

**Ministry of Environment, Forest and Climate Change**  
**Impact Assessment Division**  
**(Industry-1 Sector)**

**Summary record of the thirty fifth (35<sup>th</sup>) meeting of Re-Constituted Expert Appraisal Committee (REAC) held on 30<sup>th</sup> April, 2021 for environment appraisal of Industry-1 sector projects constituted under the provisions of Environment Impact Assessment (EIA) notification, 2006.**

The thirty fifth meeting of the Expert Appraisal Committee (EAC) for Industry-1 Sector constituted as per the provisions of the EIA Notification, 2006 for Environment Appraisal of Industry 1 Sector Projects was held on 30<sup>th</sup> April, 2021 in the Ministry of Environment, Forest and Climate Change (MoEF&CC) through **video conferencing** in view of the ongoing Corona Virus Disease (Covid-19) pandemic. The list of EAC attendees is as follows:

S.No.	Name	Position	30/04/2021
1.	Dr. Chhavi Nath Pandey	Chairman	Present
2.	Dr. M.K. Gupta, Director, CPPRI.	Member	Present
3.	Dr. Siddharth Singh,	Member	Present
4.	Dr. Jagdish Kishwan	Member	Present
5.	Dr. Tejaswini Ananth Kumar	Member	Present
6.	Dr. G.V. Subramanyam	Member	Present
7.	Shri. Ashok Upadhyaya	Member	Present
8.	Shri. Rajendra Prasad Sharma	Member	Present
9.	<i>Dr. Sanjay Deshmukh</i>	<i>Member</i>	<i>Absent</i>
10.	Prof. S.K. Singh	Member	Present
11.	<i>Dr. R. Gopichandran</i>	<i>Member</i>	<i>Absent</i>
12.	Shri Jagannadha Rao Avasarala	Member	Present
13.	Shri. J.S. Kamyotra	Member	Present
<b>Officials from MoEF&amp;CC</b>			
14.	Shri. Sundar Ramanathan	Member Secretary	Present
15.	Dr. Mahendra Phulwaria	Scientist 'C'	Present

After welcoming the Committee Members, discussion on each of the agenda items was taken up. The minutes of 34<sup>th</sup> meeting held during 15-16<sup>th</sup> April, 2021 were confirmed by the EAC as already uploaded on PARIVESH.

**30<sup>th</sup> April, 2021**

35.1 Expansion of Integrated Steel Plant (Sponge Iron – 0.21 to 0.264 MTPA; Steel Melting - 0.129 to 0.211 MTPA; Ferro Alloy – 0.0144 to 0.0198 MTPA; Rolling Mill 0.15 to 0.21 MTPA; New Pellet Plant – 0.6 MTPA with Coal Gasifier from alternative fuel) by **M/s. Shri Bajrang Power and Ispat Limited** at Village Borjhara, Urla Guma Road, Urla Growth Centre, Tehsil Tilda, **Distirct Raipur, Chhattisgarh** [Online proposal no IA/CG/IND/193265/2007; File No. J-11011/531/2007-IA.II(I)] – **Environment Clearance** regarding.

35.1.1 M/s. Shri Bajrang Power and Ispat Limited has made an online application vide proposal no. IA/CG/IND/193265/2007 dated 09/04/2021 along with copy of EIA/EMP report and Form 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed expansion project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006 and appraised at Central level.

**Details submitted by Project proponent**

35.1.2 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord
31/08/2017	23 <sup>rd</sup> meeting of EAC held on 9-10 <sup>th</sup> October, 2017	Terms of Reference	20/10/2017
10/02/2020	16 <sup>th</sup> Meeting of EAC held on 24-25 <sup>th</sup> February, 2020	Amendment in ToR	09/04/2020

35.1.3 The project of M/s. Shri Bajrang Power & Ispat Limited located at Village Borjhara, Urla Guma Road, Urla Growth Centre, Tehsil Tilda, Distirct Raipur, Chhattisgarh is for Expansion of Integrated Steel Plant (Sponge Iron – 0.21 to 0.264 MTPA; Steel Melting – 0.129 to 0.211 MTPA; Ferro Alloy – 0.0144 to 0.0198 MTPA; Rolling Mill 0.15 to 0.21 MTPA; New Pellet Plant – 0.6 MTPA with Coal Gasifier from alternative fuel).

35.1.4 Environmental Site Settings:

SN	Particulars	Detail														
i.	Total land	31.8 ha [Private land 31.8 ha] <table border="1"> <thead> <tr> <th>Description</th> <th>After Expansion</th> </tr> </thead> <tbody> <tr> <td>Total Built up area</td> <td>11.46</td> </tr> <tr> <td>Area for green belt</td> <td>10.49</td> </tr> <tr> <td>Open area</td> <td>7.693</td> </tr> <tr> <td>Area under road</td> <td>1.4000</td> </tr> <tr> <td>Parking Bay</td> <td>0.747</td> </tr> <tr> <td><b>Total</b></td> <td><b>31.8</b></td> </tr> </tbody> </table>	Description	After Expansion	Total Built up area	11.46	Area for green belt	10.49	Open area	7.693	Area under road	1.4000	Parking Bay	0.747	<b>Total</b>	<b>31.8</b>
Description	After Expansion															
Total Built up area	11.46															
Area for green belt	10.49															
Open area	7.693															
Area under road	1.4000															
Parking Bay	0.747															
<b>Total</b>	<b>31.8</b>															
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land has been acquired and is under the possession of the project proponent.														
iii.	Existence of habitation &	No Habitation existence, Hence, R & R not														

SN	Particulars	Detail
	involvement of R&R, if any.	required.
iv.	Latitude and Longitude of the project site	Latitude: 21°18'23.02" to 21°18'46.34" Longitude: 81°35'11.75" to 81°35'43.21"
v.	Elevation of the project site	277m AMSL
vi.	Involvement of Forest land if any.	No forest Land involved.
vii.	Water body exists within the project site as well as study area	<b>Project site:</b> Nil <b>Study area:</b> Kharoon River: 2.5 km in NW Nala: 0.8 km - W Pond: 1.5 km in ENE
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Nil

35.1.5 Chronology of statutory clearances for existing project:

unit	Establishment Year	Statutory Clearances obtained	Remarks
2x350 TPD Sponge Iron Plants with 18 MW WHRB Power Plant	2005	Consent for Establishment from Chhattisgarh State pollution Control Board	-
6 x 8 MT Induction Furnace with Co Casting machine Note: CTE for change in configuration from 6x 8 T to 3x 15 T has been granted by CECB	2006	Establishment done in year 2006 From Chhattisgarh State pollution Control Board	-
	2018	Amendment in CTE was obtained for change in configuration to 3 X 15 MT from Chhattisgarh State pollution Control Board	-
2x 4 MVA Ferro Alloys plant	2008	Environmental Clearance from MoEF&CC vide letter no. J-11011/531/2007-IA.II (I) dated 17-01-2008	-
Captive Power Plant (8 MW biomass based)	2008		
0.6 MTPA Coal Washery	2012	J-11015/159/2009-IA.II (M) dated 28.1.2010	EC granted for 0.6 MTPA
0.15 MTPA Rolling Mill	2012	J-11015/159/2009- IA.II (M) dated 26.8.2013	EC granted for 0.15 MTPA
<b>RENEWAL OF CONSENT TO OPERATE</b>			
Ferro alloys and Biomass based Power Plant	2020	letter No. 1087/TS/CECB/2020 of water and air dated 30/05/2020	valid up to 30/05/2021

unit	Establishment Year	Statutory Clearances obtained	Remarks
Steel Melting Shop	2020	letter No. 5577/TS/CECB/2020 for both water and air dated 24/09/2020	valid upto 31/08/2021
Coal washery and Hot Re-rolling Mill Plant	2019	letter No. 7561/TS/CECB/2019 of water and air dated 26/11/2019	valid upto 31/12/2021
Sponge Iron and Waste Heat Recovery Based Power Plant	2021	letter No. 11400/TS/CECB/2021 of water and air dated 24/03/2021	valid upto 31/03/2022
Fly ash bricks	2015	Letter No. /TS/CECB/2015 of Air and /TS/CECB/2015 of water dated 28/04/2015	Valid up to 30/09/2019 CTO was not renewed; this is categorized as “white category”. Hence CTO is not applicable after 2019

35.1.6 Implementation status of the existing statutory clearances:

	Unit	Capacity
<b>Sponge Iron Plant</b>	MTPA	0.210
<b>Captive Power Plant</b>	MW	26 MW (18 MW Waste Heat Recovery Based Power Plant + 8 MW Biomass (Rice Husk & Dolo Char) Based Power Plant
<b>Steel Melting Shop</b>	MTPA	0.1296
<b>Ferro Alloy Plant</b>		0.0144
<b>Rolling Mill</b>		0.15
<b>Coal Washery</b>		0.6
<b>Fly Ash Bricks Plant</b>		3,00,00,000 NPA

35.1.7 The unit configuration and capacity of existing and proposed project is given as below:

Facility	Present Capacity	Proposed Production	Capacity After Expansion	Proposed activities of Expansion
Sponge Iron Plant, MTPA	0.210	0.054	0.264	Sponge iron process optimization with same 2 kilns by use of good quality coal
Captive Power Plant, MW	26 18 WHRB + 8 MW CPP	-	26 18 WHRB + 8 MW CPP	No change in capacity Change in fuel Mix for CPP. To include coal fines as fuel in addition to Rice Husk & Dolochar

Facility	Present Capacity	Proposed Production	Capacity After Expansion	Proposed activities of Expansion
Steel Melting Shop(SMS) MTPA	0.129	0.0814	0.211	Two more induction furnaces of 15 T each along with continuous casting machine and LRF will be installed. Already permission obtained for establishment of 3 x 15T instead of 6x 8T Induction furnaces.
Ferro Alloy Plant, MTPA	0.0144	0.0054	0.0198	Existing furnaces 4 MVA – 2 Nos. will be replaced by higher capacity transformer 1x5 MVA and 1x6 MVA
Rolling Mill, MTPA	0.15	0.06	0.21	Optimization of production capacity of Rolling Mill by curtailing Idle running hours.
Coal Washery, MTPA	0.6	-	0.6	No change in capacity. (EC for 1.2 MTPA but CTE/CTO for 0.6 MTPA only)
Pellet plant with coal gasifier, MTPA	-	0.60	0.60	New Pellet Plant will be installed with coal gasifier of 9000 Nm <sup>3</sup> /hr
Iron Ore Washery Plant, MTPA	-	0.4	0.4	New unit Ground Hopper Prograde Triple Deck screen Tailings Thickener Horizontal Belt filter
Titanium Slag Plant & Pig Iron Plant, MTPA	-	0.036 0.02	0.036 0.02	New unit 4x 4.5 MVA capacity Submerged Arc Furnaces will be installed to produce Titanium slag @36000 TPA along with Pig Iron @ 20000 TPA.

35.1.8 The details of the raw material requirement for the expansion cum proposed project along with its source and mode of transportation is given as below:

S. No	Raw Materials (Input)	Quantity (TPA)		Storage Quantity	Type of storage	Source	Mode of Transportation
		Before Exp.	After Exp.				
1.	Manganese Ore	25920	35640	2700	Open Yard	Mines- Garividi, MOIL	By Road
2.	Iron Ore	315000	396000	24,000	Open Yard	Mines- Hahaladdi, NMDC, Bailadila	
3.	Iron Ore fines	0	612000	37090	Open Yard	Mines- Hahaladdi, NMDC, Bailadila	
4.	Coal Fines	0	84000	2545	closed Shed	Own plant	
5.	Pig Iron	5388	8784	800	closed Shed	External procurement	

S. No	Raw Materials (Input)	Quantity (TPA)		Storage Quantity	Type of storage	Source	Mode of Transportation
		Before Exp.	After Exp.				
						will not be there 20,000 TPA will be produced of which 8784 TPA will be consumed and balance will be disposed as product	
6.	Furnace Oil/LDO	0	7500	24KL	In MS Storage Tank	Bhilai	
7.	Limestone	0	9000	300	Open yard	Katni	
8.	Bentonite	0	4800	0.5	Open Yard	Bhuj and local market	
9.	Coke Ferro	2880	7200	1700	In covered Shed	Nagpur & Jharkhand	
10.	Coal SID	252000	250800	24000	Open Yard & closed Shed	SECL, Imported	
11.	Ferro and Non-Ferro Alloys	1296	2112	200	Closed Shed	Own Plant	
	Coal Ferro	8640	8640	2000	In covered Shed	SECL, Imported	
	Coke Pellet	-	21000	5000	In covered Shed	Nagpur & Jharkhand	
	Coke Titanium Slag	-	12600	3000	In covered Shed	Nagpur & Jharkhand	
	Coal (Gasifier)	-	27000	2500	In covered Shed	SECL, Imported	
12.	Dolomite	9840	12540	1000	Open Yard	Mines-Mandla, Katni	
13.	Ferro Manganese Slag	14400	14400	1500	Open yard	Own Plant	
14.	Rice Husk	125004	28200	2350	Open Yard	Local Rice Mill	
15.	Dolochar	52200	26100	1500	Open Yard	Own plant	
16.	Ilmenite	-	72,900	3500	Open yard	IREL & Other Suppliers	
17.	Graphite	-	900	225	closed Shed	Imported/Indigenous	

35.1.9 Present water consumption of the plant is 2442 m<sup>3</sup>/day. The total water requirement after expansion will be about 3537 m<sup>3</sup>/day. This requirement will be met from River Kharun at intake point 21° 20' 3.71" N Latitude and 81° 35' 6.81" E Longitude. SBPIL has already obtained consent for drawl of water through Kharun River (1,25,000 m<sup>3</sup>/month) from Water Resources Department, Govt. of Chhattisgarh, vide letter No. 5010/302/JS/TS/AJP/03-D-4 dated 26/10/2004. SBPIL has already obtained NOC of Ground water 75 KLD for drinking

& domestic purpose from Central Ground Water Authority vides NOC No. CGWA/NOC/IND/ORIG/2021/11130 Dated 05.01.2021 valid up to 04.01.2024

35.1.10 Presently the electric Power requirement is met from captive power plant having capacity of 26MW capacity in which 18MW power generated through WHRB and rest of 08MW generated through bio mass. The additional power requirement after expansion shall be met by wheeling of power from another unit and/or from CSPDCL.

