

COAL HANDLING PLANT FOR DURGAPUR II/ SARIYA COAL BLOCK

Introduction

DB Power Ltd is to conduct mining of coal at Durgapur II/ Sariya Coal Block located in Dharamjaygarh Tehsil of Raigarh district for its end-use TPP at village Badadarha of Janjgir-Champa district in Chattisgarh. The peak approved capacity of the coal mine is 2 MTPA and the entire coal shall move by road to the plant and after the establishment of the proposed rail corridor by rail.

CHP Proposal

In order to facilitate easy and fast dispatches of coal from the mine site, establishment of a mechanized loading system within the leasehold is proposed.

Salient Features

Here are the salient features of the proposed system:

1. The capacity of the system is designed at 800 TPH with 1000 mm rubber conveyor belts and 400×2 surge bunkers.
2. Loading for trucks meant for transportation up to the plant shall be done by gravity loading from the surge bunkers.
3. ROM coal that comes from the mine shall be of size +400 mm without deployment of Surface Miner.
4. A crusher is proposed in the CHP to crush and downsize the ROM coal to –250 mm thereby eliminating the requirement of primary crusher at the TPP end.
5. Environmental hazard due to noise and dust will be taken care of by means of efficient water sprinkling arrangement and setting of noise barriers along the CHP.
6. A green barrier is also proposed to be set up along the boundary of the CHP and spot plantations shall also be undertaken.
7. Persons working in the CHP area shall be provided with personal protective kits for dust and noise.

8. To avoid any chance of fire within the CHP area efficient fire fighting system shall be installed which may consist of portable ABC type fire extinguishers and laying of fire hydrants.
9. Since the CHP shall be operational round the clock proper lighting arrangements shall also be made.
10. Manpower requirement for operation of the CHP comes to around 27 persons per shift.
11. In addition to the mentioned manpower strength other services such as security, weighbridge staff shall also be deployed.
12. Trucks that move out of the CHP shall be well covered with tarpaulin to avoid any spillage during transportation.

This system shall provide fast and easy loading on to trucks. It will also eliminate the losses that occur with manual loading or loading by payloaders. Environmental hazard due to noise and dust is also well taken care by means of efficient water sprinkling arrangement and setting of noise barriers along the CHP.

Annexures

1. A detailed Technical Specification Data Sheet is enclosed as Annexure I.
2. Schematic Layout of the proposed Coal Handling Plant is enclosed as Annexure II.

