GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-1 SECTOR)

*****

Date of Zero Draft MoM sent to Chairman/EAC: 20/05/2022
Approval by Chairman: 24/05/2022

MINUTES OF THE 5th EXPERT APPRAISAL COMMITTEE (INDUSTRY-1 SECTOR) MEETING HELD ON MAY 12-13, 2022

Venue: **Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)**

Time: **10:30 AM onwards**

DAY-1: MAY 12, 2022 [THURSDAY]

(i) Opening Remarks by the Chairman, EAC

Shri Rajive Kumar, Chairman EAC welcomed the Committee members and opened the EAC meeting for further deliberations.

The Chairman and other EAC members thanked the outgoing Member Secretary, Shri Sundar Ramanathan, Scientist E, MoEF&CC for his intelligent and outstanding contribution towards conducting the EAC meetings and welcomed the new Member Secretary, Dr. R. B. Lal, Scientist 'E', MoEF&CC.

The Chairman also appreciated the efforts of the EAC and Ministry's Team (Industry 1 Sector) for preparation and uploading the agenda of the EAC meetings and draft record of discussion very scientifically, systematically and timely on Parivesh Portal.

(ii) Details of Proposals and Agenda by the Member Secretary

Dr. R. B. Lal, Scientist 'E' & Member Secretary, EAC (Industry-1 Sector) appraised to the Committee about the details of Agenda items to be discussed during this EAC meeting.

(iii) Confirmation of the Minutes of the 4th Meeting of the EAC (Industry-1 Sector) held during April 27-28, 2022 at MoEF&CC through VC.

The EAC, having taken note that final minutes were issued after incorporating comments offered by the EAC (Industry-1 Sector) members on the minutes of its **4th Meeting of the EAC (Industry-1 Sector) held during April 27-28, 2022** conducted through Video Conferencing (VC), and one request has been received for modifications, in the minutes of the project/activities, as below.

<u>Correction in the minutes of the EAC meeting w.r.t.</u> Proposed set up of 3x9 MVA Ferro Alloy plant and 30 TPD Sinter Plant with jaw crusher by M/s. Nilkanth Ferro Limited located at Village Radhamadhavpur, Tehsil Gangajalghati, District Bankura, West Bengal. [Online Proposal No. IA/WB/IND/255995/2021, File No. J-11011/10/2011-IA.II(I)] – Environment Clearance– regarding.

The instant EC proposal was recommended by the EAC in its 4th meeting held during 27-28th April, 2022. The Minutes were uploaded on Parivesh Portal on 06.05.2022. Further, PP vide e-mail dated 12.05.2022 requested for correction/amendment in various specific conditions imposed by EAC. w.r.t. project.

S. No.	Page No. of Minutes	Specific Points	Information as per Minutes of Meeting	Details to be Corrected	Justification/ Remarks and deliberation of the EAC
1.	Page no. 59	A. Specific Condition: ix	ix. 4th hole extraction system shall be provided in the Sub Merged Arc Furnaces.	ix. Extraction system shall be provided in the Sub Merged Arc Furnaces.	PP mentioned that there submerged arc furnace is open type with fume collection hood were 4th hole extraction system is not possible. The EAC found the request of PP in order and accepted the same.
2.	Page no. 59	A. Specific Condition: x.	x. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.	Deletion of this point	PP mentioned that this point is not applicable since they are Sintering manganese ore fines in small pallets of 1 m x 1 m size and there is no enclosure to retain the heat of the air above the pallet. The EAC deliberated the issue and accepted the request of PP as it was found in order.

Deliberations by the EAC:

It was informed to the Committee that the instant EC proposal was earlier recommended by the EAC in its 4th meeting held during 27-28th April, 2022.

The EAC, after detailed deliberations, noted that the request of PP may be accepted and **recommended** for the incorporation of the above mentioned corrections/modifications in the minutes of the meeting.

The EAC also noted that no other request has been received for modifications/factual correction, in the minutes of the 4th EAC meeting for the project/activities, and confirmed the same.

Details of the proposals considered during the meeting **conducted through Video Conferencing (VC)**, deliberations made and the recommendations of the Committee are explained in the respective agenda items as under:

Consideration of Environmental Clearance Proposals

Agenda No. 5.1

5.1 **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–Consideration of Environmental Clearance.**

[Proposal no. IA/CG/IND/208264/2021; File no. IA-J-11011/154/2021-IA-II(I)]

5.1.1 M/s Karnikripa Power Private Limited has made an online application *vide* proposal no. IA/CG/IND/208264/2021 dated 19/04/2022 along with copy of EIA/EMP Report, Form - 2 and seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous), 2(b) Mineral Beneficiation and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

5.1.2 Name of the EIA consultant: M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 138, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0148; valid upto 21/09/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.1.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
08/04/2021	35th EAC held on 30th April 2021	TOR issued	17/05/2021	16/05/2025

5.1.4 The project of M/s Karnikripa Power Private Limited located in Khairjhitti & Koajhar Village, Mahasamund Tehsil & District, Chhattisgarh State 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 2x9 MVA (FeSi-14000 TPA/ FeMn-50400 TPA/ SiMn-28800 TPA/ FeCr-30000 TPA), WHRB based Power Plant – 50 MW (4x12.5 MW), FBC based Power Plant - 24 MW(2x6 MW & 1x12 MW) & Brick Manufacturing unit (58,000 Bricks/Day) & Briquetting Plant (200 Kg/hr).

5.1.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>50.57 ha (124.95 Acres) [Private 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 dated 27/03/2021 to facilitate expeditious grant of approvals for proposed Steel plant at Khairjhitti & Koajhar Villages. Mahasamund Tehsil & District.</td><td>Land Use: Agriculture</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>24.8 Ha. (61.28 Acres) is in possession of management and agreements have been entered for remaining 25.77 Ha. (63.67 Acres).</td><td>--</td></tr>
<tr><td>iii.</td><td>Existence of habitation &involvement of R&R, if any.</td><td>No habitation exists in the project site
Study Area:
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Khairjhit</td><td>0.5 km</td><td>SE</td></tr>
<tr><td>Tenduwahi Alias Nawagaon</td><td>0.7 km</td><td>NE</td></tr>
<tr><td>Gopalpur</td><td>1.2 km</td><td>SSW</td></tr>
</table></td><td>--</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>
<table>
<tr><th>S No</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1.</td><td>21°12'28.18"N</td><td>82° 8'39.08"E</td></tr>
<tr><td>2.</td><td>21°12'32.06"N</td><td>82° 8'33.26"E</td></tr>
<tr><td>3.</td><td>21°12'38.75"N</td><td>82° 8'26.88"E</td></tr>
<tr><td>4.</td><td>21°12'42.24"N</td><td>82° 8'26.73"E</td></tr>
<tr><td>5.</td><td>21°12'37.84"N</td><td>82° 8'6.70"E</td></tr>
<tr><td>6.</td><td>21°12'49.39"N</td><td>82° 8'7.08"E</td></tr>
<tr><td>7.</td><td>21°12'56.72"N</td><td>82° 8'12.34"E</td></tr>
<tr><td>8.</td><td>21°12'59.15"N</td><td>82° 8'19.25"E</td></tr>
<tr><td>9.</td><td>21°12'58.36"N</td><td>82° 8'27.31"E</td></tr>
<tr><td>10.</td><td>21°13'3.12"N</td><td>82°8'29.91"E</td></tr>
<tr><td>11.</td><td>21°12'45.59"N</td><td>82° 8'37.23"E</td></tr>
<tr><td>12.</td><td>21°12'33.93"N</td><td>82° 8'37.66"E</td></tr>
<tr><td>13.</td><td>21°12'29.58"N</td><td>82° 8'40.81"E</td></tr>
<tr><td>14.</td><td>21°12'32.22"N</td><td>82° 8'40.72"E</td></tr>
<tr><td>15.</td><td>21°12'35.99"N</td><td>82° 8'38.48"E</td></tr>
<tr><td>16.</td><td>21°12'41.80"N</td><td>82° 8'38.30"E</td></tr>
<tr><td>17.</td><td>21°12'40.09"N</td><td>82° 8'43.20"E</td></tr>
<tr><td>18.</td><td>21°12'37.83"N</td><td>82° 8'44.49"E</td></tr>
<tr><td>19.</td><td>21°12'35.38"N</td><td>82° 8'42.11"E</td></tr>
</table></td><td>--</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>274 to 281 m AMSL</td><td>--</td></tr>
<tr><td>vi.</td><td>Involvement of Forest Land, if any</td><td>No Forest land is involved in the project site.</td><td>--</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project Site</u>:
<table><tr><th>Water Body</th><th>Distance</th></tr><tr><td>Unused Canal</td><td>Ending into the project site (in South West Direction)</td></tr><tr><td>Tributary of Dhaskut Nala</td><td>Passing through the site on the Eastern side.</td></tr></table>
<u>Study area:</u>
<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Water pond</td><td>0.4 km</td><td>ESE</td></tr><tr><td>Water Pond</td><td>0.35</td><td>NNE</td></tr><tr><td>Kurar river</td><td>2.6 Km</td><td>South</td></tr><tr><td>Kurar Water Reservoir</td><td>3.8 Km</td><td>SE</td></tr><tr><td>Mahanadi river</td><td>8.5 Km</td><td>NW</td></tr></table></td><td>Land scaping will be done on both sides of Nala along with measures for soil stabilization including development of lawns with shrubs with 15 m width. Moreover, no process activity is proposed on the East side of the stream and same will be utilised for greenbelt (ecological park) & other non-process activity.</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA / National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve/ Elephant Reserve etc. if any within the study area</td><td>NIL
However, following forests are located within study area:
Tumgaon RF: 0.5 Km – SW
Sirpur RF: 1.28 Km – East
Kukradih RF: 3.8 Km – NW
Sorid PF: 4.1 Km – S
Loharidih PF: 7.6 Km – SE</td><td>---</td></tr>
</table>

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

S. No.	Plant Equipment/ Facility	Unit	Configuration	Capacity	Remarks
1	Iron ore Beneficiation (Beneficiated ore)	TPA	--	8,00,000 (Throughput)	--
2	Pellet Plant (Pellet)	TPA	--	6,00,000	--
3	DRI Kilns (Sponge Iron)	TPA	4x500 TPD	6,60,000	--
4	Induction Furnace (Billets / Ingots / Hot Billets)	TPA	6x15 T	2,97,000 TPA	--

S. No.	Plant Equipment/ Facility	Unit	Configuration	Capacity	Remarks
5	Rolling Mill (TMT bars / Structural Steel)	TPA	1x1100 TPD	3,63,000 TPA	(85 % Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)
6	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr)	TPA	2x9 MVA	FeSi-14,000 or FeMn-50,400 or SiMn-28,800 or FeCr-30,000	--
7	Brick Manufacturing Unit	Bricks / Day	--	58,000	--
8	Briquetting Plant*		200 Kg/Hr	--	--
9	Power Plant	MW	WHRB: 4x12.5 FBC: 2 x 6 MW + 1 x 12 MW	74	--
Note: * As stipulated in TOR letter vide Additional TOR no. vii					

5.1.7 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 Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
1.	**For Iron Ore Beneficiation Plant (8,00,000 TPA – throughput capacity)**				
a)	Iron ore fines	8,00,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)
2.	**For Pellet Plant (Pellets) - 6,00,000 TPA**				
a)	Iron Ore Concentrate	6,20,000	Own generation	---	Through covered conveyers
b)	Bentonite	4,800	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Limestone	9,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
d)	Anthracite Coal	6,000	SECL Chhattisgarh /	~ 500 Kms.	By rail & road

S. No.	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
				MCL Odisha		(through covered trucks)
3.	**For DRI Kilns (Sponge Iron) – 6,60,000 TPA**					
a)	Pellets (100 %)		9,90,000	Own generation & purchased from outside	---	Through covered conveyers & By road (through covered trucks)
	or					
b)	Iron ore (100%)		10,56,000	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
c)	Coal	Indian	8,58,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	5,50,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route &by road (through covered trucks)
d)	Dolomite		33,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
4.	**For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 2,97,000 TPA**					
a)	Sponge Iron		3,00,000	Own generation	---	Through covered conveyers
b)	MS Scrap / Pig Iron		45,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	Ferro alloys		15,000	Own generation	---	By road (through covered trucks)
5.	**For Rolling Mill through Hot charging (Rolled Products) – 3,63,000 TPA**					
a)	Hot Billets / Billets / Ingots		3,88,400	Own generation	---	----

S. No.	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
b)	LDO / LSHS		20,000 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
6.	**For FBC Boiler [Power Generation 2 x 6 MW & 1 x 12 MW]**					
a)	Indian Coal (100 %)		1,42,560	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
b)	Imported Coal (100 %)		91,381	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
	OR					
c)	Dolochar + Indian Coal	Dolochar	1,98,000	In plant generation	---	through covered conveyors
		Indian Coal	43,560	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
d)	Dolochar + Imported Coal	Dolochar	1,98,000	In plant generation	---	through covered conveyors
		Indian Coal	26,208	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
7.	**For Ferro Alloys (2 x 9 MVA)**					
6 (i)	*For Ferro Silicon – 14,000 TPA*					
a)	Quartz		24300	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
b)	LAM coke		18900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

S. No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
c)	MS Scrap / Mill scales	4230	Inhouse Generation	---	By road (through covered trucks)
d)	Electrode paste	360	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
e)	Bagfilter dust	200	Own generation	---	---
6 (ii)	*For Ferro Manganese – 50,400 TPA*				
a)	Manganese Ore	68400	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM coke	19800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite	8100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill scales	7200	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode Paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	1000	Own generation	---	---
6 (iii)	*For Silico Manganese – 28,800 TPA*				
a)	Manganese Ore	48600	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
b)	LAM Coke	16200	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn. Slag	30294	In house generation	---	----

S. No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
d)	Dolomite	7380	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	7740	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bagfilter dust	200	Own generation	---	---
6 (iv)	*For Ferro Chrome – 30,000 TPA*				
a)	Chrome Ore	56700	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	19800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	8100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	2700	Inhouse Generation	---	By road (through covered trucks)
e)	Magnesite / Bauxite	5400	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	540	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	1200	Own generation	---	---

5.1.8 The water requirement for proposed project is estimated as 2155 m^3/day and same will be sourced from the Kurar River, which is at distance of 2.6 Kms. Application has been submitted to Water drawl permission from Water Resource Department, Chhattisgarh and same is under process. State Investment Promotion Board (SIPB) has issued an assurance letter as per MoU enter with Govt. of Chhattisgarh, for supply of water from Kurar River vide letter no. 967/SIPB/2021/784, dated 27/08/2021.

5.1.9 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.

5.1.10 Baseline Environmental Studies:

Period	1st March, 2021 to 31st May, 2021
AAQ parameters at 8 locations	$PM_{2.5}$ = 20.1 to 30.9 µg/m^3 PM_{10} = 33.4 to 51.5 µg/m^3 SO_2 = 6.9 to 11.5 µg/m^3 NO_x = 7.2 to 14.6 µg/m^3 CO= 375 to 865 µg/m^3
Incremental GLC	PM_{10} =1.73 µg/m^3 (1815 m in NE) SO_2= 8.58 µg/m^3 (2600 m in NE) NO_x= 10.23 µg/m^3(1915 m in NE) CO = 3.68 µg/m^3
Ground water quality at 8 locations	pH: 7.3 to 7.8 TSS:1.2 to 2.3 mg/l TDS: 264 to 448 mg/l Total Hardness: 190 to 295 mg/l Chlorides: 115 to 206 mg/l Fluoride: 0.25 to 0.35 Heavy metals (Iron -Fe): 0.021 to 0.029 mg/l
Surface water quality at 7 locations	pH: 7.2 to 7.8, DO (in mg/l): 4.4 to 7.6, TDS (in mg/l): 174 to 255, BOD (in mg/l): 2.1 to 3.5, COD (in mg/l): 7.7 to 14
Noise levels (Day and Night)	The equivalent day-night noise levels in the study zone are ranging from 41.26 dBA to 57.57 dBA during the study period.
Traffic assessment study findings	Traffic load (Baseline) : 9005 PCU/day Additional Traffic load during operation of the proposed project : 2650 PCU/day Total Traffic load during operation of proposed project load : 11955 PCU/day • Traffic Capacity as per the IRC 73: 1980 for highways road is 20000 PCU/day. Hence existing road can cater to this additional traffic due to the proposed project. **Level of Service (LOS) of the Road as per IRC 37: 1980** **V/C** | **LOS** | **Performance**

	<table><tr><td>0.0 – 0.2</td><td>A</td><td>Excellent</td></tr><tr><td>0.2 – 0.4</td><td>B</td><td>Very Good</td></tr><tr><td>0.4 – 0.6</td><td>C</td><td>Good</td></tr><tr><td>0.6 – 0.8</td><td>D</td><td>Fair/ Average</td></tr><tr><td>0.8 – 1.0</td><td>E</td><td>Poor</td></tr><tr><td>1.0 & Above</td><td>F</td><td>Very Poor</td></tr></table>The Level of Service (LOS) of the Road = 11955 / 20,000 = 0.59 As per the above the LOS of the ROAD is categorised under 'C', which implies "GOOD". Hence the existing road is capable of taking the additional traffic load.
Flora and fauna	No schedule-1 fauna and endangered species of flora within the study area.

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

S No	Waste / By product	Quantity (TPA)	Proposed method of disposal	Agreement Details of Disposal
A	**Solid waste**			
1.	Tailing from I/O Beneficiation	2,00,000	Will be taken to filter press & recovered the water. Cake of tailing will be stored in tailing yard & it will give to nearby Ceramic Unit.	--
2.	Ash from Pellet Plant	18,000	Will be utilized in the proposed Brick Manufacturing Unit	Own Brick making unit
3.	Ash from DRI	1,18,800	Will be utilized in the proposed Brick Manufacturing Unit	Own Brick making unit
4.	Dolochar	1,98,000	Will be used in proposed FBC power plant as fuel.	Used as fuel in captive FBC boiler
5.	Kiln Accretion Slag	5,940	Will be used in road construction & utilized in the proposed brick manufacturers.	Own Brick making unit
6.	Wet scrapper sludge	30,360	Will be used in road construction & utilized in the proposed brick manufacturers.	Own Brick making unit
7.	SMS Slag	29,700	Slag from SMS will be crushed and iron will be recovered & then remaining non - magnetic material being inert by nature will be used as sub base material in road construction.	For laying Internal Roads & Own Brick making unit
8.	End Cuttings from Rolling Mill	10,890	Will be reused in the SMS	Recycled to IF

S No	Waste / By product	Quantity (TPA)	Proposed method of disposal	Agreement Details of Disposal
A	**Solid waste**			
9.	Mill scales from Rolling Mill	7,260	Mill scales will be utilized proposed Ferro alloys manufacturing units.	Own Ferro Alloys unit
10.	Ash from Power Plant (with Indian Coal + dolochar)	1,38,402	Will be utilized in the proposed brick manufacturing unit	Own Brick making unit
11.	Slag from FeMn	30,294	Will be reused in manufacture of SiMn as it contains high SiO_2 and Silicon.	--
12.	Slag from FeSi	1,000	Will be given to Cast iron foundries	--
13.	Slag from SiMn	30888	will be used for Road construction / will be given to slag cement manufacturing	--
14.	Slag from FeCr	27,918	Will be processed in Zigging plant for Chrome recovery. After Chrome recovery, the left-over slag will be analyzed for Chrome content through TCLP test, if the Chrome content in the slag is within the permissible limits, then it will be utilized for Road laying /brick manufacturing. If Chrome content exceeds the permissible limits, it will be sent to nearest TSDF.	--
B	**Hazardous waste Generation**			
15.	Used Oil &Waste Oil	35 KL/ Annum	will be given to CECB approved Recyclers.	--
16.	Used batteries	--	will be given back to the supplier under buyback arrangement	--

5.1.12 Public Consultation:

Details of advertisement given	05/09/2021; Punjab Keshari and NayiDuniya
Date of Public Consultation	07/10/2021
Venue	Project Site, Khairjhitti Village, Tehsil & District Mahasamund, Chhattisgarh
Presiding Officer	Additional District Magistrate, District Mahasamund
Major issues raised	• Pollution Problem • Employment • Greenbelt development • Social & infrastructural development activities

Table: Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

S. No.	Major Activity Heads	Years			Total Expenditure
		(Rs. In Crores)			(Rs. In Crores)
		1st	2nd	3rd	
A	**Based on need based & SIA study**				
1	**Community & Infrastructure Development Programmes**				
	· Construction of Public Toilets 10 nos. (2 nos. in Khairjhiti Village, 2 nos. in Bhoring Village, 2 nos. in Kauwjhar Village, 2 nos. in Pirda Village and 2 nos. in Tumgaon Village) @ 3.0 lakhs	0.12	0.12	0.06	0.30
	· Providing LED Street light with solar panel in 10 no. of villages (15 no. in each village) of Khairjhitti, Bhoring, Kauwjhar, Pirda, Tumgaon, Malidih, Gurudih, Kukradih, Tenduwahi, Amawas) @ Rs. 3.0 Lakhs.	0.12	0.09	0.09	0.30
	· Providing proper drainage & sanitation facilities in 5 nos. of villages (Khairjhitti, Bhoring, Kauwajhar, Malidih, Gurudhi village) @ Rs. 15 Lakhs	0.30	0.30	0.15	0.75
	· Providing 1 no. of Grabage collection van in each village of Tumgaon, Khairjhitti, Kauwajhar, Bhoring& Acholi villages @ Rs.5.0 Lakhs for each van	0.10	0.10	0.05	0.25
2	**Education**				
	· Providing furniture, computers, library, sports equipment etc. for nearby local schools of 5 villages (Tumgaon, Acholi, Bhoring, Birkoni, Chhaporadih) @Rs. 10.0 Lakhs in each village	0.20	0.20	0.10	0.50
	·Providing Model Anganwadi Centre in consultation with State Women and Child Development Department in Tumgaon, Khairjhitti&Achholi @ Rs.10.0 Lakhs	0.10	0.10	0.10	0.30
	· Construction of 2 rooms each in school (Tumgaon&Khairjhitti) of size 8m x 5m x3 m @ Rs. 10 Lakhs per room)	0.2	--	0.2	0.40
	· Construction of 2 nos. of multiple toilets in the schools of each of 5 villages (Tumgaon, Acholi, Bhoring, Birkoni, Chhaporadih) @Rs. 2.5 Lakhs per toilet i.e Rs. 15.0 Lakhs	0.10	0.10	0.05	0.25
	· Distribution of tricycles to handicapped students (In Mahasamund Mandal) 100 nos. @ Rs.5,000	0.05	---	---	0.05
3	RWH pits & De-Siltation of ponds (5 nos. in each village) in the surrounding in 3 nos. of villages of Khairjhitti, Kauwajhar, Tumgaon, Bhoring, Achholi) @ 5.0 Lakhs each	0.25	0.25	0.25	0.75
	Sub total based on SIA	**1.54**	**1.26**	**1.05**	**3.85**
B	**Based on Public Consultation / Hearing**				

S. No.	Major Activity Heads	Years			Total Expenditure
		(Rs. In Crores)			(Rs. In Crores)
		1st	2nd	3rd	
1	Impart training to the local villagers for skill development: DISHA Centre" along with necessary infrastructure for various vocational training program for employment generation in association with National Skill Development Mission (Automobile Repair, Welding, Electrical, Computer Hardware, Soft skills like computer programs etc.) in Khairjhitti, Kauwajhar, Malidih, Tumgaon, Bhoring	0.50	0.80	0.90	2.20
2	Assistance will be provided to Women Self Help groups in the Khairjhitti, Kauwajhar, Malidih, Tumgaon, Bhoring villages (Rs. 15 Lakhs)	0.30	0.15	0.30	0.75
3	**Sports Development** ➢ Providing Sports kits (100 nos.) for each chools in Tumgaon, Khairjhitti & Achholi	0.03	0.03	0.03	0.09
	➢ Creation of facilities for volleyball, shuttle badminton in Tumgaon, Khairjhitti & Achholi	0.02	0.02	0.02	0.06
	➢ Conducting sports meets	0.05	0.05	---	0.10
4	**Educational development** ➢ Construction of toilets in Tumgaon, Khairjhitti & Achholi (2 nos. in each village)	0.04	0.04	0.04	0.12
	➢ Construction of rooms in school in Khairjhitti & Achholi (2 rooms in each village of size 8 m x 6 m x 4 m each)	0.10	0.10	---	0.20
	➢ Providing Furniture & library facilities in schools (Tumgaon, Khairjhitti villages)	0.06	0.06	---	0.12
5	**Health facilities development**: ➢ Establishment of Primary health center	0.60	--	--	0.60
	➢ Providing ambulance	0.10	--	---	0.10
	Subtotal based on PH	**1.80**	**1.25**	**1.29**	**4.34**
	Subtotal based on SIA	**1.54**	**1.26**	**1.05**	**3.85**
	Grand total based on SIA & PH	**3.34**	**2.51**	**2.24**	**8.09**
C	**Recurring expenditure under CSR as per Companies Act 2014**				
1	Health checkup & distribution of general medicines will be carried out periodically in surrounding villages @ Rs 5.0 Lakhs every year				

5.1.13 The capital cost of the project is Rs.880 Crores and the capital cost for environmental protection measures is proposed as Rs.72.14 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.2.13 Crores. The employment generation from the proposed project is 850 nos. The details of cost for environmental protection measures is as follows:

S. No.	Particulars	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
1.	**Air Emission Management**		
	Electro Static Precipitators	2100.00	100.00

S. No.	Particulars	Capital Cost (Rs.in Lakhs)	Recurring Cost / Annum (Rs.in Lakhs)
	4th Hole (for SEAF) & Fume Extraction Systems with Bag filters for SMS facility	1000.00	50.00
	Other APCS (SOx & NOx control) &Conveyers systems	800.00	1.00
	Stacks / Chimney	1000.00	2.00
	CEMS (17 nos.)	60.00	1.00
	CAAQMS (4 nos.)	160.00	0.50
	Mechanical Dust Sweepers (16 nos)	80.00	1.00
	Water Sprinklers	50.00	0.50
	Environment Monitoring	---	10.00
	Sub Total	**5250**	**166.00**
2.	**Wastewater Management**		
	ETP	200.00	4.00
	STP	50.00	1.00
	Drainage system	75.00	0.05
	Settling Ponds	20.00	0.50
	Sub Total	**345**	**5.55**
3.	**Solid waste Management**		
	Ash Handling & Disposal (Pneumatic conveyer system)	400.00	4.00
	Hazardous waste storage & disposal	10.00	1.00
	Construction of Pucca platform for storage	50.00	0.50
	Sub Total	**460**	**5.50**
4.	**Greenbelt development, Land scaping, Noise Management, RWH etc.**	**200.00**	**6.00**
5.	**Occupational Health & Safety (including Dispensary with Ambulance facility)**	**150.00**	**30.00**
6	**Social & Infrastructural development**	**809.00**	**---**
TOTAL		**7214.00Lakhs**	**213 Lakhs/annum**

5.1.14 Greenbelt will be maintained in 16.69 Ha. (41.2 acres) of land. 3 tiers greenbelt around plant boundary will be developed as per CPCB/ MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare.

5.1.15 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.

5.1.16 The project proponent had earlier applied for EC vide proposal no. IA/CG/IND/208264/2021 vide dated 05/03/2022 and the proposal was considered 2nd meeting of the EAC (Industry-I) held on 22nd – 23rd March, 2022 wherein the Committee returned the proposal in its present form due to technical deficiencies in the proposal.

5.1.17 The project proponent has again applied for EC vide proposal no. IA/CG/IND/208264/2021 dated 19/04/2022 addressing the issues and the proposal is considered in the 5th meeting of the

EAC held on 12-13th May, 2022. The observations and recommendations of the EAC are as follows:

5.1.18 During the meeting, project proponent submitted written submission on the following points:

i. PP has given undertaking that Khairjhiti Village, Bhoring Village, Pirda Village, Kauwjhar Village, Tumgaon Village, Tenduwahi, Kukradih, and Amawas villages will be adopted to implement various CSR activities as 3 nos of villages in the First year, 3 nos of villages in the Second year & 2 nos of villages in the Third year.
ii. PP confirm that it will commence construction only after obtaining NOC from water resources Department, Govt. of Chhattisgarh, with respect to canal entering in South West direction and ending within the project site.
iii. PP has submitted the revised water balance plan.
iv. PP confirmed that they will commence the Greenbelt development with effect from July, 2022.

Deliberations by the Committee

5.1.19 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

4. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

5. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.

6. The Committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found satisfactory.

7. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

8. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

9. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

10. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

5.1.20 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. Specific Conditions:

i. The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

ii. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

iii. The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

iv. The seasonal nallah passing through the project site shall not be disturbed. Landscaping shall be done on both embankments, with green belt covering 10 m land on both sides of the nallah. This shall be in addition to the 33% green belt development.

v. Tailings from Iron Ore beneficiation plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.

vi. TCLP analysis of the slag samples shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, slag shall be utilized at project site for brick manufacturing and construction work after the recovery of metal.

vii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.

viii. Three tier Green Belt shall be developed in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. In addition, PP shall provide 50-meter-wide green belt towards Reserve

Forest located at 0.50 km from project site. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

ix. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

x. Solid waste utilization
   a. PP shall install a fly ash brick making plant.
   b. PP shall recycle/reuse 100 % solid waste generated in the plant.
   c. Used refractories shall be recycled as far as possible.

xi. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or LSHS as a fuel.

xii. Following additional arrangements to control fugitive dust shall be provided:
   a. Fog / Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
   b. Proper covered vehicle shall be used while transport of materials.
   c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.

xiii. Dust emission from all the stacks shall be less than 30 mg/Nm^3.

xiv. The water requirement after the proposed project is estimated as 2155 m^3/day and shall be met from Kurar River with permission from competent authority. No ground water abstraction is permitted.

xv. Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.

xvi. The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary.

xvii. Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.

xviii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

B. General Conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled.
ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.

ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt Khairjhiti Village, Bhoring Village, Pirda Village, Kauwjhar Village, Tumgaon Village, Tenduwahi, Kukradih, and Amawas villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Agenda No. 5.2

5.2 **Expansion of Clinker production (2.5 to 3.4 MTPA) & Cement (OPC/PPC/PSC/Composite Cement) & GGBS (4.8 to 6.0 MTPA) and Captive Power Plant (18 MW) by M/s JSW Cement Limited located at Village Bilakalagudur, Mandal Gadivemula, District Kurnool, Andhra Pradesh– Consideration of Environmental Clearance.**

[Proposal No. IA/AP/IND/267226/2020, File No. J-11011/889/2007-IA-II-(I)]

5.2.1 M/s JSW Cement Limited has made an online application *vide* proposal no. IA/AP/IND/267226/2020 dated 21/04/2022 along with copy of EIA/EMP Report, Form - 2 and Certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of

the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cement Plants and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

5.2.2 Name of the EIA consultant: M/s. B.S. Envi Tech Pvt. Ltd. [Sl. No. 144, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0174; valid upto 16/11/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.2.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
03/12/2019	14th Meeting held on 23-24th December, 2019	Terms of Reference	10/02/2020	09/02/2024

5.2.4 The project of M/s JSW Cement Limited located in Bilakalagudur Village, Gadivemula Mandal, Kurnool District, Andhra Pradesh is for expansion of clinker production capacity from 2.5 MTPA to 3.4 MTPA and Cement (Ordinary Portland Cement (OPC)/Portland Pozzolona Cement (PPC)/Portland Slag Cement (PSC)/Composite Cement (CC)/ Ground Granulated Blast-furnace Slag (GGBS)) capacity from 4.8 to 6.0 MTPA with installation of 18 MW Coal Based Captive Power.

5.2.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>263.05 Ha.</td><td>Land use:
<table>
<tr><th>S. No.</th><th>Details</th><th>Before Expansion</th><th>After Expansion</th></tr>
<tr><td>1</td><td>Cement Plant Built-up area</td><td>80.85</td><td>82.85</td></tr>
<tr><td>2</td><td>Vacant land (for future expansion)</td><td>62.02</td><td>47.58</td></tr>
<tr><td>3</td><td>Road area</td><td>3.43</td><td>5</td></tr>
<tr><td>4</td><td>Solar Plant</td><td>10.17</td><td>10.17</td></tr>
<tr><td>5</td><td>CPP</td><td>10*</td><td>10</td></tr>
<tr><td>6</td><td>Proposed CPP</td><td>0</td><td>3.5</td></tr>
<tr><td>7</td><td>Area for Plantation/ Greenbelt</td><td>91.58</td><td>98.95</td></tr>
<tr><td>8</td><td>Colony</td><td>5</td><td>5</td></tr>
<tr><td colspan="2">TOTAL AREA</td><td>263.05</td><td>263.05</td></tr>
<tr><td colspan="4">* 18 MW existing CPP has been transferred to M/s JSW Energy Ltd.</td></tr>
</table></td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>The total land of 263.05 Ha is under the possession of JSWCL. The expansion is planned to be executed within the existing premises and no additional land will be acquired.</td><td>-</td></tr>
<tr><td>iii.</td><td>Existence of habitation &</td><td>No R&R is involved</td><td>-</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>involvement of R&R, if any.</td><td></td><td></td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>S. No.</th><th>Latitude N''</th><th>Longitude E''</th></tr><tr><td>A</td><td>15°40'36.61"N</td><td>78°27'16.02"E</td></tr><tr><td>B</td><td>15°41'12.97"N</td><td>78°27'10.27"E</td></tr><tr><td>C</td><td>15°41'39.49"N</td><td>78°27'12.39"E</td></tr><tr><td>D</td><td>15°41'26.99"N</td><td>78°28'12.96"E</td></tr><tr><td>E</td><td>15°40'33.31"N</td><td>78°27'58.99"E</td></tr><tr><td>F</td><td>15°40'30.74"N</td><td>78°27'45.50"E</td></tr></table></td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>252 m above msl</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No Forest Land Involved</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>An irrigation canal exists within the project site.

Water bodies within Study area
1. Kunderu River – 2.1 km - WSW
2. Kurnool Cuddapah Canal – 2.8 km – E
3. SRBC Canal – 3.6 km – SW
4. Gal Eru – 7.8 km – ESE
5. Alaganuru Balancing Reservoir – 4.62 – WNW</td><td>No mitigation mesures submitted by PP.</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil.