35.1.11 Baseline Environmental Studies:

Period	Post Monsoon: October 2018 to December 2018																										
AAQ parameters at 8 locations	PM <sub>2.5</sub> - 17.1 to 31.1 µg/m <sup>3</sup> PM <sub>10</sub> – 42.8 to 81.8 µg/m <sup>3</sup> SO <sub>2</sub> - 7.9 to 14.8 µg/m <sup>3</sup> NO <sub>2</sub> - 9.2 to 18.3 µg/m <sup>3</sup>																										
AAQ modelling (Incremental GLC <sub>max</sub> )	PM <sub>10</sub> – 4.16 µg/m <sup>3</sup> PM <sub>2.5</sub> – 2.56 µg/m <sup>3</sup> SO <sub>2</sub> - 12.8 µg/m <sup>3</sup> NO <sub>x</sub> - 5.43 µg/m <sup>3</sup>																										
Ground water quality at 8 locations	pH: 6.93 to 7.28, TDS: 332 to 896 mg/l, Total hardness: 106 to 453 mg/l, fluoride: 0.38 – 1.27 mg/l, chloride: 49 to 142 mg/l, Heavy Metal (Zinc) 0.02 to 0.29 mg/l.																										
Surface water quality at 8 locations	pH: 7.26 to 7.48, COD: 5.7-16.8 mg/lit, BOD: 1.9 – 4.2 mg/lit, DO: 6.5 to 7.4 mg/l.																										
Noise levels: 8 locations	45 to 72 Leq dB (A) for day time and 40 to 64 Leq dB (A) for Night time																										
Traffic assessment study findings	<ul style="list-style-type: none"> <li>Traffic study has been carried out on Bendari – Urla road located at 0.26 km (study point) in Northern direction.</li> <li>Additional material: 2.0704 MTPA due to expansion (18 trucks/ hr (20 T Capacity)</li> <li>Parking Facilities - Provided 0.72 Ha. Area with all facilities.</li> </ul> <p><b>TRAFFIC SCENARIO AND LEVEL OF SERVICE (LOS)</b></p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">Existing</th> <th rowspan="2">Performance (IRC Classification)</th> </tr> <tr> <th>Peak Volume V</th> <th>*Capacity PCU/HR C</th> <th>V/C</th> <th>LEVEL OF SERVICE</th> </tr> </thead> <tbody> <tr> <td>Present</td> <td>86</td> <td>1500</td> <td>0.05</td> <td>A</td> <td>Excellent</td> </tr> <tr> <td>After expansion</td> <td>86+40 = 126</td> <td>1500</td> <td>0.08</td> <td>A</td> <td>Excellent</td> </tr> </tbody> </table> <p>* Note: Capacity as per IRC-106:1990. Guide line for capacity for urban roads Page 11, Table-2 V= Volume in PCU's/hr &amp; C= Capacity in PCU's/ hr LOS= Level of Service</p>						Existing				Performance (IRC Classification)	Peak Volume V	*Capacity PCU/HR C	V/C	LEVEL OF SERVICE	Present	86	1500	0.05	A	Excellent	After expansion	86+40 = 126	1500	0.08	A	Excellent
	Existing				Performance (IRC Classification)																						
	Peak Volume V	*Capacity PCU/HR C	V/C	LEVEL OF SERVICE																							
Present	86	1500	0.05	A	Excellent																						
After expansion	86+40 = 126	1500	0.08	A	Excellent																						
Flora and fauna	There is no Schedule – I species reported																										

35.1.12 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

### Solid Waste Generation

Source and type of solid waste		Qty. MT/Year Existing	Qty.MT/Year (Total Capacity after expansion)	Utilization /disposal method
Fly ash from Power Plant		108816	91752	Bricks manufacturing unit & Cement Plant
Slag from SMS unit		17000	25344	Bricks manufacturing
Slag from Ferro Alloys unit		21000	17280	Bricks manufacturing
Dolochar from SID		66000	52800	Used in our AFBC based power plant (Gondwara unit) as a Raw material.
Coal Gasifier	Coal ash	-	7200	Disposal to Red bricks manufacturing unit.
	Tar	-	1200	Disposal to authorized recyclers
Iron Ore Washery Plant - Reject (Fines)		-	40,000	No tailing pond for handling of slimes is proposed. The slimes will move through Paste thickener to Tailings dump yard. In Iron ore Washery plant, Paste Thickener Technology will be adopted. After Installation of Paste Thickener Technology, moisture content will reduce to 35-40% and accordingly it will get dry within 5-7 days. Slimes will be disposed to cement plants.
Titanium Slag Plant capacity & Pig Iron Plant		Zero Solid Waste Generation Plant.		Note: The major Solid wastes generated from Smelting Furnace in the plant will be flue dust (@ 25 kg/T of Titanium Slag). The flue dust will be recycled back to the furnace after being collected from Dust Collector Bag Filter house and fully reutilized.
				The maximum generation of flue dust for the proposed project will be 1000 TPA. Similarly the maximum production of Titanium Slag will be 36000 TPA, and Pig Iron will be 20000TPA. The Titanium Slag though produced in the form of slag is a marketable product. Hence, both Pig Iron and Titanium Slag would be sold out. The flue dust which is another solid waste generated in the process will be fully reutilized. Hence, no solid waste disposal is envisaged.

### Hazardous Waste Generation

S. No.	Type of Hazardous Waste	Hazardous Waste Category	Quantity	Disposal
1.	Waste Oil/Spent Oil	5.1	3 kl/year (Proposed Quantity) Existing Quantity 02 kl/year	Stored in covered HDPE Drums, used for lubrication purpose & will be given to CECB approved vendors.
2.	Resin	34.2	7.0 Kg/Year	Stored in Jerry Cane of 25 Ltr. And will be reused in our own DM Plant



35.1.13 Public Consultation:

Details of advertisement given	20/11/2020
Date of public consultation	21/12/2020
Venue	Samudayik building, Gram Panchayat Naya Bendri, Dharsiwa, District Raipur
Presiding Officer	Additional District Magistrate & Additional Collector, District Raipur.
Major issues raised	<ul style="list-style-type: none"> <li>• Employment to locals</li> <li>• To develop local school as Smart School</li> <li>• To provide Vocational Training Institute</li> </ul>

**Point-wise Action plan as per MoEF&CC O.M. dated 30/9/2020**

S No	Issue Raised	Physical Target	Budget in Rs in lakhs		
			Capital Cost		Recurring cost
			2021-22	2022-23	
1.	Development of local school as smart school in village bendri	Providing computers: 4	2.0	--	--
		Computer table/ Chair: 8	0.40	--	--
		Rooms Renovation: 5	1.0	--	--
		Furniture for School: 30 sets of Table and chairs	1.50	--	--
		Miscellaneous	0.10	--	--
	<b>Total (A)</b>		<b>5.0</b>	--	--
2.	Vocational Training Institute (two batches (20/betch) in a year in three fields to benefit 40 persons in a year	Construction of building: 8 rooms	--	50.0	--
		Providing Furniture: 25 sets of Table and chairs	--	5.0	--
		Other training equipment- tool kits for mechanical, electrical and automobile	--	5.0	--
		Heavy machinerries- simulators for mechanical, electrical and automobile training	--	15.0	--
		Recurring cost for running and maintenance	--	--	25.0
	<b>Total (B)</b>		--	<b>75.0</b>	--
3.	Development of garden in Dharsinwa area (approx usage of garden by 300 persons)	Land scaping of the place	5.0	--	--
		Tree plantation	2.0	--	--
		Providing lightning around	1.0	--	--
		Fountain	0.5	--	--
		Pathway construction	2.5	--	--
		Fencing	1.0	--	--
		Bore well with pipeline & overhead tank	1.5	--	--
		Drinking water facilities	0.5	--	--
		Toilet with running water facilities	0.5	--	--
		Sitting arrangements	2.0	--	--
		Recreational activities	3.0	--	--
	<b>Total (C)</b>		20.0	--	--
	<b>Grant Total (A+B+C)</b>		<b>25.0</b>	<b>75.0</b>	<b>25.0 (2.5 crore for 10 years)</b>

**Need based Activities along with budget**

S No	Activities identifies	Capital Cost (Rs in Lakhs)		
		2020-21	2021-22	2022-23
1.	Building material construction activities work at samudayik bhawan & School	31.5		
2.	Bore well at bendri school	0.36		
3.	Kopal Vani School Civil work- development of government School to model School at Nardha	2.25		
4.	Construction contractor charges for Vihan cafeteria	9.8		
5.	Ambulance purchase for villages Borjhara, Bendri, Guma, Tendua & Urla	25		
6.	Fire Brigade repair work for villages- Borjhara/ Bendri/ Guma, Tendua/ Urla.	50		
7.	Purchase water purifier for Bendri School	0.3		
8.	Bore wells CSR work for Drilling, GI casting Work Gram Panchayat Bendri	0.83		
9.	Computer system donation at Village Bendri		0.65	
10.	Proposed Renovation & Beautification of Muktidham at Village Bendri (Pathway construction, drinking water facility, sitting arrangements, toilet with running water, Boundary wall repairing, plantation and painting)		10.44	
11.	Proposed Renovation & Beautification of Muktidham at Ashok Nagar (Pathway construction, drinking water facility, sitting arrangements, toilet with running water, Boundary wall repairing, plantation and painting)		10.0	
12.	Proposed construction of Jyoti Bhawan for Mahamaya Mandir at Village Bendri		5.0	
13.	Development of Government School to model School at Neohra		26.92	
14.	Augmentation of facilities at Vihan Cafeteria		10.0	
15.	Drinking water facilities in nearby villages		5.0	
16.	Nala Cleaning and Deepening work at Village Borjhara for water conservation		5.0	
17.	Plantation work			10.0
18.	Garden Maintenance work			10.0
19.	Vocational Training Maintenance			25.0
20.	Drinking water facilities in nearby Villages			5.0
	<b>Total</b>	<b>120.04</b>	<b>73.01</b>	<b>50.00</b>
	<b>Grand Total</b>		<b>243.05</b>	

35.1.14 The capital cost of the project is **Rs. 186.0 Crore** and the capital cost for environmental protection measures including cost to address the public hearing issues is proposed as **Rs. 16.35 Crore**. The annual recurring cost towards the environmental protection measures is proposed as **Rs 0.86 Crores**. The employment generation from the proposed project/ expansion is **200 nos**. The details of cost for environmental protection measures is as follows:

S.No.	Description of Item	(Rs. In lakhs)	
		Capital Cost	Recurring Cost
1.	Air Pollution Control Measures ESPs, Bag Filters, Dust extraction systems, stacks etc	500	10
2.	Fugitive dust control measures – vacuum cleaner	64	2

S.No.	Description of Item	(Rs. In lakhs)	
		Capital Cost	Recurring Cost
3.	Wastewater management and effluent Treatment plant	190	8
4.	Sewage treatment plant	50	2
5.	Environmental Monitoring program and occupational Health survey	200	23.75
6.	Solid waste Management	200	5
7.	Noise reduction system	10	1
8.	Green development in plant	28	7
9.	Greenbelt development at Urla-Bendri-Guma Road in 2.23 ha		
10.	Rain Water Harvesting	50	3
11.	Public hearing Commitments	100	25
12.	Need based activities of villages	243	0.0
<b>Total</b>		<b>1635.05</b>	<b>86.75</b>

35.1.15 SBPIL has already developed greenbelt in 33 % of the plant area i.e. 10.49 ha covering density of 2500 trees/ha. Due to non-availability of balance area of additional 7% i.e. 2.23 ha within plant area, in order to comply with the specific ToR of 40 % greenbelt are development, SBPIL commits to develop additional area of 2.23 ha at Urla-Bendri-Guma Road in approx 2.5 km on both side and in two lines at a gap of 2 meters with total number of 5600 saplings.

