTECTIVE EQUIPMENT**

The Service Provider shall, at its own expense, supply its personnel, where required, in connection with the safe performance of the Services, adequate protective clothing and other protective equipment including first aid which shall be maintained in good condition or replaced, and shall be worn at all times where required to manage potential injury hazards associated with a work activity under this Agreement.

The Service Provider shall ensure that its personnel have been trained in the correct use and application of PPE. All such training shall be documented and available to the Company on request.

#### **27.10 EQUIPMENT, TOOLS, TACKLES AND RESOURCES**

The Service Provider shall ensure that all plant, tools and equipment used by the Service Provider's personnel in the performance of the Services are suitable for use in the particular task or tasks for which they are to be used, are maintained in safe and operable condition and that users of the plant, tools and equipment are trained, experienced and where necessary, licensed and certified to operate them.

The Service Provider shall maintain a register of all lifting equipment and tackle. The Service Provider shall, upon request, provide certification of inspection within the previous twelve months for all cranes and lifting slings and tackle before the equipment is used for the work, and/or shall carry out such tests and inspections as are requested by applicable regulatory authorities. Safe Working Load (SWL) and radius charts shall be available for all lifting equipment and shall be marked on the equipment. The Service Provider shall ensure pre- inspection of lifting tools tackles including wire rope slings, clamps, shackles, hooks etc. before taking up the job. The Company reserves the right to require the Service Provider to inspect any lifting gear that does not meet the requirements stated above. All equipment shall be stored and operated in accordance with the manufacturer's specification and guidelines.



The Service Provider shall maintain up to date copies of all tests and maintenance certificates relating to cranes, lifting beams pulley blocks and lifting gear, and shall make them available to the Company upon demand.

All tools & tackles required for the execution of the job shall be arranged by the Service Provider. Also a periodic audit would be undertaken to assess the condition of such tools and tackles.

While using their equipment and carrying out any job, if any equipment / installation belonging to the Company or any other agency at site is damaged by the Service Provider, it shall be made good at the risk and cost of the Service Provider.

Detailed risk assessments shall be conducted for all equipment to identify all foreseeable hazards and determine the most appropriate controls to mitigate the risks associated in using in accordance with HSE laws and regulations.

Vehicles operating within the Company premises shall observe all parking and speed restrictions, road signs and traffic rules as per the company policy.

#### **27.11 MATERIAL SAFETY DATA SHEETS**

The Service Provider shall maintain, at the job site, Material Safety Data Sheets for all hazardous materials and products taken onto the job site. Products shall be stored in appropriate containers, clearly labelled prior to sending to the site, all hazard substances shall be risk assessed to determine their safety requirements and suitability for use.

#### **27.12 WORK PERMITS**

The Service Provider shall follow the site Permit to Work (PTW) system for carrying out hazardous activities that includes the following (but not limited to) activities. The Service Provider shall not perform any of such activities without obtaining and displaying the applicable work permit at the project site.

- a. Hot work
- b. Confined space entry
- c. Working at height
- d. Breaking into piping
- e. Lockout / Tagout / isolation etc.
- f. excavation or drilling into the ground or a concrete building slab using powered equipment
- g. Hazardous substance handling, etc.
- h. Excavation / trenching

- i. Chemical management MSDS's
- j. Any government related permit

**27.13 HEALTH AND FITNESS**

Each contract employee shall undergo a pre- employment medical check and periodical medical examination (PME) as per the company guidelines by a Company approved doctor/ medical personnel and cleared for the type of work he/ she will undertake, prior to the commencement of work.

The Service Provider shall ensure that all its personnel are able to perform the essential functions of their respective assignments and shall certify the same to the Company if so requested by the Company or if required by law. The Service Provider's medical assessment process shall equal or exceed the requirements of the Company's medical assessment procedure.

The Service Provider shall ensure health assessment, monitoring and management of contract personnels' exposure to noise, dust and other physical hazards that have the potential to be harmful to health.

**27.14 DISEASE**

The Service Provider shall make appropriate arrangements for medical assessment of its personnel who exhibit any symptoms of any severe infectious disease that is communicable by air or surface contact, and ensure that such personnel are removed from the site until they have received medical clearance and can provide proof of such clearance.

**27.15 HYGIENE AND HOUSEKEEPING**

The Service Provider shall ensure that its personnel maintain high standards of hygiene and housekeeping on the site. The Service Provider shall conduct routine hygiene and housekeeping inspections on the site to ensure that standards are maintained.

The Service Provider shall collect and segregate scraps generated by their activities or services by creating separate bins and finally deposit or utilize as per the directions of the Company.

**27.16 ENVIRONMENT PROTECTION**

The Service Provider shall ensure proper collection and storage of used oil and waste oil generated at site. The used oil and waste oil collected so shall be disposed of in compliance with law. Any oil/grease soaked cotton waste shall be collected from the site of work and suitably disposed as per the guidelines.