Nearest Reserved Forests:
1. Gani RF – 3.1 km – SW</td><td>-</td></tr>
</table>

5.2.6 JSWCL received the first Environmental Clearance from MOEF&CC vide No. J-11011/889/2007-IA-II(I) dated 25/08/2008. The Chronology of EC is as follows:

S. No.	Clearances	Capacity
1.	**Cement Plant EC-1**	Clinker: 2.0 MTPA, Cement: 2.2 MTPA (PSC &

S. No.	Clearances	Capacity
	from MOEFCC vide No. J-11011/889/2007-IAII(I) dt 25.08.2008	OPC – 1.1 MTPA Each), & Captive Power Plant (CPP): 2x18MW.
2.	**Cement Plant EC-2 (Installation of Slag Grinding Unit)** from MOEFCC vide No. J-11011/159/2010-IAII(I) dt 13.05.2011	Expansion of Cement Grinding unit from 2.2 MTPA to 4.8 MTPA by setting up of 2.60 MTPA slag grinding unit.
3.	**Cement Plant EC-3** from MOEFCC vide No. J-11011/889/2007-IAII(I) dt. 09.03.2016	Enhancement of Clinker Production: 2 to 2.5 MTPA and change in product mix from 4.8 MTPA (1.1 MTPA of OPC & 3.7 MTPA of PSC to 4.8 MTPA of OPC/PSC/GGBS
4.	**Cement Plant EC-4** From MOEFCC vide No. J-11011/889/2007-IAII(I) dt. 06.06.2017	Use of Fuel Mix (Pet Coke along with Coal in Different Proportion) in Existing cement plant & Captive Thermal Power Plant, change in boiler Technology AFBC to CFBC, Change of CCS from water Cooled to air Cooled & addition of PPC as Finished Product
5.	**Amendment in EC** F.No. J-11011/889/2007-IAII-(I) dt. 28-01-2021.	Transfer of 18 MW Captive Power Plant to M/s JSW Energy Ltd. from the integrated cement plant

Consent for Operation (CFO) from APPCB has also been obtained vide Order No. APPCB/KNL/KNL/124/HO/CFO/2016 dated 16/08/2016. Later the order was auto renewed on 16/06/2017 extending the validity up to 30/09/2022.

5.2.7 Implementation status of the existing EC

Sl. No.	Facilities	Units	As per EC dated 25/08/2008 & 09/03/2016	Implementation Status as on - 31/03/2022	Production as per CTO
1	Clinker Production	MTPA	2.50	2.50	2.50
2	Cement Production (MTPA) OPC/PPC/GGBS/PSC/ Composite Cement)	MTPA	4.80	4.80	4.80
3	Coal Based Captive Power Plant CPP	MW	2x18	*1x18	CTO is in the name of JSW Energy
**Transferred to JSW Energy vide MOEFCC EC no. F.No. J-11011/889/2007-IA-II-(I) dated 28/01/2021*					

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

Facility	Present Capacity	Proposed Expansion	Capacity After Expansion
Clinker Production (MTPA)	2.50	0.9	**3.4**

Facility	Present Capacity	Proposed Expansion	Capacity After Expansion
Cement Production (MTPA) OPC/PPC/GGBS/PSC/ Composite Cement)	4.80	1.2	**6.0**
Waste Heat Recovery Power Plant (MW)	Nil	*9	***9**
**Coal Based Captive Power Plant CPP (MW)		1x18	**1 X 18 MW**
**EC not required. Consent for Establishment obtained from APPCB.* ***1x18 MW CPP was transferred to M/s JSW Energy Ltd. vide MoEF&CC letter No. F.No. J11011/889/2007-IA-II-(I) dt. 28.01.2021*			

5.2.9 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 material	Existing requirement	Additional requirement	Total requirement after proposed expansion	Source	Distance / Transportation
1.	Limestone	3.65	1.30	4.95	Captive Mine	1 km, belt conveyor
2.	Aluminous Laterite	0.19	0.05	0.24	Kerala	850 km, By rail upto Nandyal/ and by road to plant
3.	Flue Dust	0.08	0.03	0.11	JSW Steel, Bellary	250 km, by road
4.	Red Mud	0.00	0.01	0.01	Belgavi	540 km, by road
5.	Coal – Cement Plant	0.34	0.12	0.46	Imported/ indigenous	237 km (Krishnapatnam Port), By rail upto Panyam and by road to plant
	Coal – Power Plant	0.00	0.12	0.12		
6.	Pet Coke	0.24	0.09	0.33	Imported/ Indigenous	750 km, By rail upto Panyam and by road to plant
7.	BF Slag	2.96	0.15	3.11	JSW Steel, Bellary	250 km, By rail upto Panyam and by road to plant
8.	Fly ash	0.01	0.33	0.34	CPP/Nearby power plant	250 km, by road, closed bulker
9.	Gypsum	0.24	0.06	0.30	Imported/ Chemical	400 km, by road

5.2.10 The existing water requirement of the plant is 1280 m^3/day Additional Water requirement for expansion of cement plant and Captive power plant is 880 m^3/day. JSWCL has obtained permission for withdrawal of 4500 m^3/day water from the State Groundwater Department, AP. Post expansion, the total fresh water requirement will be 2160 m^3/day. Approximately 1500 m^3/day will be sourced from the mine pit harvested water and the balance will be drawn through

bore wells. Groundwater drawl permission obtained from Central Ground Water Authority vide letter No 21-4(15)/SR/CGWA/2008-860 dated 23/06/2008. NOC since 30/12/2014 has been granted by State Groundwater Department, AP. vide Rc. No. 226/D1/2014, dated 30/12/2014.

5.2.11 The peak power requirement of the cement plant after the expansion is 48.5 MW. Presently the power requirement is met from the existing 18 MW power plant of JSW Energy Ltd, 5.5 MW solar power plant, and the grid power. Additional power requirements will be sourced from the new 1X18MW Captive Power Plant, WHRPP, solar plant and APCPDCL with a dedicated 220 kV overhead grid line.

5.2.12 Baseline Environmental Studies:

Period	Winter Season, 2020-2021 (December 2020, January 2021 and February 2021)
AAQ parameters at 08 Locations	• PM_{10} = 43.9 to 63.8 μg/m^3 • $PM_{2.5}$ = 21.4 to 33.6 μg/m^3 • SO_2 = 7.6 to 13.8 μg/m^3 • NOx = 8.1 to 14.5 μg/m^3 • CO: less than 1 ppm
AAQ modelling (Incremental GLC)	**Impact of plant and transportation:** • PM_{10} = 6.18 μg/m^3 - 0.50 km - SW • $PM_{2.5}$ = 2.47 μg/m^3 - 0.50 km - SW • SO_2 = 3.32 μg/m^3 - 0.70 km - N • NOx = 5.69 μg/m^3 - 0.60 km - N • CO = 280 μg/m^3 (along the route) **Model used :** AERMOD – Version 10.1
Ground water quality at 08 locations	• pH = 7.02 – 7.44 • Total Hardness = 335 - 565 mg/l • Chlorides = 78-373 mg/l • Fluoride = 0.73 – 1.21 mg/l • Heavy Metals (Zinc) = 0.12 – 0.94 mg/
Surface water quality at 07 Locations	pH: 7.56 to 7.86; DO: 5.1 to 6.1 mg/l; BOD: 03 to 04 mg/l ; COD from 11 to 22 mg/l
Noise Levels At 08 Locations	50.8 to 69.8dB (A) for the day time 40.3 to 61.3 dB (A) for the Night time.
Traffic assessment study Findings	
• **Traffic study carried out at three locations** 1. Near Railway station, National Highway (NH-18), connecting Kurnool – Chittoor. o Type of Road : Arterial - 4 lane divided (2 way) road o PCU limit : 3600 PCU per hour 2. Poluru Road connecting National Highway (NH-18) – Gadivemula Road o Type of Road : Arterial - 2 lane undivided (one way) concrete road o PCU limit : 1500 PCU per hour 3. Near HPCL Petro Hub, 'Y' Junction connecting Gadivemula Road and Plant site road. o Type of Road : Arterial - 2 lane undivided (one way) concrete road o PCU limit : 1500 PCU per hour • Transportation of raw material, fuel & finished product will be done 50% by road.	

Particulars	Details			Remarks		
	NH-18	**Poluru Road**	**Y' junction gadivamula**	**NH-18**	**Poluru Road**	**Y' junction gadivamula**
Traffic Load Study Period	08-02-2021, 08:00 AM to 08-02-2021, 08:00 PM	09-02-2021, 08:00 AM to 09-02-2021, 08:00 PM	10-02-2021, 08:00 AM to10-02-2021, 08:00 PM	Connecting Kurnool – Chittoor road	National Highway-18 – Gadivemula Road	Gadivamula Road And Plant Site Road
Traffic Load (Baseline) (PCU/Hr) – Max	816 PCU's/hr during 08:00-09:00 AM	215PCU's/hr during 08:00-09:00 AM.	257 PCU's/hr during 0:00-10:00 AM	LOS: B (Very Good)	LOS: A (Excellent)	LOS: A (Excellent)
Additional Traffic Load During Operation Of Project (PCU/Hr) – Max	101PCU/Hr	101PCU/Hr	101PCU/Hr	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)	Maximum trucks which would add to the existing traffic will be 46 trucks / hour (101 PCU/Hr)
Total Traffic Load During Operation Of Existing And Proposed (PCU/Hr) – Max	968 PCU/Hr	316 PCU/Hr	358 PCU/Hr	LOS: B (Very Good)	LOS: B (Very Good)	LOS: B (Very Good)
Traffic Capacity As Per The IRC 106:1990 For Highways (PCU/Hr)	3600 PUC per hour	1500 PUC per hour	1500 PUC per hour	IRC-106:1990 Guide line		

- No change in Level of Service at location -1. Level of Service changed from A to B at location 2 and 3 due to additional traffic from JSW.

- **EMP MEASURES**
  - Closed trucks will be employed for transport of Materials/Products
  - Trucks- Pollution Under Control (PUC) will be employed
  - Plantation of local species has already been taken up along the road on either side
  - Monitoring of trucks to ensure compliances such as covering of trucks by tarpaulin, avoiding spillage on roads etc.

- **PARKING FACILITIES:**
  JSWCL has earmarked an area of 3.75 Ha for parking facility with following

  - 0.9 Ha Area for roads and free movement of trucks
  - 2.1 Ha area for 700 vehicles (@30 m^2 /truck)
  - 0.5 Ha for greenbelt around the parking area
  - 0.25 Ha for facilities to truck drivers

All facilities, such as canteen, toilets, rest rooms, etc. will be provided for truck drivers. Separate office building equipped with all communication and other infrastructure will be provided to the transporters.

Flora and fauna	• Nearest Forest - Gani RF – 3.1 km, SW

	• 9 nos of Schedule - I species are reported in 10 km namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. Conservation Plan was approved by the Principal Chief Conservator of Forests and Head of Forest Force (PCCF & HOF) Forest Department, Govt. of Andhra Pradesh with a budget of Rs. 455 Lakhs vide Rc.no. 5967/2O21/WL-2. Dated 09.07.2021.

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

Manufacturing Process:

- Ash (0.05 MTPA) generated from Power Plant will be used in the cement production process
- Dust collected from Pollution Control Equipment will be recycled back to the process

Domestic Waste from colony:

Present solid waste generation from colony is about 300 kg/day.
Proposed additional 100 kg/day.

Hazardous Waste:

S.No.	Type Of Waste	Source Name	Quantity		Treatment before disposal	Mode Of Disposal	Agreement Details For Disposal
			Existing	Additional			
1	Spent Oil/Used grease	Cement Plant	20 KL/year used oil & 7.60 t/annum grease	2.0 KL/year used oil	None	Containers	Authorized Recycler

5.2.14 Public Consultation:

Details of advertisement given	18.10.2021 - The Hans India (English News Paper) 18.10.2021 - Surya (Telugu News Paper)
Date of public consultation	19.11.2021
Venue	Existing JSW cement plant located at Bilakalagudur (V), Gadivemula (M), Kurnool District, Andhra Pradesh
Presiding Officer	District Revenue Officer, Kurnool District [Nominated by District Collector]
Major issues raised	1. Employment 2. Land compensation 3. Air pollution 4. Village Development 5. Skill development 6. Construction of dam 7. Grazing land development

5.2.15 The capital cost of the project is Rs. 420 Crores.JSWCL has spent about Rs. 89.30 crores for implementing EMP measures with recurring cost of Rs. 2.55 crores in the existing plant. The capital cost for environmental protection measures is proposed as Rs. 34.78 crores. The annual

recurring cost towards the environmental protection measures is proposed as Rs.1.93 Crores. The employment generation from the proposed expansion is 80 (locals will be preferred). The details of cost for environmental protection measures is as follows:

Description	ENVIRONMENT CONTROL MEASURES	Capital Cost (Rs. Lakh)	Recurring Cost per annum (Rs. Lakh)
Air Pollution Control	• Bag filter and Cyclone for raw mill	180	130
	• Upgradation of Coal Mill Bag House	80	
	• Industrial vacuum cleaning machine	110	
	• New/ upgradation of Bag filters at material transfer points	200	
	• ESP for CPP	750	
	• Roads, drains and concrete paving in truck parking extension	200	
	• Coal shed extension	540	
	• Sheet covering for dust control in CPP and cement plant	150	
	• Water sprinkler for coal yard in CPP	20	
	Sub-total (A)	**2230**	**130**
Wastewater Management	• Effluent treatment plant for CPP & WHRBPP	140	8.4
	Sub-total (B)	**140**	**8.4**
Energy Conservation Measures	• Solar street Lights (20 nos)	10	1.2
	• Variable Frequency Drives, SPRS for HT motors	10	
	Sub-total (C)	**20**	**1.20**
Solid Waste Management	• Shredder for Plastic waste shredding	100	6
	Sub-total (D)	**100**	**6**
Greenbelt	• Greenbelt Development	92.5	10
	Sub-total (E)	**92.5**	**10**
Drains & Rainwater Harvesting	• Rooftop Rainwater Harvesting in colony and CPP	5.0	0.50
	Sub-total (F)	**5.0**	**0.50**
Environmental monitoring	• Stack Emissions (CEMS- 2 nos)	25	1.0
	• Equipment calibration	-	2.0
	• Periodic Env. monitoring by 3rd party (Stack emission, AAQ,, Soil Quality, Surface and Ground Water Quality, Waste Water, Noise)	-	5.0
	• Performance evaluation of major Pollution control equipment	-	10.0
	Sub-total (G)	**25.0**	**18.0**
OHS	• Occupational Health & Safety	-	6.0
	Sub-total (H)	**-**	**6.0**

Description	ENVIRONMENT CONTROL MEASURES	Capital Cost (Rs. Lakh)	Recurring Cost per annum (Rs. Lakh)
Wildlife conservation	• Implementation of wildlife conservation plan (WLCP) with forest deptt.	325	13.0 (for 10 years)
	Sub-total (I)	**325**	**13.0**
PH issues & need based activities	• Budget for addressing PH issues and need based activities	540.50	-
	Sub-total (J)	**540.50**	**-**
Total		**3478.0**	**193.1**

5.2.16 JSWCL has developed greenbelt in an area of 91.58 (34%) ha in the cement plant complex which is more than 33% by planting 86567 numbers of seedlings of native and exotic species. A wide green belt has been developed all along the periphery of the activities of the plant with local plant species. JSWCL have planted more than 900 saplings per hectare and will attain 1500 /Ha, with gap filling within two years.

5.2.17 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.

Certified compliance report from Regional Office

5.2.18 The Status of compliance of earlier EC was obtained vide letter No. IRO/VIJ/EPA/MISC/111-01/2021 dated 19/01/2022 from Integrated Regional Office, Vijayawada, Andhra Pradesh. Action taken report of the Observations/minor non-compliances submitted to IRO on 21/02/2022. Recertified compliance report was received from R.O. MoEF&CC, Vijayawada vide letter dated 14/03/2022. The details of the observations made by RO in the report dated 14/03/2022 along with its re-assessment / present status as furnished by the PP is given as below:

Sl. No	Conditions	Non-compliances Recertified compliance on 14.03.2022	Corrective action taken (Action taken report submitted by the project proponent on 23.03.2022)	Remarks
iv	Efforts shall be made to achieve power consumption of 70 units /tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of	As per the ATR submitted, it has been observed that the power consumption for OPC for the year 2020-21 was 80.01 kWh/t of cement. However, the thermal energy consumption was 723 kcal/Kg of Clinker. It has been stated that, in order to	Action plan for achieving the thermal energy consumption of 670 Kcal/kg clinker is as below: • Both the top cyclones (4 nos' in both the PH strings) will be replaced with Low Pressure cyclones. In addition, all other cyclones of the preheater will also be modified.	By implementing the corrective measures, JSWCL is hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The modifications are likely to be completed by August 2022

Sl. No	Conditions	Non-compliances Recertified compliance on 14.03.2022	Corrective action taken (Action taken report submitted by the project proponent on 23.03.2022)	Remarks
	670 kcal/Kg of Clinker. **[Partially Complied]**	reduce thermal energy consumption, PAs have planned to replace the Cooler with the latest technology high efficiency cooler during the proposed expansion to achieve sp. thermal energy consumption of 695 Kcal/kg clinker. Tentative schedule for replacement of cooler – June-July 2022. However, PAs have not yet achieved the sp. thermal energy consumption of 670 kcal/Kg of Clinker. It is required to make efforts to achieve thermal energy consumption of 670 kcal/Kg of Clinker. It requires immediate action (Specific Condition No. iv).	• Modification in the Calciner by increasing the vessel height. • Reduction in false air ingress in Preheater cyclones from 10% to less than 7 %. By implementing the above measures, we are hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The above modifications are likely to be completed by August 2022.	

Deliberations by the Committee

5.2.19 The EAC has made detailed deliberations on the proposal and observed the following:

i. An irrigation canal exists within the project site. The PP has not submitted suitable steps /conservation plan along with contouring, Run -off calculations, disposal etc. Details of

mitigation measures and management plan needs to be submitted. As a canal exist in the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.

ii. On perusal of kml file the green belt has not adequately developed. This seems non compliances of earlier EC condition. PP shall provide detailed plantation status with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Details of implementation of the green belt development as per granted ECs needs to be submitted.

iii. Details of Action Plan on the issues raised during Public Hearing needs to be submitted with timelines and proposed budget for its implementation. The PP shall present to the EAC regarding mitigation measures against the social issues raised in Public consultation.

iv. Details of implementation status of the earlier commitment made by the PP during old PHs for which the Ministry has granted the earlier ECs.

v. EAC noted that there is non-compliance of EC condition, "Efforts shall be made to achieve power consumption of 70 units /tone of Portland-Pozzolona cement (PPC) and 95 units/tone of cement for Ordinary Portland Cement and thermal energy consumption of 670 kcal/Kg of Clinker." In this context, PP submitted that by implementing the corrective measures, JSWCL is hopeful to achieve thermal energy consumption of 670 KCaI/kg clinker. The modifications are likely to be completed by August 2022. EAC advised the PP to implement this condition first.

vi. Scheme for monitoring of Dioxin/Furan during co processing of hazardous waste in the Kiln has not been available to the EAC

vii. Details of the all possible measures to control particulate matter emissions needs to be submitted.

viii. Details of Greening and Paving shall be submitted in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

ix. Details monitoring data of the Continuous Emission Monitoring System (CEMS) for the existing process stacks and Continuous Ambient Air Quality Monitoring Station (CAAQMS) needs to be submitted.

x. Bilakalaguduru – 1.2 km – W (Population: 4906) are in close proximity to the project site. Environmental safeguards to be adopted in this regard has not been enumerated in the Report.

xi. There are 9 nos. of Schedule - I species reported in study area, namely Blackbuck, Peafowl, Sloth bear, Indian Wolf, Great Indian Bustard, Lesser Florican, Indian Python, Smooth Coated Otter, Lesser florican and Flapshell turtle. PP and consultant could not explain the implementation status of conservation Plans on the schedule I species.

xii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

xiii. Details analysis of free silica in limestone needs to be submitted. Details of silicosis analysis carried out by the PP, if any shall be submitted to the EAC.

xiv. Details of recycling of water needs to be submitted. PP shall explore the possibility to use the STP water for its process so that ground water requirement can be reduced.

Recommendations of the Committee

5.2.20 In view of the foregoing and after detailed deliberations, the Committee recommended for the **deferment** and also subcommittee of EAC Industry-1 shall undertake a site visit to the project

site and based on the site visit report and submission of the abovementioned requisite information by the PP, the instant proposal for Environment Clearance under the provisions of EIA Notification, 2006 may be considered by the EAC.

Re-Consideration of Environmental Clearance Proposals

Agenda No. 5.3

5.3 Project for installation of production facilities for production of Sponge iron (245000 TPA); Mild Steel billet (179550 TPA) and/or Rerolled Steel Products through Hot Charging (131970 TPA); Rerolled Steel Product through Reheating Furnace (42194 TPA); Ferro alloys (75000 TPA) or Pig iron (150000 TPA), Captive Power 56 MW (16 MW through WHRB and 40 MW through AFBC) and Fly Ash Brick (150000 TPA) by M/s. Kusum Smelters Pvt. Ltd. located at Village Dhamni, Tehsil Patharia, District Mungeli, Chhattisgarh – Environment Clearance – regarding.

[Proposal No. IA/CG/IND/190436/2020; File No. J- 11011/197/2020-IA.II(I)]

5.3.1 M/s. Kusum Smelters Private Limited has made an online application vide proposal no. IA/CG/IND/190436/2020 dated 09/03/2022 along with copy of EIA/EMP Report, Form - 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3 (a) Metallurgical Industries (Ferrous & Non-ferrous) and Schedule 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

5.3.2 Name of the EIA consultant: M/s. Anacon Laboratories Pvt. Ltd. Nagpur, [S No 66, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/SA 0160 valid till 29/03/2023; Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.3.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
04/09/2020	23rd meeting of REAC (Industry-I) held on 28th-30th September, 2020.	Issued Terms of references	22/10/2020	21/10/2024
30/12/2020	28th meeting of REAC (Industry-I) held on 18th-20th January, 2021.	Issued amendment in ToR	08/02/2021	

5.3.4 The project of M/s.Kusum Smelters Private Limited is located in Village Dhamni, Tahsil Patharia, District Mungeli, Chhattisgarh is for installation of production facilities for production of Sponge iron (245000 TPA); Mild Steel billet (179550 TPA) and/or Rerolled Steel Products through Hot Charging (131970 TPA); Rerolled Steel Product through Reheating Furnace (42194 TPA); Ferro alloys (75000 TPA) or Pig iron (150000 TPA), Captive Power 56 MW (16 MW through WHRB and 40 MW through AFBC) and Fly Ash Brick (150000 TPA).

5.3.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>10.6 ha
[Private land: 10.6 ha]</td><td>Land use: Agriculture land</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF & CC O.M. dated 7/10/2014</td><td>PP has acquired total 17.14 ha land out of which 10.6 ha land is proposed for steel Plant as cited above and 6.54 ha for Bio Ethanol Plant.</td><td>--</td></tr>
<tr><td>iii.</td><td>Existence of habitation &involvement of R&R,if any.</td><td><u>Project Site</u>: NIL

<u>Study area:</u>

<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Dhamni</td><td>1.2 km</td><td>SSW</td></tr><tr><td>Bhakuridih</td><td>0.87</td><td>SE</td></tr></table></td><td>R&R is not required.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>Latitude:21^{0}56’12.67’’ N
Longitude:81^{0}58’52.05’’ E</td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site.</td><td>245 m above MSL</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>Not involved.</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body(Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Project site:</u> NIL

<u>Study Area:</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Maniari River</td><td>0.67 km</td><td>East</td></tr><tr><td>Seonath River</td><td>8.4 Km</td><td>SE</td></tr><tr><td>Tesua Nadi</td><td>1.5 Km</td><td>SW</td></tr><tr><td>Ghongha Nadi</td><td>6.5 Km</td><td>North</td></tr><tr><td>Agar Nadi</td><td>8.5 Km</td><td>NW</td></tr><tr><td>Linjua Nala</td><td>8.6 Km</td><td>SW</td></tr><tr><td>Turturia Nala</td><td>0.8 Km</td><td>NE</td></tr><tr><td>Basanti Nala</td><td>5.5 Km</td><td>SE</td></tr><tr><td>Stream</td><td>0.2 Km</td><td>ENE</td></tr></table></td><td>-</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA / national park/wildlife sanctuary/ biosphere reserve/tiger reserve/ elephant reserve etc. if any within the study area</td><td>NIL.</td><td>-</td></tr>
</table>

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

S. No.	Plant Equipment/Facility	Proposed Units	
		Configuration	Capacity
1.	Sponge Iron	DRI Kiln: 2x350 TPD	245000 TPA
2.	Mild Steel Billet	IF:4x15 MT with LRF:1x15 T	179550 TPA

S. No.	Plant Equipment/Facility	Proposed Units	
		Configuration	Capacity
3.	Rerolled Steel product (Hot Charging)	--	131970 TPA
4.	Rerolled Steel product (Reheat Furnace based)	--	42194 TPA
5.	Ferro Alloys	SAF:4x9 MVA	75000 TPA
	and/or		and/or
	Pig Iron		150000 TPA
6.	WHRB Captive Power	--	16 MW
7.	AFBC Captive Power	--	40 MW
8.	Fly Ash Bricks	Fly Ash Brick Making Plant	150000 TPA

5.3.7 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 Material	Quantity (TPA)	Source	Distance from site(Kms)	Mode of Transportation
1.	Iron Ore	396900.00	Odisha Iron Ore Mine and NMDC	500	By Road through covered vehicles
2.	Coal	306250.00	SECL Coal mines	100	By Road through covered vehicles
3.	Limestone/ Dolomite	8575.00	Open Market	100	By Road through covered vehicles
4.	Refractory Material	400.00	Open Market	100	By Road through covered vehicles
5.	Sponge Iron	189000.00	Captive production/ Local market	100	By Road through covered vehicles
6.	Pig Iron / CI Scrap	23381.00	Captive production/ Local market	0 to 100	By Road through covered vehicles/ Internally available
7.	Melting Scrap	3900.00	Captive generation/ Local market	0 to 100	Internally available/ By Road through covered vehicles
8.	Ferro Alloys	1890.00	Captive production/ Local market	0 to 100	Internally available/ By Road through covered vehicles
9.	Aluminum	189.00	Open Market/BALCO	100	By Road through covered vehicles
10.	Ramming Mass	473.00	Open Market	100	By Road through covered vehicles
11.	Steel Sheet Former	48.00	Open Market	100	By Road through covered vehicles
12.	LDO/LSHS for preheating at laddle	366.66	Open Market	100	By Road through Tankers
13.	Calcined Lime for Refining of Liquid Steel	9450.00	Open Market	100	By Road through covered vehicles
14.	Flurospar and other additives for de phos	1890.00	Open Market	100	By Road through covered vehicles
15.	Electrode for Arc Furnace	378.00	Open Market	100	By Road through covered vehicles
16.	Hot Billets	134662.00	Captive production in Steel Melting shop	0	Internal Transfer
17.	Cold Billets	44888.00	Captive production/ Local market as per requirement	0	Internal Transfer/ By Road through covered vehicles

S. No.	Raw Material	Quantity (TPA)	Source	Distance from site(Kms)	Mode of Transportation
18.	Coal for producer gas	5387.00	SECL Mines/ Local Market	100	By Road through covered vehicles
19.	Mn Ore	153972.00	Open Market	400	By Road through covered vehicles
20.	High Mn Slag	29328.00	Open Market	0 to 100	By Road through covered vehicles
21.	Quartz	5866.00	Open Market	100	By Road through covered vehicles
22.	Coke/Coal/Charcoal	43992.00	Open Market	100	By Road through covered vehicles
23.	Dolomite	2200.00	Open Market	100	By Road through covered vehicles
24.	Electrode Paste	2200.00	Open Market	100	By Road through covered vehicles
25.	M.S. Item	734.00	Open Market	100	By Road through covered vehicles
26.	Lancing Pipe and Canister Sheet	1100.00	Open Market	100	By Road through covered vehicles
27.	Oxygen Gas	220.00	Open Market	100	By Road
28.	Char dolochar	61250.00	Captive generation in SID	0	Internally available.
29.	Coal	202964.00	SECL mines	100	By road through covered vehicles
30.	Fluidizing bed media	200.00	Open market	100	By road through covered vehicles
31.	Fly Ash/ Coal Ash etc.	100750.00	Internally available.	0	Internal Transfer
32.	Granulated Ferro Alloys Slag	23250.00	Internally available.	0	Internal Transfer
33.	Gypsum and Cement	15500.00	Open market	50	By Road through covered vehicles
34.	Granulated slag from Induction Furnace	15500.00	Internally available.	0	Internal Transfer

5.3.8 The daily makeup water requirement for the proposed project is estimated to be 2400 m^3/day out of which 36m^3/day will be used for domestic purpose. Water will be source from Maniari River, 0.67 km in East for which application has been submitted to Water resources department of Govt. of Chhattisgarh.

5.3.9 The power requirement for the proposed project is estimated as 60 MW, out of which 56 MW will be met through captive power plant and 4 MW will be sourced through Chhattisgarh State Power Development Corporation Limited (CSPDCL). In addition to this total 2 Nos. of 3300 kVA DG sets are proposed for emergency backup.

5.3.10 Baseline Environmental Studies:

Period	Post monsoon season (1st October 2020 – 31st December 2020)
AAQ parameters at 8 Locations (min and max)	PM_{10} = 43-89.3 µg/m^3 $PM_{2.5}$ = 15-33.8 µg/m^3 SO_2 = 13-25.2 µg/m^3 NO_2 = 13.5-29.4µg/m^3 CO = 0.222-0.356 mg/m^3 Ozone = 4.9-14.4µg/m^3 NH_3 = 5.2-16.0 µg/m^3

<table>
<tr><td>Incremental GLC</td><td>PM_{10}= 1.2µg/m^3(Level at 0.9 km SSW and S Direction)
$PM_{2.5}$ = 0.42 µg/m^3(Level at 0.9 km SSW and S Direction)
SO_2=7.0 µg/m^3(Level at 1.2 km SSW and S Direction)
NOx= 3.8µg/m^3(Level at 1.0 km SSW and S Direction)</td></tr>
<tr><td>Ground water quality at 8locations</td><td>pH:7.08-7.85,
TotalHardness:273.21-671.87 mg/l,
Fluoride: 0.32-0.58 mg/l,
Chloride: 119.62-228.69 mg/l,
TDS: 546-972 mg/l,
Nitrate: 11.46-32.64 mg/l
Sulphate: 23.63-54.81 mg/l</td></tr>
<tr><td>Surface water quality at 8 locations</td><td>pH: 7.23-7.76;
DO: 6.0-6.3 mg/l;
BOD:12.61- 4.83 mg/l and
COD: 35.88 – 13.64 mg/l;
TDS: 456-486 mg/l;
Total Hardness: 166.61-197.77 mg/l as $CaCO_3$</td></tr>
<tr><td>Noise levels Leq. (Day and Night)</td><td>46.2 dBA to 66.4 dBA for day time and
37.3 dBA to 59.5 dBA for night time.</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic study has been conducted at NH-130which is 2.4 km/ E from project site.
• The raw material will be transported through road by covered trucks.
• Existing PCU is 172 PCU/hr on NH- 130 and existing level of service (LOS) is:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH 130</td><td>172</td><td>625</td><td>0.27</td><td>B</td></tr>
</table>
• PCU load after proposed project will be 212PCU/hr (172 Existing + 40 Additional) and level of service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>NH 130</td><td>212</td><td>625</td><td>0.34</td><td>B</td></tr>
</table>
*Note: Capacity as per IRC: 64-1990Guidelineforcapacityforroads.