35.1.16 It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

35.1.17 Name of the EIA consultant: M/s B. S. Envi-Tech Private Limited [S.No. 136, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0174 and valid up to 16/11/2022 as per Rev. 09, Apr. 12, 2021].

#### **Certified compliance report from Regional Office**

35.1.18 SBPIL has obtained Certified Compliance of the EC conditions by Regional Office, MoEF&CC, Nagpur:

- i. For EC dated 17.01.2007 File No: 5-23/2008 (ENV)/6403 Dated 23.03.2020, Date of site visit on 17.03.2020 and
- ii. For EC dated 28.01.2010 - File No: EC-635/RON/2017(ENV)/6772 Dated 26.06.2020, Date of site visit on 16.03.2020

Some EC Conditions are partially complied and SBPIL submitted Action plan for the partially complied points. The Action plan implemented for partially complied conditions are given below:

<b>Status of certified compliance condition vides EC F.No. 5-23/2008 (ENV)/6403 dtd. 23.03.2020 Issued from MoEF, for Ferro Alloys (14,400 MTPA) and Biomass Power Plant (8 MW) of Shri Bajrang Power and Ispat Limited, status as on dated 15.04.2021</b>		
<b>Specific Condition No.</b>	<b>Comments on Specific Condition</b>	<b>Action Plan Implementation status as on 15.04.2021</b>
Some of the EC Conditions were observed to be Partially complied by PP.		
<b>Specific Condition No. ii</b>	Partially complied: - Housekeeping inside the plant was poor. Needs extra attention/care	For betterment of plant housekeeping, Procured a Mechanical Sweeping Machine of Rs. 28 lacs for cleaning of our all RCC internal roads. All the roads are being cleaned and water sprinkling on these by movable water sprinklers and water tanker on regular basis. Apart from it proper stacking of raw materials; products and generated solid wastes, being done at their designated areas.
<b>Specific Condition No. viii</b>	Partially complied: - Density of plantation was poor. PP Was suggested to increase the plantation density all along the plant boundary.	Total plant area is 31.80 Hect. As per norms for plantation i.e. 33% Area of our plant premises to be reserved for plantation & green belt, PP required to develop 26235 nos. tree plants. PP informed that so far we have done more than 40,000 tree plantation within the plant premises of which around 28000 plants are still surviving. However as per recommendation made in verification report, gap filling is done at plant premises for Further increasing density. Apart from it, planted around 3000 tree plants, outside the plant premises i.e at nearby villages, outer Road sides etc.
<b>Specific Condition No. ix</b>	One Rain Water Harvesting structure proposed to construct by end of June 2020.	Already constructed 2 Nos. of Rain Water Harvesting systems in our plant premise (Near ADM Building & SMS Division). However as per recommendation made in verification report, Constructed one more Rain water harvesting pit at Power plant building.
<b>Status of certified compliance condition vide EC-635/RON/2017(ENV)/6772 dated 26.06.2020 issued from MoEF for coal washery -1.2 MTPA (CTE/CTO granted by CECB-0.6 MTPA) and hot rolling mill -0.15 MTPA (CTE /CTO granted by CECB-0.12 MTPA) status as on dated 15.04.2021</b>		
Some of the EC Conditions were observed to be Partially complied by PP.		
<b>Specific Condition No. ix</b>	One Rain Water Harvesting structure proposed to construction by end of June 2020.	Already constructed 2 Nos. of Rain Water Harvesting systems in our plant premise (Near ADM Building & SMS Division). However as per recommendation

		made in verification report, constructed one more Rain water harvesting pit for at Power plant building.
<b>Specific Condition No. xii</b>	Density of the Plantation was poor. PP was suggested to increases the plantation density all along the p-lant boundary.	Plant area is 31.80 hect. As per norms for plantation i.e. 33% Area of plant premises to be reserved for plantation & green belt, It is required to develop 26235 nos. tree plants. So far more than 40,000 trees are planted within the plant premises of which around 28000 plants are still surviving. However as per recommendation made in verification report, gap filling has been done for further increasing density. Apart from it, planted around 3000 tree plants, outside the plant premises i.e at nearby villages, outer Road sides etc.
<b>Specific Condition No. xix</b>	Housekeeping inside the plant was poor. Needs extra attention/care	For betterment of plant housekeeping, Mechanical! Sweeping Machine of Rs. 28 lacs are procured for cleaning of RCC internal roads. All the roads are being cleaned and water sprinkling on these by movable water sprinklers and water tanker on regular basis. Apart from it proper stacking of raw materials, products and generated solid wastes, being done at their designated areas.
<b>Specific Condition No. viii</b>	Project Proponent does not have full-fledged environment lab facility.	Developed Environment Lab with required instruments and equipment for Environment Related monitoring and analysis work. For day to day Environment Laboratory activities, already appointed two experienced Chemist for timely conducting Stack emission, Ambient Air, sound level and Water quality monitoring and preparing reports.
<b>Specific Condition No. XV</b>	Copy of Newspaper cutting has not been submitted/ provided.	Already Submitted.

35.1.19 The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC is given as below:

**Observations of the Committee**

35.1.20 The Committee noted the following:

- i. Proposed steel plant is located in a Urla Industrial Area wherein the State Government of Chhattisgarh imposed ban on establishment of new sponge iron plant and coal-based power plant (Ref: 783/205/07 dated 16/03/2007) and ban on diversification (involving use of coal as fuel or raw material) of the existing industries [Ref: 3529/205/05/11/(E) dated 12/12/2007]. The provisions contained in the said notification neither considered by the proponent nor reflected in the EIA report.
- ii. 18 trucks per hour of 20 T capacity shall be added to present traffic after expansion. Incremental SO<sub>2</sub> and NO<sub>x</sub> due to traffic has not been considered in AAQ modelling.
- iii. Details of Ferro Alloys to be manufactured is not clear.
- iv. Action plan for dolochar utilization has not been furnished.
- v. The proposed additional use of coal fines to be examined in view of the biomass status of the power plant and to ensure that complete utilization of dolochar.
- vi. Iron ore slimes @ 35-40 % moisture from U/F of thickener shall be dumped in tailing dump yard for sun drying. No filter press is proposed.
- vii. Iron Ore slimes shall be sent to cement plant. There is no letter of comfort to this extent, available with PP.
- viii. Several non-compliances are observed in RO compliance letter of 23.3.2020. ATR has been sent after more than one year on 15.4.2021. ATR has not been verified by RO. Major NCs are related to poor housekeeping, incomplete green belt, inadequate RWH and environment laboratory.
- ix. Incremental concentration of SO<sub>2</sub> is 12.8. µg/Nm<sup>3</sup> which indicates almost 100 % increase in SO<sub>2</sub> levels in the study area. No details to minimize SO<sub>2</sub> emissions have been given.
- x. There could be net increase in SO<sub>2</sub> emission due to high sulphur in imported coal. The chimney height shall be calculated considering the highest value of sulphur content in coal. No details are provided.
- xi. Scheme to treat phenolic water and tar sludge from coal gasifiers has not been given.
- xii. Additional TOR point No 3 to have 40 % green belt has not been complied with. Proposed green belt is only 33 %.
- xiii. Cyclones are proposed for dedusting in coal gasifier unit which may not meet PM emissions less than 30 mg/Nm<sup>3</sup>.
- xiv. Process flow sheets have not been given for any product manufacturing in the EIA report.
- xv. Criteria for selection of AAQ stations has not been given in EIA (page 142 of EIA report).
- xvi. Surface water analysis does not indicate BOD, COD, Heavy Metals, Coliform in Table 3.11 page 147 of EIA report.
- xvii. Action plan to address the issues raised during public hearing as per the MoEF&CC O.M. dated 30/09/2020 has not been furnished.
- xviii. Certified compliance reports attached against point No 9 of Form 2 are not legible. One cannot make out anything from most of the pages of this large document of 205 pages.
- xix. Copy of the PH proceedings given under section 7.1(1) of Form 2 is in Hindi. English translation of PH is not available.

- xx. Details about titanium slag emission from furnace and radiation effects if any, by using ilmenite may be furnished.
- xxi. Most of the sections in Form 2 have not been filled in properly and needs to revised in light of the aforesaid observations.

#### **Recommendations of the Committee**

35.1.21 In view of the foregoing observations, the committee recommended the following:

- i. Proposal is recommended to be returned in its present form to address the shortcomings mentioned above.
- ii. Show Cause Notice is recommended to be issued to the EIA consultant - M/s B.S. Envitech, Hyderabad as the consultant has submitted the EIA report with several deficiencies.

35.2 Expansion of steel plant from 2,00,000 TPA of Rolled Steel to 2, 80,000 TPA of Rolled Steel by **M/s. Vardhman Special Steels Limited** located at Village Dhandari Kalan/ Jamanpur, Tehsil & District Ludhiana, Punjab [Online Proposal No. IA/PB/IND/208613/2013; File no. J-11011/74/2013-IA.II(I)] - **Environment Clearance** – regarding.

35.2.1 M/s. Vardhman Special Steel Limited has earlier made an online application vide proposal no. IA/PB/IND/190704/2013 dated 31/12/2020. The proposal was considered by the EAC (Industry 1) in its 28<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 18–20<sup>th</sup> January, 2021. The observations and recommendations of EAC is given as below:

#### **Observations of the Committee held during 18–20<sup>th</sup> January, 2021**

35.2.2 The Committee noted the following:

- i. An expansion project from 2 LTPA steel to 2.8 LTPA in Focal Point Industrial Area Ludhiana, a critically polluted area with CEPI index of 73.48.
- ii. Action Plant suggested by Punjab State PCB for CEPI area of Focal point is not included in EMP chapter of EIA.
- iii. Total land area is 11.23 ha. Only 3.01 Acre land (11%) is available in the plant for Green Belt Development. Additional 3.27 ha land away from plant site in split locations has been acquired by PP to make up for 40% green belt in split locations is envisaged to be planted in the land not owned by PP under some agreement with schools, community centers etc. This not acceptable as the green belt is to be planted in the land owned by PP.
- iv. Ground and Surface water (767KLD) is used for running of the plant. Permission for GW (467 KLD) abstraction is to be renewed. Agreement to draw treated water (300kld) from a CETP in Ludhiana has been signed.
- v. Geo and Soil Conservation specialists have not been included in the team for EIA report preparation.
- vi. All signatures of team members in EIA are scanned.
- vii. TOR point# 9 pertaining to Corporate Environment Policy has not been complied with.
- viii. RWH and recharge details have not been furnished.
- ix. PM emission from chimneys has been indicated as 40 mg/nm<sup>3</sup> in EIA report.

- x. 98 percentile value of PM<sub>10</sub> at all 8 locations is higher than 100µg/m<sup>3</sup>. Plant site is the most polluted with 179.3µg/m<sup>3</sup>. PM<sub>2.5</sub> at plant site is 82.9µg/m<sup>3</sup>. Reasons for exceeding the NAAQS has not been furnished.
- xi. Soil sampling has not been done as per CPCB guidelines.
- xii. Solid waste utilization plan for the plant has not been detailed.
- xiii. Plant is land locked and does not have space for green belt and at present polluted much beyond the acceptable limit.
- xiv. EIA does not suggest any concrete plan to make the existing plant and proposed expansion environment friendly.

### **Observations of the Committee held during 18–20<sup>th</sup> January, 2021**

- 35.2.3 In view of the foregoing and after detailed deliberations, the Committee recommended to return the proposal in present form.
- 35.2.4 M/s Vardhman Special Steels Limited has made again an online application vide proposal no. IA/PB/IND/208613/2013 dated 12/04/2021. The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC is given as below:

#### **Observations of the Committee**

- 35.2.5 The Committee noted that the Consultant as well as the proponent has not revised the EIA/EMP report by incorporating the aforesaid observations of EAC.

#### **Recommendations of the Committee**

- 35.2.6 In view of the foregoing, the committee recommended to return the proposal in its present form as the project proponent has not submitted the revised EIA report by incorporating the observations made by the EAC in its meeting held on Jan 2021.

