Brief Note

Prakash Industries Limited (PIL) is existing Integrated Steel Plant located at Hathneora, Champa Villages, Janjgir-Champa District, Chhattisgarh. Existing plant has obtained Environment Clearance from MoEF&CC vide No. J-11011/522/2008-IA II (I) dated 03.11.2010. Accordingly obtained Consent to Establishment and Consent to Operate from the Chhattisgarh Environment Conservation Board (CECB) for few units and same are under operation.

Since the validity of Environment Clearance is for 7 years, as per the EIA notification 2006 and its subsequent amendments, we have applied for EC validity extension to MoEF&CC and same was discussed in 22nd EAC meeting (Industry – 1) held during 11th – 13th September 2017 and accordingly after detailed deliberations, the committee has recommended for extension of validity fo Environment Clearance for further period of 3 years i.e. upto 02.11.2020.

The details of units in existing EC dated 03.11.2010, capacity installed and in operation, capacity under installation and balance capacity yet to be installed & commissioned are given in Table - 1 below:

S.No.	Details of Unit	Capacity as per EC Dt. 03.11.10	Capacity in operation	Capacity under installation	Balance capacity to be installed & commissioned
1	Sponge Iron	2.0 MTPA	1.0 MTPA	0.4 MTPA	0.6 MTPA
2	Captive Power Plant				
	Co-generation Power Plant (WHRB)	100 MW	47 MW	20 MW	33 MW
	Coal based power plant	187.5 MW	162.5 MW	25 MW	0
	BF gas based power plant	20 MW	0	0	20 MW
	TOTAL	307.5 MW	209.5 MW	45 MW	53 MW
3	Ingots/Billets/Blooms	2.0 MTPA	0.94 MTPA	0.06 MTPA	1.00 MTPA
4	TMT/Wire Rod Mill	0.6 MTPA	0	0	0.6 MTPA
5	Blast Furnace	1.0 MTPA	0	0	1.0 MTPA
6	Ferro Alloys Plant	9 X 7.5 MVA	9 X 7.5 MVA	0	0
7	Sinter Plant	1.45 MTPA	0	0.2 (2x 0.1) MTPA	1.35 MTPA

S.No.	Details of Unit	Capacity as per EC Dt. 03.11.10	Capacity in operation	Capacity under installation	Balance capacity to be installed & commissioned
8	Oxygen Plant	800 TPD	0	8.4 (2x4.2) TPD	791.6 TPD

Now, as part of expansion, company has proposed following:

i. Augmentation to enhance power generation capacity of the Co-generation captive power plant through WHRB attached with the Sponge Iron Kilns from 100 MW power (10 MW/Kiln) to 150 MW (15 MW/ Kiln) from the flue gases emanating from the Sponge Iron Kilns as per the details given in the Table – 2 below:

S.No.	Modifications / Changes proposed for Augmentation	Additional Power Generation/ Kiln
1	More steam generation in WHRB by injecting Bag Filter dust in ABC / DSC of Kiln	2 MW
2	Installation of efficient TG set for consuming lesser specific Steam	3 MW
	Total / Kiln **Total for 10 Kilns**	**5 MW** **50 MW**

Hence, we will be able to enhance power generation to the extent of 150 MW from 10 Kilns instead of 100 MW.

ii. Installation of Iron Ore Beneficiation Plant of Capacity 0.75 MTPA (throughput)

iii. Installation of Captive Palletisation plant of 3 Million Ton capacity in 2 phases of 1.5 Million ton each as a step towards backward integration to fulfill Pellet requirement for DRI Kilns, as a substitute of Iron Ore.

LOCATION OF THE PROJECT

- Existing plant is located at Village: Hathneora, Champa, District: Janjgir – Champa Chhattisgarh.
- Existing plant is located in 601.47 acres / 243.4 Ha. of land.
- Proposed expansion will be taken up in the Existing plant only.
- Coordinates of the project site are shown below:

Point No.	Coordinates
1.	22° 0'58.14"N 82°39'52.32"E
2.	22° 0'53.30"N 82°40'6.92"E
3.	22° 0'50.75"N 82°40'23.52"E
4.	22° 0'28.93"N 82°40'23.53"E
5.	22° 0'15.75"N 82°40'37.04"E
6.	22° 0'3.89"N 82°40'35.67"E
7.	22° 0'4.36"N 82°40'47.84"E
8.	21°59'51.89"N 82°40'49.53"E
9.	21°59'47.99"N 82°40'29.26"E
10.	21°59'40.61"N 82°40'5.87"E
11.	21°59'54.41"N 82°40'1.92"E
12.	22° 0'28.18"N 82°39'44.04"E