Conclusion: The level of service will be “B” after including additional traffic due to proposed project.</td></tr>
<tr><td>Flora and fauna</td><td>None of reported species in study area belongs to Rare, Endangered or Threatened category. No Schedule -I species observed in study area.</td></tr>
</table>

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

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal	Remarks
1.	Char Dolochar	DRI Kiln	61250.00	Used in own captive power plant	Used in own captive power plant	The Char dolo char has on an average more than 1800 Kcal/kg energy and hence is being used in Power Plants
2.	Bottom Flue Dust Ash	DRI Kiln	49000.00	Used in Brick making	Used in Brick making	It will be used by the company as well as given free to other brick units and also to Cement Plants
3.	Kiln Accretion and Refractory waste	DRI Kiln	400.00	Used in Brick making and low-lying areas	Used in Brick making and low-lying areas	
4.	Defective Billets	Induction Furnace & Rolling Mill	5770.00	Used as melting scrap in own plant	Used as melting scrap in own plant	
5.	Mill Scale (CCM and RM)	Rolling Mill	3780.00	Used in own Ferro Alloys as raw material/ sold to Ferro Alloys / Pellet Plants.	Used in own Ferro Alloys as raw material/ sold to Ferro Alloys / Pellet Plants.	
6.	Slag from Induction Furnace	Induction Furnace	34256.00	Given/ Sold to metal recovery units. And also used in own plant to make Bricks	Given/ Sold to metal recovery units. And also used in own plant to make Bricks	
7.	Refractory and Ramming Mass waste		237.00	Given to refractory recycling units / used	Given to refractory recycling units / used in Fly ash	

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal	Remarks
				in Fly ash brick making unit / landfill.	brick making unit / landfill.	
8.	Defective and Miss Roll	Rolling Mill	2693.00	Reused in own Induction furnace	Reused in own Induction furnace	
9.	Mill Scale	Rolling Mill	2694.00	Reused in own Induction furnace	Reused in own Induction furnace	
10.	Ash from Coal firing in Mill	Rolling Mill	1886.00	Used in own Fly Ash Brick making unit and for	Used in own Fly Ash Brick making unit and for	TCLP test must be carried out before the slag from ferro-alloy and pig iron production is disposed off.
11.	Slag from Ferro Alloys Plant/ Pig Iron (Higher value)	Ferro Alloys Plant/ Pig Iron	150000.00	land fill	land fill	
12.	Fly Ash from Char Dolo Char from FBC	FBC	45938.00	Used in own Fly Ash Brick making unit and for	Used in own Fly Ash Brick making unit and for	
13.	Ash From Coal in FBC	FBC	71038.00	land fill	land fill	
14.	Fluidized Bed Material	FBC	200.00	Used in own Fly Ash Brick making unit and for	Used in own Fly Ash Brick making unit and for	

5.3.12 Public Consultation:

Details of advertisement given	04/09/2021: Dainik Bhaskar (Hindi News Paper) and The Pioneer (English Newspaper)
Date of public consultation	07/10/2021
Venue	At Primary School Hall, Village Khamhardih, Tehsil Patharia, Dist. Mungeli (C.G).
Presiding Officer	Shri. Tirthraj Agrawal Additional District Magistrate, Mungeli
Major issues raised	1. Impact of Air Pollution on Air Regime 2. Water pollution and effluent flown outside the premises 3. Employment to local peoples. 4. Regarding Intimation about Public Hearing 5. Impact on nearby agricultural fields

	6. Impact on human health due to air and water pollution 7. Impact on Drinking Water quality due air emission 8. Contribute toward Mahamaya Temple development 9. Regarding road condition

Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

S. No.	Name of the Activity	Physicals Targets	Year of Implementation			Budget (Rs. Lacs)
			1st year	2nd Year	3rd Year	
1	Skill Development for employment generation	Skill development Centre with Building and Equipment and Furniture and Fixtures **Location:** Village Dhamani at community land provided by Village Panchayat/ Local Authority. **Size:**Approx. 1000 Sqft. (50x20 Sqft) **Quality:** RCC Roof and Floor, Fly Ash Brick Wall. **Facilities**: Welding Machine, Leith Machine, Computer, Weaving machine, embroidery machine, Tailoring Machine; Grinding machine to prepare Papad and Pickle, Computer, Printer etc.	-	Village: Dhamni (60 Lakhs)	-	60.00
2	Road Strengthening	**Location:** Village: Dhamni, Khamhardih, Rambod **Length:**Approx. 1 km, **Width:** minimum 2meter and maximum 4 meter (as present road/land available in the village. **Quality:** Pavement Road or Paver block roads	Dhamni (40 Lakhs)	Khamhardih (30 Lakhs)	Rambod (30 Lakhs)	100.00
3	Mahamaya Bhawan (Community Satsang Bhawan cum Waiting Hall) at Mahamaya Temple	**Location:** Village: Mahamaya Temple Village Dhamni Size: Approx. 2000 Sqft. (100 x 20 Sqft) **Quality:** RCC Roof and Floor, Fly Ash Brick Wall.	Dhamani (30.00 Lkhs)	-	-	30.00
4	Implementation of Vermi-composting pits towards Improvement for Agricultural field	**Location:** Village: Dhamni, Khamhardih, Rambod, Lohda and Umaria **Work: Vermicomposting Training Centre and implementing of Vermicomposting Pits at**	Dhamni, Khamhardih (10 Lakhs)	Rambod Lohda (10 Lakhs)	Umaria (10 Lakhs)	30.00

S. No.	Name of the Activity	Physicals Targets	Year of Implementation			Budget (Rs. Lacs)
			1st year	2nd Year	3rd Year	
		Gauthan of Villages and at Village Ghurua (Cow Dund disposal area)				
5	Deepening and cleaning of Pond and Beatification of ponds	**Location:** Village: Dhamni, Khamhardih, Rambod, Lohda and Umaria **Work: Pond Cleaning, Pond Deepening, Beatification through Construction of Pachari and strengthening of side walls**	Dhamni, Khamhardih (25 Lakhs)	Rambod Lohda (20 Lakhs)	Umaria (25 Lakhs)	70.00
6	Drinking Water Facility	**Location:** Village: Dhamni, Khamhardih, Rambod, Lohda and Umaria **Work:** Implementation of Bore well, Solar Water Pumps and Overhead Drinking Water Tank along with Water Filters/ RO system at Community Places or Panchayat to provide Drinking water to villages	Dhamni, Khamhardih (30 Lakhs)	Rambod Lohda (30 Lakhs)	Umaria (15 Lakhs)	75.00
7	Solar Lighting	Location: Village: Dhamni, Khamhardih, Rambod, Lohda and Umaria **Work:** Implementation of Solar Street Light with 5-year AMC at village road and connecting road **Qty.:**100 Nos. x 0.25 Lakhs each = 25.00 Lakhs	Dhamni, Khamhardih (10 Lakhs)	Rambod Lohda (10 Lakhs)	Umaria (5 Lakhs)	25.00
8	Community Sanitation support	Location: Village: Dhamni, Khamhardih, Rambod, Lohda and Umaria 5 no of Village Community Toilets with Sewage treatment Septic Tank system. Sqft. (10x20 Sqft) x5 Nos **Quality:** RCC Roof and Floor, Fly Ash Brick Wall. With water supply and electricity For this a sum of Rs 5 Lakhs Rs each will be provided and the work will be completed by December 2025	Dhamni, Khamhardih (10 Lakhs)	Rambod Lohda (10 Lakhs)	Umaria (5 Lakhs)	25.00
Total						**415.00**

5.3.13 The capital cost of the proposed project is Rs. 441.10 Crores and the capital cost for environmental protection measures is proposed as Rs. 36.15 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.20 Crores. The employment

generation from the proposed project is 755 persons. The details of cost for environmental protection measures are as follows:

S. No.	Particulars	In Lakhs Rs.	
		Capital cost	Recurring cost
1	Dry ESP for DRI Kilns	600	60
2	Bag Houses for the Sponge Iron Kilns	600	60
3	Cost of common Chimney	400	40
4	Cost of Bag Houses and Chimney for Induction Furnaces	40	4
5	Cost of Rotary Vane Wet Scrubber for Rolling Mill for Reheating Furnaces	25	2.5
6	Cost of Bag Houses and Chimney for Ferro Alloys Plant	320	32
7	Cost of Dry ESP for FBC	300	30
8	Cost of Bag Houses for Boiler Furnaces for Power Plant Coal Handling and Ash Handling Area	150	15
9	Cost of Industrial ETP	200	20
10	Cost of STP for Domestic Waste	25	2
11	Occupational health and safety	25	3
12	Greenbelt development	25	3
13	Oil Trap in the drains system	20	2
14	Silt Arrestation Pit in Storm Water Drains	20	2
15	Fugitive dust Control Spray system in Plant	10	1
16	Movable Vacuum cleaning system	20	2
17	Wheel Washing System in Security area	10	1
18	Internal Road and other construction work	35	2
19	Drainage system	35	5
20	Carbon Emission study	05	-
21	Rain Water Harvesting and Recharge system with Roof Harvesting	15	1.5
22	Environment Monitoring systems	320	32
23	Addressal to the public consultation concerns	**415**	**--**
	Total cost	**3615**	**320**

5.3.14 Proposed greenbelt will be developed in 3.52 Ha. which is about 33% of the total project area. A 9.50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 8800 saplings will be planted and nurtured in 3.52 Ha. in 3 years.

5.3.15 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.

5.3.16 The project proponent was initially considered in the 3rd meeting of the EAC (Industry-I) held on 11-12th April, 2022 wherein the Committee deferred the proposal for want of additional information. The observations and recommendations of EAC are as follows:

Observations by the Committee (During 3rd EAC held on 11-12th April, 2022)

5.3.17 The committee noted the following:

i. A drainage is passes through the project site. PP has not provided conservation plan for natural drainage. (Flow characteristics, time period of flow).
ii. PP has proposed to lay pipeline across the natural drainage. Permission for same from concern authority was not provided.
iii. Maniari River is located at 0.67 km form the project site. Authenticated HFL data of the river was not provided.
iv. As per AAQ modeling submitted by PP. Maximum GLC for all parameters are located at same point, clarification for same was not given by PP and consultant.
v. PP was provided the result for NH_3 in baseline data, but PP was not given satisfactory reply for source of the NH_3.
vi. There are some constructions at project site, PP has not given the detail about the constructed shed in EIA report.
vii. As per AAQ modeling the GLC for SO_2 is high, PP has not provided the measures taken for control and monitor for SO_2 emission.
viii. PP proposed for steel plant and Bio Ethanol Plant with adjacent to each other with sharing common facilities. PP has not provided the details of common facilities for both plants and how to inter connect the bioethanol and steel plant.
ix. The KML file provided by the project proponent was not matched with plant layout.
x. Latitudes and longitudes for all corners of the proposed project site is not provided by PP.

Recommendations of the Committee (During 3rd EAC held on 11-12th April, 2022)

5.3.18 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought additional information on the following points. On receipt of the additional information, the proposal shall be placed before the EAC in its next meeting for consideration by the EAC.

i. As a natural drainage is passing through the middle of the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.
ii. The PP shall present to the EAC regarding mitigation measures against the social issues raised in Public consultation.
iii. Permission for laying the pipeline across the natural drainage from concern authority shall be provided.
iv. Authenticated HFL data of Maniari River shall be provided.
v. Clarification for maximum GLC for all parameters are located at same point shall be provided.
vi. PP shall provide the source of the NH_3 monitored in ambient air quality.
vii. PP shall provide clarification on the sheds constructed at the project site. Further, PP shall submit an undertaking in the form of affidavit stating that no construction activity has been commenced at the project site pertaining to the project under consideration.
viii. PP shall be provided the additional measures to be taken for control SO_2 emission and monitoring plan.
ix. PP shall be provided the detail of common facilities for Steel Plant and Bio-Ethanol Plant and how the connectivity to be exists within the site.
x. PP shall provide the coordinates for all corners of the project site.
xi. PP shall submit the KML file in consonance with the engineering drawing layout of the project site.
xii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain

water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

5.3.19 The proponent submitted the ADS Reply vide letter No. Kusum/EC/2022-23/001 dated 29.04.2022 uploaded on PARIVESH on 29.04.2022. Point-wise reply of ADS is given as below:

S. No.	ADS Point raised by the EAC	Reply/Response of PP
i.	As a natural drainage is passing through the middle of the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.	The drainage conservation scheme has been prepared to conserve the 2nd order seasonal drain passing through the proposed project area. The scheme is prepared by taking the services of Mr. F.H. Khan, Retired Superintending Engineer WRD Govt. of Chhattisgarh dated 15/04/2022 and is submitted by the PP on PARIVESH.The total cost for drain Management is estimated to be Rs 39.00 Lakhs. The soil conservation plan has also been prepared to conserve top soil in project area as well as to restrict soil erosion outside the project water shed area as well as through the drainage system.The conservation plan is prepared by taking the services of Mr. F.H. Khan, Retired Superintending Engineer WRD Govt. of Chhattisgarh dated 27/04/2022 and is submitted by the PP on PARIVESH.
ii.	The PP shall present to the EAC regarding mitigation measures against the social issues raised in Public consultation.	Mitigation measures against the social issues raised during Public Consultation are provided by the proponent**.**
iii.	Permission for laying the pipeline across the natural drainage from concern authority shall be provided.	Permission for laying the pipeline across the natural drainage has been obtained from Court Nayab Tehsildar Sargaon, District Mungeli, Chhattisgarh vide letter dated 26/04/2022 and is submitted by PP on PARIVESH alongwith ADS reply.
iv.	Authenticated HFL data of Maniari River shall be provided.	Hydrological setting in and around proposed plant and HFL data for Maniyari River has been submitted**.** Court Nayab Tehsildar Sargaon, District Mungeli, Chhattisgarh vide letter dated 07/03/2022 has stated the following: ***"It is to inform that "Turturiya Nala" is a seasonal drain, in which flood is reported on monsoon. The drain is approx 4 to 5 meter lower from the project site land level. The Proposed industry site is located at distance of 800 meter to 1.0 KM. Therefore, there is no impact expected through flood from this Nala (Stream) to proposed industrial site. Also no impact is expected from flood water of Maniyari River located at East of proposed Industry."***
v.	Clarification for maximum GLC for all parameters are located at same point shall be provided.	PP has re-run the model and revised AQIP results are given below, GLC found for all parameters are at different distances may on their respective density basis.

<table>
<tr><th>S. No.</th><th>ADS Point raised by the EAC</th><th>Reply/Response of PP</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Pollutant</th><th>Max. Baseline Conc. (µg/m^3)</th><th>Incremental Conc. (µg/m^3)</th><th>Resultant Conc. (µg/m^3)</th><th>Dist. (km) and Direction</th><th>CPCB Limit</th></tr>
<tr><td>PM_{10}</td><td>89.3</td><td>1.2</td><td>90.5</td><td>0.9 km in SSW & S</td><td>100</td></tr>
<tr><td>$PM_{2.5}$</td><td>28.9</td><td>0.42</td><td>29.32</td><td>0.9 km in SSW & S</td><td>60</td></tr>
<tr><td>SO_2</td><td>23.2</td><td>7.0</td><td>30.2</td><td>1.2 km in SSW & S</td><td>80</td></tr>
<tr><td>NO_2</td><td>24.5</td><td>3.8</td><td>28.3</td><td>1.0 km in SSW & S</td><td>80</td></tr>
<tr><td colspan="6">Note: Maximum GLC considered during operation phase of steel plant, maximum baseline considered at Khapri which is in downwind direction 1.8 km SSW direction.
PP has reworked on the GLC and above results were observed depicting distance and directions for parameters. The details are submitted by PP on PARIVESH alongwith ADS reply.</td></tr>
</table>
</td></tr>
<tr><td>vi.</td><td>PP shall provide the source of the NH_3 monitored in ambient air quality.</td><td>Source of ammonia in ambient air is breakdown, volatilization of urea, emissions, deposition vary spatially, with "emission hot-spots" associated with high-density intensive farming practices. Other agriculture-related emissions of ammonia include biomass burning or fertilizer manufacture.

It is a common practice in the farming community of the state to broadcast urea; DAP ; Ammonium Sulphate fertilizers and also apply dissolved Urea solution on standing crops. This is also likely to add to Ammonia levels

Ammonia is also emitted from a range of non-agricultural sources, such as catalytic converters in petrol cars, landfill sites, sewage works, composting of organic materials, combustion, industry and wild mammals and birds (Sutton et al. 2000, Wilson et al. 2004).
Link : http://www.apis.ac.uk/overview/pollutants/overview_nh3.htm

The concentration of Ammonia (NH_3) ranges in study area is 5.2 µg/m^3 – 16 µg/m^3. The maximum concentration of NH_3 is 16 µg/m^3 is reported invillage Pendri which is about 7.6 km at SW direction from project site which may be due to farming activity in the village hence reported in the EIA. This value is well within limit.
Further, animal and Domestic waste disposal practices in ***Ghuruwa***(common livestock waste dumping pit), are common practices in various villages of Chhattisgarh State, this may also</td></tr>
</table>

S. No.	ADS Point raised by the EAC	Reply/Response of PP
		be a source for ammonia as Animal manure and Urine is disposed along with digestible farm waste in the pits.
vii.	PP shall provide clarification on the sheds constructed at the project site. Further, PP shall submit an undertaking in the form of affidavit stating that no construction activity has been commenced at the project site pertaining to the project under consideration.	No Pucca construction has been started at the site. Proposed site land is owned by Directors and family members of the company and transferred in the name of company. Land history provided in undertaking and declaration for commencement of no construction activity at the site provided by the Director. Undertaking in an India non judicial stamp dated 15/04/2022 submitted by the PP. No industrial shed is constructed so far.
viii.	PP shall be provided the additional measures to be taken for control SO_2 emission and monitoring plan.	Details about proposed majors for controlling SO_2 emission and monitoring SO_2 level in plant is submitted by the PP on PARIVESH.
ix.	PP shall be provided the detail of common facilities for Steel Plant and Bio-Ethanol Plant and how the connectivity to be exists within the site.	**The promoters decided to add Bio** Ethanol after their decision to set up the steel unit, Bioethanol was added looking at the national priority in policy plans of GOI, as well as CG State Govt. to use ethanol for fuel blending to mitigate GHG emission and reduce dependence on imported Crude Oil. Both these projects (Steel & Bioethanol) have a few common facilities to achieve better Energy Efficiency as well as cost saving on capitol side and operational side. Details of common facilities are given as under: ➢ Main Admin building ➢ Surface Water Line from River ➢ Electrical Substation common ➢ Coal and Fuel Storage for captive TPP ➢ WTP for surface water treatment Cap 2950 KLPD; Steel 2400 KLPD and 550 KLPD Bioethanol. ➢ STP Cap 52 KLPD; Steel 32 KLPD & 20 KLPD Bioethanol. ➢ Captive Power Plant (Cap 43 MW) 40 MW Steel Division, 3 MW Bioethanol Division ➢ Emergency DG set Back up will be common ➢ Electrical circuit to draw power from the Grid ➢ Common Laboratory for Environment and Quality assessment. ➢ Common Technical staff for management of Electrical, Mechanical and Environmental and safety aspects. ➢ Common administrative staff for handling Legal and commercial issues ➢ Common weighment facility

<table>
<tr><th>S. No.</th><th>ADS Point raised by the EAC</th><th>Reply/Response of PP</th></tr>
<tr><td></td><td></td><td>➢ Common Security
Future Possibilities of use of Methane in the Power Generation or Other process</td></tr>
<tr><td>x.</td><td>PP shall provide the coordinates for all corners of the project site.</td><td>The range of plot boundaries is as follows:
Latitude:
From 21^{0}56’5.64’’N to 21^{0}56’24.54’’N
Longitude:
From 81^{0}58’44.09’’ E to 81^{0}59’5.23’’ E.

The detailed coordinates for all corners of the project site are provided by PP on PARIVESH alongwith ADS reply.</td></tr>
<tr><td>xi.</td><td>PP shall submit the KML file in consonance with the engineering drawing layout of the project site.</td><td>KML file in consonance with the engineering drawing layout of the project site is submitted by PP on PARIVESH alongwith ADS reply.</td></tr>
<tr><td>xii.</td><td>Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.</td><td>Contour map of project site is provided by PP on PARIVESH alongwith ADS reply. The details regarding drainage disposal system including rain water harvesting and GW recharge with drawing is provided by PP on PARIVESH alongwith ADS reply. Total of 623.44 CUM water required to be recharged. It is proposed to build 2 Nos Rain water reservoir at about 0.92 Hectare area. Besides the above 2 Nos. of Rain water harvesting collection tank of total storage capacity of 10000 KL capacity will be built. The water collected during monsoon will firstly be used from these tanks. Thereafter the Water will be stored for summer time consumption. The company will also maintain and desilt the Rambod diversion to create more storage volume which will help also to recharge ground water in the area. This tank is located at village Rambod almost a kilometer away on the upper land on the II order drain which passes through company project land.</td></tr>
<tr><td>xiii.</td><td>Clarification for maximum GLC for all parameters are located at same point shall be provided.</td><td>PP has re-run the model and revised AQIP results are given below, GLC found for all parameters are at different distances may on their respective density basis.
<table>
<tr><th>Pollutant</th><th>Max. Baseline Conc. (μg/m^3)</th><th>Incremental Conc. (μg/m^3)</th><th>Resultant Conc. (μg/m^3)</th><th>Dist. (km) and Direction</th><th>CPCB Limit</th></tr>
<tr><td>PM_{10}</td><td>89.3</td><td>1.2</td><td>90.5</td><td>0.9 km in SSW & S</td><td>100</td></tr>
<tr><td>$PM_{2.5}$</td><td>28.9</td><td>0.42</td><td>29.32</td><td>0.9 km in SSW & S</td><td>60</td></tr>
<tr><td>SO_2</td><td>23.2</td><td>7.0</td><td>30.2</td><td>1.2 km in SSW & S</td><td>80</td></tr>
<tr><td>NO_2</td><td>24.5</td><td>3.8</td><td>28.3</td><td>1.0 km in SSW & S</td><td>80</td></tr>
</table></td></tr>
</table>

S. No.	ADS Point raised by the EAC	Reply/Response of PP
		Note: Maximum GLC considered during operation phase of steel plant, maximum baseline considered at Khapri which is in downwind direction 1.8 km SSW direction. PP has reworked on the GLC and above results were observed depicting distance and directions for parameters. The details are submitted by PP on PARIVESH alongwith ADS reply.
xiv.	PP shall provide the source of the NH_3 monitored in ambient air quality.	Source of ammonia in ambient air is breakdown, volatilization of urea, emissions, deposition vary spatially, with "emission hot-spots" associated with high-density intensive farming practices. Other agriculture-related emissions of ammonia include biomass burning or fertilizer manufacture. It is a common practice in the farming community of the state to broadcast urea; DAP; Ammonium Sulphate fertilizers and also apply dissolved Urea solution on standing crops. This is also likely to add to Ammonia levels Ammonia is also emitted from a range of non-agricultural sources, such as catalytic converters in petrol cars, landfill sites, sewage works, composting of organic materials, combustion, industry and wild mammals and birds (Sutton et al. 2000, Wilson et al. 2004). Link : http://www.apis.ac.uk/overview/pollutants/overview_nh3.htm The concentration of Ammonia (NH_3) ranges in study area is 5.2 µg/m^3 – 16 µg/m^3. The maximum concentration of NH3 is 16 µg/m^3 is reported in village Pendri which is about 7.6 km at SW direction from project site which may be due to farming activity in the village hence reported in the EIA. This value is well within limit. Further, animal and Domestic waste disposal practices in ***Ghuruwa*** (common livestock waste dumping pit), are common practices in various villages of Chhattisgarh State, this may also be a source for ammonia as Animal manure and Urine is disposed along with digestible farm waste in the pits.

5.3.20 Based on the ADS reply by the proponent, the proposal is re-considered in the 5th meeting of the EAC held on 12-13th May, 2022. The deliberations of the EAC are as follows:

5.3.21 During the meeting, project proponent submitted written submission on the following points:

i. PP has confirmed to adopt nearby 4 Villages namely (1) Dhamni, (2) Bhakurdih, (3) Khamhardih and (4) Khapri. The budget for Rs. 415 Lakhs under CER will be utilised to develop these areas as model villages. Socio-economic index study before and after project implementation will be carried out (after three years) to assess the improvement in the surrounding livelihood because of project activities.

ii. Greenbelt of 33 % (i.e. 3.5 Hectare) with 2500 Tree/Hectare with total plantation about 8750 Trees in coming Monsoon shall be carried out and survival rate shall be maintained in subsequent years. Local and broad leaf species for greenbelt development i.e. Kadamb,

Neem, Bargad, Karanj, Saptparni, Dumer, Khamhar, Tacoma, Sterculia Foetida, etc. will be preferred. Plantation will also be carried all along approach road as avenue plantation.

iii. PP undertake that ESP with 4 fields will be installed along with other APC devises. In addition, they will also evaluate alternate advanced technology to reduce the PM emission below 30 mg/Nm^3. Proper maintenance of APC will be ensured in order to keep emission levels below 30 mg/Nm^3. Paver blocks will be used for lining to avoid dust emissions. 4 Numbers of Mobile Fog Machines and Dust suppression system will be installed within plant premises. One mobile sweeping machine will ensure overall best housekeeping within the plant premises.

iv. PP has provided Yearly Estimation of GHG Emission due to Project Activity along with future road map to reduce the GHG emission.

v. PP has submitted drainage management plan along with soil conservation plan.

Deliberations by the Committee

5.3.22 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

3. The Committee noted that the EIA/EMP reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

4. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

5. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.

6. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found satisfactory.

7. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

8. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

9. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and

accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

10. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

5.3.23 In view of the foregoing and after detailed deliberations, the Committee **recommended** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. Specific conditions:

i. The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

ii. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

iii. The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA/EMP report in letter and spirit.

iv. The natural drainage passing through the project site shall not be disturbed. Landscaping shall be done on both embankments, with green belt covering 9 m land on both sides of the irrigation canal and nallah. This shall be in addition to the 33% green belt development. Conservation plan submitted in this regard shall be implemented and compliance status shall be submitted to the concerned Regional Office of the MoEF&CC.

v. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

vi. Three tier Green Belt shall be developed in a time frame of one year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC. In addition, Block plantation shall be done on vacant land within the premises of the plant.

vii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

viii. Solid waste utilization
    a. PP shall install a fly ash brick making plant.
    b. PP shall recycle/reuse 100 % solid waste generated in the plant.
ix. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or LSHS as a fuel.
x. Following additional arrangements to control fugitive dust shall be implemented:
    a. Proper covered vehicle shall be used while transport of materials.
    b. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.
    c. Mist Sprinklers at all on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.
xi. Dust emission from stacks shall be less than 30 mg/Nm^3.
xii. The water requirement project is estimated as 2400 m^3/day and shall be met from Maniari River with permission from competent authority. No ground water abstraction is permitted.
xiii. Rain water harvesting shall be implemented to recharge/harvest water.
xiv. The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary.
xv. As per the commitment made by the Project proponent, ESP with 4 fields shall be installed along with other APC devises. In addition, PP shall also evaluate alternate advanced technology to reduce the PM emission below 30 mg/Nm^3. Proper maintenance of APC shall be ensured in order to keep emission levels below 30 mg/Nm^3. Paver blocks shall be used for lining to avoid dust emissions. 4 Numbers of Mobile Fog Machines and Dust suppression system shall be installed within plant premises. One mobile sweeping machine shall ensure overall best housekeeping within the plant premises.
xvi. Project proponent shall ensure to reduce the GHG emission as per the roadmap submitted based on the yearly estimation of GHG Emission due to Project Activity.
xvii. Drainage management plan along with soil conservation plan shall be implemented as committed.
xviii. The PP shall implement a project specific AQMP (Air quality Management Plan) with Best practices. PP shall determine priority pollutants. Pollution prevention approaches to reduce, eliminate, prevent pollution at its source, should be considered, like (but not limited to) are to use less toxic raw materials or fuels, use a less-polluting industrial process, and to improve the efficiency of the process. Develop a control strategy and plan that incorporates the pollution control measures. The Clean Air practices shall be adopted like mechanical collectors, wet scrubbers, fabric filters (baghouses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, absorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels.
xix. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.
xx. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

B. <u>General Conditions</u>

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be

obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.
vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
vii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
viii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
iv. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

i. Used refractories shall be recycled.
ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.
ii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.
iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt Dhamni, Bhakurdih, Khamhardih and Khapri Villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

x. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Consideration of Terms of Reference Proposals

Agenda No. 5.4

5.4 Increasing the Production Capacity of Axle Shop from 75,000 No's/Annum (36,750 TPA) To 1,65,000 No's/Annum (80,850 TPA) & Existing Capacity of Wheel Shop of 2,00,000 No's/Annum (97,000 TPA) by M/s. Rail Wheel Factory located at Yelahanka Village, Doddaballapur Road, Yelahanka Hobli, Bengaluru North Taluk, Bengaluru District, Karnataka- Consideration of TOR.

[Proposal No. IA/KA/IND/267276/2022; File No. IA-J-11011/130/2022-IA-II(IND-I)]

5.4.1 M/s. Rail Wheel Factory has made an application online vide proposal no. IA/KA/IND/267276/2022 dated 20/04/2022 in prescribed format (Form-I), copy of pre-feasibility report along-with proposed ToR 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 under Category "A" of the schedule of the EIA Notification and attracts General Condition since, Puttenahalli Lake Birds Conservation Reserve is at a distance of 131.8 m (W) from the project site. Hence the application is submitted to MoEF&CC and appraised at central level.

5.4.2 Name of the EIA consultant: M/s Enviro Resources, Mumbai[S No 70, List of ACOs with their Certificate / Extension Letter No: QCI/NABET/ENV/ACO/22/2291 valid till 29/06/2022; Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.4.3 The project of M/s. Rail Wheel Factory located at Puttenahalli Village & Yelahanka Village, Doddaballapur Road, Yelahanka Hobli, Bengaluru North Taluk, Bengaluru District, Karnataka is for Increasing the production capacity of Axles shop from 75,000 no,s/annum (36,750 TPA) to 1,65,000 no's/annum (80,850 TPA) & Existing capacity of Wheel Shop of 2,00,000 no's/annum (97,000 TPA).

5.4.4 Environmental site settings:

S. No.	Particulars	Details	Remarks
i	Total Land	77.25 ha (190.91 Acres) [Private]	Land Use: Acquired Land for Industrial use.
ii	Land Acquisition details as per	The Rail wheel factory has purchased land of 190.91 Acres for the	1. M/s. Rail Wheel Factory is an existing unit engaged in manufacturing of wheels

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>MoEF O.M dated 7/10/2014.</td><td>establishment of Axels shop and Wheel shop.</td><td>and axles for Indian Railways since 1984.
2. Subsequent to establishment, M/s. Rail Wheel Factory have been regularly renewing Consent for Operation (CFO) from Karnataka State Pollution Control Board.</td></tr>
<tr><td>iii</td><td>Existence of habitation involvement of R&R, if any</td><td>Not Applicable</td><td>There is no habitation on the proposed project area. Land is converted for Industrial use. so, R & R policy is not applicable.</td></tr>
<tr><td>iv</td><td>Latitude and Longitude of all the corners of project site</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>13° 6'42.11"N</td><td>77°34'50.12"E</td></tr>
<tr><td>B</td><td>13° 6'44.58"N</td><td>77°34'58.11"E</td></tr>
<tr><td>C</td><td>13° 6'47.40"N</td><td>77°35'8.72"E</td></tr>
<tr><td>D</td><td>13° 6'47.82"N</td><td>77°35'11.34"E</td></tr>
<tr><td>E</td><td>13° 6'46.59"N</td><td>77°35'13.62"E</td></tr>
<tr><td>F</td><td>13° 6'38.48"N</td><td>77°35'18.71"E</td></tr>
<tr><td>G</td><td>13° 6'37.48"N</td><td>77°35'17.67"E</td></tr>
<tr><td>H</td><td>13° 6'22.38"N</td><td>77°35'25.18"E</td></tr>
<tr><td>I</td><td>13° 6'22.38"N</td><td>77°35'25.96"E</td></tr>
<tr><td>J</td><td>13° 6'16.51"N</td><td>77°35'28.35"E</td></tr>
<tr><td>K</td><td>13° 6'17.84"N</td><td>77°35'24.34"E</td></tr>
<tr><td>L</td><td>13° 6'14.12"N</td><td>77°35'11.48"E</td></tr>
<tr><td>M</td><td>13° 6'13.46"N</td><td>77°35'5.80"E</td></tr>
<tr><td>N</td><td>13° 6'12.97"N</td><td>77°35'4.65"E</td></tr>
<tr><td>O</td><td>13° 6'16.77"N</td><td>77°35'0.99"E</td></tr>
<tr><td>P</td><td>13° 6'17.76"N</td><td>77°35'1.01"E</td></tr>
<tr><td>Q</td><td>13° 6'17.63"N</td><td>77°35'0.21"E</td></tr>
<tr><td>R</td><td>13° 6'18.73"N</td><td>77°34'59.18"E</td></tr>
<tr><td>S</td><td>13° 6'19.85"N</td><td>77°35'2.90"E</td></tr>
<tr><td>T</td><td>13° 6'24.03"N</td><td>77°35'3.43"E</td></tr>
<tr><td>U</td><td>13° 6'24.69"N</td><td>77°34'58.67"E</td></tr>
<tr><td>V</td><td>13° 6'23.59"N</td><td>77°34'59.08"E</td></tr>
<tr><td>W</td><td>13° 6'20.07"N</td><td>77°34'59.19"E</td></tr>
<tr><td>X</td><td>13° 6'19.86"N</td><td>77°34'58.68"E</td></tr>
<tr><td>Y</td><td>13° 6'19.40"N</td><td>77°34'59.05"E</td></tr>
<tr><td>Z</td><td>13° 6'19.19"N</td><td>77°34'58.79"E</td></tr>
<tr><td>AA</td><td>13° 6'24.12"N</td><td>77°34'54.22"E</td></tr>
<tr><td>AB</td><td>13° 6'27.54"N</td><td>77°34'51.93"E</td></tr>
<tr><td>AC</td><td>13° 6'34.25"N</td><td>77°34'49.83"E</td></tr>
<tr><td>AD</td><td>13° 6'34.18"N</td><td>77°34'56.51"E</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table><tr><td>AE</td><td>13° 6'39.28"N</td><td>77°34'57.02"E</td></tr><tr><td>AF</td><td>13° 6'39.13"N</td><td>77°34'50.65"E</td></tr></table></td><td></td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>912 m above mean sea level</td><td>-</td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any</td><td>No Forest land is involved.</td><td>-</td></tr>
<tr><td>vii</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Project site:</u>
There is no nala or water body passing through within the project site.
<u>Study area</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Yalahanka Lake</td><td>97.9 m</td><td>E</td></tr><tr><td>Puttenehalli Lake</td><td>136 m</td><td>W</td></tr><tr><td>Allalasandra Lake</td><td>1.29 Km</td><td>S</td></tr><tr><td>Attur Lake</td><td>1.5 Km</td><td>W</td></tr><tr><td>Jakkur Lake</td><td>1.9 Km</td><td>SE</td></tr></table></td><td><u>Study area</u>
The water body is 100 meters away from the project site. Hence HFL data is not required for proposed project.</td></tr>
<tr><td>viii</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td><u>Study area</u>
Puttenahalli Lake Birds Conservation Reserve

Status of Notification: Notified by Government of Karnataka vide No. FEE 389 FWL 2014 dated 29.04.2015.

Distance: 131.8 m (W)</td><td></td></tr>
</table>

5.4.5 M/s Rail wheel factory was established in the year 1984 i.e. prior 2006. Hence, the proponent has not obtained Environmental Clearance for existing facility, the proponent has obtained Consent to Operate from Karnataka State Pollution Control Board. The latest consent has been granted vide letter no. AW-329624 on dated 05/02/2022 and it is valid up to 30.06.2026.

5.4.6 Implementation status

S. No.	Facilities	Units	As per EC	Production as per CTO
1.	Casting of rail wheel	2,00,000 Nos/month	-	2,00,000 Nos/month
2.	Forging of machined railway axles	75,0000 Nos/month	-	75,0000 Nos/month

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

S. No.	Plant Equipment/ facility	Existing facilities as per CFO	Proposed Units	Final (Existing + Proposed
		Capacity		
1	Wheel	2,00,000 Nos/Annum (97000 TPA)	-	2,00,000 Nos/Annum (97000 TPA)
2	Axle	75,000 Nos/Annum (36750 TPA)	90,000 Nos/Annum (44100 TPA)	1,65,000 Nos/Annum (80850 TPA)
Note: Total Quantity in Tonnes of Wheel and Axle is calculated by considering one wheel and axle weight is 485 Kg & 490 Kg respectively.				

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

The raw materials are sourced from local markets and scrap yard.

