

## **COAL EVACUATION PLAN**

### **BHARATPUR OPEN CAST EXPANSION PROJECT 26.00 MTY**

#### **7.1 COAL RECEIPT**

Rated capacity of Bharatpur Expansion OCP Revision-2 is 26 Mty. It is proposed to produce (-)100 mm size coal at the face itself by deployment of surface miners. 15 Mty Coal will be hauled by 60 T dumpers to the receiving hoppers located inside excavated quarry. 5 Mty coal will be hauled up to CHP at surface. 6 Mty coal will be sent to rail spur sidings located about 500m from quarry mouth.

#### **7.2 DISPATCH (Coal Flow diagram shown in Plate -20)**

##### **15 Mty through silo near the mine**

2 sets of receiving hoppers of 20 bins, each of 60 t capacity are located inside the mine to receive 15 Mty of coal. The crushed coal from the hoppers will be collected and transported up to the silo through a system of six sets (12 Nos) belt conveyors C1 & C1A, C2 & C2A, C3 & C3A (Tripper conveyor), C4 & C4A (Reclaim Conveyor) C5 & C5A (Silo loading), and silo bridge conveyors C6 & C6A.

The coal from the over ground type truck receipt hopper shall be loaded onto belt conveyor C1 & C1A and C2 & C2A through electro-mechanical vibro-feeders of 400tph capacity each. Coal carried by conveyor C1 & C1A shall be loaded to conveyor C2 & C2A at a suitable position. The same shall be collected by another set of conveyors C3 and C3A fitted with a traveling tripper which shall evenly spread coal in the over ground bunker of 15,000 t capacity.

Coal will be reclaimed from the over ground bunker by plough feeders and in turn discharge the coal onto the reclaim conveyors C4 & C4A of 1800mm wide to further discharge coal onto Silo loading conveyors C5 and C5A of same width.

Conveyor C5 and C5A shall discharge coal either into the SILO-1 underneath it or onto other conveyors C6 and C6A (1800mm wide) respectively to load the coal into the SILO-2. For further loading into the wagons, two pre-weigh hoppers shall be installed underneath each silo to load pre-determined quantities of coal into the wagons as well as with the help of in-motion rail weigh bridges. The discharge chutes installed to silo feed conveyors (C5/C5A) shall be provided with electro-hydraulically operated flap gate. Simultaneously two rakes can be loaded at a time from the two Silos.

### 7.3 FUTURE RAILWAY INFRASTRUCTURE

MCL have proposed various schemes/proposals in consultation with RITES/Eco Railways to strengthen the overall rail movement of Talcher coalfield. As the proposed rail infrastructure will benefit other projects, the cost has been distributed among three projects namely, Bharatpur OCP, Ananta OCP and Bhubaneswari OCP.

### 7.4 WASHING

There is no proposal of washing coal of this project.

### 7.5 PUMPING

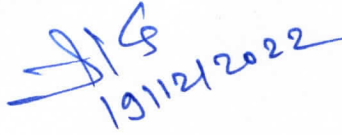
In the proposed reorganization report of Bharatpur opencast mine for 26 Mty, the area and the maximum depth of the mine will be more than previous mining plan area. The existing pumps as well as the pumps provided in the approved PR of Bharatpur 20 Mty will be utilized for the revised report. To deal with larger area and greater depth of the reorganized mine area, additional pumps and pipe fittings will be required in later years.

#### 7.5.1 BASIC CONSIDERATION

Considering the basic requirements as well as based on continuous rainfall of 150mm covered in 24 hours and with proper back filling as per increased exposed area, the make of water has been assessed.