- 35.3 **Integrated Steel Plant (1.0 MTPA) along with Coal based Power Plant (200 MW) by M/s. Rashmi Cement Limited at Village Hijalgarh Mouja, P.S-Jamuria, District Burdwan, West Bengal [Online Proposal No. IA/WB/IND/207718/2021; File no. J-11011/112/2010-IA.II(I)] –Validity extension of Environment Clearance – regarding.**

- 35.3.1 M/s. Rashmi Cement Limited has made online application vide proposal no. IA/WB/IND/207718/2021 dated 09/04/2021 along with Form 6 and sought for extension of validity of Environment Clearance accorded by the Ministry vide letter no. J-11011/112/2010-IA.II(I) dated 26/08/2014.

#### **Details submitted by the project proponent**

- 35.3.2 M/s. Rashmi Cement Limited was granted Environment Clearance by the Ministry vide letter No. 11011/112/2010-IA.II(I) dated 26/08/2014 for a project titled “Integrated Steel Plant (1.0 MTPA) along with Coal based Power Plant (200 MW) at Village Hijalgarh Mouja, P.S-Jamuria, District Burdwan, West Bengal” under the provisions of EIA Notification, 2006.
- 35.3.3 With respect to the aforesaid EC, project has not been started yet as the purchasing of continuous patch of land with private rayat was delayed. Now, the issue has been resolved



and the management is hopeful to start the activity with respect to the project. So, in this connection, validity extension for another three years of the EC accorded project is requested.

35.3.4 The implementation status of the EC dated 02/01/2014 is as follows:

Sl. No	Facilities	Units	As per EC dated 26.08.2014	Implementation status as on 08.04.2021	Consent (CTE/CTO)
1	Pellet Plant (along with I/O Beneficiation Plant)	Pellet Plant (1 x 1.2 Million TPA) Beneficiation Plant (1 x 1.5 Million TPA)	Pellet Plant (1 x 1.2 Million TPA) Beneficiation Plant (1 x 1.5 Million TPA)	Not started yet	--
2	DRI Kiln	0.84 Million TPA (7 X 100 TPD + 6 x 350 TPD)	0.84 Million T.P. A (7 X 100 TPD + 6 x 350 TPD)	Not started yet	--
3	Blast Furnace	0.42 Million TPA (2 x 350 m <sup>3</sup> )	0.42 Million TPA (2 x 350 m <sup>3</sup> )	Not started yet	--
4	Coke Oven Plant	0.50 Million TPA	0.50 Million TPA	Not started yet	--
5	Steel Making Facilities	1.05 Million TPA (3 x 40 T EAF + 3 x 40 T LF)	1.05 Million TPA (3 x 40 T EAF + 3 x 40 T LF)	Not started yet	--
6	Ferro Alloy Plant	0.036 Million TPA (3 x 9 MVA)	0.036 Million TPA (3 x 9 MVA)	Not started yet	--
7	Sinter Plant	0.60 Million TPA (1 x 70 m <sup>2</sup> + 1x 25 m <sup>2</sup> )	0.60 Million TPA (1 x 70 m <sup>2</sup> + 1x 25 m <sup>2</sup> )	Not started yet	--
8	Lime & Dolomite Plant	(1 x 300 TPD)	(1 x 300 TPD)	Not started yet	--
9	Oxygen Plant	(1 x 300 TPD)	(1 x 300 TPD)	Not started yet	--
10	H.R. Coil Mill	0.60 Million TPA	0.60 Million TPA	Not started yet	--
11	Alloy Steel Mill with Billet & Bloom Caster	0.40 Million TPA	0.40 Million TPA	Not started yet	--
12	Captive Power Plant	200 MW (WHRB Based 12 MW + 18 MW + 40 MW + CFBC based 2 x 65 MW)	200 MW (WHRB Based 12 MW + 18 MW + 40 MW + CFBC based 2 x 65MW)	Not started yet	--
13	Railway Siding	01 No.	01 No.	Approval obtained for RTC (Railway Transport Clearance), DPR (Detailed Project Report) & ESP (engineering Sectional Plan)	--

- 35.3.5 The details of the activities undertaken during the validity period is given as below:
- NOC obtained from Hijalgora Gram Panchayat, Dist.-Burdwan (under Jamuria Panchayat Samity) for setting up plant and facilities for private railway siding from IKRA station, Water project from the source of "Ajay River" at Hijalgarh Mouza.
  - Obtained DVC construction clearance for supply of 20 MVA power in phase manner.
  - Obtained Rail Transport clearance from Indian railway in connection with construction of the proposed private siding.
  - 14Y Permission from Govt. of West Bengal to acquire and hold the area of 614.25 acres of land.
  - Water withdrawal Permission from Jamuria Municipality,
  - Water withdrawal permission from Ajay River, Ground Water from SWID, West Bengal.

- 35.3.6 Implementation schedule for the unimplemented facilities envisaged under EC is given as below:

Sl. No	Facilities	Units	Project start-up time	Completion time
1	Pellet Plant (along with I/O Beneficiation Plant)	Pellet Plant (1x1.2 MTPA) Beneficiation Plant (1 x 1.5 MTPA)	September, 2021	August, 2024
2	DRI Kiln	0.84 MTPA (7x100 TPD + 6x350 TPD)	September, 2021	August, 2024
3	Blast Furnace	0.42 MTPA (2 x 350 m <sup>3</sup> )	September, 2021	August, 2024
4	Coke Oven Plant	0.50 Million TPA	September, 2021	August, 2024
5	Steel Making Facilities	1.05 MTPA (3x40 T EAF + 3x40 T LF)	September, 2021	August, 2024
6	Ferro Alloy Plant	0.036 MTPA (3 x 9 MVA)	September, 2021	August, 2024
7	Sinter Plant	0.60 MTPA (1x70 m <sup>2</sup> + 1x25 m <sup>2</sup> )	September, 2021	August, 2024
8	Lime & Dolomite Plant	(1 x 300 TPD)	September, 2021	May, 2024
9	Oxygen Plant	(1 x 300 TPD)	September, 2021	May, 2024
10	H.R. Coil Mill	0.60 MTPA	September, 2021	August, 2024
11	Alloy Steel Mill with Billet & Bloom Caster	0.40 MTPA	September, 2021	August, 2024
12	Captive Power Plant	200 MW (WHRB Based 12 MW + 18 MW + 40 MW + CFBC based 2 x 65 MW)	September, 2021	August, 2024
13	Railway Siding	01 No.	January, 2021	August, 2024

- 35.3.7 It has been reported that there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

- 35.3.8 The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC is given as below:

#### Observations of the Committee

- 35.3.9 The Committee noted the following:

- i. Environment Clearance for the project was issued during Aug 2014.
- ii. Scope of the plant included one MTPA steel plant with 200 MW power plant.
- iii. Project got delayed due to non-availability of land (acquisition delayed). Total land required is 614.25 acres. 92% land is in possession of PP.
- iv. Substantial land is now in the possession of PP to start the construction.
- v. Water shall be drawn from Ajay River and Jamuria municipality.
- vi. New schedule submitted by the PP indicates completion of the plant by Aug, 2024.
- vii. There is no change in layout drawing and coordinates of the land proposed in EC.

#### Recommendations of the Committee

35.3.10 In view of above and after deliberations, the Committee recommended to extend the validity of the Environment Clearance for a period of three years beyond 25/08/2021, i.e., from 26/08/2021 to 25/08/2024 subject to environmental safeguards prescribed in the EC dated 26/08/2014.

35.4 Proposed expansion of Sponge Iron Plant from 75 TPD to 300 TPD by upgrading DRI Kiln (from 1 x 75 TPD to 1 x 100 TPD) and adding new DRI Kilns (2 x 100 TPD) along with 3 MW Captive Power Plant (4 no WHRB based and 1 no AFBC based) by **M/s. Subramanya Sponge Iron Private Limited** at Sy. No 135/2, 135/3, 136A/2, 136/A3, 136/B and 138/A of Haraginadonni Village, Tehsil & District Ballari, Karnataka. [Online Proposal no. IA/KA/IND/209479/2021; File no. IA-J-11011/173/2021-IA-II(I)] – **Prescribing for Terms of Reference** regarding.

35.4.1 M/s. Subramanya Sponge Iron Private Limited has made an application online vide proposal no. IA/KA/IND/209479/2021 dated 21/04/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) “A” of the schedule of the EIA Notification, 2006 and being appraised at Central Level.

#### Details submitted by Project proponent

35.4.2 The project of M/s. Subramanya Sponge Iron Private Limited located at Sy. No 135/2, 135/3, 136A/2, 136/A3, 136/B and 138/A of Haraginadonni Village, Tehsil & District Ballari, Karnataka is for Proposed expansion of Sponge Iron Plant from 75 TPD to 300 TPD by upgrading DRI Kiln (from 1 x 75 TPD to 1 x 100 TPD) and adding new DRI Kilns (2 x 100 TPD) along with 3 MW Captive Power Plant (4 no WHRB based and 1 no AFBC based).

35.4.3 Environmental site settings

S No	Particulars	Details	Remarks
I.	Total land	14.68Acres (5.94 ha) Private land (Out of 14.68 acres 7.98 acres are already converted to industrial use and additional 6.7 acres are required to be converted for industrial use)	Land use: The present land use is industrial and vacant land.
II.	Existence of habitation & involvement of R&R, if any.	Not applicable	

S No	Particulars	Details	Remarks
III.	Latitude and Longitude of the project site	15° 9'15.60"N & 76°46'55.43"E	
IV.	Elevation of the project site	458 Meters Above Sea level	
V.	Involvement of Forest land if any.	There is no forest land involved in the proposed project land	
VI.	Water body exists within the project site as well as study area	<b>Project site:</b> No water bodies present in project site <b>Study area</b> <ul style="list-style-type: none"> <li>• Tungabhadra High level Canal – 8.15 Km, NE</li> <li>• Lake Near Kolagallu – 8.5 Km, NE</li> <li>• Avinamudagu Kere – 9.1 Km, SW</li> <li>• Daroji Kere – 12.9 Km, NW</li> </ul>	Authenticated HFL data of the water body shall be furnished. (Not applicable as there is no river water body within the 5 Km radius)
VII.	Existence of ESZ/ESA/national park/wildlife sanctuary/ biosphere reserve/tiger reserve/ elephant reserve etc. if any within the study area	Nil <ul style="list-style-type: none"> <li>• Chikkantapur RF – 5.3 Km, SW</li> <li>• Ballari RF – 5.8 Km, S</li> <li>• Thorangallu RF – 8 Km, NW</li> <li>• Metriki RF – 9.25 Km, S</li> <li>• Marutla extension RF - 9.25Km, SW</li> <li>• Kodagallu RF – 10.4 Km, SW</li> <li>• Daroji RF – 12.5 Km, NW</li> </ul>	

35.4.4 M/s. Sri Subramanya Sponge Iron Private Limited (SSSIPL), established in the year 2007. Later on due to various techno-legals & financial reasons the industry was closed in September 2011 & State Bank of India who had funded for the project took the custody of the project. Considering the easily availability of raw material & growing demand for sponge iron a new ambitious group was formed & this ambitious New Management has approached the State Bank of India & taken over the closed unit entirely in May 2018. The New Management's aim is to establish Sponge Iron Manufacturing Unit of Capacity 300 TPD, for which they have decided to install new kilns 2x100 TPD & existing kiln of capacity 1x75 TPD will be modified to 100 TPD, Totaling to 300 TPD production of sponge iron. Due to Techno-legal reasons New Management has decided to retain & continue the business in the same name as M/s. Sri Subramanya Sponge Iron Private limited.

35.4.5 The unit configuration and capacity of proposed project is given as below:

S No	Existing Units		Proposed Units		Total (Existing +Proposed)	
	Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
1	75 TPD Sponge Iron Plant	Presently, the industry is in shutdown condition since 2011. It is a sick and non-operating unit taken over by the new management in 2018. New	Up-gradation of 75 TPD to 100 TPD and proposed 2x100 TPD Sponge Iron Plant	99,000 TPA Sponge Iron	300 TPD Sponge Iron Plant	99,000 TPA Sponge Iron

S No	Existing Units		Proposed Units		Total (Existing +Proposed)	
	Configuration	Production TPA	Configuration	Production TPA	Configuration	Production TPA
		management has taken over the industry and now applying for refurbishing the existing Kiln of 1x75 TPD to 100 TPD and proposed 2x100 TPD totalling to 300 TPD production of Sponge Iron.				