S. No.	Raw Materials	Quantity in MT			Mode of transport
		Existing	Proposed	Total	
	Wheel Shop				
1	Calcine Lime	5044	-	5044	Road
2	Graphite Powder	873	-	873	Road
3	Graphite Granules	291	-	291	Road
4	Graphite Electrode	291	-	291	Road
5	HDDRM	97	-	97	Road
6	Wet Ramming Mass	752.914	-	752.914	Road
7	Ferro Manganese	379.076	-	379.076	Road
8	Ferro Silicon	804.421	-	804.421	Road
9	Silico Manganese	304.58	-	304.58	Road
10	Crushed raw Dolomite	97	-	97	Road
11	Magnesis Carbon Bricks	362.586	-	362.586	Road
12	Aluminum Star	5.529	-	5.529	Road
13	AL Wire 10 Gauge	0.194	-	0.194	Road
14	Oxygen	2093.26	-	2093.26	Road
15	Ladle Bricks	579.09	-	579.09	Road
16	Scrap (Including All type)	137442.4	-	137442.4	Rail & Road
17	Ladle Insulation Material	400	-	400	Road
18	Cutting Tips	0.1	-	0.1	Road
19	Steel Rabble	13.2	-	13.2	Road
20	Dome Sleeves	16.2	-	16.2	Road
21	Rice Hull	192	-	192	Road
22	C G Elctraode	72.6	-	72.6	Road
23	Formaldehyde Sol	0.6	-	0.6	Road
24	Hexamine Gr.I	28.8	-	28.8	Road
25	Silican Parting Comp	1.2	-	1.2	Road
26	Veegum Flakes	2.2	-	2.2	Road
27	CMC	0.2	-	0.2	Road

S. No.	Raw Materials	Quantity in MT			Mode of transport
		Existing	Proposed	Total	
28	Pouring Tube Glaze	4.2	-	4.2	Road
29	Air setting mortar	32	-	32	Road
30	Silica Sand 45 AFS	8400	-	8400	Road
31	Silica Sand 100 AFS	110	-	110	Road
32	Fused Silica Powder	182	-	182	Road
33	P.F. Resin	290	-	290	Road
34	Asbestos Gasket	19.8	-	19.8	Road
35	Garlock P.t Gasket	1.6	-	1.6	Road
36	Conical cover	20.8	-	20.8	Road
37	Cardboard tube	9.2	-	9.2	Road
38	Clay Graphite Stopper	109.2	-	109.2	Road
39	Stopper Pipe	387.6	-	387.6	Road
40	Ceramic Pouring Tube	304	-	304	Road
41	Dip Rod	4.4	-	4.4	Road
Axle Shop					
1	Blooms	51750	62100	113850	Rail and Road
2	Drills	0.6	0.7	1.3	Road
3	LNUX inserts	0.1	0.1	0.2	Road
4	Cutting compound oil	15	18	33	Road
5	Castor oil	7.5	9	16.5	Road
6	Milling Inserts LH	11.7	14.1	25.8	Road
7	Milling Inserts RH	11.7	14.1	25.8	Road

5.4.9 Existing water requirement is 667 m^3/day, obtained from BWSSB and permission for the same has been obtained. The freshwater requirement for the proposed project is estimated as 75 m^3/day and requirement will be met through BWSSB treated water source and open wells.

5.4.10 Existing power requirement of 23 MW is obtained from M/s RGPPL & REMCL. The power requirement for the proposed project is estimated as 2 MW and will be sourced from M/s. RGPPL & M/s. REMCL.

5.4.11 M/s. Rail Wheel Factory has provided greenbelt of 36.54% of the total area. The greenbelt, thus developed, would not only prevent the fugitive dust emissions but also improve the plant peripheral appearance from aesthetics viewpoint. Unpaved areas, if any, within the plant boundary would be provided with grass cover.

5.4.12 The capital cost of the existing project is Rs. 811.42 Crores and for the proposed project is Rs. 453.13 Croes. Thus the total project cost would be Rs. 1264.55 Crores. The employment generation from the proposed project/expansion is 72 numbers.

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

5.4.14 Proposed Terms of Reference:**(Baseline data collection period: March, April & May 2022)**

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
Meteorological parameters	Wind speed, Direction, Relative humidity Temperature and Rainfall	1	Hourly	--
AAQ parameters	PM_{10}, $PM_{2.5}$, SO_2, NO_x, O_3, Pb, CO, NH_3, C_6H_6, BaP, As, Ni	8	24 hours, twice a week for three months during study period	Based on Wind rose
B. Noise	Sound pressure level (Leq)	8	Hourly observations for 24 hours per location	--
C. Water				
Surface water	Physical, Chemical and Bacteriological Parameters	8	Once during the study season	Various locations in core and buffer zone
Ground water quality parameters	Physical, Chemical and Bacteriological Parameters	2	Once during the study season	
D. Land				
Soil quality	Physical & Chemical	8	Once during the season.	--
Land use	10 Km Buffer zone	--	--	--
E. Biological				
Aquatic Terrestrial	--	Core and Buffer zone Primary data/Secondary data	Once during the study period	--
F. Socio-economic parameters	Demographic structure resource base. Economic resource base. Cultural and aesthetic attributes, Health Education	Core and Buffer zone Primary data/Secondary data	Once during the study period	--

Deliberation by the Committee

5.4.15 The Committee noted the following:

i. Instant proposal is for expansion of the production capacity of Axles shop from 75,000 no,s/annum (36,750 TPA) to 1,65,000 no's/annum (80,850 TPA) & Existing capacity of Wheel Shop of 2,00,000 no's/annum (97,000 TPA).

ii. Puttenahalli Lake Birds Conservation Reserve is at a distance of 131.8 m (W) from the project site. Notified by Government of Karnataka vide No. FEE 389 FWL 2014 dated 29.04.2015.
iii. The PP has informed to the EAC that the instant Project was sanctioned by the Ministry of Railways in 2011-12. However, PP is now submitted the TOR application in the month of April 2022. EAC is of the view PP shall submit the application on time so that necessary clearance can be issued for implementation of this important project.
iv. The EAC deliberated on the proposal. The Committee deliberated on green belt development plan and proposed ToR. Based on the KML file presented by the PP, the proposed Unit is brown filed project.

Recommendations of the Committee

5.4.16 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 ToRs enclosed at Annexure-1 read with additional ToRs at **Annexure-2:**

i. The Puttenahalli Lake Birds Conservation Reserve is at a distance of 131.8 m (W) from the project site. The PP shall prepare detailed mitigation measures to prevent any impacts on the Puttenahalli Lake Birds Conservation Reserve. PP shall also take necessary permission from the State Government in this regard.
ii. PP shall prepare and submit the plan to conserve the nearby lakes and shall develop Lake Fronts for two number of lakes nearby
iii. Project proponent shall critically examine the increase in traffic and pollution load due to additional transport of the material while implementation of the project.
iv. PP shall submit the waste disposal plan including electronic waste.
v. PP shall conduct a rapid social-economic study of adjoining study area.
vi. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
vii. Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
viii. Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
ix. PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.
x. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
xi. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
xii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

xiii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

xiv. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

xv. An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years

xvi. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

Agenda No. 5.5

5.5 Greenfield Project for Production of Sponge Iron 1,15,500 TPA with 350 TPD DRI Kiln, Ferro Alloy Plant Product Mix of Silico Manganese (16,929 TPA) or Ferro Manganese (21,092 TPA) or Ferro Silicon (9,191 TPA) with 9 MVA Submerged Arc Furnace and WHRB based Captive Power Plant of 8 MW by M/s. Manbhum Ispat Pvt. Ltd. located at Mouza- Mondalpur, Jadudanga, PS+PO-Jamuria, Ranisayer -Jamuria Road, District Paschim Bardhaman, West Bengal - Consideration of TOR .

[Proposal No. IA/WB/IND/266191/2022; File No. IA-J-11011/127/2022-IA-II(IND-I)]

5.5.1 M/s Manbhum Ispat Pvt Ltd. have made an application online vide proposal no. IA/WB/IND/266191/2022 dated 20/04/2022 in prescribed format (Form-I), copy of pre-feasibility report along-with proposed ToR 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 under Category "A" of the schedule of the EIA Notification and appraised at central level.

5.5.2 Name of the EIA consultant: M/s Grass Roots Research and Creation India (P) Ltd. [S No 169, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2124/RA0213, valid till 15/02/2024; Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.5.3 The project of M/s Manbhum Ispat Pvt Ltd. located at Mouza- Mondalpur, Jadudanga, PS+POJamuria, Ranisayer -Jamuria Road, District Paschim Bardhaman, West Bengal is for production of Sponge Iron 1,15,500 TPA with 350 TPD DRI Kiln, Ferro Alloy Plant Product Mix of Silico Manganese (16,929 TPA) or Ferro Manganese (21,092 TPA) or Ferro Silicon (9,191 TPA) with 9 MVA Submerged Arc Furnace and WHRB based Captive Power Plant of 8 MW.

5.5.4 Environmental site settings:

SL. No	Particulars	Details	Remarks
i	Total Land	6.26 Ha [Private]	Land will be diverted for industrial purpose.
ii	Land Acquisition details as per MoEF	Land has been taken on lease basis for 30 years.	-

<table>
<tr><th>SL. No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>O.M dated 7/10/2014.</td><td></td><td></td></tr>
<tr><td>iii</td><td>Existence of habitation involvement of R&R, if any</td><td>No R & R involved in the project</td><td>-</td></tr>
<tr><td>iv</td><td>Latitude and Longitude of all the corners of project site</td><td><table><tr><th>Latitude</th><th>Longitude</th></tr><tr><td>23°40'45.11"N</td><td>87° 5'47.29"E</td></tr><tr><td>23°40'38.21"N</td><td>87° 5'39.82"E</td></tr><tr><td>23°40'41.61"N</td><td>87° 5'35.95"E</td></tr><tr><td>23°40'46.95"N</td><td>87° 5'38.69"E</td></tr><tr><td>23°40'51.41"N</td><td>87° 5'45.23"E</td></tr></table></td><td>-</td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>119 m AMSL</td><td>-</td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any</td><td>No forest land is involved</td><td>-</td></tr>
<tr><td>vii</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Project site:</u> Nil.

<u>Study area</u><table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Damodar River</td><td>8.5 Km</td><td>SW</td></tr><tr><td>Ajay River</td><td>9.5 Km</td><td>NE</td></tr></table></td><td>-</td></tr>
<tr><td>viii</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tigerreserve/ elephant reserve etc. if any within the studyarea</td><td>Nil</td><td>-</td></tr>
</table>

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

Sponge Iron Production	**Description**	**Total Capacity**
➢ No of Rotary Kiln	01 No's	**1,15,500 TPA**
➢ Capacity of Rotary Kiln	350 TPD	
➢ Production capacity per day	350 Ton	
➢ No. of days operation per day	330	
Ferro Alloy Plant (9 MVA)		
Silico Manganese	**16,929 TPA**	
OR		
Ferro Manganese	**21,092 TPA**	
OR		
Ferro Silico	**9,191 TPA**	
Captive Power Plant		
➢ WHRB Boiler (01)	**1x36 TPH**	**8 MW**

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

Raw Material Details for Sponge Iron (1,15,500TPA)

S. No.	Name	Quantity (TPA)	Source	Transportation	Distance w.r.t Project Site
1	Iron ore lumps	1,67,475	Captive mines, purchase from NMDC/ OMDC /other mines	Through Rail /Road	Between 300 to 350 KMs
2	Coal Indian	1,50,150	Purchase from NCL/ECL/CCL	Rail route/ by road	Between 20 - 250 KMs.
3	Dolomite	5,198	Local purchase	Road through covered trucks	Between 20 - 40 KMs

Raw Material Details for Silico Manganese (16,929 TPA)

S. No.	Name	Quantity	Source	Transportation	Distance w.r.t Project Site
1	Manganese Ore	31,319	MOIL; OMC; and other private mines	Road through covered trucks	Between300 0to350 KMs
2	Coke	7,618	Open Market	Road through covered trucks	Between 20–50KMs.
3	Coal	5,925	Nearby Coal Mines	Road through covered trucks	Between 20–50KMs
4	Dolomite	2,539	Open Market	Road through covered trucks	Between 20–50KMs.
5	Quartz	3,724	Open Market	Road through covered trucks	Between 20–50KMs
6	Carbon Paste	339	Open Market	Road through covered trucks	Between 20–50KMs.
7	Ferro Manganese Slag	7,618	In-house	Road through covered trucks	Between 20–50KMs

Raw Material Details for Ferro Manganese (21,092TPA)

S. No.	Name	Quantity	Source	Transportation	Distance w.r.t Project Site
1	Manganese Ore	46,402	MOIL; OMC; And other private mines	Road through covered trucks	Between 300 to 350 KMs
2	Coke	9,491	Open Market	Road through covered trucks	Between 20–50 KMs.
3	Coal	5,484	Nearby Coal Mines	Road through covered trucks	Between 20–50 KMs
4	Dolomite	5,273	Open Market	Road through covered trucks	Between 20–50 KMs.

5	CarbonPaste	422	Open Market	Road through covered trucks	Between 20–50 KMs

Raw Material Details for Ferro Silicon (9,191TPA)

S. No.	Name	Quantity	Source	Transportation	Distance w.r.t Project Site
1	Quartzite	17,003	Open Market	Road through covered trucks	Between 20–50KMs.
2	Mill Scale	3,493	Open Market	Road through covered trucks	Between 20–50KMs
3	Charcoal	20,670	Open Market	Road through covered trucks	Between 20–50KMs.
4	Coke Breeze	2,298	Open Market	Road through covered trucks	Between 20–50KMs
5	Carbon Paste	460	Open Market	Road through covered trucks	Between 20–50KMs.

Material Balance for Sponge Iron

S. No.	INPUT	Qty, TPA	OUTPUT	Qty, TPA
1	Iron Pellet	1,67,475	Sponge Iron	1,15,500
2	Coal Indian	1,50,150	Dolochar	25,410
3	Dolomite	5,198	Ash/ Dust from ESP/ Bag filter	20,790
			Wet Scraper sludge	18,810
			Accretion Slag	2,079
			Flue Gases and LOI	1,40,234
Total		**3,22,823**	**Total**	**3,22,823**

Material Balance for Silico-Manganese

S. No.	INPUT	Quantity, TPA	OUTPUT	Quantity, TPA
1	Manganese Ore	31,319	Silico Manganese	16,629
2	Coke	7,618	Slag	15,468
3	Coal	5,925	Bag Filter Dust	6,071
4	Dolomite	2,539	Oxidation/ Burning Losses	19,867
5	Quartz	3,724		
6	Carbon Paste	339		
7	Ferro Manganese Slag	7,483		
	Total	58,035	Total	58,035

Material Balance for Ferro-Manganese

S. No.	INPUT	Quantity, TPA	OUTPUT	Quantity, TPA
1	Manganese Ore	46,402	Ferro Manganese	21,092

2	Coke	9,491	Slag	15,819
3	Coal	5,484	Bag Filter Dust	8,437
4	Dolomite	5,273	Oxidation/ Burning Losses	21,680
5	Carbon Paste	422		
Total		**67,073**	**Total**	**67,073**

Material Balance for Ferro-Silicon

S. No.	INPUT	Quantity, TPA	OUTPUT	Quantity,TPA
1	Quartzite	17,003	Ferro Silicon	9,191
2	Mill Scale	3,493	Slag	2,506
3	Charcoal	20,670	Bag Filter Dust	3,759
4	Coke Breeze	2,298	Oxidation/ Burning Losses	28,467
5	Carbon Paste	460		
Total		**43,923**	**Total**	**43,923**

- All the trucks used for the transport of raw materials, products and wastes will be completely covered with tarpaulin and ensured no spillage during transportation.
- Internal roads in the proposed project will be made pucca.
- All the raw material required for the proposed steel plant will be stored on pucca plat form above ground level.
- All the raw material yards are equipped with water sprinkling system, so as to avoid fugitive emission during the material handling.

5.5.7 The water requirement for the project is estimated as 348.5 KL/day. Source of the water will be ground water supply and permission will be obtained.

5.5.8 Total power requirement for the proposed project is 15 MW. 8 MW will be sourced from in-house CPP and remaining from DVC/IPCL.

5.5.9 The capital cost of the project is Rs. 230 Crores and the capital cost for environmental protection measures is proposed as Rs. 15 Crores. The employment generation from the proposed project 300 persons.

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

5.5.11 Proposed Terms of Reference: **(Baseline data collection period: March to May, 2022)**

S. No.	Environmental Component	Primary data		
		Parameters	**Frequency**	**Monitoring/ Sampling Locations**
1.	Land	Agriculture, Habitation, Industry, Stonywaste/ Quarries, Forestarea, Plantation/ Vegetation, Openscrub, Water bodies etc.	Onceina Study period Season	10 km radius Buffer from Project site (Corezone)

S. No.	Environmental Component	Primary data		
		Parameters	**Frequency**	**Monitoring/ Sampling Locations**
2.	Meteorology	Temperature, Relative Humidity, Wind Speed, Wind Direction, Rainfall	Hourly	Project site
3.	Air	PM_{10}, $PM_{2.5}$, SO_2, NO_2, CO and other applicable parameters as per ToR	Twice a week (24 hourly)	08
4.	Noise	Equivalent noise levels in Leq ind B(A)	Once in a season (day & night time)	08
5.	Water			
a.	Surface Water	Parameters as per IS 10500-2012	Once in a season	08
b.	Ground Water		Once in a season	08
6.	Soil	Parameters as per IS 2720/ USDA	Once in a season	05
7.	Biological Environment	Flora and fauna	Once in a season	Study area
8.	Socio-Economic Environment	Economic Demography	Once in a season	Study area

5.5.12 During the meeting, project proponent submitted written submission on the following points:

i. PP submitted an affidavit explaining chronology of land transfer to justify the construction at project site.
ii. PP submitted that land use conservation is under process and submitted a copy of application submitted to Asansol Durgapur Development Authority.
iii. PP submitted willingness to adopt nearby schools and sponsor higher education of meritorious students as CER.
iv. PP submitted that proposed project is falling under Items 1(d) and 3(a) of the Schedule of the EIA Notification 2006 and its subsequent amendment.

Deliberation by the Committee

5.5.13 The Committee noted the following:

i. Instant proposal is for production of Sponge Iron 1,15,500 TPA with 350 TPD DRI Kiln, Ferro Alloy Plant Product Mix of Silico Manganese (16,929 TPA) or Ferro Manganese (21,092 TPA) or Ferro Silicon (9,191 TPA) with 9 MVA Submerged Arc Furnace and WHRB based Captive Power Plant of 8 MW.
ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is green filed project and PP has submitted an affidavit explaining chronology of land transfer to justify the construction at project site.

iii. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

Recommendations of the Committee

5.5.14 After deliberations, the Committee **recommended** the project proposal **subject to uploading the EDS reply in PP's letter head** for prescribing following specific ToRs for undertaking detailed EIA and EMP study in addition to the generic ToRs enclosed at Annexure-1 read with additional ToRs at **Annexure-2:**

i. Details of mitigation measures to prevent the impacts on the nearby schools/hospitals/eco sensitive zone etc. The PP shall install one CAQMS in one of the school. Extra care and precaution shall be taken by the PP to protect the schools from air and noise pollution.
ii. Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
iii. Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
iv. PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.
v. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
vi. Action plan for 100 % solid waste utilization shall be submitted.
vii. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
viii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.
ix. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
x. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
xi. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
xii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.
xiii. An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year

shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

xiv. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

Agenda No. 5.6

5.6 Proposed Installation of Iron Ore Beneficiation Plant (1x1.0 MTPA), Pelletization Plant (1x0.6 MTPA) with Coal Gasifier (5x7000 m^3/hr), Sponge Iron Plant (2x350 TPD DRI Kilns), Induction Furnaces (3x20T) with matching LRF & CCM, Hot Rolling Mill (0.2 MTPA) with 1x15 TPH oil fired Re-heating Furnace (optional) alongwith 34MW Capacity Captive Power Plant (16 MW WHRB based + 18 MW AFBC based) by M/s CPCBL Steels and Power Private Limited located at Village Newra, Mouza Takhatpur, District Bilaspur, Chhattisgarh - Consideration of TOR.

[Proposal No. IA/CG/IND/263618/2022; File No. IA-J-11011/28/2022-IA-II(IND-I)]

5.6.1 M/s. CPCBL Steels and Power Private Limited have made an application online vide proposal no. IA/CG/IND/263618/2022dated 22/04/2022 in prescribed format (Form-I), copy of pre-feasibility report along-with proposed ToR 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. 2(b) Mineral Beneficiation, 3(a) Metallurgical Industries and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification and appraised at central level.

5.6.2 Name of the EIA consultant: M/s. Envirotech East Pvt. Ltd.[S No 177, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2124/SA 0145 valid till 12/09/2022; Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.6.3 The project of M/s CPCBL Steels and Power Private Limited, located at village Newra, Mouza Takhatpur, District Bilaspur in the state of Chhattisgarh is for setting up of a new Steel Plant for production of 0.2 Million Tons Per Annum (MTPA) TMT Bars, Rods, Structural.

5.6.4 Environmental site settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total Land</td><td>The proposed project will be installed on the available 24.28 hectares (60.0 acres) vacant land (private land).</td><td></td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Land is acquired by the Company.</td><td></td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project Site : Village Newra

Study Area:
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Bilaspur City</td><td>16.0 km</td><td>South-east from the Project site</td></tr>
</table></td><td>No R&R issue involved in the proposed project</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td><table><tr><td>Kota Town</td><td>10.0 km</td><td>North from the Project site</td></tr></table></td><td></td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site.</td><td><table><tr><th>POINT</th><th>LATITUDE</th><th>LONGITUDE</th></tr><tr><td>A</td><td>22°12'36.89"N</td><td>82° 1'31.36"E</td></tr><tr><td>B</td><td>22°12'35.32"N</td><td>82° 1'37.06"E</td></tr><tr><td>C</td><td>22°12'32.37"N</td><td>82° 1'47.68"E</td></tr><tr><td>D</td><td>22°12'26.67"N</td><td>82° 1'49.56"E</td></tr><tr><td>E</td><td>22°12'27.85"N</td><td>82° 1'39.49"E</td></tr><tr><td>F</td><td>22°12'25.23"N</td><td>82° 1'38.07"E</td></tr><tr><td>G</td><td>22°12'26.29"N</td><td>82° 1'33.50"E</td></tr><tr><td>H</td><td>22°12'17.14"N</td><td>82° 1'30.34"E</td></tr><tr><td>I</td><td>22°12'19.94"N</td><td>82° 1'17.49"E</td></tr><tr><td>J</td><td>22°12'27.35"N</td><td>82° 1'20.06"E</td></tr><tr><td>K</td><td>22°12'33.13"N</td><td>82° 1'30.24"E</td></tr></table></td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>294 m above mean sea level</td><td></td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any.</td><td>No forest land is involved in the project site.</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers, Lakes Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Arpa River is passing about 6.0 km distance in east direction w.r.t the project site in the study area.</td><td></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area</td><td>Nil.</td><td></td></tr>
</table>

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

Sl. No.	Name of the Facility	Project Configuration	Total Capacity (TPA)	Product
1	Iron Ore Beneficiation Plant	1X1.0 MTPA	10,00,000	Iron Ore Concentrate
2	Pelletization Plant	1X0.6 MTPA	6,00,000	Iron Ore Pellet
3	Sponge Iron Plant	2X350 TPD	2,10,000	Sponge Iron
4	Induction Furnaces with matching LRF & CCM	3X20T	2,00,000	Billets

Sl. No.	Name of the Facility	Project Configuration	Total Capacity (TPA)	Product
5	Rolling Millwith 1x15 TPH Reheating Furnace	1X600 TPD	2,00,000	TMT Bars, Rods, Structural
6	Coal Gasifier	5x7000 m^3/hr (4 in operation and 1 as standby)	5x7000 m^3/hr (4 in operation and 1 as standby)	Producer Gas
7	Captive Power Plant	34 MW (16 MW WHRB based &18 MW CFBC based)	34 MW	34 MW Power

5.6.6 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 MATERIAL	QUANTITY (IN TPA)	SOURCE	MODE OF TRANSPORT
IRON ORE BENIFICATION UNIT (1.0 MTPA):				
1.	Iron Ore	10,00,000	Barbil, Orissa	Rail
PELLETIZATION UNIT (0.6 MTPA):				
1.	Iron Ore Concentrate	6,00,000	In-House	-
2.	Bentonite	20,000	Local Market	Road
3.	Limestone	13,000	Local Market	Road
SPONGE IRON PLANT (2X350 TPD):				
1.	Iron Pellet	3,50,000	In-House	-
2.	Coal	2,40,000	Imported	Rail / Road
3.	Dolomite	12,000	Local Market	Road
INDUCTION FURNACE (3X20 ton):				
1.	Sponge Iron	1,20’000	In-House	-
2.	Scraps	30,000	Local Market	Road
3.	Pig Iron	30,000	Local Market	Road
4.	Ferro Alloys	1,600	Local Market	Road
CAPTIVE POWER PLANT (18 MW BASED ON AFBC BOILER):				
1.	Coal	1,40,000	Local Market	Road
2.	Dolochar	72,000	In-House	-

5.6.7 The water requirement for the proposed project is estimated as 2007 m^3/day which will be met from Water supply system of Water Resources Department, Kota through River Arpa.

5.6.8 The power requirement for the proposed project is estimated as 33 MW which will be sourced from 34 MW capacity Captive Power Plant and Chhattisgarh State Power Distribution Company Limited (CSPDCL).

5.6.9 The capital cost of the project is Rs. 455 Crores. The employment generation from the proposed project during operational phase will be 750 persons.

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

5.6.11 Proposed Terms of Reference: **[Baseline data collection period: 1st December, 2021 to 28th February, 2022 (Winter Season)]**

Attributes	Sampling		Parameters
	No. of Stations	Frequency	
A. Air			
a. Meteorological Parameters	1	Continuous on 24-hourly basis	Temperature, Relative Humidity, Atmospheric Pressure, Wind Speed, Wind Direction, Rainfall.
b. AAQ Parameters	8	Twice in a week	PM_{10}, $PM_{2.5}$, SO_2, NO_2& CO
B. Noise	10	Once (Day & Night)	L_{eq} [dB (A)]
C. Water			
a. Surface Water	10	Once in the study period	Physical, Chemical & Biological
b. Ground Water	9	Once in the study period	Physical, Chemical & Biological
D. Land			
a. Soil Quality	4	Once in the study period	Physical and Chemical
b. Land Use	Study Area	Once in the study period	Land use using Satellite Imagery
E. Biological			
a. Aquatic	Study Area	Once in the study period	Enlist local Flora and Fauna
b. Terrestrial	Study Area	Once in the study period	Enlist local Flora and Fauna
F. Socio-economic Parameters	Study Area	Based on Latest census data and sample survey	Population & Infrastructure Facilities

5.6.12 The project proponent had earlier applied for ToR vide proposal no. IA/CG/IND/250313/2022 dated 21st January, 2022 and the proposal was considered in 53rd meeting of the Re-constituted Expert Appraisal Committee [EAC] (Industry-1) held on 10th February, 2022 wherein the Committee returned the proposal in its present form due to technical deficiencies in the proposal.

5.6.13 The project proponent has again applied for ToR, vide proposal no. IA/CG/IND/263618/2022dated 22/04/2022 after thoroughly reviewing the observations of Committee and has ultimately decided to set up the proposed project only on the eastern side of the said canal. It is also proposed to develop proper greenbelt maintaining a minimum width of 50 m all along the side of the canal. Accordingly, the plant layout as well as project configuration is revised, considering the available area of 60 acres instead of 84.03 acres as proposed earlier. Hence, the irrigation canal will be passing outside the project boundary in the western direction. However, the proposed project is designed, based on zero liquid discharge concept, the water of the canal shall be monitored on regular basis. The proposal is considered in the 5th meeting of the EAC held on 12-13th May, 2022. The observations and recommendations of the EAC are as follows:

5.6.14 During the meeting, project proponent submitted written submission on the following point:

i. PP submitted that proposed project is falling under Items 3(a), 2(b), 1(d) of the Schedule of the EIA Notification 2006 and its subsequent amendment.

Deliberation by the Committee

5.6.15 The Committee noted the following:

i. Instant proposal is for setting up of a new Steel Plant for production of 0.2 Million Tons Per Annum (MTPA) TMT Bars, Rods, Structural.
ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is green filed project and no activities on the site started and no violation case is observed.
iii. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

Recommendations of the Committee

5.6.16 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 ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:

(i) An irrigation canal exists nearby of the project site. The PP shall submit the suitable steps /conservation plan along with contouring, Run -off calculations, disposal etc. As a canal exist nearby of the project area, so a robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.
(ii) Tailing management plan shall be included in EIA.
(iii) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
(iv) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
(v) PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.
(vi) The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
(vii) PP should submit action plan rainwater harvesting.
(viii) Action plan for 100 % solid waste utilization shall be submitted.

(ix) Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.

(x) Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

(xi) Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.

(xii) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.

(xiii) Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

(xiv) Action plan to limit the dust emission from all the stacks below 30 mg/Nm^3 shall be furnished.

(xv) An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

Consideration of Amendment in ToR Proposals

Agenda No. 5.7

5.7 Proposed Expansion of Integrated Cement Project (Clinker - 2.85 to 6.15 MTPA, Cement - 4.75 to 10 MTPA and WHR - 45 MW) by Installation of new Line-II by M/s Ambuja Cements Limited (Unit: Maratha Cement Works) located at Villages Upparwahi & Kukkudsat (Taluka Korpana) and Villages Bhendvi & Hardona (Taluka Rajura), District Chandrapur, Maharashtra– Amendment in Terms of Reference – regarding.

[Proposal No. IA/MH/IND/264438/2022; File No. J-11011/292/2006-IA.II(I)]

5.7.1 M/s Ambuja Cements Limited has made an application online *vide* proposal no. IA/MH/IND/264438/2022 dated 25/04/2022 along with Form 3, revised Form-1 and revised PFR seeking amendment in Terms of Reference accorded by the Ministry vide letter no. J-11011/292/2006-IA.II(I) dated 04/03/2021. The proposed project activity is listed at S. No. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification and appraised at central level.

5.7.2 Name of the EIA consultant: M/s. J.M. EnviroNet Pvt. Ltd.[S No 42, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/RA 0186valid till 07/02/2023; Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.7.3 M/s. Ambuja Cements Limited had made an application for Environmental Clearance (for ToR approval) to MoEF&CC, New Delhi on 02/03/2021 for Expansion of Integrated Cement Plant - Clinker (2.85 to 6.15 MTPA), Cement (4.75 to 10 MTPA) and WHRS (45 MW) by Installation of New Line – II located at Villages: Upparwahi & Kukkudsat, Taluka: Korpana and Villages: Bhendvi & Hardona, Taluka: Rajura, District: Chandrapur (Maharashtra). Accordingly, Standard ToR was issued *vide* letter no. J-11011/292/2006-IA.II(I),dated 04thMarch, 2021.

5.7.4 The instant proposal is for seeking amendment in ToR dated 04/03/2021 with respect to the proposed area from 121.41 ha to 194.65 ha. There is no other amendment proposed in the ToR Letter.

5.7.5 Changes in granted ToR vis-à-vis with proposed ToR are as follows:

S. No.	Units	Details as per ToR dated 04/03/2021	Proposed Amendment in ToR
1.	Total Project Area (Ha)	121.41 Ha	194.65 Ha
2.	Geographical Coordinates	Latitude - 19°42'51.3507"N to 19°41'53.3722"N, Longitude - 079°13'39.0797"E to 079°12'47.3493"E	Latitude - 19°44'54.0902" N to 19°41'53.4071"N Longitude - 079°13'39.0871" E to 079°12'47.4790" E

5.7.6 As reported, there will be no change in the unit configuration and capacity of proposed project.

5.7.7 **Reason for seeking amendment in ToR:** As per the earlier granted EC vide MoEF&CC letter no. J-11011/292/2006-IA.II(I) dated 03/11/2006; the total plant area was 121.41 ha. Company had already purchased additional land to accommodate associated activities (Residential colony, Truck Parking area and future expansion in railway siding area) for the plant and final plant area including all the associated facilities totals to be 194.65 ha. Also, while filing the ToR application for the expansion project; the plant area has been mentioned as 121.41 ha only and based on the same, Standard ToR has been granted by MoEF&CC, New Delhi. Now, Company is proposing amendment in ToR letter with respect to change of area from 121.41 ha to 194.65 ha. There is no other amendment proposed in the ToR Letter.

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

5.7.9 During the meeting, project proponent submitted written submission on the following points:

i. In the existing area of 121.41 ha, PP shall continue to maintain greenbelt / plantation area of 33% and also develop greenbelt / plantation in the additional area of 73.24 ha. In this way, PP will maintain/develop 33% greenbelt in the total area of 194.65 ha for which the ToR amendment is sought for.

ii. The additional land of 73.24 ha for which ToR amendment is sought for was acquired and under the physical possession of M/s Ambuja Cements Limited (Unit: Maratha Cement Works) after converting for non-agricultural purposes.

Deliberation by the Committee

5.7.10 The Committee noted the following:

i. Standard ToR was issued to M/s. Ambuja Cements Limited *vide* letter no. J-11011/292/2006-IA.II(I) dated 04th March, 2021 for Expansion of Integrated Cement Plant - Clinker (2.85 to 6.15 MTPA), Cement (4.75 to 10 MTPA) and WHRS (45 MW) by Installation of New Line – II located at Villages: Upparwahi & Kukkudsat, Taluka: Korpana and Villages: Bhendvi & Hardona, Taluka: Rajura, District: Chandrapur (Maharashtra).

ii. Instant proposal is for seeking amendment in ToR dated 04/03/2021 with respect to the proposed area from 121.41 ha to 194.65 ha. There is no other amendment proposed in the ToR Letter.

iii. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

Recommendations of the Committee

5.7.11 After deliberations, the Committee **recommended** the project proposal for amendment in Terms of Reference no. J-11011/292/2006-IA.II(I) dated 04th March, 2021 with respect to the proposed area from 121.41 ha to 194.65 ha as detailed in para 5.7.4 and 5.7.5 above with the following additional specific TOR.