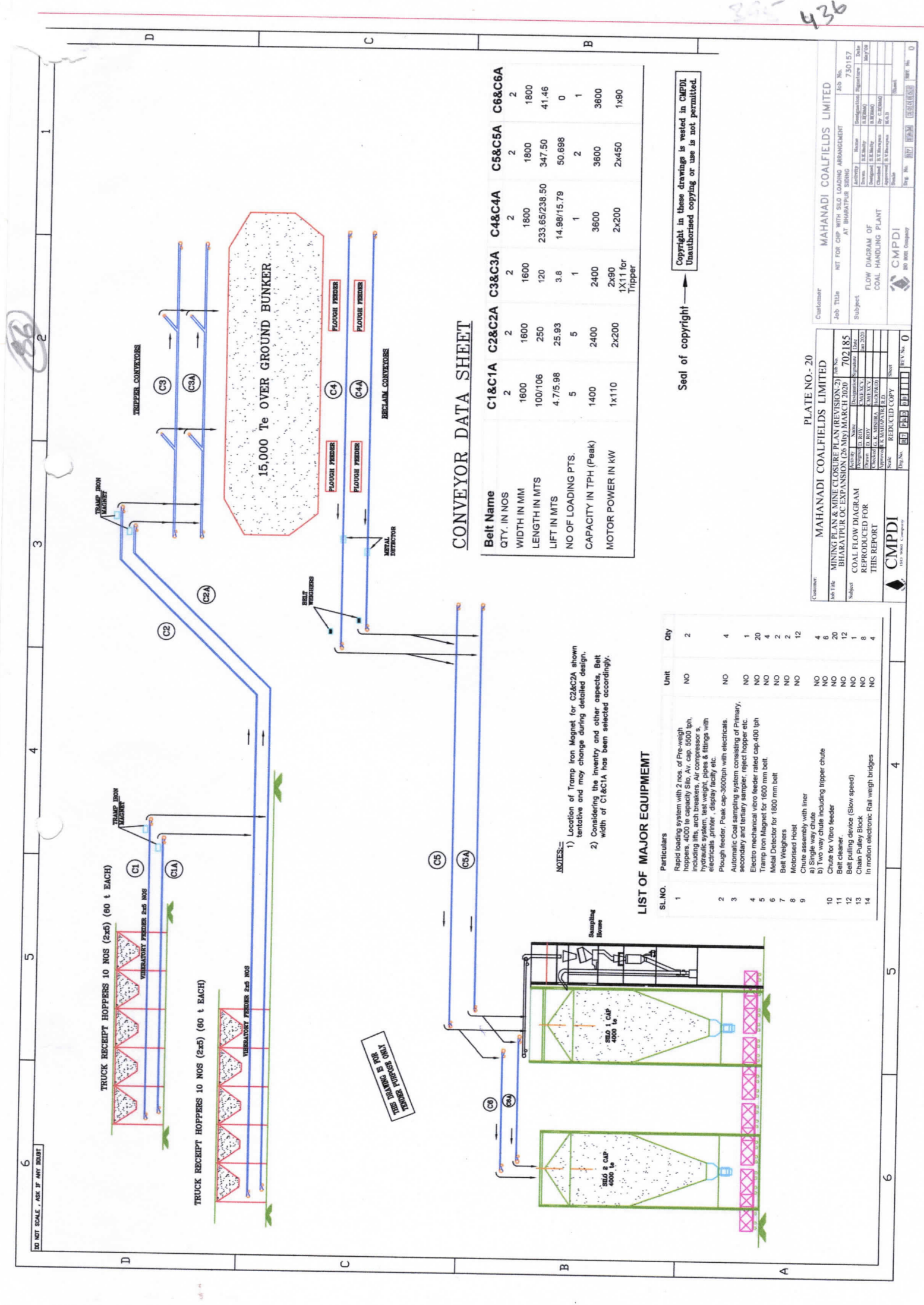
In the proposed revised project (26 Mty) for the subsequent increase in quarry exposed area as well as for maximum depth, additional requirement of 2 numbers main pumps (2+0) of 225lps, 260m head with 840kW power (6.6kV electricals) and 4 nos. (2+2) of 225lps, 310m head with 1000kW power (6.6kV electricals) pumps have been provided including pipes and pipe fittings at the beyond target year.

  
**SO (Inv't)**  
**Bharatpur Area**

  
19/11/2022  
**महाप्रबंधक/G.M.**  
**भरतपुर क्षेत्र/Bharatpur Area**

  
**Divisional Forest Officer**  
**Angul, Division**





CONVEYOR DATA SHEET

Belt Name	C1&C1A	C2&C2A	C3&C3A	C4&C4A	C5&C5A	C6&C6A
QTY. IN NOS	2	2	2	2	2	2
WIDTH IN MM	1600	1600	1600	1800	1800	1800
LENGTH IN MTS	100/106	250	120	233.65/238.50	347.50	41.46
LIFT IN MTS	4.7/5.98	25.93	3.8	14.98/15.79	50.698	0
NO OF LOADING PTS.	5	5	1	1	2	1
CAPACITY IN TPH (Peak)	1400	2400	2400	3600	3600	3600
MOTOR POWER IN KW	1x110	2x200	2x90	2x200	2x450	1x90

LIST OF MAJOR EQUIPMENT

SL.NO.	Particulars	Unit	Qty
1	Rapid loading system with 2 nos. of Pre-weight hoppers. 4000 to capacity Silo. Air controlled hydraulic lifts, arch breakers, Air controlled hydraulic system, test weight, pipes & fittings with electricals, printer, display facility etc.	NO	2
2	Plough feeder, Peak cap-3600tph with electricals	NO	4
3	Automatic Coal sampling system consisting of Primary, secondary and tertiary sampler, reject hopper etc.	NO	1
4	Electro mechanical vibro feeder rated cap-400 tph	NO	20
5	Tramp Iron Magnet for 1600 mm belt	NO	4
6	Metal Detector for 1600 mm belt	NO	2
7	Belt Weighers	NO	2
8	Motorised Hoist	NO	12
9	Chute assembly with liner	NO	4
10	a) Single way chute	NO	6
11	b) Two way chute including tripper chute	NO	20
12	Belt cleaner.	NO	12
13	Belt pulling device (Slow speed)	NO	1
14	Chain Pulley Block	NO	8
	In motion electronic Rail weigh bridges	NO	4

- NOTES:-
- 1) Location of Tramp Iron Magnet for C2&C2A shown tentative and may change during detailed design.
  - 2) Considering the inventory and other aspects, Belt width of C1&C1A has been selected accordingly.

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PLATE NO - 20

Customer: MAHANADI COALFIELDS LIMITED		Job Title: MTP FOR CHP WITH SLO LOADING ARRANGEMENT AT BHARATPUR SIDING		Job No: 750157	
Subject: MINING PLAN & MINE CLOSURE PLAN (REVISION 2)		Subject: FLOW DIAGRAM OF COAL HANDLING PLANT		Subject: FLOW DIAGRAM OF COAL HANDLING PLANT	
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