35.4.6 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

Sl No	Raw Materials	Quantity required per annum	Source	Distance from site (Km)	Mode of Transportation
1	Iron Ore	2,07,900 TPA	Through E - Auction	-	By road in covered trucks
2	Coal	99,000 TPA	Indigenous/ Imported	-	By road in covered trucks
3	Lime Stone	4,950 TPA	Within Karnataka	-	By road in covered trucks

35.4.7 The water requirement for the project is estimated as Total water requirement for the proposed project will be 234 KLD. Out of which, for existing expansion of 1x75 to 100 TPD is 55 KLD and for additional establishment of 2x100 TPD is 169 KLD, hence there is no requirement of fresh water for the project. The STP treated water from the Ballari Municipal Corporation / KUWS&DB will be utilized for the process and 10 KLD is for Domestic Purpose. Domestic sewage of 8 KLD will be treated in STP capacity of 10 KLD.

35.4.8 The total power requirement for the project is estimated as 1850 KVA for operational phase (Existing expansion and proposed) out of which for existing expansion of 75 to 100 TPD is 500 KVA and for Proposed 2x100 TPD is 1350 KVA. During construction phase the required power met from GESCOM (Gulbarga Electric Supply Company Limited) and during operational phase the required power will be used from 3MW in-house captive power plant.

35.4.9 The capital cost of the project is Rs. 49 Crores and the capital cost for environmental protection measures is proposed as Rs. 1.98 Crores. The employment generation from the proposed project during construction phase is 50 Nos and during operation phase is 150 Nos.

35.4.10 Name of the EIA consultant: M/s. Environmental Health and Safety Consultants Pvt. Ltd. [Accreditation Bearing No. QCI/NABET/ENV/ACO/21/1586 Certificate / Extension Letter no. NABET/EIA/1821/SA 0123 validity up to 21-10-2021].

35.4.11 Proposed Terms of Reference (**Baseline data collection period: October,2021 to December, 2021**)

Attributes	Details	Sampling	Remarks
A. Air			
a. Meteorological parameters	Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.	Project site	
b. AAQ parameters	AAQ data (except monsoon) will be studied for 8 locations for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO and will be collected. The monitoring stations will be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.	8 No of Sampling Stations	Frequency- As per NAAQ standards
B. Noise	Noise levels monitoring will be studied for 8 locations within the study area	8 No of Sampling Stations	
C. Water Surface water/ground water quality parameters	Surface water quality of nearby River (100 m upstream and downstream of discharge point) and other surface drains will be collected at 5 locations as per CPCB/MOEF&CC guidelines. Ground water samples will be collected at 3 locations	Surface water - 5 locations Ground water - 3 locations	
D. Land			
a. Soil quality b. Land use	Soil Characteristic as per CPCB guidelines.	Soil samples will be collected at 7 locations.	
E. Biological a. Aquatic b. Terrestrial	Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area will be given with special reference to rare, endemic and endangered species. If Schedule I fauna are found within the study area, a Wildlife Conservation Plan will be prepared and furnished.	Study Area	
F. Socio-economic parameters	Socio-economic status of the study area.	Study area.	

35.4.12 The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting of the Re-constituted EAC (Industry-I) held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC is given as below.

**Observations of the Committee**

35.4.13 The EAC noted the following:

- i. TOR sought for undertaking EIA study for an old sponge iron plant of 2011 taken over by PP in 2018. Unit was not under operation since 2011.
- ii. Scope includes modernization of a 75 TPD Kiln and upgradation to 100 TPD and installation of 2 more 100 TPD kilns along with a 3 MW WHRB. Higher heat recovery is not possible as the charge is being preheated to save 10 % coal.
- iii. Existing land is 7.98 acres and additional 6.7 acres of land is purchased for expansion. Total land with PP is now 14.68 Acres. Total land is in possession of PP.
- iv. 234 KLD treated water shall be sourced from Bellary STP. 10 KLD ground water shall be used for domestic purpose.
- v. 10 KLD STP is proposed for domestic effluent. ZLD is committed.
- vi. Iron ore fines generated in the plant shall be sold to a local pellet plant.
- vii. Plant site is adjacent to SH and 4 km away from NH 63.
- viii. All products, RM and waste shall be transported by road. Nearest Railway station is Kudatani located at a distance of 6.55 Km in eastern direction.
- ix. Nearest village is Haragadani located at a distance 1.35 km from site in West direction.
- x. Allipura lake a water body is 6.28 Km from plant and Tunga Bhadra River is 8.15 KM NE.

**Recommendations of the Committee**

35.4.14 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. Action plan for achieving PM emission less than 30 mg/Nm<sup>3</sup> from the stacks shall be submitted
- ii. Action plan for recycling and reuse of treated wastewater shall be submitted.
- iii. Traffic analysis shall be carried out.
- iv. CFBC/AFBC based CPP of adequate capacity shall be installed to fully utilize the dolochar to be generated from DRI kiln.
- v. Action plan for green belt development covering 33% of the project area all around the boundary of the plant shall be submitted.
- vi. All roads inside the plant shall be paved and a vacuum cleaner shall be provided to sweep the roads periodically for fugitive emission control.
- vii. Action plan for storage of Raw materials shall be stored in covered sheds with impervious lining shall be furnished. Garland drains shall be designed all around stock piles with catch pits to trap the run off material.
- viii. 10 KLD Ground Water abstraction shall be permitted.

- ix. Scheme for 100 % waste utilization shall be submitted. No dumping shall be permitted.

35.5 Proposed set up of steel plant for Sponge Iron: 5,61,000 TPA (DRI Kilns: 2 x 500 TPD & 2 x 350 TPD), Billets/ Ingots/ Hot Billets: 4,95,000 TPA (IF: 6x25 T), Rolling Mills: 4,50,000 TPA (TMT / Wire Rod: 2,00,000 TPA, HR Strip Mill: 1,50,000 TPA & Structural Mill: 1,00,000 TPA), Ferro Alloy Unit: 1 x 9 MVA (FeSi: 7000 TPA/ FeMn: 25,200 TPA/ SiMn: 14,400 TPA/ Pig Iron: 25,200 TPA) and Power plant 56 MW (40 MW: WHRB + 16 MW CFBC) by **M/s GOS Ispat Private Limited** at Ghughuwadih Village, Simga Tehsil, **Balodabazar-Bhatapara District, Chhattisgarh** [Online proposal no IA/CG/IND/209668/2021; File no. IA-J-11011/185/2021-IA-II(I)] – **Prescribing for Terms of Reference** regarding.

35.5.1 M/s. GOS Ispat Private Limited has made an application online vide proposal no. IA/CG/IND/209668/2021 dated 20/04/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A.” of the schedule of the EIA Notification, 2006.

**Details submitted by Project proponent**

35.5.2 The project of M/s. GOS Ispat Private Limited located at Ghughuwadih Village, Simga Tehsil, Balodabazar - Bhatapara District, Chhattisgarh is for Proposed set up of steel plant for Sponge Iron: 5,61,000 TPA (DRI Kilns: 2 x 500 TPD & 2 x 350 TPD), Billets/ Ingots/ Hot Billets: 4,95,000 TPA (IF: 6 x 25 T), Rolling Mills: 4,50,000 TPA (TMT / Wire Rod: 2,00,000 TPA, HR Strip Mill: 1,50,000 TPA & Structural Mill: 1,00,000 TPA), Ferro Alloy Unit: 1 x 9 MVA (FeSi: 7000 TPA/ FeMn: 25,200 TPA/ SiMn: 14,400 TPA/ Pig Iron: 25,200 TPA) and Power plant 56 MW (40 MW: WHRB + 16 MW CFBC).

35.5.3 Environmental site settings

S No	Particulars	Details		
i.	Total Land	20.54 Ha. (50.76 Acres) (Partly Private Agricultural Land and Partly Govt. Land)		
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; hence no R & R is involved.		
iii.	Latitude and Longitude of the project site	S No	Latitude	Longitude
		1.	21°37'48.92"N	81°46'49.38"E
		2.	21°37'48.97"N	81°46'54.92"E
		3.	21°37'39.98"N	81°46'57.29"E
		4.	21°37'37.83"N	81°47'4.25"E
		5.	21°37'37.45"N	81°46'59.61"E
		6.	21°37'35.53"N	81°46'57.55"E
		7.	21°37'31.92"N	81°46'57.55"E
		8.	21°37'31.78"N	81°47'5.46"E
9.	21°37'25.04"N	81°46'59.47"E		



S No	Particulars	Details												
		10.	21°37'26.76"N	81°46'47.37"E										
		11.	21°37'34.63"N	81°46'49.13"E										
		12.	21°37'42.83"N	81°46'48.98"E										
iv.	Elevation of the project site	271 m to 275 m AMSL												
v.	Involvement of Forest land, if any	Not Applicable												
vi.	Water body exists within the project site as well as study area	Project site: Nil Study area: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Water Body</th> <th>Distance/Direction</th> </tr> </thead> <tbody> <tr> <td>Chitawar Nallah (Seasonal Nallah)</td> <td>Adjacent/(E direction)</td> </tr> <tr> <td>Bhatapara Branch Canal of Mahanadi Canal</td> <td>1.5 Km/(SE Direction)</td> </tr> <tr> <td>Ghughua Water Reservoir</td> <td>2.6 Km/(SW Direction)</td> </tr> <tr> <td>Shivnath River</td> <td>9.0 Km(West Direction)</td> </tr> </tbody> </table>			Water Body	Distance/Direction	Chitawar Nallah (Seasonal Nallah)	Adjacent/(E direction)	Bhatapara Branch Canal of Mahanadi Canal	1.5 Km/(SE Direction)	Ghughua Water Reservoir	2.6 Km/(SW Direction)	Shivnath River	9.0 Km(West Direction)
Water Body	Distance/Direction													
Chitawar Nallah (Seasonal Nallah)	Adjacent/(E direction)													
Bhatapara Branch Canal of Mahanadi Canal	1.5 Km/(SE Direction)													
Ghughua Water Reservoir	2.6 Km/(SW Direction)													
Shivnath River	9.0 Km(West Direction)													
vii.	Existence of ESZ/ ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nil												
viii.	Forests within study area	Bilari Ghughua RF (0.3 Km – South Direction) Bilar RF (5.8 Km– SW Direction)												

35.5.4 The unit configuration and capacity of proposed project is given as below:

S. No.	Products (Units)	Production Capacity (Plant Configuration)
1	Sponge Iron (DRI Kilns)	5,61,000 TPA (2 x 500 TPD & 2 x 350 TPD)
2	Billets / Ingots / Hot Billets (Induction Furnace)	4,95,000 TPA (6 x 25 T)
3	Rolling Mill	4,50,000 TPA
	TMT bars / Structural Steel (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)	2,00,000 TPA
	HR Strip Mill	1,50,000 TPA
	Structural Mill	1,00,000 TPA
4	Power Plant	56 MW (WHRB – 40 MW & CFBC - 16 MW)
5	Ferro Alloys Unit (FeSi / FeMn / SiMn / Pig Iron)	1 x 9 MVA (FeSi-7,000 TPA / FeMn- 25,200 TPA /

S. No.	Products (Units)	Production Capacity (Plant Configuration)
		SiMn – 14,400 TPA / Pig Iron – 25,200 TPA)

35.5.5 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

S.No.	Raw Material		Quantity (TPA)	Sources	Distance from Site (in Km)	Mode of Transport
1.	<b>For DRI Kilns (Sponge Iron) – 561000 TPA</b>					
a)	Iron ore		842000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Km	By rail & road (through covered trucks)
b)	Coal	Indian	730000	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)
		Imported	467000	Indonesia / South Africa / Australia	~ 600 Km (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
c)	Dolomite		28000	Chhattisgarh	~ 100 Km	By road (through covered trucks)
2.	<b>For Steel Melting Shop (MS Billets/ Ingots/Hot Billets) – 495000 TPA</b>					
a)	Sponge Iron		500000	Own generation	----	By Covered Conveyers
b)	MS Scrap / Pig Iron		74000	Chhattisgarh	~ 100 Km	By road (through covered trucks)
c)	Ferro alloys		25000	Own generation	---	By road (through covered trucks)
3.	<b>For Rolling Mill through Hot charging (Rolled Products) – 450000 TPA</b>					
a)	Hot Billets / MS Billets / Ingots		477000	Own generation	--- ~ 100 Km	---
b)	LDO / LSHS		20,000 KI/annum	Nearby IOCL Depot	~ 100 Km	By road (through Tankers)
4.	<b>For CFBC Boiler [Power Generation 16 MW]</b>					
a)	Indian Coal (100 %)		86,400	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)
<b>OR</b>						
b)	Imported Coal (100 %)		55,000	Indonesia / South Africa / Australia	~ 600 Km (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
<b>OR</b>						
c)	Dolochar + Indian Coal	Dolochar	112200	In plant generation	---	through covered conveyors
		Indian Coal	30000	SECL Chhattisgarh /	~ 500 Km	By rail & road (through covered trucks)