- In the existing area of 121.41 ha, PP shall continue to maintain greenbelt / plantation area of 33% and shall also develop greenbelt / plantation in the additional 24.17 ha (i.e. 33% of additional area of 73.24 ha) with a tree density of not less than 2500 per ha. The additional plantation of 24.17 ha has to be undertaken within the additional land of 73.24 ha.

- Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

*****

DAY-2: MAY 13, 2022 [FRIDAY]

Consideration of Environmental Clearance Proposals

Agenda No. 5.8

5.8 **Expansion of Existing Sponge Iron Plant capacity from 100 TPD (2 x 50 TPD) to 300 TPD (2 x 100 TPD) and 3 MW captive Power Generation Plant by M/s. Mahamanav Ispat Pvt. Ltd., located at Sy. No. 81/A, 82/A, 78/A, 78/B/2, 82/B/2a & 82/B/2b of Belagal Village, Ballari Taluk & District, Karnataka- Consideration of Environmental Clearance.**

[Proposal No. IA/KA/IND/266926/2021; File No. J-11011/287/2020-IA.II(I)]

5.8.1 M/s Mahamanav Ispat Private Limited has made an online application vide proposal no. IA/KA/IND/266926/2021 dated 26/04/2022 along with copy of EIA/EMP Report, Form - 2 and Certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical Industries (ferrous & non-ferrous) under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

5.8.2 Name of the EIA consultant: M/s Environmental Health and Safety Consultants Pvt Ltd. [Sl. No. 53, List of ACOs with their Certificate / Extension Letter no. QCI/NABET/ENV/ACO/22/2301; valid upto 05/07/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.8.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
11/11/2020	Standard Terms of Reference	Terms of Reference	21/11/2020	20/11/2024
09/04/2021	-	Corrigendum in ToR	04/05/2021	

5.8.4 The project of M/s. Mahamanav Ispat Private Limited located in Belagal Village, Ballari Taluk, Ballari District, Karnataka for expansion of the existing industry from 100 TPD (2X50TPD) to 300 TPD (2 X 100 TPD) along with 3MW captive power plant.

5.8.5 Environmental Site Settings:

SI. No	Particulars	Details	Remarks
i.	Total Land	11.18 Ha (27.63 Acres) (Existing Plant – 13.14 Acre i.e. 5.31 Ha; Expansion : 14.49 Acre i.e. 5.86 Ha)	Industrial Land
ii.	Land acquisition details as per MoEF&CC O.M dated 7/10/2014	M/s. Mahamanav Ispat Pvt. Ltd. has already acquired total land area of 27.63 Acres, out of which the existing plant is spread over an area of 13.14 acres and area reserved for the proposed	-

<table>
<tr><th>SI. No</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>expansion is 14.49 Acres. There is no land acquisition.</td><td></td></tr>
<tr><td>iii.</td><td>Existence if habitation & involvement of R & R, if any</td><td>No R&R involved.</td><td>-</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Piller</th><th>Latitude</th><th>Longitude</th></tr><tr><td>North</td><td>15° 6'43.58"N</td><td>76°48'24.25"E</td></tr><tr><td>East</td><td>15° 6'39.46"N</td><td>76°48'28.74"E</td></tr><tr><td>South</td><td>15° 6'36.98"N</td><td>76°48'24.62"E</td></tr><tr><td>West</td><td>15° 6'39.32"N</td><td>76°48'21.22"E</td></tr><tr><td>SW</td><td>15° 6'36.45"N</td><td>76°48'20.05"E</td></tr><tr><td>NE</td><td>15°6'42.61"N</td><td>76°48'27.65"E</td></tr></table></td><td>-</td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>556 m AMSL</td><td>-</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land if any</td><td>No involvement of Forest Land.</td><td>-</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td>Project Site-Nil

Study Area:
• Allipura Kere – 5.77 Km, NE
• Avinamodugu Kere – 7.64 Km, SW
• Halkundi Lake – 8.26 Km, NE
• Tungabhadra canal passes – 9.42 Km NE</td><td>-</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/National Park/Wild Life Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve, etc. if any within the study area.</td><td>Nil

• Ballari RF – 0.3 Km, S
• Chikkantapur RF-5.6Km, W
• Metriki RF – 8.5 Km, SW
• Mincheri RF – 9.2 Km, SE
• Marutla Extension RF-9Km, SW</td><td>-</td></tr>
</table>

5.8.6 The existing project was accorded environmental clearance vide letter No: SEIAA: 70: IND: 2008 Dated: 20.03.2009, CTE vide letter No: PCB/442/CFE/LR/2009-10/92 Dated: 11.05.2009 and the latest CTO vide letter No: AW-303500 Dated: 28.08.2017 valid till 30.06.2022.

5.8.7 Implementation status of the existing EC

SI. No.	Facilities	As per EC dated 20/03/2009	Implementation Status as on date	Production as per CTO
1	Establishment of Sponge Iron Unit with a capacity of 100 TPD (2 X 50)	100 TPD (2 X 50)	100 TPD (2 X 50)	30000 TPA (2 X 50 TPD)

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

Sl. No.	Activity	Unit Configuration		Total Capacity (Existing + Proposed) in TPA
		Existing	Proposed Expansion	
1	Sponge Iron	2 x 50 TPD	2 x 100 TPD	99000
2	Captive Power Generation	-	3 MW	3 MW

5.8.9 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:

Sl. No.	Raw Material	Qty. (TPA)	Source	Distance from Project Site	Mode of Transport
1	Iron Ore	198000	Local	130 Km	By Road in covered Trucks
2	Imported Coal	84150	Local	450 Km	By Road in covered Trucks
3	Lime Stone	4950	Local	150 Km	By Road in covered Trucks

5.8.10 Existing water requirement is 60 m^3/day (KLD), water requirement is obtained from Ballari Municipal Corporation/ Karnataka Urban Water supply and drainage Board (KUW&DB). The proposed water requirement is 173.25 m^3/day (KLD). Thus, total water requirement after expansion is estimated as 233.25 m^3/day (Process: 223.25 KLD + Domestic Purpose: 10 KLD), which will be met from Ballari Municipal Corporation/ KUW&DB. Water Permission is obtained from the KUWS&D vide Ballari City Corporation letter No. MNPB/WB/WTP/15MLD/136/2021-22 dated 07/01/2022 for a quantity of 150 KLD treated water to be supplied from 15 MLD Sewage Treatment Plant.

Raw Material	Qty.	Source
Water requirement	233.25 KLD Process: 223.25 KLD Domestic Purpose: 10 KLD	Process treated water from Ballari Municipal corporation Domestic purpose – Bore well water

5.8.11 The power requirement for running the existing plant is from GESCOM. The power requirement for the project is estimated as 3 MW, out of which 1.5 MW will be obtained from the in-house.

5.8.12 Baseline Environmental Studies:

Period	December 2020, January 2021, February 2021	February 2022		
AAQ Parameters at 8 Locations	$PM_{2.5}$ = 12.1 to 30.6 µg/m^3 PM_{10} = 46.2 to 87.1 µg/m^3 SO_2 = 4.5 to 11.61 µg/m^3 NO_2 = 11.42 to 28.16 µg/m^3	Para-meters	Project Site (Max)	Study Area (Max)
		$PM_{2.5}$	84.5 µg/m^3	92.3 µg/m^3
		PM_{10}	29.5 µg/m^3	29.7 µg/m^3
		SO_2	9.42 µg/m^3	10.49 µg/m^3

Period	December 2020, January 2021, February 2021	February 2022		
		NO_2	18.61 µg/m^3	20.65 µg/m^3
		CO	1.05 µg/m^3	8.09 µg/m^3
AAQ Modelling (Incremental GLCs) AERMOD CLOUD CALINE PRO	**Existing Plant** PM = 0.25 µg/m^3 at a distance of 300 m towards SW direction. SO_2 = 0.12 µg/m^3 at a distance of 300 m towards SW direction. NO_2 = 0.22 µg/m^3 at a distance of 300 m towards SW direction. **Proposed Plant** PM = 0.35 µg/m^3 at a distance of 300 m towards SW direction. SO_2 = 0.15 µg/m^3 at a distance of 300 m towards SW direction. NO_2 = 0.26 µg/m^3 at a distance of 300 m towards SW direction.	-		
Ground Water at 7 Locations	pH: 7.31 (GW-4) to 8.38 (GW-6), Total Hardness: 200 mg/L (GW-2) to 564 mg/L (GW-1), Chlorides 45 mg/L (GW-5) to 349.39 mg/L (GW-6), Fluoride 0.59 mg/L (GW-7) to 1.42 mg/L (GW-6). Heavy metals are within the limits. As per the IS 10500:2012 Standards (Second revision), values are well within the standards except Sodium and Potassium which exceeds at Janikunte village.	pH:7.95, Total hardness mg/L: 592 mg/L, TDS: 1571 mg/L, Fluoride: 1.27 mg/L		
Surface Water at 5 Locations	pH: 8.39 (SW-3) to 8.48(SW-4), DO 4.2 mg/L (SW-4) to 5.2 mg/L (SW-5), BOD 6.5 mg/L (SW-5) to 16 mg/L (SW-3 & SW-4), COD 32 mg/L (SW-5) to 48 mg/L (SW-4).	pH: 8.14, DO: 5.8 mg/L, BOD: 7.5 mg/L, COD: 24 mg/L, Fecal Coliform: 170 MPN/100ml, E-coli: 41 MPN/100ml		
Noise Levels at 8 Locations	43.79 to 67.37 dB(A) for day time 36 to 63.95 dB(A) for night time	Leq(dB)-Day 49.94 to 71.27 Leq(dB)-Night 38.04 to 66.65		
Traffic Assessment Study findings	• The Mahamanav Ispat Pvt. Ltd. project which manufactures sponge iron from various raw materials is located along Tumati road / Ballari road. • Tumati road measures 7m CW 2-lane undivided road & RoW 12m, which connects to Tumati on one side and Belagal on other side.			

<table>
<tr><td>Period</td><td colspan="2">December 2020, January 2021, February 2021</td><td>February 2022</td></tr>
<tr><td></td><td colspan="3">• Tumati road – Belagal road which is a sub-arterial road & connecting the Ballari road as a loop line & also measures 2-lanes undivided road.
• PCU limit of Tumati road is 15,000 PCU/Day
<table>
<tr><th>Particulars</th><th>Details</th></tr>
<tr><td>Traffic Load Study Period</td><td>December 2020-Feb 2021</td></tr>
<tr><td>Traffic Load (Baseline)</td><td>1738 PCU/Day</td></tr>
<tr><td>Additional Traffic Load during operation of the Project</td><td>2102 PCU/Day for Tumati Road</td></tr>
<tr><td>Total Traffic Load</td><td>2133 PCU/Day for Tumati Road</td></tr>
<tr><td>Traffic Capacity as per IRC 64:1990 for Highways</td><td>15,000 PCU/Day</td></tr>
</table></td></tr>
<tr><td>Flora and fauna</td><td colspan="3">Black-Shouldered Kite, Indian Peafowl and Shikra belongs to Schedule I Species as per WL(P)A, 1972 Schedule were recorded in the study area for which conservation plan has been submitted to Karnataka Forest Department.</td></tr>
</table>

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

Sl. No.	Type of Waste	Quantity (TPA)			Mode of Disposal	Agreement Details for Disposal
		Existing	Proposed	Total		
1	Iron Ore fines	9900	19800	**29700**	The Iron ore fines will be sold to the local pellet plant.	Will be entered
2	Char	11863.5	11880	**23743.5**	The char will be used in the AFBC boiler.	--
3	Ash	10642.5	6600	**17242.5**	The Ash will be sold to brick manufacturing units/ cement plants / Agarbatti industries.	Will be entered
4	Used Oil in DG Set	0.27 KL/A	0.30 KL/A	**0.095**	Disposed to KSPCB authorized dealers	Will be entered

5	Oil soaked cotton waste	0.30 MT/A	0.20 MT/A	**0.05**	Disposed to KSPCB authorized dealers	Will be entered

5.8.14 Public Consultation:

Details of advertisement given	Vijay Karnataka on 30.08.2021 and English (Deccan Herald) on 01.09.2021 and also local newspaper (E Namma Kannada Nadu on 01.09.2021.
Date of Public Consultation	30.09.2021
Venue	Project Site
Presiding Officer	Additional Deputy Commissioner and Additional District Magistrate, Ballari District, Karnataka
Number of people attended PH	About 44 persons have signed the attendance during public Hearing
Major issues raised	• Pollution levels in nearby villages by surrounding industrial cluster is causing health problems • No employment opportunities for Local peoples nearby Belgal Village, Belgal Tanda, Janukunte and Janakunte Thanda • No Infrastructure Development • Some of them expressed that the industries were provided drinking water facilities to their villages, job opportunities to local people and indirect job opportunities have increased.

Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

Major Issue Raised	**Action Plan**	**Physical Measurable Target**	**Total Budget and Time**	**Time Period/Measurable Target/Budget**		
				Year 1	**Year 2**	**Year 3**
Infrastructure Developmental Activities.	Construction of toilets with water facilities will be done in Belagal, Belagal Tanda, Janukunte, Janukunte Tanda, Tumati, Tumati Tanda, Haraginadoni and Honnahalli Villages.	15 No	12 Lakhs	5 No 4L	5 No 4L	5 No 4L
Plantation Activity around lakes in the study area	Plantation activity around Allipur Kere, Avinamodugu Kere and Halakundi Lake	3 No	8 Lakhs	1 No 3L	1 No 3L	1No 2L
Soil conservation and ground water Recharge	Creation of farm ponds in Belagal, Belagal Tanda, Janukune, Janukunte Tanda, Tumati, Tumati Tanda, Haraginadoni and Honnahalli	15 No	15 Lakhs	5 No 5L	5 No 5L	5 No 5L
Medical Facilities	Health Check-up camps will be conducted at Belagal, Belagal Tanda, Janukunte, Janukunte Tanda, Tumati, Tumati Tanda, Haraginadoni and Honnahalli Villages.	4 No	9 Lakhs	2 No 3L	1 No 3L	1 No 3L

Major Issue Raised	Action Plan	Physical Measurable Target	Total Budget and Time	Time Period/Measurable Target/Budget		
				Year 1	Year 2	Year 3
Greenbelt Development	Plantation activity on either side of the Tumati Road.	2 No	4 Lakhs	1 No 2L	1 No 2L	-
Increase in level of pollutants.	Air Pollution Control Equipments like ESP, Bag filters will be installed ensuring no particulate emissions are released into the atmosphere.	Physical Target	Included in EMP cost.	The target will be achieved upon receipt of CFExp.		
Employment Opportunity to Local Population	Local population will be given employment opportunities based on the qualification and capabilities.	Priority will be given local people.	2 Lakhs	Construction of skill development centre/training to local people and employment opportunities to local people.		
Total Budget Provision for addressing Public Consultation Issues		**Year 1 – 19 Lakhs Year 2 – 17 Lakhs Year 3 – 14 Lakhs**				

5.8.15 The capital cost of the project is Rs. 33 Crores. The capital cost for environmental protection measures is proposed as Rs. 329.85 lakhs (10% of the total project cost). The annual recurring cost towards the environmental protection measures is proposed as 61.11 Lakhs. The total manpower for the existing unit is 160 Nos. Total Number of Employment is 60 Nos. during the construction phase & 90 Nos during operation phase. The details of cost for environmental protection measures is as follows:

Sl. No	Particulars	Cost in Lakh Rs.
A. Capital Cost		
1	Air Pollution Control Equipment such as Fume extraction system with bag filters and stack arrangements	201.25
2	Provision of STP	14
3	Continuous online monitoring for stack emissions	25
4	Rain Water harvesting	20
5	Stack arrangements for DG set & other source of emissions	9
6	Traffic management and asphalting of internal roads	18
7	Solid & hazardous waste management	3.5
8	Green belt development within the project site	6.40
9	Green belt development on road side	4.50
10	Conservation Plan for Schedule-I Species	5
11	Provision of garland drains and catch pit	6
12	Provision of PPEs for workers, enclosures and barriers for attenuation of noise	12
13	Provision of solar lighting as part of Energy Conservation measures	3
14	Environmental Monitoring during construction phase	2.2
	Total	**329.85**
B. Recurring Cost		
1	Environmental Monitoring during Operation phase	7.2
2	Solid & hazardous waste management	3
3	Occupational Health and Safety	5

Sl. No	Particulars	Cost in Lakh Rs.
4	Socio-economic improvement activities	5
5	Preparation of social need assessment report	0.5
6	Operation & Maintenance of Air Pollution Control Systems	5
7	Operation & Maintenance of STP	2.7
8	Operation & Maintenance of online monitoring	1.5
9	Maintenance of Green Belt development	23.71
10	DG Set maintenance	5
11	Operation & Maintenance of garland drains, solar lights, internal roads	2.5
	Total	**61.11**

5.8.16 The total area of the existing plant is 13.14 Acres. Out of which, 5 acres corresponding to 38% has been developed as Greenbelt. A total of 6,000 trees (trees including girth size < 30 cm) were recorded. The carbon sequestration capacity of existing trees in the project site was estimated to be 267.259 t/Yr. Greenbelt will be developed in 2.56 Ha (43.06%) which is about 33% of the total project area. 5 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total No. of 6400 saplings will be planted and nurtured in 2.56 hectare in 3 years.

5.8.17 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.

Certified Compliance Report from Regional Office

5.8.18 The status of compliance of earlier EC was obtained from Integrated Regional Office, Bangalore vide letter No. EP/12.1/SEIAA/131/KAR/911 dated 03.11.2021. According to CCR issued, the status of compliance to the conditions stipulated in the environmental clearance rate is satisfactory.

5.8.19 The project proponent had earlier applied for EC vide proposal no. IA/KA/IND/238994/2021 dated 07/01/2022 and the proposal was considered in 52nd meeting of the Re-constituted EAC (Industry-I) held on 27th and 28th January, 2022 wherein the Committee returned the proposal in its present form due to technical deficiencies in the proposal.

5.8.20 The project proponent has again applied for EC vide proposal no. IA/KA/IND/266926/2021 dated 26/04/2022 addressing the issues and the proposal is considered in the 5th meeting of the EAC held on 12-13th May, 2022. The observations and recommendations of the EAC are as follows:

5.8.21 During the meeting, project proponent submitted written submission on the following points:

i. Truck mounted mist will be procured.
ii. Four field ESP will be provided to Rotary Kiln and WHRB.
iii. PP has undertaken that only treated water will be used for the process and groundwater for the domestic operations.
iv. PP has submitted the revised action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020 to address the PH issues (as incorporated in para 5.8.14 above).

Deliberations by the Committee

5.8.22 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
3. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.
4. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
5. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.
6. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found satisfactory.
7. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
8. The Committee deliberated upon the certified compliance report of IRO as well as action taken report submitted by PP with respect to the observations reported by IRO and found it satisfactory.
9. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
10. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.
11. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to

time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

5.8.23 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. Specific conditions

(i) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii) The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

(iv) Particulate matter emission from all the stacks shall not exceed 30 mg/Nm^3.
Three tier Green Belt shall be developed in a time frame of one year covering 33% of total area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall do plantation work in the surrounding villages also.

(v) Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

(vi) 233.25 m^3/day water shall be drawn from the Ballari Municipal Corporation/ KUW&DB with proper permission/approval from the competent authority in this regard. No GW abstraction shall be permitted.

(vii) NOx Control system is provided in CPP.

(viii) 100 % solid waste generated in the facility shall be utilized.

(ix) All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.

(x) Slip roads shall be provided at the gates and along crossings on main roads to avoid traffic congestion.

(xi) Performance monitoring of all Pollution Control Devices shall be carried out annually and report submitted to MoEF&CC, Regional Office.

(xii) All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.

(xiii) Rain Water harvesting shall be implemented as per the action plan submitted in the EIA report.

(xiv) As committed by PP, they will maintain lakes in the nearby villages.

(xv) Sufficient numbers of truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.

(xvi) A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

B. General conditions

I. Statutory compliance:

(i) The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

(i) The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

(ii) The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

(iii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

(iv) The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

(v) Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

(vi) The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.

(vii) The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

(viii) Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

(i) The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

(ii) The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant

and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories

(iii) Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

(iv) The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March, 2012 (applicable to IF/EAF) as amended from time to time.

(v) Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

(vi) Tyre washing facilities shall be provided at the entrance of the plant gates.

(vii) Water meters shall be provided at the inlet to all unit processes in the steel plants.

IV. Noise monitoring and prevention

(i) Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

(i) Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

(i) Used refractories shall be recycled as far as possible.

(ii) Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

(i) The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

(i) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

(ii) The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

(iii) Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

(i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

(ii) The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

(iii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

(v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vi) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(vii) The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

(viii) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

(ix) The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

(x) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

(xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

(xiii) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xv) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Agenda No. 5.9

5.9 **Installation of New Line -II (Clinker 3.3 MTPA, Cement -2.0 MTPA and WHRB-15.5MW) at existing cement plant site of Star Cement Limited, taking total capacity to 4.09 MTPA Clinker, 2.99 MTPA Cement with 20.17 MW Waste Heat Recovery Power Plant by M/s Star Cement Limited, located at Village Lumshnong, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya Consideration of Environmental Clearance.**

[Proposal No. IA/ML/IND/265139/2016; File No. J-11011/225/2016-IA II (I)]

5.9.1 M/s Star Cement Limited has made an online application vide proposal no. IA/ML/IND/265139/2016 dated 26/04/2022 along with copy of EIA/EMP Report, Form - 2 and Certified EC Compliance Report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(b) Cement Plants under Category "A" of the schedule of the EIA Notification, 2006 and attracts general condition due to Narpuh Wildlife Sanctuary (ESZ at 2.65 km from project location) being appraised at Central Level.

5.9.2 Name of the EIA consultant: M/s. Perfact Enviro Solutions Pvt. Ltd. [Sl. No. 8, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/RA 0184; valid upto 27/05/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.9.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
26.10.2021	48th meeting held on 11-12 November 2021	Terms of Reference	29/11/2021	28/11/2025

5.9.4 The project of M/s Star Cement Limited located in Lumshnong Village, Khliehriat Tehsil, East Jaintia Hills District, Meghalaya State is an expansion project for setting up of a new Line- II for production of Clinker 3.3 MTPA, Cement -2.0 MTPA and WHRB-15.5 MW at existing cement plant site of Star Cement Limited, taking total capacity to 4.09 MTPA Clinker, 2.99 MTPA Cement with 20.17 MW Waste Heat Recovery Power Plant.

5.9.5 Environmental Site Settings:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>i.</td><td>Total land</td><td>94.96 ha [Private land]
<table><tr><th>Particulars</th><th>Existing Area (Line- I) in Ha</th><th>Proposed Area (Line-II) in Ha</th><th>Total area (Line-I + line-II) in Ha</th></tr><tr><td>Cement Plant & Material Storage</td><td>12.2</td><td>21.31</td><td>33.51</td></tr><tr><td>Misc. Infrastructure/ Colony</td><td>2.6</td><td>2.20</td><td>4.80</td></tr><tr><td>Greenbelt / Plantation</td><td>11.9</td><td>19.98</td><td>31.88</td></tr><tr><td>Roads & storm water channel</td><td>2.8</td><td>3.00</td><td>5.80</td></tr><tr><td>Conveyer belt</td><td>0</td><td>2.90</td><td>2.90</td></tr><tr><td>Open Area/ Parking Area</td><td>5.5</td><td>10.57</td><td>16.07</td></tr><tr><td>Total Plot area</td><td>35.0</td><td>59.96</td><td>94.96</td></tr></table></td><td>The land use of additional land will be changed from scrubland to built-up land. The land use of existing land has already changed.</td></tr>
<tr><td>ii.</td><td>Land acquisition details as per MoEF&CC O.M. dated 07/10/2014</td><td>The existing plant (Line - I) is established on land measuring 35 Ha. There will be an addition of 59.96 Ha of land area for proposed installation of new line-II and thus, total land (Line I + Line II) will be 94.96 Ha. Total land of 94.96 ha is in the possession of the company.</td><td></td></tr>
<tr><td>iii</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project site:</u>
Existing land area: Residential colony available within plant
Proposed land area: Vacant Land, no habitation exist
<u>Study area</u>
Nearest habitation - Lumshnong Village - 1.0 km NNW</td><td>R&R- N/A</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site</td><td><table><tr><th>Name</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>25°10'43.90"N</td><td>92°23'8.05"E</td></tr><tr><td>B</td><td>25°10'43.83"N</td><td>92°23'18.00"E</td></tr><tr><td>C</td><td>25°10'42.90"N</td><td>92°23'18.10"E</td></tr><tr><td>D</td><td>25°10'43.20"N</td><td>92°23'28.89"E</td></tr><tr><td>E</td><td>25°10'43.65"N</td><td>92°23'28.84"E</td></tr><tr><td>F</td><td>25°10'43.79"N</td><td>92°23'33.78"E</td></tr><tr><td>G</td><td>25°10'32.77"N</td><td>92°23'34.50"E</td></tr><tr><td>H</td><td>25°10'32.79"N</td><td>92°23'35.32"E</td></tr><tr><td>I</td><td>25°10'34.25"N</td><td>92°23'35.29"E</td></tr><tr><td>J</td><td>25°10'34.24"N</td><td>92°23'36.67"E</td></tr><tr><td>K</td><td>25°10'43.76"N</td><td>92°23'36.14"E</td></tr><tr><td>L</td><td>25°10'44.30"N</td><td>92°23'41.87"E</td></tr><tr><td>M</td><td>25°10'31.95"N</td><td>92°23'42.51"E</td></tr></table></td><td></td></tr>
</table>

S. No.	Particulars	Details			Remarks
		N	92°23'42.51"E	92°23'50.44"E	
		O	25°10'18.32"N	92°23'50.46"E	
		P	25°10'18.31"N	92°23'48.21"E	
		Q	25°10'16.83"N	92°23'45.82"E	
		R	25°10'16.48"N	92°23'43.66"E	
		S	25°10'15.52"N	92°23'43.37"E	
		T	25°10'15.29"N	92°23'42.48"E	
		U	25°10'17.34"N	92°23'41.09"E	
		V	25°10'18.49"N	92°23'42.66"E	
		W	25°10'19.13"N	92°23'43.18"E	
		X	25°10'20.17"N	92°23'43.12"E	
		Y	25°10'21.08"N	92°23'40.09"E	
		Z	25°10'23.46"N	92°23'39.68"E	
		A1	25°10'23.74"N	92°23'38.24"E	
		A2	25°10'23.57"N	92°23'37.44"E	
		A3	25°10'26.50"N	92°23'37.28"E	
		A4	25°10'27.20"N	92°23'37.04"E	
		A5	25°10'28.18"N	92°23'35.31"E	
		A6	25°10'27.54"N	92°23'34.08"E	
		A7	25°10'22.11"N	92°23'23.67"E	
		A8	25°10'12.56"N	92°23'15.54"E	
		A9	25°10'13.86"N	92°23'12.34"E	
		A10	25°10'11.03"N	92°23'9.69"E	
		B1	25°10'9.59"N	92°23'12.22"E	
		B2	25°10'8.79"N	92°23'13.01"E	
		B3	25°10'7.70"N	92°23'13.47"E	
		B4	25°10'6.62"N	92°23'13.59"E	
		B5	25°10'6.37"N	92°23'13.96"E	
		B6	25°10'5.16"N	92°23'12.52"E	
		B7	25°10'6.01"N	92°23'11.51"E	
		B8	25°10'7.07"N	92°23'12.34"E	
		B9	25°10'7.36"N	92°23'12.32"E	
		B10	25°10'8.25"N	92°23'11.95"E	
		C1	25°10'8.88"N	92°23'11.29"E	
		C2	25°10'9.54"N	92°23'8.58"E	
		C3	25°10'10.60"N	92°23'7.66"E	
		C4	25°10'10.98"N	92°23'7.07"E	
		C5	25°10'13.66"N	92°23'6.66"E	
		C6	25°10'13.69"N	92°23'4.37"E	
		C7	25°10'18.23"N	92°23'6.79"E	
		C8	25°10'20.09"N	92°23'5.99"E	

S. No.	Particulars	Details			Remarks
		C9	25°10'20.94"N	92°23'3.10"E	
		C10	25°10'19.18"N	92°22'58.92"E	
		D1	25°10'17.76"N	92°22'58.39"E	
		D2	25°10'17.14"N	92°22'57.44"E	
		D3	25°10'17.00"N	92°22'54.49"E	
		D4	25°10'16.15"N	92°22'53.64"E	
		D5	25°10'17.02"N	92°22'52.85"E	
		D6	25°10'16.75"N	92°22'52.31"E	
		D7	25°10'15.17"N	92°22'49.09"E	
		D8	25°10'14.71"N	92°22'49.32"E	
		D9	25°10'14.04"N	92°22'45.99"E	
		D10	25°10'13.44"N	92°22'45.62"E	
		E1	25°10'11.32"N	92°22'46.14"E	
		E2	25°10'9.90"N	92°22'44.48"E	
		E3	25°10'9.07"N	92°22'41.73"E	
		E4	25°10'9.05"N	92°22'41.14"E	
		E5	25°10'9.65"N	92°22'39.22"E	
		E6	25°10'9.77"N	92°22'37.63"E	
		E7	25°10'8.65"N	92°22'35.11"E	
		E8	25°10'8.38"N	92°22'34.91"E	
		E9	25°10'6.41"N	92°22'35.90"E	
		E10	25°10'6.06"N	92°22'35.48"E	
		F1	25°10'5.69"N	92°22'31.63"E	
		F2	25°10'5.88"N	92°22'29.89"E	
		F3	25°10'5.46"N	92°22'28.77"E	
		F4	25°10'6.52"N	92°22'26.27"E	
		F5	25°10'7.65"N	92°22'26.40"E	
		F6	25°10'9.92"N	92°22'26.64"E	
		F7	25°10'14.85"N	92°22'25.66"E	
		F8	25°10'14.93"N	92°22'33.06"E	
		F9	25°10'15.58"N	92°22'35.73"E	
		F10	25°10'16.88"N	92°22'41.06"E	
		G1	25°10'18.41"N	92°22'41.99"E	
		G2	25°10'18.46"N	92°22'45.17"E	
		G3	25°10'16.30"N	92°22'46.06"E	
		G4	25°10'15.04"N	92°22'45.96"E	
		G5	25°10'16.28"N	92°22'49.33"E	
		G6	25°10'16.58"N	92°22'49.89"E	
		G7	25°10'17.16"N	92°22'51.00"E	
		G8	25°10'18.33"N	92°22'53.23"E	
		G9	25°10'19.09"N	92°22'53.47"E	

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>G10</td><td>25°10'19.34"N</td><td>92°22'54.73"E</td></tr>
<tr><td>H1</td><td>25°10'20.12"N</td><td>92°22'55.39"E</td></tr>
<tr><td>H2</td><td>25°10'20.49"N</td><td>92°22'56.21"E</td></tr>
<tr><td>H3</td><td>25°10'22.66"N</td><td>92°23'1.16"E</td></tr>
<tr><td>H4</td><td>25°10'23.00"N</td><td>92°23'1.99"E</td></tr>
<tr><td>H5</td><td>25°10'24.10"N</td><td>92°23'4.47"E</td></tr>
<tr><td>H6</td><td>25°10'28.61"N</td><td>92°23'13.76"E</td></tr>
<tr><td>H7</td><td>25°10'31.96"N</td><td>92°23'14.59"E</td></tr>
<tr><td>H8</td><td>25°10'31.42"N</td><td>92°23'12.89"E</td></tr>
<tr><td>H9</td><td>25°10'33.76"N</td><td>92°23'7.28"E</td></tr>
<tr><td>H10</td><td>25°10'34.76"N</td><td>92°23'6.61"E</td></tr>
<tr><td>I1</td><td>25°10'36.92"N</td><td>92°23'6.64"E</td></tr>
<tr><td>I2</td><td>25°10'37.39"N</td><td>92°23'7.07"E</td></tr>
<tr><td>I3</td><td>25°10'38.33"N</td><td>92°23'7.94"E</td></tr>
<tr><td>I4</td><td>25°10'40.39"N</td><td>92°23'8.55"E</td></tr>
<tr><td>I5</td><td>25°10'41.06"N</td><td>92°23'8.44"E</td></tr>
<tr><td>I6</td><td>25°10'41.92"N</td><td>92°23'8.09"E</td></tr>
<tr><td>I7</td><td>25°10'42.32"N</td><td>92°23'8.30"E</td></tr>
<tr><td>I8</td><td>25°10'42.86"N</td><td>92°23'8.37"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>Maximum: 528 m AMSL
Minimum: 381 m AMSL</td><td></td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any.</td><td>No forest land is involved in the plant site</td><td></td></tr>
<tr><td>vii.</td><td>Water body (Rivers, lakes, Pond, Nala, natural Drainage, Canal etc.) exists within the project site as well as study area</td><td><u>Project site:</u>
Name: Umtyrngai Nallah is crossing the plant site

<u>Study area</u>
<table>
<tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Umso Nallah</td><td>0.80 Km</td><td>East</td></tr>
<tr><td>Um Lunar River</td><td>3.28 Km</td><td>East</td></tr>
<tr><td>Lubha River</td><td>4.09 Km</td><td>S</td></tr>
<tr><td>Seshympa River</td><td>5.48 Km</td><td>WNW</td></tr>
<tr><td>Wah Lukha river</td><td>6.45 Km</td><td>N</td></tr>
<tr><td>Lynriang River</td><td>13.45 Km</td><td>NW</td></tr>
</table></td><td>The HFL of the Umlunar river (3.28 Km E from project site) is at elevation 70 m AMSL. However, the minimum elevation of the proposed cement plant is 381 m AMSL.</td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/</td><td><u>Study area</u>
Name of ESZ/ESA: Narpuh Wildlife Sanctuary
Status of Notification: Final notification issued vide S.O.2942 (E) dated 6, September 2017
Distance of project from ESZ/ESA: Narpuh Wildlife Sanctuary (3.81 km in SSE direction) and ESZ boundary</td><td></td></tr>
</table>

S. No.	Particulars	Details	Remarks
	biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	of Narpuh Wildlife Sanctuary (2.65 km in SSE direction) **Authenticated map of ESZ projecting distance of ESZ from project site:** The authenticated map showing aerial distance of the Cement Plant from the Narpuh WLS & ESZ Boundary has been obtained from Department of Forest and Environment, Gov. of Meghalaya vide letter No. MFG.16/50/CMCL/Vol-III/12409 dated 23/12/2021.	