ANNEXURE I: TECHNICAL SPECIFICATIONS

**FOR COAL HANDLING PLANT PROPOSED AT DURGAPUR II/SARIYA COAL BLOCK
OF DB POWER LIMITED**

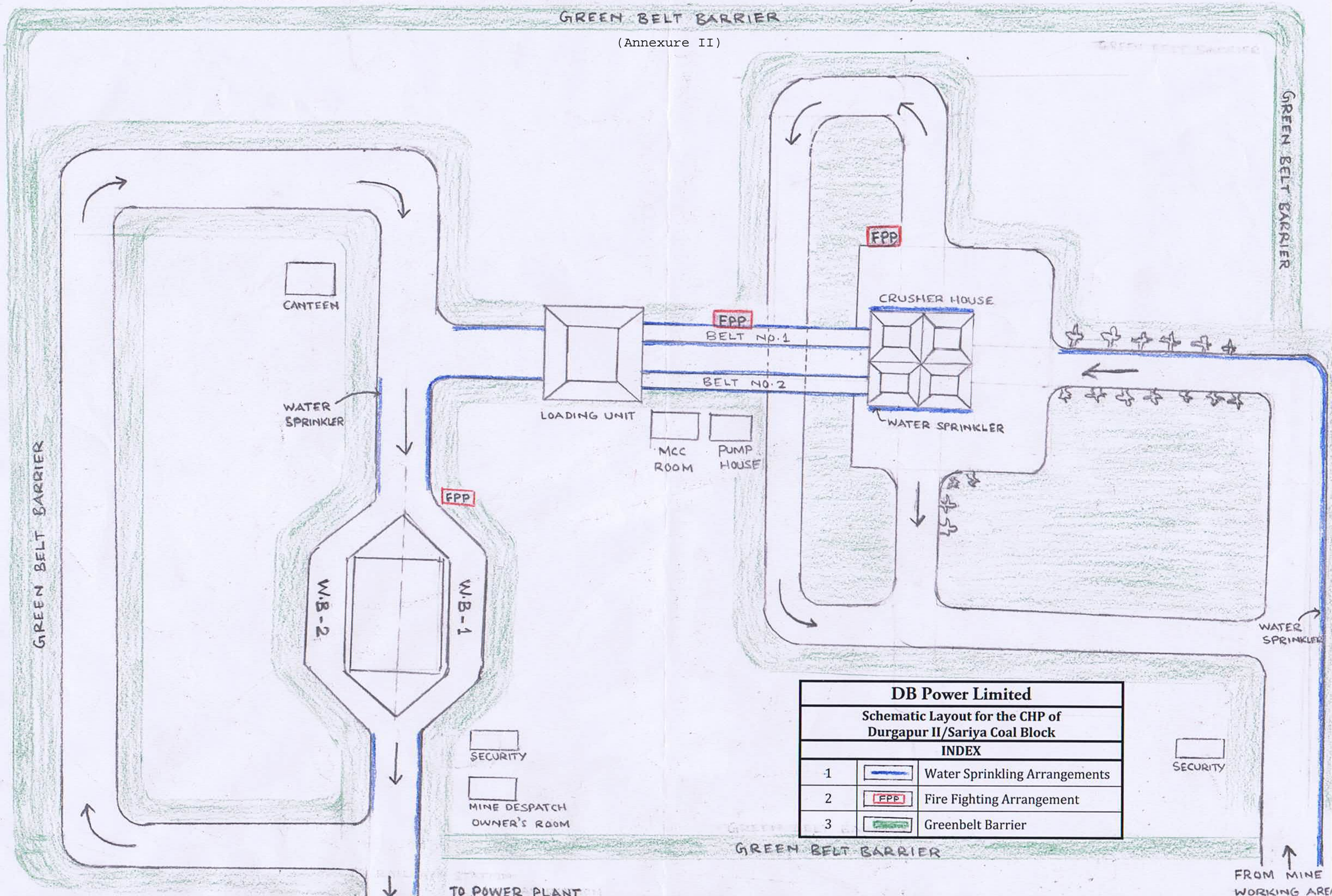
S. No.	Equipment	Parameter	Unit	Specification Value/Description
1	Dumper Unloading Hopper	Quantity	nos.	2
		Size (l×b×h)	m×m×m	5×4× 8
		Capacity	Tons	400
2	Primary Crusher	Quantity	nos.	2
		Size of output coal	mm	-250
		Capacity	TPH	400
		Type	-	To be decided
		Motor Power Rating	kW	90; 3 phase
		Motor Voltage Rating	V	415
		Motor Speed	RPM	1480
3	Chain Feeder	Quantity	nos.	2
		Capacity	TPH	1000
		Flight Bar Quantity	nos.	64
		Type of Drive	-	Variable Frequency Drive
		Gear Box Ratio	-	1:216
		Motor Power Rating	kW	90; 3 phase
		Motor Voltage Rating	V	415
		Motor Speed	RPM	1485
4	Belt Conveyor	Length	m	200
		Width	mm	1000
		Capacity	TPH	1000
		Belt Speed	m/s	3.00
		Motor Power Rating	kW	55 kW; 3 phase
		Motor Voltage Rating	V	415 V
		Motor Speed	RPM	1475
5	Online Magnetic Separator	Quantity	nos.	2
		Type	-	Electromagnet
		Voltage Rating	V (DC)	220
		Power (Cold Working)	kW	16.5
		Power (Hot Working)	kW	12
6	Magnetic Separator Control Panel	Power Rating	kW	19.5
		Input Voltage Rating	V (AC)	415
		Output Voltage Rating	V (DC)	220
7	Belt Weigher	Quantity	nos.	2
		Capacity	TPH	1000
		Type	-	Multi Idler Microprocessor Based
8	Metal Detector	Quantity	nos.	2
		Type	-	Electronics Coil; Sandbag marker type

Table 1: Technical Specification for the proposed CHP at Durgapur II/Sariya Coal Block

SCHEMATIC LAYOUT FOR THE CHP OF DURGAPUR-II/SARIYA COAL BLOCK

GREEN BELT BARRIER

(Annexure II)



DB Power Limited		
Schematic Layout for the CHP of Durgapur II/Sariya Coal Block		
INDEX		
1		Water Sprinkling Arrangements
2		Fire Fighting Arrangement
3		Greenbelt Barrier

FROM MINE WORKING AREA