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from Site (in Km)	Mode of Transport
			MCL Odisha		
	<b>OR</b>				
d)	Dolochar + Imported Coal	Dolochar 112200 Imported Coal 19235	In plant generation Indonesia / South Africa / Australia	--- ~ 600 Km (from Vizag Port)	through covered conveyors Through sea route, rail route & by road (through covered trucks)
<b>5.</b>	<b>For Ferro Alloys (1 x 9 MVA)</b>				
5 (i)	<i>For Ferro Silicon – 14,000 TPA</i>				
a)	Quartz	12150	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
b)	LAM coke	9450	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	MS Scrap / Mill scales	2115	In-house Generation	---	By road (through covered trucks)
d)	Electrode paste	180	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
e)	Bag filter dust	100	Own generation	---	---
5 (ii)	<i>For Ferro Manganese – 25,200 TPA</i>				
a)	Manganese Ore	34200	MOIL / OMC	~ 500 Km	By Rail & Road (through covered trucks)
b)	LAM coke	9900	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	Dolomite	4050	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
d)	MS Scrap / Mill scales	3600	In-house Generation	---	By road (through covered trucks)
e)	Electrode Paste	315	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
f)	Bag filter dust	500	Own generation	---	---
6 (iii)	<i>For Silico Manganese – 14,400 TPA</i>				
a)	Manganese Ore	24300	MOIL / OMC	~ 500 Km	By Rail & Road (through covered trucks)
b)	LAM Coke	8100	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	FeMn. Slag	15147	In house	---	----

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from Site (in Km)	Mode of Transport
			generation		
d)	Dolomite	3690	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
e)	Electrode paste	315	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
f)	Quartz	3870	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
g)	Bag filter dust	200	Own generation	---	---
5 (iv)	<i>For Pig Iron – 25,200 TPA</i>				
a)	Iron ore / Sinter	46,000	Barbil, Odisha NMDC, Chhattisgarh	~ 500 Km	By road (through covered trucks)
b)	LAM Coke	21,600	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	Dolomite	3,000	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
d)	Quartz	1,530	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
e)	Bag filter dust	600	Own generation	---	---

35.5.6 Water consumption for the proposed project will be 1690 KLD, which will be met from Shivnath River (at a distance of 9.0 Km from project site). Permission for drawl of water from Water Resources Department of Government of Chhattisgarh will be obtained.

35.5.7 The total power requirement for the proposed project will be about 74.3 MW, this will be met mainly with captive power plant of 56 MW, remaining 18.3 MW power will be sourced from the State Grid.

35.5.8 The capital cost of the project is Rs. 490.0 Crores and the capital cost for environmental protection measures is proposed as Rs. 25.0 Crores. Proposed employment generation from proposed project will be 300 nos. through direct employment and 500 nos. through indirect employment.

35.5.9 Proposed Terms of Reference (Baseline data collection period: **October, 2021 to December, 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>A. Air</b>			

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> <li>• Wind Speed</li> <li>• Wind Direction</li> <li>• Temperature</li> <li>• Relative Humidity</li> <li>• Rainfall</li> </ul>
b. AAQ parameters	8	24 hourly Twice a week for One Season	Parameters Monitored: PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> and CO
<b>B. Noise</b>	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: <ul style="list-style-type: none"> <li>• Day equivalent</li> <li>• Night equivalent</li> </ul>
<b>C. Water</b>			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
b. Surface Water	4	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
<b>D. Land</b>			
a. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
<b>E. Biological</b>	--	Once in Season	---
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
<b>F. Socio economic parameters</b>	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area

35.5.10 There is no violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration.

35.5.11 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.129 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022 as per Rev. 09, Apr. 12, 2021].

35.5.12 The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC are given as below:

**Observations of the Committee**

35.5.13 The EAC noted the following:

- i. TOR is required for undertaking EIA study for a green field mini steel plant of 0.45 MTPA capacity.
- ii. Total land required for the project is 50.76 Acres. Process for land acquisition has been initiated. 16.75 acres of land will be brought under green belt.
- iii. There is no forest land or ESZ in the study area. However, two RFs exist in the area at 0.3 and 5.8 km from project site.
- iv. 1690 KLD Water shall be drawn from Sheonath River, 9 km away from site.
- v. Ferro Alloy plant shall manufacture FeSi, FeMn, SiMn, and Pig iron. No FeCr will be manufactured.
- vi. Nearest village from project site is located at a distance of 1.19 Km.
- vii. NH 200 passes 6.4 Km from site. Hathband Railway siding is 6.6 km away. All RM, Products and wastes shall be transported by road.
- viii. Total number of trucks required are 250 Nos per day. An area of 3 acres is reserved for truck parking inside the plant premises.
- ix. Air cooled condensers shall be used in CPP. The plant shall not discharge any effluent outside the premises.
- x. 16 KLD STP is proposed to treat domestic waste water.
- xi. Garland drains are provided in RM area (having impervious floors) and catch pits for trapping run off material.
- xii. A High-Tension line is passing through the plant area. No construction shall be done under the line and no trees shall be planted underneath.
- xiii. Reheating Furnace shall operate on LDO/LSHS.
- xiv. Submerged Arc Furnace of open type is proposed.

**Recommendations of the Committee**

35.5.14 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- i. Scheme for achieving PM emission less than 30 mg/Nm<sup>3</sup> shall be submitted.
- ii. Scheme for 100 % waste utilization shall be furnished. No dumping is permitted.
- iii. Nearest village from site is 1.1 Km. Action plan for developing additional green belt of 20 meter wide towards the village shall be furnished.
- iv. 1690 KLD Water shall be drawn from Sheonath River, 9 km away from site. No GW shall be abstracted.
- v. Action plan for parking of trucks within the plant premises shall be submitted and the same shall be indicated in the plant lay out.
- vi. Air cooled condensers shall be used in CPP. The plant shall not discharge any effluent outside the premises.
- vii. 16 KLD STP is proposed to treat domestic waste water.

- viii. A High-Tension line is passing through the plant area. No construction shall be done under the line and no trees shall be planted underneath. No activity shall be carried out under the HT line.
- ix. Reheating Furnace shall be designed to operate on LDO/LSHS. 80-85 % hot charging shall be practiced.
- x. Submerged Arc Furnace shall be closed type with 4<sup>th</sup> hole extraction system.
- xi. Jigging and briquetting plant shall be included.
- xii. FeCr slag shall be tested by TCLP and Cr concentration is found above limit the slag shall be sent to TSDF.
- xiii. In order to control fugitive emissions, all plant roads shall be paved and industrial vacuum cleaners shall be used to clean the roads regularly.
- xiv. Action plan for storage of Raw materials shall be stored in covered sheds with impervious lining shall be furnished. Garland drains shall be designed all around stock piles with catch pits to trap the run off material.
- xv. Action plan for rain water harvesting shall be furnished.

35.6 Establishment of Iron ore beneficiation (8,00,000 TPA), Pellet Plant (6,00,000 TPA), DRI Kilns (6,60,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars / Structural Steel) (3,63,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi-14000 TPA / FeMn-50400 TPA / SiMn-28800 TPA / FeCr-30000 TPA), WHRB based Power Plant – 50 MW (4 x 12.5 MW), FBC based Power Plant - 24 MW(2 x 6 MW & 1 x 12 MW) & Brick Manufacturing unit (58,000 Bricks / Day) **by M/s. Karnikripa Power Private Limited** at Khairjhitti & Koajhar Village, Tehsil & **District Mahasamund, Chhattisgarh** [Online proposal no IA/CG/IND/208264/2021; File no. IA-J-11011/154/2021-IA-II(I)] – **Prescribing for Terms of Reference** regarding.

35.6.1 M/s Karnikripa Power Private Limited has made an application online vide proposal no. IA/CG/IND/208264/2021 dated 08/04/2021 along with the application in prescribed format (Form-I), copy of pre-feasibility report as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No. 3(a) Metallurgical industries (ferrous & nonferrous) under Category “A” of the schedule of the EIA Notification, 2006.

**Details submitted by Project proponent**

35.6.2 The project of M/s Karnikripa Power Private Limited located Khairjhitti & Koajhar Village, Tehsil & District Mahasamund, Chhattisgarh is for Establishment of Iron ore beneficiation (8,00,000 TPA), Pellet Plant (6,00,000 TPA), DRI Kilns (6,60,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars / Structural Steel) (3,63,000 TPA), Ferro Alloy Unit 2 x 9 MVA (FeSi-14000 TPA / FeMn-50400 TPA / SiMn-28800 TPA / FeCr-30000 TPA), WHRB based Power Plant – 50 MW (4 x 12.5 MW), FBC based Power Plant - 24 MW(2 x 6 MW & 1 x 12 MW) & Brick Manufacturing unit (58,000 Bricks / Day).

35.6.3 Environmental site settings:

S No	Particulars	Details		
i.	Total Land	50.57Ha. (124.95Acres) [Private Agricultural Land] MoU has been entered between Govt. of Chhattisgarh & M/s. Karnikripa Power Pvt. Ltd. for establishment Steel plant and accordingly State Investment Promotion Board (SIPB), Govt. of Chhattisgarh has confirmed vide letter dt. 27.03.2021, to facilitate expeditious grant of approvals for proposed Steel plant at Khairjhitti & Koajhar Villages. Mahasamund Tehsil & District.		
ii.	Existence of habitation & involvement of R & R, if any	No habitation exists in project site; hence no R & R is involved.		
iii.	Latitude and Longitude of the project site	S No	Latitudes	Longitudes
		1.	21°12'28.18"N	82° 8'39.08"E
		2.	21°12'32.06"N	82° 8'33.26"E
		3.	21°12'38.75"N	82° 8'26.88"E
		4.	21°12'42.24"N	82° 8'26.73"E
		5.	21°12'37.84"N	82° 8'6.70"E
		6.	21°12'49.39"N	82° 8'7.08"E
		7.	21°12'56.72"N	82° 8'12.34"E
		8.	21°12'59.15"N	82° 8'19.25"E
		9.	21°12'58.36"N	82° 8'27.31"E
		10.	21°13'3.12"N	82°8'29.91"E
		11.	21°12'45.59"N	82° 8'37.23"E
		12.	21°12'33.93"N	82° 8'37.66"E
		13.	21°12'29.58"N	82° 8'40.81"E
		14.	21°12'32.22"N	82° 8'40.72"E
		15.	21°12'35.99"N	82° 8'38.48"E
		16.	21°12'41.80"N	82° 8'38.30"E
		17.	21°12'40.09"N	82° 8'43.20"E
		18.	21°12'37.83"N	82° 8'44.49"E
19.	21°12'35.38"N	82° 8'42.11"E		
iv.	Elevation of the project site	274 m to 281 m AMSL.		
v.	Involvement of Forest land, if any	No Forest land is involved in the project site.		
vi.	Water body exists within the project site as well as study area	Project site:		
		Water Body	Distance	
		Unused Canal	Ending into the project site (in South West Direction)	
Tributary of Dhaskut Nala	Landscaping will be done on both sides of Nala along with measures for soil stabilization including development of			



S No	Particulars	Details										
		lawns with shrubs with 20 m width. Moreover, no process activity is proposed on the East side of the stream and same will be utilized for greenbelt & other non-process activity.										
		<b>Study area:</b>										
		<table border="1"> <thead> <tr> <th>Water Body</th> <th>Distance/ Direction</th> </tr> </thead> <tbody> <tr> <td>Village Pond</td> <td>0.33 km/ North</td> </tr> <tr> <td>Kurar river</td> <td>2.6 Km/ South</td> </tr> <tr> <td>Mahanadi river</td> <td>8.5 Km/ North West</td> </tr> <tr> <td>Kodar Reservoir</td> <td>3.8 km/ ESE</td> </tr> </tbody> </table>	Water Body	Distance/ Direction	Village Pond	0.33 km/ North	Kurar river	2.6 Km/ South	Mahanadi river	8.5 Km/ North West	Kodar Reservoir	3.8 km/ ESE
Water Body	Distance/ Direction											
Village Pond	0.33 km/ North											
Kurar river	2.6 Km/ South											
Mahanadi river	8.5 Km/ North West											
Kodar Reservoir	3.8 km/ ESE											
vii.	Existence of ESZ/ESA/ National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area	Nil Tumgaon RF: 0.5 Km – SW Sirpur RF: 1.28 Km – East Kukradih RF: 3.8 Km – NW Sorid PF: 4.1 Km – South										
viii.	Industry within the study area	M/s. Kalindi Power & Steel Ltd. (8.5 MW Biomass Power Plant) is located adjacent to the proposed project site.										