5.9.6 The existing project was accorded environmental clearance vide letter. no. F.No. J-11011/225/2016-IA II (I) dated 23.02.2017. Current Consent to Operate for the existing unit was accorded by Meghalaya State Pollution Control Board vide letter. no. MPCB/TB-900/Pt-IV/2021-2022/83 dated 11 February 2022. The validity of CTO is up to 31st March 2023.

5.9.7 Implementation status of the existing EC

S. No.	Facilities	Units	As per EC dated 23/02/2017	Implementation Status as on date	Production as per CTO
1	Clinker	MTPA	0.792	Presently Operational with CTO dated 26.03.2021	0.792
2	Cement	MTPA	0.990	Presently Operational with CTO dated 26.03.2021	0.990

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

S. No.	Name	Existing as per EC dated 23/02/2017		Proposed		Total	
		Configuration	Capacity MTPA	Configuration	Capacity MTPA	Configuration	Capacity MTPA
1	Clinker	Raw Mill – 160 TPH (Ball Mill)	0.79	Raw Mill (VRM)– 725 TPH	3.3	Raw Mill – 160 TPH (Ball Mill) & Raw Mill (VRM)– 725 TPH	4.09
2	Cement	Cement Mill – 150 TPH (Ball Mill)	0.99	Cement Mill (VRM)– 285 TPH	2	Cement Mill – 150 TPH (Ball Mill) & Cement Mill (VRM)– 285 TPH	2.99
3	WHR Power Boiler	Turbine Inlet 22.5 TPH HP Steam only	4.67 MW (yet to be operated)	Turbine Inlet 68.4 TPH HP Steam 18.2 TPH LP Steam	15.5 MW	Turbine Inlet 90.9 TPH HP Steam 18.2 TPH LP Steam	20.17 MW

5.9.9 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 Material	Quantity required per annum			Source	Distance from site (kms)	Mode of transportation
		Existing	Expansion	Total			
For Clinker production							
1.	Limestone	0.982	4.260	5.242	Own mines (from Limestone mine 70 ha adjacent to project site and other mines of 4.85 Ha., 13.58 Ha. 4.96 Ha., 4.70 Ha., 42.051 Ha, etc.)	1.5 km Belt Conveyor/ 2 km by road	Belt Conveyor/ Road
2.	Shale	0.15	0.750	0.900	Own mines	3 - 7.0 km	Road
3.	Mill Scale/ Iron Ore/ Laterite	0.0079	0.050	0.058	Guwahati	230 km	Road
4.	Coal/ Petcoke (Fuel)	0.1330	0.400	0.533	Coal will be procured from the open market from mines at Wapung/ Margherita/ Ranigunj/ Imported coal, pet coke from Indian/Imported Refinery.	26 km 615 km 1151 km	Rail/Road
For Cement Production							
5.	Gypsum	0.017	0.040	0.057	Mineral Gypsum from Bhutan Chemical gypsum from plants such as Paradeep Phosphates	30 km - 250 km Road/ 700 km Rail	Road/Rail
6.	Fly Ash	0.183	0.605	0.788	By Pneumatic conveying from adjoining own Subsidiary power plant and balance from Bongaigaon, Kahal gaon,	300-350 km	Road

S. No.	Raw Material	Quantity required per annum			Source	Distance from site (kms)	Mode of transportation
		Existing	Expansion	Total			
					farakka		
7.	Clinker	0.790	1.355	2.145	Manufacturing within this plant	-	Produced within the plant (Inhouse conveyor belt)

5.9.10 The water requirement for the project is estimated as 1660 m^3 /day (existing: 450 m^3/day; proposed: 1210 m^3/day), out of which 1439 m^3/day (existing: 372 m^3/day; proposed: 1067 m^3/day) of fresh water requirement will be obtained from the Umtyrngai Nallah and the remaining requirement of 221 m^3/day (existing: 78 m^3/day; proposed: 143 m^3/day) will be met from the treated water obtained from Common STP & proposed STP. The permission for drawl of surface water is obtained from Govt. of Meghalaya, Office of Chief Engineer (Irrigation) vide Letter. No. AGRI/IRRI- 110 /96/2004-05/08 dated 15th September 2004.

5.9.11 The power requirement for the project is estimated as 49.7 MW (existing: 15.5 MW; Proposed: 34.2 MW), out of which 29.53 MW will be obtained from the own subsidiary power plant of Meghalaya Power Ltd., (MPL) and the rest 20.17 MW will be obtained from WHR power plant. In case of emergency, electricity will be taken from the power grid.

5.9.12 Baseline Environmental Studies:

Period	**Baseline data collection period: December 2020-February 2021 ;**	**Additional study- Revalidated Baseline Data: 15 November 2021 to 15 December 2021**
AAQ parameters at 9 Locations (min and max) & Revalidated AAQ parameters at 11 Locations (min and max)	$PM_{2.5}$ = 25.33 to 31.79 μg/m^3, PM_{10} = 60.47 to 75.92 μg/m^3 SO_2 = 5.95 to 7.47 μg/m^3 NOx = 10.86 to 13.63 μg/m^3 CO =0.25 to 0.32 μg/m^3	$PM_{2.5}$ = 28.11 to 33.34 μg/m^3, PM_{10} = 68.85 to 81.67 μg/m^3 SO_2 = 6.78 to 8.88 μg/m^3 NOx = 13.29 to 15.77 μg/m^3 CO =0.28 to 0.33 μg/m^3
Incremental GLC level	---	PM_{10} =83.17 μg/m^3 (Level at 0.25 km in NE Direction) $PM_{2.5}$= 42.96 μg/m^3 (Level at 0.25 km in NE direction) SO_2 = 14.86 μg/m^3 (Level at 0.25 km in NE Direction) NOx = 62.09 μg/m^3 (Level at 0.25 km in NE Direction)
Ground water quality at 7 locations & Revalidated Ground water quality at 7 locations	pH: 7.1 to 8.1, Total Hardness: 16 to 172 mg/l, Chlorides: 7.1 to 32 mg/l, Fluoride: > 0.1 mg/l. Heavy metals: > 0.1 mg/l	pH: 7.10 to 8.10, Total Hardness: 16 to 74 mg/l, Chlorides: 8 to 32 mg/l, Fluoride: < 0.1 to 0.98 mg/l. Heavy metals: > 0.1 mg/l
Surface water quality at 5 locations & Revalidated Surface	pH: 6.8 to 7.9 ; DO: 3.8 to 5.3 mg/l and BOD: 3.2mg/l to 11.79mg/l . COD from 12 to 56 mg/l	pH: 6.8 to 7.9 ; DO: 4.1 to 5.3 mg/l and BOD: 1.68mg/l to 2.18mg/l . COD from 10 to 38mg/l

<table>
<tr><td>water quality at 5 locations</td><td></td><td></td></tr>
<tr><td>Noise levels Leq (Day and Night) & Revalidated Noise levels Leq (Day and Night)</td><td>49.7 dB(A) to 62.3 dB(A) for the day time and 44.4 dB(A) to 57.6 dB(A). for the Night time</td><td>54.7 dB(A) to 64.9 dB(A) for the day time and 44.9 dB(A) to 57.8 dB(A). for the Night time</td></tr>
<tr><td>Traffic assessment study findings</td><td colspan="2">Traffic study has been conducted at NH-6 which is approximately 0.1 km S (distance) from the plant site. Existing PCU is 787 PCU/hr on NH-6 and existing level of service (LOS) is: 0.15
<table>
<tr><td>Road</td><td>V (Volume in PCU/hr.)</td><td>C (Capacity in PCU/hr.)</td><td>Existing V/C Ratio</td><td>LOS</td></tr>
<tr><td>NH -6</td><td>787</td><td>5143</td><td>0.15</td><td>0.15</td></tr>
</table>
PCU load after proposed project will be 787 (Existing) + 223 (Additional) PCU/hr and level of service (LOS) will be: 0.20
<table>
<tr><td>Road</td><td>V (Volume in PCU/hr.)</td><td>C (Capacity in PCU/hr.)</td><td>Proposed V/C Ratio</td><td>LOS</td></tr>
<tr><td>NH-6</td><td>1010</td><td>5143</td><td>0.20</td><td>0.20</td></tr>
</table>
* Note: Capacity as per IRC-106:1990 Guide line for capacity for roads.
Conclusion: The level of service will 0.20 “Category A” after including additional traffic due to proposed project</td></tr>
<tr><td>Flora and fauna</td><td colspan="2">**10 no. of Schedule -I species present in buffer zone:** Hoolock hoolock (Western hoolock gibbon), Nycticebus bengalensis (Slow loris), Prionailurus bengalensis (Leopard Cat), Python molurus (Indian Rock Python), Neofelis nebulosa (Clouded Leopard), Buceros bicornis (Great Pied Hornbill), Canis lupus pallipes (Indian Wolf), Manis pentadactyla (Pangolin), and Melursus ursinus (Sloth bear), Capricornis sumatraensis thar (Himalayan serow).
Status of Conservation Plan:
● Star Cement Ltd. has submitted the Conservation Plan of Rs. 107.80 Lakhs along with Supplementary Plan of Rs. 15 lakhs, approved by the Government of Meghalaya, totalling to Rs. 122.80 lakh. Out of the earlier approved 122.80 lakhs, the company has already spent 110.95 lakhs. Further, the Government of Meghalaya had conducted an online meeting on 9.08.2021 (MoM vide letter no. FWC/G/117/1/80-99 dated 19 August 2021) wherein it has proposed for preparation and implementation of a Regional Conservation Plan to prevent, minimise and mitigate impacts of Development Projects on wildlife and their habitats in East Jaintia Hills District, Shillong. SCL has committed support and necessary financial participation in the same vide letter no. SCL/PCCF&CWW/2021-22 dated on 10.08.2021.
● SCL has also submitted an additional Conservation Plan for Rs. 1.50 Crores to Principal Chief Conservator of Forest, Shillong vide letter no. SCL/PCCF/CP/2103/2021-22 dated 21.03.2022, in case there is any delay in the Regional Conservation Plan for conservation of 10 Schedule-1 species.</td></tr>
</table>

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

S. No	Type of Waste	Source	Quantity generated (TPA)			Mode of Treatment	Disposal	Remarks
			(Existing)	(Proposed)	(Total after expansion)			
Solid Waste Management								
1	Organic Waste (Biodegradable)	Labour & Staff	43.23	52.14	95.37	The generated organic waste will be converted into biogas through biogas plant installed in existing site. Same shall be followed after expansion or may be converted into compost by vermicomposting proposed at plant site.	-generated biogas used in domestic cooking -manure from vermicomposting used in plantation	-
2	Recyclable Waste (Plastic, paper, wood, glass, etc) (Non-Biodegradable)	Labour & Staff	28.71	34.98	63.69	-	The generated waste will be handed over to authorised vendor or burnt in Kiln as per the permission obtained.	-
Non- Hazardous Waste Management								
3	STP Sludge	STP	7.92	14.85	22.77	Sludge is passed through filter press	Will be used as manure within the plant for plantation	-
4	Old/used refractory bricks	Kiln	225	450	675	-	Used / waste Refractory bricks used for own consumption like making flooring, toilets, roads etc.	-
5	Dust from APCS/Bag filter/ ESP residue	APCS	99000	280500	379500	-	100% dust is collected from bag filters/ ESP and will be recycled in	-

S. No	Type of Waste	Source	Quantity generated (TPA)			Mode of Treatment	Disposal	Remarks
			(Existing)	(Proposed)	(Total after expansion)			
							cement manufacturing.	
6	Other Solid Waste (MS Scrap, GI Scrap, Grinding media, Used/expired tyres, HDPE bags, Blow bar, Conveyor belt steel coated, misc. scarp)	Process	1000	1500	2500	-	Sell/dispose to vendor	-
Hazardous Waste Management								
7	Used Oil and Used Grease	DG Sets	1.41	18.40	19.81	-	Dispose to Kiln/Sell to BRS Lubricants (authorized recyclers)	-
E-waste Management								
8	E- waste	Control Room	0.45	0.50	0.95	-	Sell/dispose to Newtek Recyclers (authorised vendors)	-
Battery Waste Management								
9	Battery Waste	Control Room	2.53	3.00	5.53	-	Sell/dispose to Shiv Shakti udyog (authorised vendor)	-

5.9.14 Public Consultation:

Details of advertisement given	Notice for Public Hearing was made through advertisements in the Newspapers The Shillong Times and The Meghalaya Guardian in English language on 23 December 2021 & in Mawphor, U Nongsain Hima & Rupang newspaper in local language on 23 December 2021. Also the public notices were displayed by SPCB at the DC office, Office of Chief Conservator of Forest, Commerce and Industry Deptt., Mining and Geology Deptt., etc. Also, advertisements were again made in the Newspapers The Shillong Times & U Nongsain Hima on 25 January 2022.
Date of public consultation	29th January 2022

Venue	Village Lumshnong, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya.
Presiding Officer	Deputy Commissioner, East Jaintia Hills District, Khliehriat;
Major issues raised	**Major Issues & Commitment by PP:** • Air Pollution, Degradation of the ecology, degradation of agricultural lands & water bodies - Regular monitoring has been carried out to maintain the pollution level under permissible limits. Various APCS like RABH, bag filter, has been installed to control air pollution. The raw materials are stored in covered sheds, cement clinker is stored in cement clinker stockpile and finished product is stored in silos. Water tankers have been deployed for water sprinkling at coal & limestone storage yards. For dust emissions from roads, all loading and unloading areas, Road Sweeping machines have been deployed for cleaning dust. In addition to installation of a mist fogging system. machines have been deployed for cleaning dust. Same will be followed for proposed installation of new line-II in addition to installation of mist fogging system. To reduce the dust emissions from transportation, proper maintenance, cleaning of vehicles and tires, and sprinkling of water is being done & transportation will be done in covered vehicles only. Only PUC certified vehicles are being used for transportation of raw materials and products to reduce vehicular emissions. Moreover, with the proposed expansion a conveyor belt will be installed from the limestone mines to the plant site for transportation of limestone which is one of the raw materials for clinker production. With the proposed use of conveyor belt the number of trips by road (trucks) will be reduced. This will reduce the dependency on road transport and the consumption of fuel that would be required for the movement of vehicles and thereby reducing the air pollution load & dust generation • STP will be installed for waste water treatment & it will be a ZLD unit, no waste water will be discharged hence there will be no degradation of agricultural land, water bodies. Also, 33.6% of the total plot area will be developed as green area which will minimise degradation of ecology & lead to natural well being. • Company has already spent Rs 15.55 crores as capital cost & is spending Rs 1.116 crores/yr as recurring cost for environment monitoring plan (EMP) and has allocated Rs 74.62 crores as capital & 4.05 crores/year as recurring cost for the same after expansion. Time frame for capital cost is 18 months. Capital cost for installation of conveyor belt- Rs 12 Cr. • Power shortage- There will not be shortage of electricity due to the project as the company is taking power for existing line I and proposed line II from its own subsidiary of Meghalaya Power Plant and WHR plant that will be installed in the unit. Only in case of emergency electricity will be taken from the power grid. Hence, no shortage of electricity will be there. • Employment - Company has already employed 145 personnel,

	however during expansion additional 176 personnel will be given employment during the operation phase & 2500 persons will be employed during construction phase & preference will be given to locals. • Social development in areas of Lumshnong only. - Company has already carried out various development of the locality since incorporation, further company proposed development of the locality including Kuliang, Sakri, Lumtongseng, Khaddum villages in addition to Lumshnong in the next five years. Company has already employed 145 personnel & they are from the entire Elaka & state and not from Lumshnong village only. Further during expansion additional 176 personnel will be given employment during the operation phase & 2500 persons will be employed during construction phase & preference will be given to locals. • Amount of Rs 3.38 crores spent from 2017-2021, Rs 1.12 crores will be spent in the next five years.

Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

S. No.	Physical activity and action plan		Year of implementation					Total Expenditure (Rs. in crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	4th	5th	
1	Undertaking the maintenance of school or provision of sports facilities, playground, computers in school Khliehriat L&P and UP School, Support to Lumshnong Youth Welfare & Sports Club, Support to Mowtyrshaih Rising Hills School.	2022-2027	0.03	0.03	0.02	0.01	0.01	0.10
2	Provision of solar lights in the village, Solar Street lights, Pendere, Khaddum, Sakri, Lumtongseng, Kuliang & Lumshnong	2022-2027	0.05	0.05	0.03	0.03	0.01	0.17
3	Support to medical infrastructure to nearby local villages	2022-2027	0.2	0.2	0.1	0.05	0.05	0.6
4	Pucca roads in consultation with Panchayat:- CC Step of Khaddum village, dongwalarug bridge, RCC culvert Pendere	2022-2027	0.10	0.06	0.04	0.03	0.02	0.25

S. No.	Physical activity and action plan		Year of implementation					Total Expenditure (Rs. in crores)
	Name of the Activity	**Physical Targets**	**1st**	**2nd**	**3rd**	**4th**	**5th**	
	Total	**0.23**	**0.38**	**0.34**	**0.19**	**0.12**	**0.09**	**1.12**

5.9.15 The capital cost of the project is Rs. 2221.74 Crores (Existing: 321.74 Crores; Proposed: 1900 Crores) and the capital cost for environmental protection measures is proposed as Rs. 90.67 Crores (Existing- 15.55 crores & Proposed- 75.12 crores) & recurring cost is 5.166 Crores/annum (Existing- 1.116 crores/annum & proposed- 4.05 crores/annum). The employment generation from the proposed expansion is 321 nos. (Existing: Manpower: 145; Proposed: Manpower- 176). The details of cost for environmental protection measures is as follows:

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	**Recurring Cost**	**Capital Cost**	**Recurring Cost**
1	Air Pollution Control/ Noise Management	9.74	0.373	65.38	1.9
2	Water Pollution Control	0.73	0.03	3.62	0.15
3	Environmental Monitoring and Management	0.27	0.123	3.0	1.25
4	Green Belt Development	0.2	0.14	0.5	0.1
5	Addressal of Public Consultation concerns	Included in others	Included in others	Included in others	Included in others
6	Social Activities	3.38	-	1.12	-
7	Wildlife Conservation Plan	1.23	-	1.5	-
8	Public Health & Safety	-	0.15	-	0.25
9	Occupational Health & Safety	-	0.30	-	0.40

5.9.16 Existing green belt has been developed in 11.9 ha area which is about 34 % of the total project area of 35 ha with a total sapling of 29750 Trees. Proposed greenbelt will be developed in 19.98 ha which is about 33.3% of the total project area of 59.96 Ha. Thus a total of 31.88 ha area (33.6% of total project area of 94.96 Ha) will be developed as greenbelt. A 2 m wide greenbelt, consisting of at least 3 tiers around the plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 79700 saplings will be planted and nurtured in 31.88 hectares in 7 years.

5.9.17 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.

Certified compliance report from Regional Office

5.9.18 The Status of compliance of earlier EC was obtained from Regional Office, MoEF, Shillong vide letter no. 14/18/2011/E-RONE/2305, dated 21.12.2021 in the name of M/s. Star Cement Limited. The Action taken report regarding the partially/non-complied condition was submitted to Regional officer MoEF&CC, Shillong vide letter no. SCL/EHS/LUM/2021-22/41 dated 08.03.2022. MoEF&CC (RO) Shillong, thereafter evaluated the same and issued closure report vide letter no. RONE/EIA/ML/IN/79/210-11 dated 21.04.2022 to member secretary of MoEF&CC. The details of the observations made by RO in the closure report dated 21.04.2022 along with its reassessment / present status as furnished by the PP is given as below:

Sl.	Non-compliances details	Observation of RO (abridged)	Condition no			Re-assessment by RO / Response by PP
			EC date	Specific	General	
1.	An amount of Rs 113 lakhs will be set aside by the Project proponent as its Enterprise Social Commitment (ESC) to be expended over a period of 5 years, including Rs 15 lakhs on implementing a wildlife conservation plan.	It has been stated that Rs. 113 lakhs have been set aside for Enterprise Social Commitment as stipulated. During monitoring, however, the stipulated sum of Rs. 113 lakhs for Enterprise Social Commitment utilisation details could not be provided (Specific Condition No. VII).	23 February 2017	VII	-	**Response by PP-** Till date PP has spent Rs. 3.38 Cr on Enterprise Social Commitment. Details have been submitted. **Reassessment by RO-** The Company has submitted detailed expenditure spent on Enterprise Social Commitment amounting to Rs 3.38 Cr. during the financial year 2017-18 to 2021-22. The expenditure pertains to Health & Sanitation, cultural upliftment , education upliftment, sport, rural development, livelihood, infrastructure development etc.
2.	At least four Ambient Air Quality Monitoring Stations should be established in downward direction as well as where maximum ground level concentration of PM10, Pm 2.5, NOx, SO2 shall be regularly submitted	As stated in the Ministry's G.S.R No.826 (E) dated November 16, 2009, the company has not conducted monitoring for NH3, CO, O3, B(a)P, C6H6, Ni, As and Pb (General Condition No. III).	23 February 2017	-	iii	**Response by PP-**Ambient air quality monitoring is being done regularly as per the stipulation of Environmental Clearance F. No. J-11011/225/2016-IA II (I), Dated - 23.02.2017, General Conditions-III and CTO No. MPCB/CON-900/Pt-IV/2020-2021/76, Dated-26.03.2021, Specific Conditions, Air Aspects-2.

Sl.	Non-compliances details	Observation of RO (abridged)	Condition no			Re-assessment by RO / Response by PP
			EC date	Specific	General	
	to this Ministry including its Regional Office at Shillong and the SPCB/ CPCB once in six month.					However, NH_3, CO, O_3, BaP, C_6H_6, Ni, Pb and as parameters have been monitored as stipulated. **Reassessment by RO-** Project authorities had submitted a monitoring report for all twelve parameters as mentioned in the Ministry's G.S.R. No. 826 (E) dated November 16,2009. All parameters are found to be within permissible limits.
3.	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the groundwater	The company has yet to receive a letter of approval from the Central Ground Water Board, State Unit Office, Shillong, for rainwater harvesting for ground water recharge in the cement plant premises as directed by the Central Ground Water Board, State Unit Office, Shillong, in their letter NO. T32/CGWA/CGWB/SUO/Shil/18/266 dated 19.09.2018. The company would also need to build a large dam to collect rainwater for use in the plant and water sprinkling in the plant area during the dry season (General Condition No. VII).	23 February 2017	-	vii	**Response by PP-** SCL is not using any ground water in process or for domestic purposes. All water requirements are fulfilled through surface water from the perennial nala passing through the plant. However, the company has installed roof top rainwater harvesting structures in all possible areas to recharge the groundwater. We have provided/constructed 3 nos of pits for rainwater harvesting and these are as follows; Size of First Pit – 6*2.25*1.6 Size of Second Pit – 3.2*1.4*1.6 Size of Third Pit – 4.2*3.5*1.6 Total Volume of 3 pits – 52 cub. M Also, SCL has constructed a huge common water reservoir and runoff water is channelized to the common reservoir also, which is used in plant processes as well as water sprinkling and greenbelt development **Reassessment by RO-** The Company has not made any commitment regarding suggestion for construction of additional dam to collect rainwater for use in the plant and water sprinkling in the plant area during the dry season. It is observed during monitoring water reservoir constructed cannot provide sufficient water required for water sprinkling in the plant area during the dry season. The company has yet to receive a letter of approval from

Sl.	Non-compliances details	Observation of RO (abridged)	Condition no			Re-assessment by RO / Response by PP
			EC date	Specific	General	
						the Central Ground Water Board, State Unit Office, Shillong, for rainwater harvesting for ground water recharge in the cement plant premises as directed by the Central Ground Water Board, State Unit Office, Shillong, in their letter No. T32/CGWA/CGWB/SUO/Shil/ 18/266 dated 19.09.2018.

5.9.19 During the meeting, project proponent submitted written submission on the following points:

i. PP has given undertaking that they will adopt 15 villages i.e. 5 in first year and 5 in second year, and 5 in third year namely, Brichyrnot, Khaddum,Pyadare, Lumshnong, Lum-Myrli, Tongseng, Umstain, Srkari, Sonapyrdi, Symplong, Lumtongseng, Whaijer, Umlonng, Moosiang and Saiken with in 10 km of the project site and develop them as a MODEL village.
ii. PP will install 5 mist cannons within the project site.
iii. PP will transplant tree to the maximum extent possible. If the same is not possible will undertake compensatory plantation 1:10
iv. PP will collect plastic waste generated with in the site and from nearby villages. The plastic waste will then have shredded and burnt in the kiln with coal.
v. PP will construct the settling pond for collection of the rainwater and shall reuse about 100 KLD collected rainwater within the unit whenever possible.

Deliberations by the Committee

5.9.20 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
3. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

4. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.

5. Total 24 villages are existing in the periphery of the project. These villages may be adopted by the company in year-wise for their socio-economic development.

6. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP the green belt development shall be completed within one year.

7. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found satisfactory.

8. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.

9. The Committee deliberated upon the certified compliance report of IRO as well as action taken report submitted by PP with respect to the observations reported by IRO and found it satisfactory.

10. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

11. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

12. The Narpuh Wildlife Sanctuary (3.81 km in SSE direction) and ESZ boundary of Narpuh Wildlife Sanctuary (2.65 km in SSE direction) from the project site exist. The authenticated map showing aerial distance of the Cement Plant from the Narpuh WLS & ESZ Boundary has been obtained from Department of Forest and Environment, Gov. of Meghalaya vide letter No. MFG.16/50/CMCL/Vol-III/12409 dated 23/12/2021.

Recommendations of the Committee

5.9.21 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. <u>Specific conditions:</u>

(i) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(ii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iii) The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed

as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

(iv) Overhead belt conveyor for transportation of Limestone from the mines to the plant site shall be established in a time frame as committed from the date of issue of Environment Clearance after obtaining requisite statutory permissions from the concerned competent authority. Thereafter, road transportation of limestone from the mines to the plant site is not permitted.

(v) Particulate matter emissions from all the stacks shall be less than 30 mg/Nm^3.

(vi) Three tier Green Belt shall be developed in a time frame of one year covering 33% of the total land area with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

(vii) 1660 KLD of water requirement after the proposed expansion shall be met from Surface Water from Umtyrngai Nallah with requisite permission from the Competent Authority and from treated water obtained from Common STP & proposed STP. No ground water abstraction is permitted except for domestic purposes.

(viii) All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.

(ix) Slip roads shall be provided at the gates and along crossings on main roads.

(x) All internal and connecting road to the Highway shall be black topped/ concreted with suitable load in term of Million Standard Axle (MSA) as per IRC guidelines.

(xi) Performance monitoring of pollution control equipment shall be taken up yearly and compliance status in this regard shall be reported to the concerned Regional Office of the MoEF&CC.

(xii) Dioxin and furans shall be monitored twice a year during co-processing of hazardous waste and report shall be submitted to the Regional Office of the MoEF&CC.

(xiii) Project proponent shall develop separate drainage system for storm water and industrial waste water and effectively prevent the pollution of natural waterbody.

(xiv) Petcoke dosing shall be controlled automatically to control SO_2 emission from chimney within the prescribed limits.

(xv) Rain water harvesting shall be carried out as per the action plan submitted in the EIA report.

(xvi) All the recommendations made in the risk assessment report shall be implemented and compliance status in this regard shall be furnished to the Regional Office of the MoEF&CC along with the six monthly compliance report.

(xvii) The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

B. <u>General conditions</u>

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 Continuous Emission Monitoring System (CEMS) at process stacks to monitor stack emission as well as 4 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.
iii. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
iv. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash;
v. The project proponent shall provide wind shelter fence and chemical spraying on the raw material stock piles;
vi. Ventilation system shall be designed for adequate air changes as per the prevailing norms for all tunnels, motor houses, and cement bagging plants.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25thAugust, 2014 (Cement) and subsequent amendment dated 9thMay, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
ii. The project proponent shall regularly monitor ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off
v. Water meters shall be provided at the inlet to all unit processes in the cement plant.
vi. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Waste heat recovery system shall be provided for kiln and cooler.

ii. The project proponent makes efforts to achieve power consumption less than 65 units/ton for Portland Pozzolona Cement (PPC) and 85 units/ton for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.
iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.
iv. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the program for reduction of the same including carbon sequestration by trees in the plant premises.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.
iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt Brichyrnot, Khaddum, Pyadare, Lumshnong, Lum-Myrli, Tongseng, Umstain, Srkari, Sonapyrdi, Symplong, Lumtongseng, Whaijer, Umlonng, Moosiang and Saiken villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
ii. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
iii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
iv. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which

one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Re-Consideration of Environmental Clearance Proposal

Agenda No. 5.10

5.10 Change in EC Configuration from 5.5 MTPA to 4.5 MTPA by M/s. Bhushan Power and Steel Limited located at Village Thelkoloi, Tehsil Rengali, District Sambalpur, Odisha – Environment Clearance under the provision of para 7 (ii) of EIA Notification, 2006 – regarding.

[Proposal No. IA/OR/IND/257254/2022; File No. IA-J-11011/40/2009-IA-II(I)]

5.10.1 M/s. Bhushan Power and Steel Limited has made an online application vide proposal no. IA/OR/IND/257254/2022 dated 15/03/2022 along with copy of Addendum EIA report, Form – 2 and certified compliance report seeking Environment Clearance (EC) under the provisions of para 7(ii) of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 3(a) Metallurgical industries (ferrous &non-ferrous), 2 (a) Coal Washeries, 2(b) Mineral Beneficiation, 1(d) Thermal Power Plants and 4(b) Coke oven plants under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

5.10.2 Name of the EIA consultant: M/s M. N. Dastur & Company (P) Ltd [S. No. 178, List of ACOs with their Certificate/ Extension Letter no. QCI/NABET/ENV/ACO/22/2285; valid up to 23/06/2022; Rev. 23, May 09, 2022].

Details submitted by the project proponent

5.10.3 The project of M/s Bhushan Power and Steel Limited is located at Village Thelkoloi, Tehsil Rengali, District Sambalpur, Odisha is for Change in EC Configuration from 5.5 MTPA to 4.5 MTPA.

5.10.4 Environmental site settings:

S. No.	Particulars	Details	Remarks
i)	Total land	**789.24 ha** (1950.25 acre) [Private: 789.24 ha] As per earlier EC dated 06/12/2016 total project area was 829.726 ha (plant area: 789.24 ha + Township: 40.48 ha). As per instant proposal, PP excluded the township area of 40.48 ha and kept plant area of 789.24 ha only. As per EC dated 06/12/2016 total land is 789.24 ha out of which 505.96 ha land is existing land and 283.28 ha is expansion land)	Land use – Industrial land.
ii)	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The proposed change in configuration will take place within existing plant area of 789.24 ha. Out of total 789.24 ha land existing land 505.96 ha is in possession of the company and for expansion 283.28 ha land acquisition process is in progress. No additional land is required for proposed change in configuration.	--

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>iii)</td><td>Existence of habitation & involvement of R&R, if any</td><td><u>Project site:</u>
Village Thelkoloi and Khadiapalli having Project displacement families- 111 of 2 villages.

Study area:<table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Thelkoloi</td><td>50 m</td><td>West</td></tr><tr><td>Sripura</td><td>1.5 km</td><td>NE</td></tr><tr><td>Lapanga</td><td>0.5 km</td><td>SW</td></tr></table></td><td>R&R is in progress.</td></tr>
<tr><td>iv)</td><td>Latitude and Longitude of the project site</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td colspan="3">Existing plant 1250.25 acre</td></tr><tr><td>1</td><td>21°46'16.14"N</td><td>84° 0'49.60"E</td></tr><tr><td>2</td><td>21°45'35.06"N</td><td>84° 0'51.46"E</td></tr><tr><td>3</td><td>21°44'51.44"N</td><td>84° 0'33.81"E</td></tr><tr><td>4</td><td>21°44'53.10"N</td><td>84° 2'1.75"E</td></tr><tr><td>5</td><td>21°45'41.70"N</td><td>84° 1'41.13"E</td></tr><tr><td>6</td><td>21°46'28.66"N</td><td>84° 1'21.75"E</td></tr><tr><td colspan="3">Additional 700 acres</td></tr><tr><td>1</td><td>21°44'53.17"N</td><td>84° 1'22.00"E</td></tr><tr><td>2</td><td>21°43'49.85"N</td><td>84° 1'7.45"E</td></tr><tr><td>3</td><td>21°43'42.73"N</td><td>84° 1'39.56"E</td></tr><tr><td>4</td><td>21°44'51.88"N</td><td>84° 2'02.61"E</td></tr></table></td><td>-</td></tr>
<tr><td>v)</td><td>Elevation of the project site</td><td>222 m above mean sea level (MSL)</td><td>-</td></tr>
<tr><td>vi)</td><td>Involvement of Forest land if any</td><td>Not Applicable</td><td></td></tr>
<tr><td>vii)</td><td>Water body exists within the project site as well as study area</td><td>Project site: NIL

Study area:<table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Ib river</td><td>7.0 km</td><td>West</td></tr><tr><td>Matwali river</td><td>4.7 km</td><td>SSE</td></tr><tr><td>Bheden river</td><td>0.88Km</td><td>NW</td></tr><tr><td>Hirakud Reservoir</td><td>1.0 km</td><td>SSW</td></tr></table></td><td>-</td></tr>
<tr><td>viii)</td><td>Existence of ESZ/ESA/ national park/wildlife sanctuary/biosphere reserve/tiger reserve/ elephant reserve etc. if any within the study area</td><td>NIL</td><td>-</td></tr>
</table>

5.10.5 The chronology of earlier EC is given as below:

Date	Detail
12/05/2004	EC obtained from MOEF&CC vide letter no J-11011/228/2003-IA II for setting up of **1.2 MTPA** Steel Plant in the name of M/s. Bhushan Power & Steel Limited
29/03/2007	EC expansion from MOEF&CC vide letter no J-11011/372-IA-II(I) for **1.2 MTPA to 2.2 MTPA.**
02/04/2010	EC expansion from MOEF&CC vide letter no J-11011/40/2009-IA-II(I) for **2.2 MTPA to 2.8 MTPA.**
17/10/2012	Amendment in EC for **2.8 MTPA to 3.0 MTPA**
06/12/2016	Expansion in EC for **3.0 MTPA to 5.5 MTPA**
26/07/2017	BPSL went into NCLT and was under administrative control of RP (Resolution Professional) as per CIRP (Corporate Insolvency Resolution Procedure).
26/03/2021	M/s. JSW Steel Ltd took over the M/s. BPSL on and has full administrative control of its operations.