RAW MATERIAL REQUIREMENT (FOR PROPOSED EXPANSION)

The following will be the raw material requirement for the proposed expansion project:

Table - 17

S.No.	Raw Material	Per Ton	MTPA	Sources
For Iron ore Beneficiation Plant				
1	Iron ore fines	---	7,50,000 (throughput)	Kawardha Iron ore Mines / Sirkagutu mines Iron ore Mines
For Pelletisation Plant				
1	Iron Ore Fines	1.03 (96.9%)	3,09,0000	In-house generation through screening at Champa, Company's own mines and from NMDC iron ore mines.
2	Bentonite	0.008 Min (0.75%)	24,000	Kutch & Bhuj (Gujrat)
3	Anthracite Coal or Coke breeze	0.015 (1.43%)	45,000	Open market and coke producers
4	Dolomite/ Limestone	0.01(1%)	30,000	Open market

WATER REQUIREMENT AND ITS SOURCE

- Water required in the existing plant is 18.25 MCM and same being sourced from Hasdeo river
- Water required for the proposed expansion project will be 2220 KLD and same will be sourced from Hasdeo river through Intake wells already installed for which permission from Water Resource Department of Govt of Chhattisgarh has already been obtained.

Following is the break up of water requirement for the proposed expansion:

S.No.	Unit	Quantity (m^3/h)
1.	WHRB based Power Plant	Nil
2.	Iron ore Beneficiation plant	2.5
3.	Pellet Plant	
	Process	56
	Evaporation & Cooling	22
	Floor Washing	6
	Others	6
		92.5
		2220 m^3/day

WASTEWATER GENERATION & ITS MANAGEMENT

Existing

- There is no wastewater generation from the existing plant as Closed circuit cooling system is being adopted.
- Boiler blowdown & DM plant regeneration wastewater is being treated in Neutralization tanks and is being mixed in a Central Monitoring Basin (CMB). The treated effluent from CMB is being utilized for dust suppression, ash conditioning and for greenbelt development.
- Only wastewater is sanitary wastewater, which is being treated in Sewage Treatment Plant (STP).
- Zero liquid effluent discharge is being maintained in the existing plant.

Proposed

- There will be no effluent generation in the WHRB Power Plant (DRI based), Iron Ore beneficiation plant & Pellet Plant as closed circuit cooling system will be adopted.
- Sanitary waste water will be treated in Sewage Treatment Plant (STP).

SOLID WASTE GENERATION & ITS MANAGEMENT

Solid waste generation from the proposed expansion project will be :

From WHRB Power Plant

Presently the generation of Dust from Bagfilters which needs to be injected in ABC/DSC of Kilns for additional generation of steam contains 80% ash so by using the dust in Dust Injection system, there will be a reduction of 20% in overall solid waste generation. This dust shall come out as solid waste through hoppers of the Boilers / ESP.

From Iron Ore beneficiation Plant

0.18 MTPA of Tailings will be generated from the proposed Iron ore beneficaition plant, which will be used partially for embankments, road making, brick making & will also be given to nearyby cement plant.

From Pellet plant

The collected dust from bag filters and ESP will be pneumatically transported to feed proportioning system for continuously feeding to the production of pellets, thus, there will be "NO SOLID WASTE" generated from the plant.

POWER REQUIREMENT

For WHRB Power Plant

200 kW for two kiln i.e. 1 MW for 10 Kilns which will be met through captive power plant of the company.

For Iron Ore beneficiation Plant

Power requirement will be 0.42 MW and same will be met from the existing captive power plant.

For Pellet Plant

Power requirement for both the units of 1.5 Million Ton capacity will be 20 MVA which will be met out from the existing captive power plant of the company.

TOTAL PROJECT COST FOR PROPOSED PROJECTS

Total project cost for the proposed augmentation project and Diversification project will be as mentioned below

Table - 26

S.No.	DETAILS OF THE PROJECT	PROJECT COST (RS IN CR)
I)	**AUGMENTATION PROJECT**	
A)	Dust Injection system	2.4
B)	Installation of efficient TG sets	65.00
	Total (A+B)	**67.40**
II)	**BACKWARD INTEGRATION PROJECT**	
A)	0.75 MTPA Iron Ore beneficiation plant	**15.0**
B)	3 Million Ton (2x1.5 Million ton) Palletisation Plant	**425.00**
	TOTAL PROJECT COST	**507.4**