35.6.4 The unit configuration and capacity of existing and proposed project is given as below:

S No	Units (Products)	Plant Configuration (Production Capacity)
1.	Iron ore Beneficiation (Beneficiated ore)	8,00,000 TPA
2.	Pellet Plant (Pellet)	6,00,000 TPA
3.	DRI Kilns (Sponge Iron)	6,60,000 TPA (4 x 500 TPD)
4.	Induction Furnace (Billets / Ingots / Hot Billets)	2,97,000 TPA (6 x 15 T)
5.	Rolling Mill (TMT bars / Structural Steel) (85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)	3,63,000 TPA (1x1100 TPD)
6.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)	2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA)
7.	Brick Manufacturing Unit	58,000 Bricks / Day
8.	Power Plant (74 MW)	50 MW (4 x 12.5 MW WHRB based) 24 MW (2 x 6 MW & 1 x 12 MW FBC based)

35.6.5 The details of the raw material requirement for the proposed project along with its source and mode of transportation is given as below:

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport	
1.	<b>Iron Ore Beneficiation Plant (8,00,000 TPA – throughput capacity)</b>					
a)	Iron ore fines	8,00,000	Chhattisgarh / Orissa	~ 600 Km	By rail & road (through covered trucks)	
2.	<b>Pellet Plant (Pellets) - 6,00,000 TPA</b>					
a)	Iron Ore Concentrate	6,20,000	Own generation	---	Through covered conveyers	
b)	Bentonite	4,800	Gujarat	~ 600 Km	By rail & road (through covered trucks)	
c)	Limestone	9,000	Chhattisgarh	~ 100 Km	By road (through covered trucks)	
d)	Anthracite Coal	6,000	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)	
3.	<b>DRI Kilns (Sponge Iron) – 6,60,000 TPA</b>					
a)	Pellets (100 %)	9,90,000	Own generation & purchased from outside (Chhattisgarh)	~ 100 Km	Through covered conveyers & By road (through covered trucks)	
	Or					
b)	Iron ore (100%)	10,56,000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Km	By rail & road (through covered trucks)	
c)	Coal	Indian	8,58,000	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)
		Imported	5,50,000	Indonesia / South Africa / Australia	~ 600 Km (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
d)	Dolomite	33,000	Chhattisgarh	~ 100 Km	By road (through covered trucks)	
4.	<b>Steel Melting Shop (Billets/ Ingots/Hot Billets) – 2,97,000 TPA</b>					
a)	Sponge Iron	3,00,000	Own generation	---	Through covered conveyers	
b)	MS Scrap / Pig Iron	45,000	Chhattisgarh	~ 100 Km	By road (through covered trucks)	
c)	Ferro alloys	15,000	Own generation	---	By road (through covered trucks)	
5.	<b>For Rolling Mill through Hot charging (Rolled Products) – 3,63,000 TPA</b>					
a)	Hot Billets / Billets / Ingots	3,88,400	Own generation & Purchase from outside	~ 100 Km	Through covered conveyers & By road (through covered trucks)	
b)	LDO / LSHS	20,000 Kl/annum	Nearby IOCL Depot	~ 100 Km	By road (through Tankers)	
6.	<b>FBC Power Generation - 24 MW</b>					
a)	Indian Coal (100 %)	1,42,560	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)	
	<b>OR</b>					
b)	Imported Coal	91,381	Indonesia /	~ 600 Km	Through sea route, rail	

S No	Raw Material		Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
	(100 %)			South Africa / Australia	(from Vizag Port)	route & by road (through covered trucks)
	<b>OR</b>					
c)	Dolochar	Dolochar	1,98,000	In plant generation	---	through covered conveyors
	+ Indian Coal	Indian Coal	43,560	SECL Chhattisgarh / MCL Odisha	~ 500 Km	By rail & road (through covered trucks)
	<b>OR</b>					
d)	Dolochar	Dolochar	1,98,000	In plant generation	---	through covered conveyors
	+ Imported Coal	Indian Coal	26,208	Indonesia / South Africa / Australia	~ 600 Km (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
<b>7.</b>	<b>Ferro Alloys (2 x 9 MVA)</b>					
7 (i)	<i>Ferro Silicon – 14,000 TPA</i>					
a)	Quartz		24300	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
b)	LAM coke		18900	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	MS Scrap / Mill scales		4230	In-house Generation	---	By road (through covered trucks)
d)	Electrode paste		360	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
e)	Bag filter dust		200	Own generation	---	---
7 (ii)	<i>Ferro Manganese – 50,400 TPA</i>					
a)	Manganese Ore		68400	MOIL / OMC	~ 500 Km	By Rail & Road (through covered trucks)
b)	LAM coke		19800	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	Dolomite		8100	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
d)	MS Scrap / Mill scales		7200	In-house Generation	---	By road (through covered trucks)
e)	Electrode Paste		630	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
f)	Bag filter dust		1000	Own generation	---	---
7 (iii)	<i>Silico Manganese – 28,800 TPA</i>					
a)	Manganese Ore		48600	MOIL / OMC	~ 500 Km	By Rail & Road (through covered trucks)
b)	LAM Coke		16200	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	FeMn. Slag		30294	In house generation	---	----
d)	Dolomite		7380	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
e)	Electrode paste		630	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
f)	Quartz		7740	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
g)	Bag filter dust		200	Own generation	---	---
7 (iv)	<i>Ferro Chrome – 30,000 TPA</i>					
a)	Chrome Ore		56700	Sukinda, Odisha	~ 500 Km	By road

S No	Raw Material	Quantity (TPA)	Sources	Distance from site (in Km)	Mode of Transport
			Import, South Africa	~ 600 Km (from Vizag Port)	(through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	19800	Andhra Pradesh	~ 500 Km	By road (through covered trucks)
c)	Quartz	8100	Chhattisgarh / Andhra Pradesh	~ 500 Km	By road (through covered trucks)
d)	MS Scrap / Mill Scale	2700	In-house Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	5400	Chhattisgarh / Maharashtra	~ 500 Km	By road (through covered trucks)
f)	Electrode Paste	540	Maharashtra / West Bengal	~ 300 Km	By road (through covered trucks)
g)	Bag filter dust	1200	Own generation	---	---

35.6.6 Water consumption for the proposed project will be 2155 KLD, which will be sourced from Kurar River (which is at a distance of 2.6 Km from the project site). Water drawl permission from Water Resource Department, Govt. of Chhattisgarh will be obtained. As part of MOU signed with state Govt., SIPB will facilitate expeditious approvals including water drawl permission.

35.6.7 The total power requirement for the proposed project will be about 65 MW, this will be met from the Captive power plant of 74 MW. Remaining 9 MW will be exported to the state grid.

35.6.8 The capital cost of the project is Rs. 880Crores and the capital cost for environmental protection measures is proposed as Rs. 35.0 Crores. Employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

35.6.9 Proposed Terms of Reference (Baseline data collection period: **March 2021 to May 2021**):

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>A. Air</b>			
a. Meteorological parameters	1	On hourly basis for one season	<ul style="list-style-type: none"> <li>• Wind Speed</li> <li>• Wind Direction</li> <li>• Temperature</li> <li>• Relative Humidity</li> <li>• Rainfall</li> </ul>
b. AAQ parameters	8	24 hourly Twice a week for One Season	Parameters Monitored: PM <sub>2.5</sub> , PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> and CO
<b>B. Noise</b>	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: <ul style="list-style-type: none"> <li>• Day equivalent</li> <li>• Night equivalent</li> </ul>

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
<b>C. Water</b>			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500
b. Surface Water	5	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
<b>D. Land</b>			
a. Soil quality	8	One sample at each of the locations	Parameters Monitored: Texture, infiltration rate, SAR bulk density, pH, Ca, Mg, Na, K, Zn, Mn
b. Land use	--	--	LU map will be prepared by concerned FAE for study area
<b>E. Biological</b>	--	Once in Season	---
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
<b>F. Socio economic parameters</b>	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area

35.6.10 It has been reported by PP that, there is no violation under EIA Notification, 2006/court case/show cause/direction related to the project under consideration.

35.6.11 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [S.No.129 in the List of ACOs and NABET certificate vide no. NABET/EIA/1922/RA0149 valid till 22-03-2022 as per Rev. 09, Apr. 12, 2021].

35.6.12 The proposal was considered by the EAC (Industry 1) in its 35<sup>th</sup> meeting held on 30<sup>th</sup> April, 2021. The observations and recommendations of EAC are given as below:

#### Observations of the Committee

35.6.13 The Committee noted the following:

- i. TOR is being sought for undertaking EIA study for a new 0.363 MTPA Mini Steel Plant.
- ii. Land requirement is 124.95 Acres. Acquisition formalities are being processed. Land is primarily agriculture and a RF named Tumgaon RF is 500 m away from site. No ESZ is present in the study area.
- iii. Plant configuration includes; IOBP, Pellet Plant, 4x500 TPD DRI kilns, 6x15 T IF, RM yard, 2x9 MVA FAP to manufacture, FeSi, FeMn, SiMn and FeCr, a 58000 Nos/day brick plant and a CPP of 74 MW (50+24MW).
- iv. 2155 KLD water shall be drawn from Kurar River 2.6 km from site.
- v. NH6 passes adjacent to site and the nearest village is 0.5 km from plant boundary.
- vi. Coal and FO is proposed as fuel in RHF.
- vii. Open type SAF with Fume extraction hood has been proposed.

- viii. Details of Jigging and Briquetting plant have not been mentioned.
- ix. Raw Material shall be transported by road to Railway siding and from there, 16.5 km by road to the plant.
- x. 480 trucks per day shall be used to transport RM, Products and solid waste. Five (5) acres land has been earmarked for truck parking inside the plant.
- xi. Plant roads shall be pucca, and vacuum cleaners shall be used to clean the roads regularly.
- xii. Stock piles shall be on impervious floor, with garland drains and catch pits to trap run off material.
- xiii. Air cooled condensers shall be used in CPP.
- xiv. 32 KLD STP shall be installed.
- xv. 41.2 acre land shall be brought under green belt.
- xvi. IOBP tailings shall be dewatered in Filter press and stored for max 30 days.
- xvii. A pipe line belonging to IOCL passes by the side of the Plant. An eighteen-metre corridor shall be left as per Norm.
- xviii. A nallah is passing through the site. Landscaping shall be done on both sides of nallah.

### **Recommendations of the Committee**

- 35.6.14 After deliberations, the Committee recommended the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToR enclosed at Annexure-1 read with additional ToRs at Annexure-2:
- i. Water requirement for the project shall be met from surface water sources only. No ground water abstraction shall be permitted.
  - ii. PM emission from all the stacks shall not exceed 30 mg/Nm<sup>3</sup>.
  - iii. 32 KLD STP for treatment of domestic waste water shall be provided.
  - iv. Action plan for green belt development covering 33% of the project area along the periphery of the plant shall be submitted. This should include a 20 m green belt within the project area towards the nearest village Koajhar.
  - v. Action plan for using LDO/LSHS as fuel in RHF shall be submitted.
  - vi. Closed type Submerged Arc Furnace with 4<sup>th</sup> hole extraction shall be proposed.
  - vii. Jigging and Briquetting plant shall be provided. FeCr slag shall be tested by conducting TCLP tests and the slag shall be sent to TSDF if Cr values are high.
  - viii. Raw Material shall be transported by road to Railway siding and then 16.5 km by road to the plant. Traffic study shall be carried out and scheme to strengthen village roads shall be furnished.
  - ix. 480 trucks per day are to be used to transport Raw Materials, Products and solid waste. Detailed action plan for parking of trucks within the plant site shall be submitted.
  - x. Plant roads shall be made pucca, and vacuum cleaners shall be used to clean the roads regularly.
  - xi. Stock piles shall be on impervious floor, with garland drains and catch pits to trap run off material.
  - xii. Air cooled condensers shall be used in CPP.

- xiii. Action plan for 100 % solid waste utilization shall be submitted.
- xiv. Action plan dewatering of IOBP tailings in Filter press and storage for a period of thirty days shall be submitted.
- xv. A nallah is passing through the site. Scheme for landscaping on both sides of nallah shall be submitted. The land in eastern side of nallah shall be converted to ecological park.
- xvi. All dust generated in the plant including dust collected through road sweeping machines shall be recycled.
- xvii. Action plan for rain water harvesting shall be submitted.
- xviii. IOCL. ROW shall not be used for any activity. NOC of layout shall be obtained from IOCL.

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**ANNEXURE –1**

**GENERIC TERMS OF REFERENCE (ToR) IN RESPECT OF INDUSTRY SECTOR**

1. **Executive Summary**
2. **Introduction**
  - i. Details of the EIA Consultant including NABET accreditation
  - ii. Information about the project proponent
  - iii. Importance and benefits of the project
3. **Project Description**
  - i. Cost of project and time of completion.
  - ii. Products with capacities for the proposed project.
  - iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
  - iv. List of raw materials required and their source along with mode of transportation.
  - v. Other chemicals and materials required with quantities and storage capacities
  - vi. Details of Emission, effluents, hazardous waste generation and their management.
  - vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
  - viii. The project proponent shall furnish the requisite documents from the competent authority in support of drawl of ground water and surface water and supply of electricity.
  - ix. Process description along with major equipment and machineries, process flow sheet (Quantitative) from raw material to products to be provided
  - x. Hazard identification and details of proposed safety systems.
  - xi. Expansion/modernization proposals:
    - a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MoEF&CC/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30<sup>th</sup> May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of compliance of Consent to Operate for the ongoing /existing operation of the project from SPCB/PCC shall be attached with the EIA-EMP report.
    - b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.