Renewal of consents to operate for the existing plant was accorded by State Pollution Control Board, Odisha dated 25/03/2022 and same is valid up to 31/03/2023.

5.10.6 Implementation status of the existing Environmental Clearances:

S. No.	Facilities	As per EC dated 06/12/2016	Implementation Status	Production as per CTO
1	Coal Washery	1x1.0MTPA+ 1x3.5MTPA	Commissioned	1x1.0MTPA+ 1x3.5MTPA
2	Beneficiation Plant	1x1200TPH (6.5MTPA Product)	Commissioned	1200 TPH
3	Pellet Plant	4.0MTPA	3.5 MTPA commissioned	3.5MTPA
4	DRI Kiln	14x500TPD (2.3MTPA)	12x500 TPD commissioned	(12x500 TPD) 1.92MTPA
5	Coke Oven	2x0.45MTPA (Non-Recovery Type) 1x1.2MTPA (Recovery Type)	1x0.45MTPA (Non recovery commissioned and 1.0 MTPA recovery type coke oven has been commissioned. Detail engineering for upgradation to 0.2 MTPA is in progress.	0.45 MTPA-Non-Recovery Type; 1.0 MTPA-Recovery Type
6	Sinter Plant	1x105 m^2 + 1x450 m^2	1x105 m^2 commissioned; 1x450 m^2under construction	1x105 m^2
7	Blast Furnace	1x1008 m^3 + 2x2015 m^3	1x1008 m^3 + 1x2015 m^3 commissioned and	(1x1008 m^3) 0.8 MTPA + (1x2015 $m^{3)}$ 1.55 MTPA
8	EAF	6x100 Ton	2x90T, 2x100T and 1x70 T commissioned	2x90 T + 2x100 T + 1x70
9	LF	6x100 ton + 2x250 ton	2x90T, 2x100T and 1x70 T commissioned	2x90 T + 2x100T + 1x70 T
10	Alloy Smelter	4x16 MVA	Not commissioned	--
11	BOF	2x250 ton	Not commissioned	--

S. No.	Facilities	As per EC dated 06/12/2016	Implementation Status	Production as per CTO
12	VD/AOD	2x100 ton + 2x250 ton	Not commissioned	--
13	RH	2x250 ton	Not commissioned	--
14	HMDP	2x250 ton	Not Commissioned	--
15	Lime Plant	3x300 TPD + 2x600 TPD	3x300 TPD- commissioned	3x300 TPD
16	Dolo Plant	1x300 TPD + 1x100 TPD + 1x600 TPD	1x600 under construction.	--
17	Oxygen Plant	1x400 TPD + 1x660 TPD + 1x1250 TPD	1x400 TPD + 1x660 TPD – Commissioned; 1000 TPD under construction	1x400 TPD + 1x660 TPD
18	Billet Caster	(1x2) + (2x4) + (1x5) Strand	(1x2) + (1x4) + (1x3) Strand	1x5 + 1x2 + 1x4, strand
19	Bloom Caster	2x2 Strand	Not commissioned	--
20	Thin Slab Caster	3x1 Strand	2x1 strand Commissioned.	2x1 strand
21	CSP	4.0 MTPA	1.8 commissioned	1.8 MTPA
22	Cold Rolling Mill	2.5 MTPA	1 MTPA commissioned 1.5 MTPA under engineering	1 MTPA
23	Pipe and Tube Mill	0.8 MTPA	0.2 MTPA commissioned 0.6 MTPA under implementation	0.2 MTPA
24	Galvanising / Galvalume Line	1.3 MTPA	0.5 MTPA commissioned 0.8 MTPA under implementation	0.5 MTPA
25	Colour Coating Unit	0.7 MTPA	0.45 MTPA commissioned 0.25 MTPA under implementation	0.45 MTPA
26	Wire and Rod Mill	0.45 MTPA	0.45 commissioned	0.45 MTPA
27	Bar and Rod Mill	0.55 MTPA	0.55 under implementation	--
28	Captive Power Plant	710 MW (Coal fired, & WHRB)	506 MW Commissioned	3x130 MW + 60 MW + 40 MW + 2x8
29	Cement Plant	1.0 MTPA	Under engineering stage	--

5.10.7 The unit configuration and capacity of existing and proposed unit are given as below:

S. No.	Facility	Configuration as per EC dated 06/12/2016	Configuration after proposed amendment	Remarks
1	Coal Washery	1x1.0 MTPA + 1x3.5 MTPA	1x1.0 MTPA + 1x3.5 MTPA	No change
2	Beneficiation Plant	1x1200 TPH (6.5 MTPA Product)	1x1200 TPH (6.5 MTPA Product)	No change
3	Pellet Plant	4.0 MTPA	4.0 MTPA	No change
4	Sinter Plant	1x105 m^2 + 1x450 m^2 (Total: 5.9 MTPA)	1x105 m^2 + 1x450 m^2 (Total: 5.9 MTPA)	No change

S. No.	Facility	Configuration as per EC dated 06/12/2016	Configuration after proposed amendment	Remarks
5	DRI Kiln	14x500 TPD (2.3 MTPA)	12x500 TPD (2.0 MTPA)	2x500 TPD surrendered
6	Coke Oven	2x0.45 MTPA (Non-Recovery Type) 1x1.2 MTPA (Recovery Type)	1x0.45 MTPA (Non-Recovery Type) 1x1.2 MTPA (Recovery Type)	1x0.45 MTPA Non-Recovery Coke Oven surrendered
7	Blast Furnace	1x1008 m^3 + 2x2015 m^3 (Total: 3.9 MTPA)	1x1120 m^3 + 1x2015 m^3 (Total: 2.35 MTPA)	Augmentation of BF from 1008 m^3 to 1120 m^3 and 1x2015 m^3 BF surrendered
8	EAF/Zero Power Furnace (ZPF)	SMS-1: EAF: 4x100 T SMS-2: EAF: 2x100 T (Total: 600 T)	SMS-1: EAF: 4x105 T SMS-2: EAF: 1x75 T + ZPF: 1x75 Ton (Total: 570 T)	4x100 is upgraded to 4x105 T and 2x100 T EAF change to 1x75 T EAF +1x75 T ZPF
9	LF	6x100 ton + 2x250 ton (Total 1050T)	6x100 Ton + 2x75 Ton (Total 675T)	250T LF changed to 75 T LF
10	Alloy Smelter	4x16 MVA	NIL	All units surrendered
11	BOF	2x250 ton	NIL	All units surrendered
12	VD/AOD	2x100 ton + 2x250 ton	2x100 Ton + 2x75 Ton	250T LF changed to 75 T VD/AOD
13	RH	2x250 ton	NIL	All units surrendered
14	HMDP	2x250 ton	2x100 Ton	300 T surrendered
15	Lime Plant	3x300 TPD + 2 x 600 TPD	3x300 TPD + 2x600 TPD	No change
16	Dolo Plant	1x300 TPD + 1 x 100 TPD + 1x600 TPD	1x600 TPD	1x300 TPD + 1x100 TPD surrendered
17	Oxygen Plant	1x400 TPD + 1x660 TPD + 1x1250 TPD	1x400 TPD + 1x660 TPD + 1x1000 TPD + 3x200 TPD	Reduction of capacity of 1250 TPD to 1028 TPD Addition of 3x200 TPD (VPSA)
18	Billet caster	(1x2) +(2x4) +(1x5) Strand	(1x3) + (2x4) Total Strands 11 Nos	4 Strands surrendered
19	Bloom Caster	2x2 Strand	NIL	All units surrendered
20	Thin Slab Caster	3x1 Strand	2x1 Strand	1x1 strand surrendered
21	CSP	4.0 MTPA	4.0 MTPA	No change
22	Cold Rolling Mill	2.5 MTPA	2.5 MTPA	No change
23	Pipe and Tube Mill	0.8 MTPA	0.8 MTPA	No change
24	Galvanising / Galvalume Line	1.3 MTPA	1.3 MTPA	No change

S. No.	Facility	Configuration as per EC dated 06/12/2016	Configuration after proposed amendment	Remarks
25	Colour Coating	0.7 MTPA	0.7 MTPA	No change
26	WRM	0.45 MTPA	0.60 MTPA	Addition of 0.15 MTPA
27	Bar and Rod Mill	0.55 MTPA	0.60 MTPA	Addition of 0.05 MTPA
28	Captive Power Plant	710 MW (Coal fired, & WHRB)	Total 546 MW: 3x130 MW (CFBC-Coal & WHRB of DRI 5-12) + 40MW (AFBC & DRI 1-4) + 60MW (AFBC&DRI1-4) + 16MW WHRB of HR coke oven + 40 MW (250 TPH process steam boiler (Coal/Gas based)	Surrender of 150 MW coal fired CPP and addition of 40 MW (250 TPH coal/gas-based boiler.)
29	Cement Plant (Slag cement grinding and blending unit)	1.0 MTPA	2.0 MTPA	Addition of 1.0 MTPA
30	Slag processing for aggregates	-	300TPH + 150 TPH	New
31	Iron ore crusher for quality improvement	-	350TPH	New

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

S. No.	Raw Materials	Estimated Quantity (in TPA)			Source	Distance from project site (km)	Mode of transport
		As per EC (5.5 MTPA)	Revised (at 4.5 MTPA)	Change			
1	Iron Ore Lump	350,000	260,000	-90,000	Barbil region	500	Road/Rail
2	Iron Ore Fines	10,270,000	9,786,209	-483,791	Joda/ barbil/ Koira region		Road/Rail
3	DRI Coal	2,268,000	1,850,000	-418,000	Import - M/s Glencore South Africa	400	Sea
4	Coking Coal (semi soft)	1,109,600	1,015,200	-94,400	Australia/ SA/ China/ Mozambique	400	Sea
5	Coking Coal (hard)	937,400	930,600	-6,800	Australia/ SA/ China/ Mozambique	400	Sea

S. No.	Raw Materials	Estimated Quantity (in TPA)			Source	Distance from project site (km)	Mode of transport
		As per EC (5.5 MTPA)	Revised (at 4.5 MTPA)	Change			
6	Limestone	1,428,700	885,000	- 543,700	International market	400	Sea
7	Dolomite	219,800	180,000	-39,800	Baradwar region	180	Rail
8	Ferro Alloy	50,150	12,000	-38,150	Joda/ barbil/ Koira region	500	Road/Rail
9	Thermal Coal	3,678,200	2,835,800	-8,42,400	Coal India Ltd. mines	13	Rail
10	Purchased Coke	228,500	0	-2,28,500	-	-	-
11	Purchased DRI	123,600	145,262	21,662	Local market	100	Road/Rail
12	Quartzite	65,000	40,400	-24,600	Local source	120	Rail
13	Bentonite	40,000	40,000	0	Import	400	Sea
Total		**20,768,950**	**17,980,471**	**-2,788,479**			

5.10.9 Existing Water requirement is 108600 m^3/day which will be reduce to 85608 m^3/day after proposed change in configuration. Water requirement is obtained from backwater reservoir of Hirakud Dam and permission for 45 cusecs (~ 110095 m^3/hr) has been from obtained Office of Executive Engineer, Main Dam Division, Burla Department of Water Resource (Government of Odisha) vide letter No. 1739 dated 14/02/2020.

5.10.10 Existing power requirement of 672 MW, which will be reduced to 605.6 MW after proposed change in configuration. Power is obtained from 546 MW of captive power plant and remaining from Grid.

5.10.11 Baseline Environmental Studies:

Period	**December, 2020 to February, 2021 from Post project monitoring data**
AAQ parameters at 6 Locations (min and max)	$PM_{2.5}$ = 37.1 to 49.3 µg/m^3 PM_{10} = 70 to 92.4 µg/m^3 SO_2 = 9.9 to 16.1 µg/m^3 NO_x = 21.1 to 31.8 µg/m^3
Incremental GLC level	PM_{10} = 2 µg/m^3 (Level at 2.6.km in NE Direction) SO_2 =5 µg/m^3 (Level at 2.6 km in NE Direction) NOx = 5 µg/m^3 (Level at 2.6 km in NE Direction)
Ground water quality at 4 locations	pH: 7.17 to 7.41, Total Hardness: 65.33 to 94 mg/l, Chlorides: 23.33 to 29.33 mg/l, Fluoride: 0.24 to 0.33 mg/l. Heavy metals (Chromium):<0.05 mg/l
Surface water quality at 4 locations	pH: 7.11 to 7.32; DO: 3.6 to 6.43 mg/l BOD: 0.6 to 2.1.mg/l. COD from 13.4 to 26.8 .mg/l
Noise levels Leq (Day and Night)	50 to 58.7 dBA for the day time and 42.5 to 49.8 dBA for the Night time.
Traffic assessment study findings	The projected raw material transported by road would be at 5.5 MTPA is 10,334,890 TPA. The revised quantity at 4.5 MTPA would be

Period	December, 2020 to February, 2021 from Post project monitoring data
	8,626,485 TPA. Considering 35 tons trucks, the number of trucks per day at 5.5 MTPA and 4.5 MTPA are 809 and 675 respectively. So, there would be a net reduction of 134 trucks per day or 17% reduction.
Flora and fauna	No Schedule I and endangered species in present in the study area.

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

S. No.	Type	Quantity in TPA			Utilization/ Remark
		As per EC of 5.5 MTPA	Revised Configuration of 4.5 MTPA	Change	
1	BF Slag	1,241,400	1,032,450	Reduced 208,950	To be used for Cement Making.
2	SMS Slag	1,089,300	889,300	Reduced 200,000	To be used for Road construction/ Land filling purpose, Paver Block Making after recovering metal from Slag Crushing unit
3	Mill Scale	1,09,083	90150	Reduced 18933	To be used in Sinter Plant
4	Flue Dust	1,50,000	108,000	Reduced 42,000	To be used in Sinter Plant
5	Fly Ash	1,521,234	1,089,104	Reduced 432,130	To be used for Brick making and also in Captive Cement Plant
6	Bottom Ash	352,936	272,276	Reduced 80,660	To be used for Road construction/ Land filling purpose
7	Lime/Dolo Fines	14,400	14,400	No change	To be sold to WBPCB authorized Vendor
	Hazardous Waste				
1	Used /Spent oil	180	150	Reduced 30	Storage in container on impervious floor under well ventilated covered shed followed by disposal through actual users having valid authorization from SPCB, Odisha
2	Waste residue containing oil	305	250	Reduced 55	Storage in impervious pits/ con-tainers under well ventilated covered shed followed by disposal through Authorized HW incinerator / Co-Processing in Cement Kiln authorized by SPCBs/PCCs / CHWTSDF, Jajpur
3	Oil and grease skimming residues	306	250	Reduced 56	Storage in impervious pits/ con-tainers under well ventilated covered shed followed by disposal through Authorized HW incinerator / Co-Processing in Cement Kiln authorized by SPCBs/PCCs / CHWTSDF, Jajpur
4	Chemical Sludge from Waste water Treatment	856	700	Reduced 156	Storage in impervious floor/ pit under well ventilated covered shed followed by disposal in CHWTSDF, Jajpur
5	Acid Residues	31	25	Reduced 6	Storage in impervious floor/pit under well ventilated covered shed followed by disposal in CHWTSDF, Jajpur

S. No.	Type	Quantity in TPA			Utilization/ Remark
		As per EC of 5.5 MTPA	Revised Configuration of 4.5 MTPA	Change	
6	Alkali Residues	31	25	Reduced 6	Storage in impervious pits I con-tainers under covered shed followed by disposal in CHWTSDF, Jajpur
7	Spent Ion Exchange Resin Containing Toxic Metals	7	6	Reduced 1	Storage in impervious pits / containers under well ventilated covered shed followed by disposal through Authorized HW incinerator / Co-Processing in Cement Kiln authorized by SPCBs/PCCs / CHWTSDF, Jajpur
8	Decanter Tank Tar Sludge	300	300	No change	Storage in impervious pits/ containers under well ventilated covered shed followed by disposal through Authorized HW incinerator / Co-Processing in Cement Kiln authorized by SPCBs/PCCs / CHWTSDF, Jajpur
9	Process wastes, Residues & Sludge	244	200	Reduced 44	Storage in impervious pits/ containers under well ventilated covered shed followed by disposal through Authorized HW incinerator / Co-Processing in Cement Kiln authorized by SPCBs/PCCs / CHWTSDF, Jajpur
10	Empty Barrels/ Containers/ Liners Contaminated with hazardous Chemicals / Wastes	24	20	Reduced 4	Storage on impervious floor under well ventilated covered shed followed by captive reuse / disposal through original supplier / Actual Users authorized by SPCB, Odisha
11	Zinc dross	2500	2500	No change	Storage in impervious pits / containers over impervious floor under well ventilated covered shed followed by disposal through Actual Users authorized by SPCB, Odisha
12	ETL Sludge	-	120	Increased 120	Storage in impervious pits / containers over impervious floor under well ventilated covered shed followed by disposal through Actual Users authorized by SPCB, Odisha

5.10.13 Public Consultation (Part of the Original EC accorded on 06/12/2016)

Details of advertisement given	12/01/2016: National Paper 'New Indian Express' and 13/01/2016: local daily newspaper 'Sambad'.
Date of public consultation	17/02/2016
Venue	Playground of Lapanga High School
Presiding Officer	Shri Manish Agarwal, Additional District Magistrate, Sambhalpur.
Major issues raised	1. Air and Water Quality 2. Road Construction 3. Employment

	4. Establishment of technical training center. 5. Health facilities 6. Drinking water facility.

Action plan as per MoEF&CC O.M. dated 30/09/2020

S No	Area	2022	2023	2024	Total budget in crore
1	Road Infrastructure	Construction of road in Derba (Repairing 3 km) and Thelkoloi service road (1km)	Construction of road in Sripura (2 km) and Khadiapalli (1km)	- Construction of road in Dubhenchaper (3 km)and Lapanga(1km)	7
2	Rainwater harvesting	Construction of village pond at Lapanga	Construction of village pond at Dhubenchapper	Construction of village pond at Khariapalli	1.5
3	Healthcare facilities	Healthcare facility for local people in vicinity of the plant to address respiratory, skin, ENT issues etc. related to environmental pollution – Commencement of construction of building	Completion of construction	Procurement of equipment and engagement of medical staff (operational expenditure like staff salary and consumables to be borne by BPSL)	30
4	Drinking water & sanitation	Allocation of funds towards government drinking water mission and Sanitation in the close vicinity. The approved programmed would be communicated to MoEFCC through 6 monthly compliance report	-	-	5
5	Vocational training arrangements for women and youth	Vocational training courses arrangements for women through various Govt departments/ NGOs- Tailoring, beautician and mushroom cultivation etc. - 200 women Vocational Training courses for local youth through local ITIs for following trade- Electrician, Welder Fitter Electrician Mason Moto winding Machining etc for about 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth	Tailoring, beautician and mushroom cultivation course - additional 200 women Electrician, welding, fitting and machining course for additional 100 local youth	1.7
6	Education	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to Thekoloi Hugh School and Dhubenchapar upper Primary	Strengthening of village school library – 4 Nos. of PCs and 500 books	Strengthening of village school library – 4 Nos. of PCs and 500 books with bookshelves to	3

S No	Area	2022	2023	2024	Total budget in crore
		school, Sripura High School & Bir Surendra Sai High School	with bookshelves to Thekoloi Upper PrimarySchool, Lapanga High School, Saraswati Sishu Vidya Mandir & Sripura Upper Primary School	Bisadhi Upper Primary School, Bir Surendra Sai Upper Primary School, Lapanga Upper Primary School & Sripura Upper Primary School	
7	Electrification/Solar Street Lighting	Solar LED lights at Lapanga, Thelkoloi - 50 each village	Solar LED lights at Dhubenchapper, Derba - 50 each village	Solar LED lights at Khariapalli, Khinda - 50 each village	1.8
Total					**50**

5.10.14 Existing capital cost of project was Rs. 9090 Crore for expansion project from 3 MTPA to 5.5 MTPA. The capital cost of the proposed project for 3.0 MTPA to 4.5 MTPA is Rs. 4900 Crores and the capital cost for environmental protection measures is proposed as Rs. 495.7 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 24.64 Crores. The employment generation from the proposed project/expansion is 2700. The detail of cost for environmental protection measures is as follows:

S No	Description of Item	Existing (Rs. In Crores) (As per EC of 5.5 MTPA)		Proposed for 4.5 MTPA (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
1.	Air Pollution Control Measure	200	--	302.5	10.51
2.	Water Pollution, rainwater harvesting & solid waste management	90	--	107.2	11.43
3.	Environmental monitoring	30	--	6	0.9
4.	Greenbelt development	3	--	30	1.8
5.	Addressal of public consultation concern	164	--	50	--
Total		**457**	**10**	**495.7**	**24.64**

5.10.15 Existing green belt was developed in 73.25 ha area which is about 8.82% of the total project area of 829.73 ha (including 40.48 ha of Township) with total sapling of 147700 Trees (@ 2016 trees/ ha). Proposed greenbelt will be developed in additional 187.2 ha. Thus, total of 260.45 ha area (33% of total project area of 789.24 ha after excluding the 40.48 ha area of township) will be developed as greenbelt. A minimum 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB/MoEF&CC, New Delhi guidelines. Local and native species will be planted with a density of about 2500 trees per hectare. Total no. of 6,51,125 saplings will be planted and nurtured in additional 260.45 ha in 3 years.

5.10.16 It has been reported that following will be resource consumption after the proposed change:

Particulars	As per EC dated 6/12/2016	After proposed change under para 7(ii)	% Decrease
Land	829.73 ha	789.24 ha	4.88%
Greenbelt	33%	33%	-
Water	4525 m^3/hr	3567 m^3/hr	21.17%
Power	672 MW	605.6	9.88%
Raw materials	18137100	17980471	0.86%
Product	Crude Steel: 5.5 MTPA	Crude Steel: 4.5 MTPA	18.18%

5.10.17 Pollution load assessment:

Particulars	As per EC dated 6/12/2016	After proposed change under para 7(ii)	% Decrease
Air	PM ; 390.21 kg/hr SO_2 : 762.03 kg/hr NOx: 456.92 kg/hr	PM ; 361.4 kg/hr SO_2 : 610.7 kg/hr NOx: 420.3 kg/hr	**PM: 7.38%** **SO_2: 19.85%** **NOx: 8.01%**
Water	Zero discharge	Zero discharge	-
Solid and Hazardous waste	Solid Waste: 4478353 MTPA Hazardous waste: 4784 MTPA	Solid Waste: 3495680 MTPA Hazardous waste: 4546 MTPA	Solid Waste: **21.94%** Hazardous waste: **4.97%**
Traffic load	Additional 103 trucks per day	Additional 84 trucks per day	**18.44%**

5.10.18 Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration are given as below:

Types of direction	Description	Letter No & Date	Issues	Status
Closure direction	OSPCB Closure direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act,1974 amended thereafter	Letter No-6989/IND_I_CON-4650, dated-07.05.2021	Regarding Stack emission from power plant and zero discharge issues	Reply to closure direction was sent to OSPCB vide our Letter dated 08/05/2021. Action plans and progress was sent to OSPCB vide our letter dated 31/05/2021. Performance Bank Guarantee No 1025521 BG 0000003 dated 06/08/2021 submitted to OSPCB vide our Letter No JSw/BPSL/Env/OSPCB/011 dated 06/08/2021 Modifications in ESPs of 40 MW, 60 MW and Boiler 1 of unit 3x130 MW completed and emissions

Types of direction	Description	Letter No & Date	Issues	Status
				achieved within norm. Accordingly, compliance status was submitted to OSPCB vide our letter no-JSWBPSL/ENV/OSPCB/050 dated 26/02/2022. **Revocation of Closure direction received from OSPCB vide Letter No-11721/IND-I-CON-4650 dated -09/08/2021.**
Direction	OSPCB Direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act,1974 amended thereafter	Letter No-11377/IND-I-CON-4650-Dated-07/08/2021	Regarding issues at solid waste disposal site Derba	Compliance submitted at OSPCB by BPSL vide Letter No-SWBPSL/ENV/OSPCB/017 on 24/08/2021
Direction	OSPCB Direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act,1974 amended thereafter	Letter No-17816/IND-CON-4650, Dated-12/11/2021	Regarding issues at solid waste disposal site Derba	Compliance Report submitted by BPSL bearing letter No-JSWBPSL/ENV/OSPCB/028 dated 29/11/2021

Certified compliance report from Regional Office:

5.10.19 The Status of compliance of earlier EC was obtained from Integrated Regional Office, Bhubaneswar *vide* letter no. 101-595/EPE/1560dated 11/11/2021in the name of M/s. Bhushan Steel and Power Limited on basis of site inspection carried out on 28/10/2021.TheActiontakenreportregardingthepartially/non-compliedcondition was submitted by project proponent to regional officer MoEF&CC, Bhubaneswar vide letter dated 28/11/2021.MoEF&CC (RO) evaluated the same and has issued closure report vide his letter No 101-595 EPE/1560 dated 07/12/2021 The details of the observations made by RO in the above closure report are as below:

S. No.	Non-compliances details	Observation of RO(abridged)	Condition no.			Re-assessment by RO
			EC date	Specific	General	
1.	Phase IR&R is completed and for phase 2additional 700 acre has been acquired.	Project authorities are requested to provide R&R detail.	6/12/2016	ii		Condition is treated as 'Assured to Comply'.
2.	PP initiated action for constructing Rainwater harvesting	Progress made w.r.t. Rainwater harvesting will be submitted.	6/12/2016	v		Condition is treated as 'Assured to Comply'.
3.	Roads to be made of concrete or black topped to reduce fugitive emission or to be cleaned by water Spray.	Road within the plant area got damaged and create dust pollution	6/12/2016	vii		Being complied.
4.	PP assured to comply with in June, 2022	RO plant along with CETP to treat100% wastewater.	6/12/2016	xii		Condition is treated as 'Assured to Comply'.
5.	Complied in a phased manner	Status of commitment of public hearing is to be submitted.	6/12/2016	xix		Condition is treated as 'Assured to Comply'.
6	Physical target sunder CER are given. BPSL will furnish progress statusin6 monthly reports.	Information on Enterprise social commitment and constitution of committee should be submitted.	6/12/2016	xx& xxii		Being complied
7.	PP spent 60 crores for development of peripheral area but progress made should be communicate d.	Detail information regarding CSR activities should be submitted.	6/12/2016	xxi		Complied
8.	Adequate no of canteen and launch shelters have been planned and	Sitting place for workforce		xxv		Condition is treated as 'Assured to Comply'

S. No.	Non-compliances details	Observation of RO(abridged)	Condition no.			Re-assessment by RO
			EC date	Specific	General	
	constructed within March, 2022.					
9.	Progress made to be communicated.	Housekeeping Needs improvement		-		Being complied.
10.	Greenbelt will be developed up to 33%.	Plantation in vacant area and road side.		-		Being complied
11.	PP submitted that information and regular health check-up is carried out.	Details of occupational health surveillance carried out with findings.		-	vi	complied
12.	Submitted information regarding intake, consumption, recycling and reuse.	Detail water budget plan should be submitted		-		complied
13.	Construction work will be started from 2022	Development of rainwater harvesting		-	vii	Condition is treated as 'Assured to Comply'
14.	PP replied in detail later.	Detail information (item wise) to be Submitted.			ix	Complied
15.	A new website is being developed by PP	The URL address of the company' s Website regarding uploading 6 months report should be submitted.			xi	Condition is treated as 'Assured to Comply'
16.	PP submitted environmental statement in Form-IV	A copy of Environmental statement in Form-IV should be submitted			xiii	Complied
17.	PP submitted that document	Date of financial closure, final approval and date of commencing of land			xv	Complied

S. No.	Non-compliances details	Observation of RO(abridged)	Condition no.			Re-assessment by RO
			EC date	Specific	General	
		developmental work of the project should be submitted				

5.10.20 M/s. Bhushan Power & Steel Limited (BPSL) had earlier applied for EC under para 7(ii) of EIA Notification vide proposal no. IA/OR/IND/234756/2021 dated 04/01/2022 and the proposal was considered in 52nd meeting of the Re-constituted EAC (Industry-I) held on 27th January, 28th January and 31stJanuary, 2022 wherein the Committee returned the proposal in its present form due to technical deficiencies in the proposal.

5.10.21 The project proponent again applied for EC under para 7(ii) of EIA Notification vide proposal no. IA/OR/IND/257254/2022 dated 15/03/2022 and the proposal was considered in the 3rd meeting of the EAC held on 11-12th April, 2022. The observations and recommendations of the EAC are as follows:

Observations of the Committee (EAC during 11-12th April, 2022)

5.10.22 The Committee noted the following:

i. As per the closure report obtained from IRO, Bhubaneshwar on 07/12/2021, there are several non-compliances. PP did not mention current status with ATR of the EC noncompliance conditions in the presentation made before the EAC.
ii. As per AAQ modeling submitted by PP. Maximum GLC for all parameters are located at same point, clarification for same was not given by PP and consultant.
iii. There are three directions issued by Odisha Pollution Control Board for the instant proposal, PP has not submitted the detail of closure notice and the current status of the closure notice in s.no. 37 of Form 2.

Recommendations of the Committee (EAC during 11-12th April, 2022)

5.10.23 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal to seek the additional information on following points:

i. Project proponent shall submit condition wise action taken report to the non-compliances reported by IRO along with the relevant supporting documents.
ii. Project proponent shall submit the details of notices/directions issued by the SPCB in the last two years along with its present status. Further, the project proponent shall submit explanation for not furnishing the said details in s.no. 37 of Form 2.
iii. Project proponent shall clarify the reasons for as the incremental ground level concentrations for all the pollutants are falling in the same distance and direction.
iv. Project proponent shall provide the details regarding litigations pending against the proposed project.

5.10.24 The proponent submitted the ADS Reply on 29.04.2022 on PARIVESH. Point-wise reply of ADS is given as below:

(i) Project proponent shall submit condition wise action taken report to the non-compliances reported by IRO along with the relevant supporting documents.

RO, MoEF&CC inspected the plant during October 2021 and submitted his report. IRO had raised feedback from BPSL on status of 17 points on which PP had to take actions. Accordingly, PP submitted the action taken report on 27th November 2021 with all details and then RO, MoEF&CC submitted his closure report dated 07.12.21. As per his closure report ten points were noted as "complied with" or "being complied with" and rest seven points were marked as "Assured to comply". Current status of these seven points is given below –

Sl. No. as per closure report	Information sought	Action Plan submitted and Current Status
#1	Details of R & R issues including compensation (have details of meetings held and actions taken)	**R&R of Phase II (700 acres for expansion to 5.5 MTPA):** 111 PDF identified; 50 acres land identified for setting up R&R colony. Due to NCLT & Covid-19, there was no progress in R&R activities by BPSL. After taking over by JSW, discussions have been initiated with local authorities to complete the process of R&R including compensation & resettlement. BPSL has requested the Special Land Acquisition Officer, Sambalpur vide our letter No. Admin 2022/35 dated 4.04.22 (Annexure 1) to conduct RPDAC (Regional Peripheral Development Action Committee) meeting and include the following in agenda so that R&R can be completed at the earliest. Finalizing of PDF list, Finalization of R&R sites, Finalization of R&R benefits etc. RPDAC meeting is expected very soon within one month.
#2	Progress on Rainwater harvesting work	Two Nos. of rainwater harvesting reservoirs of capacity of 3.34 Lac Cum have already been established. Work order has been issued to M/s. KRG Rain Water Foundation of Chennai who are experts for implementation of rainwater harvesting projects. The will conduct feasibility study and suggest necessary measures for further implementation of rain water harvesting. Study has been completed and draft report is received on 25th April 2022 which is being examined. **Salient points of the draft report are given below -**

Sl. No. as per closure report	Information sought	Action Plan submitted and Current Status
		1.0 Average rainfall in the area is around 1000 to 1400 mm per annum 2.0 Rainwater harvesting potential is estimated to be is 12,72,960 cum per annum. 3.0 The best options available are few ground water recharges as water table is shallow in the area and major harvesting through surface water storage. 4.0 Roof water can be taken to ground water re-charge wherever suitable water table available 5.0 Surface runoff water can be collected in various ponds to be created at various locations for direct reuse of reuse after necessary treatment Feasible options will be finalized with the consultants by mid-May 2022 and finalized actions will be completed by Dec 2023
#4	100% utilization of treated wastewater	For 100% reuse and utilization of treated waste water RO plant of capacity 510 m^3/h has been commissioned & the same is in Operation. All the 03 Nos. of existing STP's have been Upgraded ant they are commissioned in Dec 2021. All the STP's are operating satisfactorily. By March 2022 all the Effluent water and storm water drains have been segregated throughout the plant. Up-gradation of ETP in CRM is under progress by M/s. Thermax Ltd. The same will be commissioned by Sep 2022.
#5	Status of compliance of commitments made to public during public hearing	Action plan submitted and will be completed in phases by 2024.
#8	Action plan for construction of shelters for taking lunch during lunch period (Back up fig of shelters)	6 Nos. of canteens have been established within the plant at various locations for employees and workers. Construction of additional 06 canteens is in progress which will be completed by May 2022.

Sl. No. as per closure report	Information sought	Action Plan submitted and Current Status
#13	Construction of rainwater structures	Completion by Dec 2023. Details provided above in at #2
#15	Uploading six monthly compliance report to company website	Environment Statement submitted on 25.09.21 Copy submitted to RO, MoEF&CC dated 27.11.22 Website for JSW BPSL is under construction, Uploading by Aug 2022.

(ii) Project proponent shall submit the details of notices/directions issued by the SPCB in the last two years along with its present status. Further, the project proponent shall submit explanation for not furnishing the said details in Sl. No. 37 of Form 2.