The Service Provider shall use appropriate personnel protective equipment and follow requisite procedure for handling, transportation and storage of hazardous wastes inside the plant including disposal sites owned by the Company.

The Service Provider shall be solely responsible for damage caused to the surrounding/ environment during transit.

The Service Provider shall ensure optimum use of water, energy and other resources while providing services and also work for loss prevention in the form of leakages, spills, overflows, wastages etc. the Service Provider shall be solely responsible for the legal actions that may be initiated consequent to environmental hazards as aforesaid. The Service Provider shall ensure that spillages, leakages and overflows etc. are attended immediately on notice or on intimation.

**27.17 SMOKING**

The Service Provider's personnel shall not smoke at the work site except within designated smoking areas.

**27.18 SERVICE PROVIDER ACCOMODATION**

Where the Service Provider's personnel provides accommodation for contract workers, the accommodation shall be appropriate for its location and be clean, safe and, at a minimum, meet the basic needs of workers. In particular, the provision of accommodation shall meet national legislations and shall have the minimum following: Provision of sanitary, laundry and cooking facilities and potable water. Safe location w.r.t health, hygiene and fire risks.

Provision of first aid, medical facilities and proper ventilation.

Building material shall be suitably inflammable, have smoke and fire alarms fitted and

Include other safety checks to prevent fire.

**27.19 CLEARANCE OF SITE**

On a continuous basis consistent with Good Industry Practice during the progress of the Works the Service Provider shall clear away and remove from the site, pursuant to the directions of the Company, all scrap, debris, other waste materials. The Service Provider shall leave on the site, for the Company, such temporary works as instructed by the Company, free of charge. The Service Provider shall at all times and particularly after completion of the Works, keep the Site and the Facility in a clean, safe and workman-like condition and shall dispose of all rubbish (other than hazardous materials or other materials which may contaminate ground-water, for which other arrangements shall be made by the Service Provider) in accordance with Good Industry Practice.

**27.20 REMOVAL OF UNSAFE WORKERS**

The Service Provider shall document any identified instances of non-compliance with safety requirements by its workers and sub - Service Providers. Where any worker or sub Service Provider breaches safety requirements and thereby presents a threat of serious injury or death to any person, the Service Provider shall remove that worker or sub-service provider from the project site for the duration of the project.

### **27.21 SUBCONTRACTING**

The Service Provider shall be able to demonstrate that it has applied selection procedures that ensure that its sub-service providers are demonstrably competent to perform the works safely. The Service Provider shall provide to the Location Manager the names of sub-service providers it intends to appoint in advance of entering into a contract with any such sub-service provider. The requirements of this booklet, the contract specification, the contract health and safety plan, the risk assessments and method statements shall be imposed upon the sub- service providers by the Service Provider.

### **27.22 MONITORING**

Compliance check by Service Provider: The Service Provider shall monitor its safety performance and that of its sub-service providers to ensure compliance with standards set in the Agreement. The frequency of monitoring will be dependent Upon the risk profile and number of persons employed. Root Cause of incidents: All accidents shall be investigated to establish the basic causes and to recommend appropriate improvements in control. Details of all accidents, together with the associated investigation and recommendations, shall be passed to the Company as soon as deemed reasonable

Audit by Company: The Company reserves the right to audit all aspects of the management of health and safety on site at any time. Deficiency identified during any inspection / audit shall be entered into an appropriate action register that summarize the deficiency, the required actions, the person to whom that action have been assigned and date by which the action shall be completed.

The Service Provider shall be responsible to ensure all actions are completed, verified and closed within stipulated timeframes.

Monitoring by Company: The Company reserves the right to allocate weight age and set safety KPIs in the Service Provider's scorecard. The scorecard performance shall be reviewed periodically.

### **27.23 SERVICE PROVIDER QUERIES**

The queries shall be normally directed to the Company's designate as specified in the Agreement. The site specific "Service Provider safety management manual" can also be referred for any clarifications when in doubt. The details on specific processes, plants and machineries and related hazards are detailed in this manual.

## **28 ENERGY MANAGEMENT SYSTEM**

Energy Management System Clause (for energy efficient products only such as motor, AC, Pumps, transformers etc.) As a part of Energy Management System (ISO 50001:2011), we wish to inform you that we intend to procure energy efficient products, equipment and services and you are requested to offer us energy efficient products, equipment & services which will have overall cost effectiveness. Your offer shall be evaluated partly on the basis of energy performance of your product, equipment or services throughout the entire life cycle of product. Hence, your offer should also include all the technical details related to energy use, consumption and efficiency and request you to inform us about the energy

efficient products & specifications.