4. **Site Details**

- i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
- ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
- iii. Co-ordinates (lat-long) of all four corners of the site.
- iv. Google map-Earth downloaded of the project site.
- v. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- vi. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
- vii. Landuse break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
- viii. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
- ix. Geological features and Geo-hydrological status of the study area shall be included.
- x. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.
- xii. R&R details in respect of land in line with state Government policy.

5. **Forest and wildlife related issues (if applicable):**

- i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).
- ii. Land use map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha*).
- iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
- iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon.
- v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area.

- vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

**6. Environmental Status**

- i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
- ii. AAQ data (except monsoon) at 8 locations for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.
- iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
- iv. Surface water quality of nearby River (60m upstream and downstream) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
- v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC.
- vi. Ground water monitoring at minimum at 8 locations shall be included.
- vii. Noise levels monitoring at 8 locations within the study area.
- viii. Soil Characteristic as per CPCB guidelines.
- ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
- x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
- xi. Socio-economic status of the study area.

**7. Impact Assessment and Environment Management Plan**

- i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.
- ii. Water Quality modelling – in case, if the effluent is proposed to be discharged in to the local drain, then Water Quality Modelling study should be conducted for the drain water taking into consideration the upstream and downstream quality of water of the drain.
- iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport

- of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
- iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.
  - v. Details of stack emission and action plan for control of emissions to meet standards.
  - vi. Measures for fugitive emission control
  - vii. Details of hazardous waste generation and their storage, utilization and disposal. Copies of MOU regarding utilization of solid and hazardous waste shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
  - viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
  - ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
  - x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
  - xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
  - xii. Action plan for post-project environmental monitoring shall be submitted.
  - xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.
- 8. Occupational health**
- i. Details of existing Occupational & Safety Hazards. What are the exposure levels of above mentioned hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,
  - ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre-designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre-placement and periodical examinations give the details of the same. Details regarding last month analysed data of abovementioned parameters as per age, sex, duration of exposure and department wise.
  - iii. Annual report of health status of workers with special reference to Occupational Health and Safety.

- iv. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.
9. **Corporate Environment Policy**
- i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.
  - iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report
10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.
11. To address the Public Hearing issues, provisions contained under Ministry's Office Memorandum vide F.No. 22-65/2017-IA.III dated 30/09/2020 shall be complied.
12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.
13. A tabular chart with index for point wise compliance of above ToRs.
14. The ToRs prescribed shall be valid for a period of three years for submission of the EIA-EMP reports along with Public Hearing Proceedings (wherever stipulated).

The following general points shall be noted:

- i. All documents shall be properly indexed, page numbered.
- ii. Period/date of data collection shall be clearly indicated.
- iii. Authenticated English translation of all material in Regional languages shall be provided.
- iv. The letter/application for environmental clearance shall quote the MOEF&CC file No. and also attach a copy of the letter.
- v. The copy of the letter received from the Ministry shall be also attached as an annexure to the final EIA-EMP Report.
- vi. The index of the final EIA-EMP report must indicate the specific chapter and page no. of the EIA-EMP Report
- vii. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MOEF&CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4<sup>th</sup> August, 2009, which are available on the website of this Ministry shall also be followed.

- viii. The consultants involved in the preparation of EIA-EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA-EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. Name of the Consultant and the Accreditation details shall be posted on the EIA-EMP Report as well as on the cover of the Hard Copy of the Presentation material for EC presentation.
- ix. ToRs' prescribed by the Expert Appraisal Committee (Industry) shall be considered for preparation of EIA-EMP report for the project in addition to all the relevant information as per the 'Generic Structure of EIA' given in Appendix III and IIIA in the EIA Notification, 2006. Where the documents provided are in a language other than English, an English translation shall be provided. The draft EIA-EMP report shall be submitted to the State Pollution Control Board of the concerned State for conduct of Public Hearing. The SPCB shall conduct the Public Hearing/public consultation, district-wise, as per the provisions of EIA notification, 2006. The Public Hearing shall be chaired by an Officer not below the rank of Additional District Magistrate. The issues raised in the Public Hearing and during the consultation process and the commitments made by the project proponent on the same shall be included separately in EIA-EMP Report in a separate chapter and summarized in a tabular chart with financial budget (capital and revenue) along with time-schedule of implementation for complying with the commitments made. The final EIA report shall be submitted to the Ministry for obtaining environmental clearance.

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**ANNEXURE-2**

**ADDITIONAL ToRS FOR INTEGRATED STEEL PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. For Large ISPs, a 3-D view i.e. DEM (Digital Elevation Model) for the area in 10 km radius from the proposal site. MRL details of project site and RL of nearby sources of water shall be indicated.
4. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
5. PM (PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
6. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
7. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
8. Plan for slag utilization
9. Plan for utilization of energy in off gases (coke oven, blast furnace)
10. System of coke quenching adopted with justification.
11. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
12. Trace metals in waste material especially slag.
13. Trace metals in water
14. Details of proposed layout clearly demarcating various units within the plant.
15. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs and outputs (material and energy balance).
16. Details on design and manufacturing process for all the units.
17. Details on environmentally sound technologies for recycling of hazardous materials, as per CPCB Guidelines, may be mentioned in case of handling scrap and other recycled materials.
18. Details on requirement of energy and water along with its source and authorization from the concerned department. Location of water intake and outfall points (with coordinates).
19. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
20. Details on toxic content (TCLP), composition and end use of slag.

**ADDITIONAL ToRs FOR PELLET PLANT**

1. Iron ore/coal linkage documents along with the status of environmental clearance of iron ore and coal mines
2. Quantum of production of coal and iron ore from coal & iron ore mines and the projects they cater to. Mode of transportation to the plant and its impact
3. Recent land-use map based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. PM(PM<sub>10</sub> and P<sub>2.5</sub>) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM<sub>10</sub> to be carried over.
5. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
6. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
7. Plan for slag utilization
8. Plan for utilization of energy in off gases (coke oven, blast furnace)
9. System of coke quenching adopted with justification.
10. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
11. Trace metals in waste material especially slag.
12. Trace metals in water

**ADDITIONAL ToRs FOR CEMENT INDUSTRY**

1. Limestone and coal linkage documents along with the status of environmental clearance of limestone and coal mines
2. Quantum of production of coal and limestone from coal & limestone mines and the projects they cater to;
3. Present land use shall be prepared based on satellite imagery. High-resolution satellite image data having 1m-5m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc. for the 10 Km radius area from proposed site. The same shall be used for land used/land-cover mapping of the area.
4. If the raw materials used have trace elements, an environment management plan shall also be included.
5. Plan for the implementation of the recommendations made for the cement plants in the CREP guidelines must be prepared.
6. Energy consumption per ton of clinker and cement grinding
7. Provision of waste heat recovery boiler
8. Arrangement for co-processing of hazardous waste in cement plant.
9. Trace metals in waste material especially slag.

**ADDITIONAL ToRs FOR PULP AND PAPER INDUSTRY**

- i. A note on pulp washing system capable of handling wood pulp shall be included.
- ii. Manufacturing process details for the existing and proposed plant shall be included. Chapter on Pulping & Bleaching shall include: no black liquor spillage in the area of pulp mill; no use of elemental chlorine for bleaching in mill; installation of hypo preparation plant; no use of potcher washing and use of counter current or horizontal belt washers. Chapter on Chemical Recovery shall include: no spillage of foam in chemical recovery plant, no discharge of foul condensate generated from MEE directly to ETP; control of suspended particulate matter emissions from the stack of fluidized bed recovery boiler and ESP in lime kiln
- iii. Studies shall be conducted and a chapter shall be included to show that Soda pulping process can be employed for *Eucalyptus/Casuarina* to produce low kappa (bleachable) grade of pulp.
- iv. Commitment that only elemental Chlorine-free technology will be used for the manufacture of paper and existing plant without chemical recovery plant will be closed within 2 years of issue of environment clearance.
- v. A commitment that no extra chlorine base bleaching chemicals (more than being used now) will be employed and AOx will remain within limits as per CREP for used based mills. Plan for reduction of water consumption.

**ADDITIONAL ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY**

1. Justification for engaging a particular type of process (raw hide/skin into semi finishing or finished leather, semi-finished leather to finished leather, dry finishing operations, chrome/vegetable tanning, *etc.*).
2. Details regarding complete leather/ skin/ hide processing including the usage of sulphides, nitrogen compounds, chromium or other tanning agents, post-tanning chemicals, biocides, *etc.*, along with the material balance shall be provided.
3. In case of chrome tanning, details of the chrome recovery plant, management of shavings/solid waste including safe disposal.
4. Details on reuse of soak liquor / saline stream from membrane system, if applicable, to the extent possible in pickling activity after required treatment. Also, mention the salt recovery measures.

**ADDITIONAL ToRs FOR COKE OVEN PLANT**

1. Justification for selecting recovery/non-recovery (beehive) type batteries with the proposed unit size.
2. Details of proposed layout clearly demarcating various facilities such as coal storages, coke making, by-product recovery area,*etc* within the plant.
3. Details of coke oven plant (recovery/non-recovery type) including coal handling, coke oven battery operations, coke handling and preparation.
4. Scheme for coal changing, charging emission centre, Coke quenching technology, pushing emission control.
5. Scheme for coke oven effluent treatment plant details including scheme for meeting cyanide standard.



**ADDITIONAL ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS**

1. Type of the project – new/expansion/modernization
2. Type of fibres used (Asbestos and others) and preference of selection from techno-environmental angle should be furnished
3. As asbestos is used in several products and as the level of precautions differ from milling to usage in cement products, friction products gasketing, textiles and also differ with the process used, it is necessary to give process description and reasons for the choice for selection of process
4. Technology adopted, flow chart, process description and layout marking areas of potential environmental impacts
5. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
6. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environmental status.
7. In case of expansion project asbestos fibre to be measured at slack emission and work zone area, besides base line air quality.
8. In case of green field project asbestos fibre to be measured at ambient air.

**ADDITIONAL ToRs FOR METALLURGICAL INDUSTRY (FERROUS AND NON-FERROUS)**

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Emission from sulphuric acid plant and sulphur muck management.
3. Details on installation of Continuous Emission Monitoring System with recording with proper calibration system
4. Details on toxic metals including fluoride emissions
5. Details on stack height.
6. Details on ash disposal and management
7. Complete process flow diagram describing process of lead/zinc/copper/ aluminium, *etc.*
8. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
9. Details on Holding and de-gassing of molten metal from primary and secondary aluminium, materials pre-treatment, and from melting and smelting of secondary aluminium
10. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
11. Trace metals in waste material especially slag.
12. Plan for trace metal recovery
13. Trace metals in water

## **Executive Summary**

Executive summary of the report in about 8-10 pages incorporating the following:

- i. Project name and location (Village, Dist, State, Industrial Estate (if applicable))
- ii. Products and capacities. If expansion proposal, then existing products with capacities and reference to earlier EC.
- iii. Requirement of land, raw material, water, power, fuel, with source of supply (Quantitative)
- iv. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes. Materials balance shall be presented.
- v. Measures for mitigating the impact on the environment and mode of discharge or disposal.
- vi. Capital cost of the project, estimated time of completion
- vii. Site selected for the project – Nature of land – Agricultural (single/double crop), barren, Govt/private land, status of its acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility, (note – in case of industrial estate this information may not be necessary)
- viii. Baseline environmental data – air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
- ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
- x. Likely impact of the project on air, water, land, flora-fauna and nearby population
- xi. Emergency preparedness plan in case of natural or in plant emergencies
- xii. Issues raised during public hearing (if applicable) and response given
- xiii. CSR plan with proposed expenditure.
- xiv. Occupational Health Measures
- xv. Post project monitoring plan

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**Email**

**Sundar Ramanathan**

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**Re: DRAFT MOM OF THE EAC MEETING HELD ON 30/04/2021**

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**From :** cnpandey@iitgn.ac.in

Mon, May 10, 2021 12:58 PM

**Subject :** Re: DRAFT MOM OF THE EAC MEETING HELD ON  
30/04/2021

📎 1 attachment

**To :** Sundar Ramanathan <r.sundar@nic.in>

Dear Mr. Sundar,

The approved MoM for 35th EAC meeting held on 30th April,2021 is sent herewith. Please take further necessary action for putting it on PARIVESH.

With regards,

C. N. Pandey.