There are total 6 Nos directions issued by Odisha State Pollution Control Board in last two years. Status of these directions are given below -

Sl. No.	Description of direction	Action taken and current status
1	Direction of Closure u/s 33A of the water (prevention & Control of pollution) Act,1974 and U/s 31 A of the Air(prevention & Control of Pollution)act 1981 and amended thereafter vide letter No. 2310/IND-I-CON-4650, dated - 26.02.2020 due to non compliance of PM emissions from CPP and incomplete installation of FTP in SMS.	Repairing of ESP of CPP units were done by replacement of old rectifiers with new rectifiers. New FTP –3 of SMS 1 was commissioned and compliance was reported to OSPCB The compliance were verified by OSPCB officials and permission for operation of CPP 3x130 MW unit-1 CFBC-1, CFBC-3 and EAF-3 of SMS-1was issued vide OSPCB Letter No. 11058/IND-I-CON-4650 Dated 09.11.2020. Matter is **closed**.
2	Direction of Closure u/s 33A of the water (prevention & Control of pollution) act, 1974 and U/s 31 A of the Air (prevention & Control of Pollution) act 1981 and amended thereafter vide letter No. 9727/IND-I-CON-4650, dated - 06.10.2020 due to non	The ESP of 40 MW & 60 MW CPP units were rectified and compliance was reported to OSPCB. After inspection and verification of compliance OSPCB vide their Letter No. 11058/IND -I-CON-4650 Dated 09.11.2020 for operation of CPP

Sl. No.	Description of direction	Action taken and current status
	compliance and emission from CPP (40 & 60 MW).	3x130 MW unit-1 CFBC-1, CFBC-3 and EAF-3 of SMS-1. Matter is **Closed.**
3	OSPCB issued Direction vide Letter No. 9733/IND-I-CON-4650 Dated 06.10.2020 under Section 31(A) of Air (P&CP) Act,1981 and 33(A) of Water (P&CP) Act,1974 amended thereafter for Stoppage of effluent discharge and install RO system by February 2021 to achieve zero discharge.	RO system of 550 m^3/hr has been installed for ensuring zero discharge from the plant premises. Also waste water collection tanks have been constructed at various locations for collection and treatment in RO system and reuse in the plant. Compliance was verified by the Board officials and after satisfactory progress of work CTO was issued by OSPCB vide letter no. 4955/IND-I-CON-4650 dated 25.03.2021. Matter is **closed**.
	OSPCB issued Closure Direction vide Letter No. 6989/IND-I-CON-4650 Dated 07.05.2021 under Section 31(A) of Air (P&CP) Act,1981 and 33(A) of Water (P&CP) Act,1974 amended thereafter for closure of CFBC Boiler 1 of 3x130 MW , AFBC Boiler of 40 MW and AFBC Boiler of 60 ME CPP Units due to stack emission issues and zero liquid discharge	Reply to closure direction was sent to OSPCB vide our Letter dated 08.05.21. Action plan and progress report was submitted to OSPCB vide our letter dated 31.05.21. Performance Bank Guarantee and affidavit was submitted to OSPCB vide our Letter dated 06.08.21 for completion of all works within committed time. After submission of BG, Permission for operation of closed CPP Boilers was accorded by OSPCB vide dated 09.08.2021 with condition to operate the units in reduced load till all rectification works are completed. Rectification of bag filter of Boiler 1 of 3x130 MW CPP unit was completed on 13.09.2021 and modifications in ESP's of 40 MW, 60 MW CPP units were completed on 30.12.2021 within the committed date and the same was intimated to OSPCB vide our letter dated 31.12.2021. Also request was made

Sl. No.	Description of direction	Action taken and current status
		for extension of time to complete CRM ETP upgradation. All compliances with regards to CPP units were verified and revised CTO dated 25.03.2022 was issued by OSPCB for operation of all plant units including the CPP in full load. Also our request for time extension for completion of CRM ETP work by 30.11.2022 has been approved. CRM ETP up-gradation work is in progress and the same will be completed by Sep 2022.
	OSPCB issued direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water P&CP) Act,1974 amended thereafter vide Letter No-11377/IND-I-CON-4650 Dated - 07.08.2021 due to complaint f pollution at Derba solid waste disposal site by a villager at **NGT**. OSPCB directed the following: • Stop dumping at Govt. land. • Provide retaining wall, garland drains in all the dumps • Tree Plantation on haulage road of dump site • Carry out study on slope stability.	Action plan and Compliance submitted to OSPCB by BPSL vide Letter No. JSWBPSL/ENV/OSPCB/ 017 on 24.08.2021 • Dumping of solid waste on Govt. Land has been stopped. • Toe wall/retaining wall and garland drain has been provided in all the • Dumps except Mound No 7 where work is in progress. • Tree plantation by sides of haulage road and dumping mound has been done except mound Nos & where work is in progress. • Experts of Sambalpur University have been engaged to carry out • Slope stability study. The study is under progress.
	OSPCB Direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water (P&CP) Act,1974 amended thereafter vide Letter No-17816/IND-I-CON-4650, Dated-12.11.2021 Regarding completion of above jobs like Construction of retaining wall at Mound 7, plantation along the road, run off water treatment facility and study for ground water contamination.	Action plan and Compliance Report submitted by BPSL bearing letter No. JSWBPSL/ENV/OSPCB/028 dated - 29.11.2021. • The construction of retaining wall at mound no. 7 is under progress. It will be completed by 30.04.2022. • Tree plantation by sides of haulage road and dumping mound is in progress. • Experts of Sambalpur University have been engaged to carry out

Sl. No.	Description of direction	Action taken and current status
		• Slope stability study. The study is under progress. Report will be submitted by 30.04.2022
	Direction under section 33(A) of water (P&CP) Act,1974,and section 31(A) of Air (P&CP) Act, 1981 vide Letter No-1134/IND-I-CON-4650,dated 25.01.2022 Regarding payment of Rs. 57.60 Lacks towards environmental compensation.	Environmental Compensation deposited vide our letter No. JSWBPSL/ENV/ OSPCB/046 dated-08.02.2022.
	OSPCB Direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water P&CP) Act, 1974 amended there after vide Letter No 4977/IND-I-CON-4650 Dated 29.03.22 To comply with above jobs specially on mound 7.	Action plan submitted vide our letter No. JSWBPSL/ENV/OSPCB/22-23/001 dated 05.04.22 for completion of jobs.
	Case Status at NGT	NGT has disposed of the case and instructed to comply with all the conditions by 30.04.2022.
	OSPCB Direction under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water (P&CP) Act,1974 amended thereafter vide Letter No-1014/IND-I-CON-4650, Dated-22.01.2022 and directed the following: • The unit shall stop all activities of tailing disposal at the breached site till completion of restoration work. • Stop beneficiation of low grade iron ore fine in the iron ore beneficiation plant till tailing pond with adequate infrastructure shall ready for operation with permission from Board (MoM of 14.02.22) • The unit shall regularize the storage of fines stockyard located outside of plant premises with permission of board. (MoM of 14.02.22) • The unit shall make a study on the ground water	Action plan submitted by BPSL bearing letter Dated - 25.01.2022. • Disposal of iron ore fines was stopped at the said site and all restoration works have been completed • Beneficiation of low grade iron ore fines has been stopped. • We shall take prior permission to start operations at site. • Presently study of the site is under progress by the experts of Parala Engineering College, Berhampur.

Sl. No.	Description of direction	Action taken and current status
	contamination of breached area and safety/stability of constructed dyke of iron ore stock yard.	

The uploading of the directions mentioned above was inadvertently missed out in Form 2. However, the details of the directions received from OSPCB were mentioned in the Addendum EIA report. The details of the two directions on fly ash pollution issue and iron ore tailing pond breach issue were uploaded along with EDS reply.

(iii) Project proponent shall clarify the reasons for as the incremental ground level concentrations for all the pollutants are falling in the same distance and direction.

The meteorological data used for the modelling exercise for the revised configuration was monitored as part of 5.5 MTPA EIA study from December 2014 – March 2015. This was done to enable a like to like comparison with the GLC modelled in the previous EIA. As observed both the previous GLC and revised GLC is falling in the SW to S direction as the monitored predominant wind direction is from the NE. The max GLC (considering the entire study area) at 4.5 MTPA stage has reduced from 30 µg/m3 to 28 µg/m^3 for PM, 24 µg/m^3 to 20 µg/m^3 for SO_2 and 24 µg/m^3 to 22 µg/m^3 for NOx as compared to 5.5 MTPA stage. This is well corroborated by the reduction in pollution load at 4.5 MTPA stage.

The GLC corresponding to the highest value for PM, SO_2 and NOx are falling mostly over the Hirakud reservoir. However, the nearest habitation where the highest glcs are falling is Lapanga village located 2.6 km from the existing plant boundary in SSW direction where the baseline data has also been collected. This distance is therefore reported for all 3 pollutants.

(iv) Project proponent shall provide the details regarding litigations pending against the proposed project.

There is only one litigation case (court case) and status of the case is as below -

Case Details	A case was filed by Mr. Bhagwan Pradhan of village Derba against BPSL at Hon'ble NGT, EZB, Kolkata alleging ash and solid waste disposal in Govt land and resulting pollution. NGT constituted a committee including OSPCB, District magistrate Sambalpur and SEIAA to inspect the site and submit report. BPSL was in NCLT under administrative control of Bankers: 26 July 2017 JSW take over from NCLT: 26 March 2021
Chronology of actions	

03.03.2021	NGT admitted the case and directed OSPCB and District Collector to take remedial action and made OSPCB to be the nodal agency for coordination and compliance, and to file an ATR by 2 months.
13.08.2021	OSPCB submitted an affidavit recommending 6 actions to be taken by BPSL after an inspection by the representatives of the Board to site on 20.04.21.
24.09.2021	NGT directed OSPCB for a fresh inspection for analysis of soil & water; condition of ash mound; degradation if any due to dumping; status of 100% use of ash; assessment of environment compensation and penalty and remedial measures for restoration.
12.11.2021	OSPCB submitted another affidavit after the inspection mentioning: 1. All soil samples are within permissible limits 2. Suggestion to the industry to get a study to examine the reasons of high Fe and Mn in water and remedial measures 3. Additional borewells to monitor water quality 4. Higher height of retaining wall to safeguard agricultural land 5. Reclamation of ash mound-7 biologically with ta toe wall 6. Treatment of water from ash mound 1-5 and 7 to avoid solid carryover.
28.03.2022	OSPCB submitted the compliance report after the inspection of site on 24.02.2022
11.04.2022	NGT Directed the following: Complete construction of toe walls and retaining wall of ash mound-7 by 30.04.2022 Complete plantation over ash mound-7 by 30.04.2022 Submission of soil & water analysis by Sambalpur University by 30.04.2022 and ensure compliance by OSPCB by 30.05.2021 Closure of Debra site by 30.10.2022 and submit the location of alternate site by 30.04.2022. While rejecting the request of BPSL for the penalty to be charged to the earlier owner, The Court ordered OSPCB to utilize the interim environment compensation deposited by BPSL towards restoration of the site and final environment compensation to be received from BPSL after submitting of reports and compliances. With the aforesaid directions, the Original Application No.65/2020/EZ is accordingly **disposed** of (Judgement submitted by PP)
Current status	**While the case filed under NGT has been closed, the follow up actions are detailed in Direction-4 of OSPCB.**

5.10.25 Based on the ADS reply by the proponent, the proposal is re-considered in the 5th meeting of the EAC held on 12-13th May, 2022. EAC noted that PP has submitted the ADS reply on Portal on

29.04.2022. The information submitted without covering letter/letter head of the Company. EAC has taken a serious note on this issue and advised the PP that all the communications/information should be submitted through letter head on Parivesh portal.

5.10.26 During the meeting, project proponent submitted written submission on the following points:

i. PP has given undertaking the they will adopt following 10 villages and develop them as model villages within 5 years namely Thelkoli, Dhubenchapal (Gontiapada), Banjiberna, Siripura, Kheruwal, Sradhapali, Maliatika, Khadiapali, Sunamal, Derba.
ii. PP will undertake renovation and up gradation of 03 Nos. of ponds of following villages by 31/03/2023, Thelkoloi-2nos. Siripura-01 No
iii. The PP shall prepare comprehensive plan for reduction of PM emission from Integrated Plant and submit MoEFCC by 30/06/2022.

Deliberations by the Committee

5.10.27 The Committee noted the following:

1. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
2. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
3. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.
4. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
5. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as per the commitments made by the PP, the green belt development shall be completed within one year.
6. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found satisfactory.
7. The Committee also deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
8. The Committee deliberated upon the certified compliance report of RO as well as action taken report submitted by PP with respect to the observations reported by RO and found it satisfactory.

9. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.

10. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

11. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

Recommendations of the Committee

5.10.28 In view of the foregoing and after detailed deliberations, the Committee **recommended** the instant proposal for grant of Environment Clearance, **subject to uploading the ADS reply/Written submission on Parivesh Portal in proper letter head of the Company,** under the para 7(ii) of EIA Notification, 2006 subject to the stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements:

A. Specific conditions

(i) This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

(ii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(iii) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(iv) The activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

(v) The project proponent shall abide by all orders and judicial pronouncements, made from time to time w.r.t. OSPCB directions under Section 31(A) of Air(P&CP) Act,1981 and 33(A) of Water(P&CP) Act, 1974 amended thereafter issued vide Letter No-6989/IND_I_CON-4650, dated 07.05.2021, Letter No-11377/IND-I-CON-4650 dated 07/08/2021 and Letter No-17816/IND-CON-4650, dated-12/11/2021.

(vi) Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.

(vii) Tailings from Iron Ore washing plant shall be dewatered in filter press and stored dry maximum for a period of 30 days inside the plant premises.

(viii) Solid waste utilization
   a. Maximum 90 days of slag storage area shall be permitted inside the plant.
   b. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
   c. PP shall recycle/reuse 100 % solid waste generated in the plant.
   d. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
   e. Used refractories shall be recycled as far as possible.

(ix) Sinter Plant
   a. Sinter cooler waste recovery system shall be installed to generate process steam or power.
   b. Equipped with MEROS technology to reduce emission of SO2, NOx and heavy metals.

(x) Producer gas plant shall not be established by the proponent.

(xi) Coke Oven Plant
   a. Coke Dry Quenching (CDQ) shall be installed.
   b. Coke Oven Gas shall be desulfurized.
   c. Tar sludge shall be mixed with coal and reused.

(xii) BF shall be equipped with Top Recovery Turbine, dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.

(xiii) Secondary fume extraction system shall be installed on converters of Steel Melting Shop.

(xiv) Basic Oxygen Furnace (BOF) gas shall be cleaned dry.

(xv) Waste Heat Recovery system for charge preheating shall be included for 65 T Electric Arc Furnace.

(xvi) Submerged Arc Furnace and Electric Arc Furnace shall be closed type with 4th hole extraction system.

(xvii) 85-90 % of billets/slabs shall be rolled directly in hot stage. Only 10-15 % rolling shall be done through RHF using only Light Diesel Oil or Mixed BF/CO gas.

(xviii) Cold Rolling Mill (CRM), color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.

(xix) Acid recovery plant shall be included to recover acid from pickling lines.

(xx) Dust emission from Steel Plant stacks shall not exceed 30 mg/Nm3.

(xxi) Water requirement for the plant shall be met from River Tungbhadra or Krishna. Ground water abstraction is not permitted.

(xxii) Green Belt shall be developed in 33 % land with tree density of 2500 trees per ha. (or 1000 trees per acre).

(xxiii) Specific water consumption in the steel plant shall be less than 6.0 m3/t of finished product.

(xxiv) Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

(xxv) Dedicated railway siding within the steel plant complex shall be established by the proponent by December, 2023 for the transportation of materials as committed.

(xxvi) As committed by the PP, they shall prepare and submit the plan to conserve the nearby lakes and shall develop Lake Fronts for two number of lakes nearby.

(xxvii) Parking area for trucks/dumpers shall be provided within the steel plant. No truck/dumper shall be parked outside the steel plant premises.

(xxviii) A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as 06 Nos. Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

iv. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

vii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).

x. Land-based APC system shall be installed to control coke pushing emissions.

xi. Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.

xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xiv. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008

(Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

v. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vi. Tyre washing facilities shall be provided at the entrance of the plant gates.

vii. Treated water from ETP of COBP shall not be used for coke quenching.

viii. Water meters shall be provided at the inlet to all unit processes in the steel plants.

IV. Noise monitoring and prevention

i. Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.

ii. Restrict Gas flaring to < 1%.

iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

iv. Provide LED lights in their offices and residential areas.

v. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

ii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, company shall adopt 10 villages, namely Thelkoli, Dhubenchapal (Gontiapada), Banjiberna, Siripura, Kheruwal, Sradhapali, Maliatika, Khadiapali, Sunamal, Derba villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed by the PP.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Modification/ Validity of Environmental Clearance Proposals

Agenda No. 5.11

5.11 Change Expansion of Ferro Alloy Plant near Villages Manesamudram and Malguru, Mandal Hindupur, District Ananthapur in Andhra Pradesh by M/s M.B. Smelters Pvt. Limited - Validity of Environmental Clearance.

[Proposal No. IA/AP/IND/269161/2022; File No. J-11011/647/2009-IA-II]

5.11.1 M/s. M.B. Smelters Private Limited has made an online application vide proposal no IA/AP/IND/269161/2022 dated 23/04/2022 along with Form-6 and sought for Extension of validity of Environment Clearance (EC) accorded by Ministry vide letter no. J-11011/647/ 2009-IA-II(I) dated 25/04/2011 and subsequent amendment/extension of EC validity dated 16/10/2018.

5.11.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 138, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0148; valid upto 21/09/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.11.3 The project was granted Environmental Clearance vide letter no J-11011/647/ 2009-IA-II(I) dated 25/04/2011 from MoEF&CC in the name of M/s. M.B. Smelters Private Limited for

Expansion of Ferro Alloy Plant [to install 2x9 MVA + 2x2 MVA furnaces(Phase-1) and 1x9 MVA + 1x16.5 MVA furnaces (Phase – 2) in addition to existing 1x1.0 MVA & 1x1.5 MVA Submerged Arc furnaces] near Villages Manesamudram and Malguru, Mandal Hindupur, District Ananthapur in Andhra Pradesh. Subsequently, the amendment w.r.t. change of total extent of land from 150.68 acres to 100.46 acres alongwith extension of EC validity upto 24/04/2021 was accorded by MoEF&CC vide letter dated 16/10/2018.

5.11.4 The unit obtained consent to establish (CTE) vide order no. 177PCB/CFE/RO-KNL/HO/2011/578 dated 03/09/2011 to install 2x9 MVA + 2x2 MVA furnaces(Phase-1) and 1x9 MVA + 1x16.5 MVA furnaces (Phase – 2).

5.11.5 The implementation status of the existing EC is as follows:

Phase	**Units As per EC issued**	**Units (Change in configuration)**	**Products**	**Quantity (TPA) as per EC issued**	**Quantity (TPA) After change in configuration**	**Status of Implementation**
Expansion (47.5 MVA)						
Phase 1	2 x 9 MVA	2 x 9 MVA	Fe-Mn OR Si-Mn	59,730	59,730	• 1 x 9 MVA Furnace is nearing completion and will be put into operation by July, 2022. • Installation of another 9 MVA furnace has been completed upto 70% and will be put into operation before December, 2022.
	2 x 2 MVA	2 x 2 MVA	Low Carbon Ferro Alloys (FeMn)	2,055	2,055	• Construction of the same will be commenced in June, 2022 and will be completed by 31st March, 2023
Phase 2	1 x 9 MVA	***Installation of 1 x 3 MVA instead of 1 x 9 MVA***	Fe-Mn OR Si-Mn OR Si Alloys	25,200	***7,560***	• PP have downsized the capacity of 1 x 9 MVA Furnace to 1 x 3 MVA Furnace and same is installed, for production of 7,560 TPA. • PP has submitted application for obtaining Consent for Operation (CFO) for 1 x 3

Phase	Units As per EC issued	Units (Change in configuration)	Products	Quantity (TPA) as per EC issued	Quantity (TPA) After change in configuration	Status of Implementation
						MVA from Andhra Pradesh Pollution Control Board (APPCB) and same is awaited.
	1 x 16.5 MVA	1 x 16.5 MVA	FeSi OR Si metal	14,200	14,200	• Construction of 1 x 16.5 MVA furnace will be commenced in June, 2022 and will be completed by 31st March, 2023.
			Slag wool from waste slag	20,000	20,000	---
Rs. 35.9 Crores has been spent on the expansion project till date. PP assure that implementation of the unimplemented units will be completed before March, 2023.						

5.11.6 **Reasons for delay:** Due to the following, the implementation of the expansion project got delayed -

- Construction of the expansion was delayed further as Possession Certificate for 50 acres of land, out of 68.10 acres was issued during peak COVID period i.e. on 20/09/2020.
- Possession certificate for the remaining 18.10 acres of land is still under process.

5.11.7 In the instant proposal, the project proponent has sought the following:

1) **EC Amendment -** Reduce the Configuration of furnace from 1 x 9 MVA (Phase – 2) furnace to 1 x 3 MVA furnace and accordingly production capacity from 25,200 TPA to 7,560 TPA.

2) **EC Validity Extension -** Extend the validity of Environment Clearance order to implement the remaining unimplemented units for which Environmental Clearance has been accorded up to 24/04/2023.

5.11.8 Validity of EC dated 25/04/2011 and amendment/extension dated 16/10/2018 is up to 24/04/2022 as per the provisions of Ministry Notification no. S.O. 221(E) dated 18/01/2021. Therefore, the proponent has requested for extension of validity of EC for further 1 year i.e. up to 24/04/2023 in line with Ministry's Gazette Notification vide S.O.1807 (E) dated 12th April 2022.

5.11.9 Project Proponent has submitted that Rs. 35.9 Crores has been spent on the expansion project till date. PP assure that implementation of the unimplemented units will be completed before March, 2023.

Deliberations by the Committee

5.11.10 The Committee noted the following:

i. Environmental Clearance was granted vide letter no J-11011/647/ 2009-IA-II(I) dated 25/04/2011. Subsequently, the amendment along-with extension of EC validity upto 24/04/2021 was accorded vide letter dated 16/10/2018.
ii. Validity of EC will expire on 24/04/2022 according to the provision contained in the Ministry Notification no. S.O. 221(E) dated 18/01/2021.
iii. PP in the instant proposal has requested for amendment in the configuration of furnace to reduce from 1 x 9 MVA (Phase – 2) furnace to 1 x 3 MVA furnace and accordingly production capacity from 25,200 TPA to 7,560 TPA along-with extension of validity of environment clearance upto 24/04/2023 as mentioned at para 5.11.6 above.
iv. EAC noted that as per EC dated 25/04/2011, the project is nearing completion of facilities as detailed at para 5.11.5 above.
v. Project Proponent has submitted that Rs.35.9 Crores has been spent on the expansion project till date.
vi. PP has provided the schedule for implementation of the unimplemented facility of project. As committed, the project will be implemented before March, 2023.

Recommendations of the Committee

5.11.11 In view of the foregoing and after deliberations, the Committee **recommended** to reduce the configuration of the furnace from 1 x 9 MVA (Phase – 2) furnace to 1 x 3 MVA furnace and accordingly production capacity from 25,200 TPA to 7,560 TPA along-with **extension of validity of Environment Clearance up to 24/04/2023** subject to stipulation of environmental safeguards prescribed in the EC letter no. J-11011/647/ 2009-IA-II(I) dated 25/04/2011 and subsequent amendment/extension of EC validity dated 16/10/2018.

Agenda No. 5.12

5.12 Expansion of Sponge Iron Plant: 1,20,000 TPA with land area of 10.60 ha acres by M/s. Padmavati Ferrous Ltd., located at Sy. 173, Village Chikkantapura, Toranagallu, Sandur Taluk, Bellary District, Karnataka – Amendment in Environmental Clearance.

[Proposal No. IA/KA/IND/252314/2022; File No. J-11011/67/2007-IAII(I)]

5.12.1 M/s. Padmavati Ferrous Limited (PFL) has made an online application vide proposal no. IA/KA/IND/252314/2022 dated 20/04/2021 along with Form 4 and addendum EIA report and sought for amendment in Environmental Clearance accorded by the Ministry vide File no. J-11011/67/2007-IA.II(I) dated 16/04/2007 for exclusion of facilities namely Ferro Alloy plant (37100 TPA) & CPP (12 MW) and transfer to M/s. A-One Steel and Alloys Private Limited (AONE). In addition to this, M/s. A-One Steel and Alloys Private Limited also submitted an application vide proposal no. IA/KA/IND/260532/2022 dated 11/05/2022 in Form 7 for part transfer of said excluded facilities in their name.

5.12.2 Name of the EIA consultant: M/s Ecomen Laboratories Pvt Ltd. [Sl. No. 155, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/RA 0203; valid upto 21/09/2023, Rev. 23, May 09, 2022].

Details submitted by the project proponent

5.12.3 M/s. Padmavati Ferrous Limited was originally accorded environmental clearance vide letter no. J-11011/67/2007-IA.II(I) dated 16/04/2007. As per the said EC following is the product capacities of various process units.

S. No.	Name of the facility	Capacity
1.	Sponge Iron Plant	1,20,000 TPA
2.	Ferro Alloy Plant	37,100 TPA
3.	Captive Power Plant	12 MW

5.12.4 Detail of Consent to Establishment/ Consent to Operate:

	Date	Details
CTE	09/04/2009	Consent to Establish (CTE) obtained vide No. CELL/PFL/EIA-724/2009-10/23 dated 09/04/2009 from KSPCB for 4 X 100 TPD DRI for sponge iron, Ferro Alloy plant – 37,100 TPA, Captive Power Plant – 12 MW.
CTO	19/03/2021	Latest Consent to Operate (CTO) obtained vide Combined Consent Order No. AW-328150 dated 18/11/2021 valid upto 30/06/2026 for Sponge Iron Plant (120000 TPA), Ferro Alloy plant (37100 TPA), CPP (12 MW) and Coke Oven Plant (24000 TPA).

5.12.5 The implementation status of the EC dated 16/04/2007 is furnished as below.

Sl. No.	Facilities	Units	As per EC dated 16/04/2007	Implementation Status as on 19/04/2022	Production as per CTO
1.	Sponge Iron plant	TPA	1,20,000 TPA	Implemented and Operational	1,20,000 TPA
2.	Ferro Alloy plant	TPA	37,100 TPA	Implemented and Operational	37,100 TPA
3.	Captive power plant	MW	12 MW	Implemented and Operational	12 MW

5.12.6 The instant proposal is for amendment in EC dated 16/04/2007 for exclusion of facilities namely Ferro Alloy plant (37100 TPA) & CPP (12 MW) for partly transferring the said excluded facilities in the name of M/s. A-One Steel and Alloys Private Limited. The reasons for part transfer of the said facilities is that M/s. A-One Steel and Alloys Private Limited intend to take over part of the Plant operations along-with the land as a separate entity to take advantage of the benefit of technical strength and volumes. In this regard, M/s. PFL and M/s. AONE has made a mutually agreeable Lease cum Sale deed of the land pocket vide India Non Judicial e-stamp Certificate No. IN-KA59528751860209T dated 23/11/2021.

S. No.	Particulars	Existing facilities Configuration & Capacity	Details after amendment/transfer			
			M/s Padmavati Ferrous Ltd.		M/s A-One Steels and Alloy Pvt. Ltd	
			Configuration & Capacity	Area (acres)	Configuration & Capacity	Area (acres)
1.	Existing Sponge Iron & Proposed unit facilities	4 X 100 DRI cap. (1,20,000 TPA)	4 X 100 DRI cap. (1,20,000 TPA)	17.023	-	-

S. No.	Particulars	Existing facilities Configuration & Capacity	Details after amendment/transfer			
			M/s Padmavati Ferrous Ltd.		M/s A-One Steels and Alloy Pvt. Ltd	
			Configuration & Capacity	Area (acres)	Configuration & Capacity	Area (acres)
2.	Ferro Alloy plant	4 X 4.5 MW SAF (37,100 TPA)	-	-	4 X 4.5 MW SAF (37,100 TPA)	2.026
3.	Captive Power Plant	12 MW AFBC	-	-	12 MW AFBC	0.3558
Other Facilities						
4.	DG Set	500 KVA	500 KVA	-	-	-
5.	Pump house and other utilities	--	-	-		0.49
6.	Coke Plant	24,000 TPA Cap	-	-	24,000 TPA Cap	6.029
7.	DG set (HSD run)	250 KVA	-	-	250 KVA	-
8.	Cooling tower	--	-	-	-	0.667
9.	Water Reservoir	--	-	-	-	1.58
10.	Residential Unit (nos.)	25	-	-	25	1.235
11.	Other - Green Belt , Open Space and road	--		9.166		34.164
12.	Total Land Area			26.19		46.547
	Combined Total 72.737 acres (29.44 Ha)					**29.44 in Ha.**

5.12.7 There will be no change in plant configuration, capacity of EC dated 16/04/2007 except the exclusion of facilities namely Ferro Alloy plant (37100 TPA) & CPP (12 MW).

5.12.8 With respect to the EC amendment and part transfer, the project proponent submitted following documents.

- Form 4 for amendment in EC and Form 7 for transfer of Environment Clearance.
- No objection for transfer of Environment clearance has been submitted by M/s. Padmavati Ferrous Limited in the form of non-judicial stamp paper dated 04/01/2022.
- Undertaking dated 24/11/2021 of M/s. A-One Steel and Alloys Private Limited in a non-judicial stamp paper stating that they will be comply with all the applicable conditions as stipulated in the Environment Clearance dated 16/04/2007.
- M/s. A-One Steel and Alloys Private Limited submitted the Lease cum Sale deed of the land pocket vide India Non Judicial e-stamp Certificate No. IN-KA59528751860209T dated 23/11/2021 executed between M/s. Padmavati Ferrous Limited and M/s. A-One Steel and Alloys Private Limited for partially transfer of the facilities from EC dated 16/04/2007.

- Facility matrix showing devolution of production facilities between PFL and AONE.
- Matrix of applicability of stipulations of EC and subsequent amendments between PFL and AONE.
- The addendum EIA report inter-alia including process details, emission levels, solid and hazardous waste management, raw material and fuel requirement, the Environmental Management Plan (EMP), etc. for the project**.**

S No	Name of Company	CIN No	Change of Ownership
1	M/s. Padmavati Ferrous Limited	U27203KA2004PLC029694	As per Sl. No 1 (f) of Form -7, the project proponent has submitted that the proposal involves change in ownership between M/s. Padmavati Ferrous Limited and M/s. A-One Steel and Alloys Private Limited. Further the CIN numbers of the both companies are found different. In view of the same the proposal involves transfer of Environment Clearance from M/s. Padmavati Ferrous Limited to M/s. A-One Steel and Alloys Private Limited.
2	M/s. A-One Steel and Alloys Private Limited	U28999KA2012PTC063439	

5.12.9 The EAC examined the aforementioned documents and noted that following are the changes arising out of the EC amendment followed by the part transfer of the facilities:

<table>
<tr><th rowspan="2">Sl. no</th><th rowspan="2">Item</th><th rowspan="2">Existing EC J- 11011/67/2007-IA-II(I) dated 2007 in favor of M/s Padmavati Ferrous Ltd. (PFL)</th><th colspan="2">Facilities/utilities after Amendment</th></tr>
<tr><th>Parent Company M/s Padmavati Ferrous Ltd. (PFL)</th><th>M/s A-One Steels & Alloys (P) Ltd. (AOne)</th></tr>
<tr><td>A</td><td>Title of the project</td><td>Expansion of Sponge Iron Plant (30,000 to 1,20,000), Ferro Alloy Plant (37,100 TPA) & Captive Power Plant (12 MW) at Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td><td>Sponge Iron Plant (1,20,000) at Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td><td>Ferro Alloy Plant (37,100 TPA) & Captive Power Plant (12 MW) at Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td></tr>
<tr><td>B</td><td>Location</td><td>Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td><td>Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td><td>Sy. 173, Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka</td></tr>
<tr><td>C</td><td>Geo Coordinates</td><td><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1.</td><td>683747.00 m E</td><td>1674331.00 m N</td></tr><tr><td>2.</td><td>683865.00 m E</td><td>1674314.00 m N</td></tr><tr><td>3.</td><td>684104.00 m E</td><td>1674314.00 m N</td></tr><tr><td>4.</td><td>684111.00 m E</td><td>1674373.00 m N</td></tr><tr><td>5.</td><td>684219.00 m E</td><td>1674344.00 m N</td></tr><tr><td>6.</td><td>684172.00 m E</td><td>1674112.00 m N</td></tr><tr><td>7.</td><td>684194.00 m E</td><td>1674099.00 m N</td></tr><tr><td>8.</td><td>684186.00 m E</td><td>1674078.00 m N</td></tr><tr><td>9.</td><td>684173.00 m E</td><td>1674038.00 m N</td></tr><tr><td>10.</td><td>684155.00 m E</td><td>1674032.00 m N</td></tr><tr><td>11.</td><td>684142.00 m E</td><td>1673961.00 m N</td></tr></table></td><td>1. 683634.00 m E 1674160.00 m N
2. 683639.00 m E 1674076.00 m N
3. 683746.00m E 1674080.00 mN
4. 683747.00 m E 1674331.00 m N
5. 683355.00 m E 1674149.00 m N
6. 683338.00 m E 1674212.00 m N</td><td>1. 683634.00 m E 1674160.00 m N
2. 2683639.00 m E 1674076.00 m N
3. 683746.00 m E 1674080.00 m N
4. 683747.00 m E 1674331.00 m N
5. 683865.00 m E 1674314.00 m N
6. 684104.00 m E 1674314.00 m N
7. 684111.00 m E</td></tr>
</table>

Sl. no	Item	Existing EC J- 11011/67/2007-IA-II(I) dated 2007 in favor of M/s Padmavati Ferrous Ltd. (PFL)	Facilities/utilities after Amendment	
			Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
		12. 684106.00 m E 1673944.00 m N 13. 684020.00 m E 1673960.00 m N 14. 683934.00 m E 1673984.00 m N 15. 683653.00 m E 1674049.00 m N 16. 683523.00 m E 1674071.00 m N 17. 683506.00 m E 1673980.00 m N 18. 683399.00 m E 1674080.00 m N 19. 683370.00 m E 1674128.00 m N 20. 683355.00 m E 1674149.00 m N 21. 683338.00 m E 1674212.00 m N 22. 683332.00 m E 1674247.00 m N 23. 683332.00 m E 1674264.00 m N 24. 683341.00 m E 1674288.00 m N 25. 683351.00 m E 1674446.00 m N 26. 683567.00 m E 1674406.00 m N 27. 683584.00 m E 1674371.00 m N	7. 683332.00 m E 1674247.00 m N 8. 683332.00 m E 1674264.00 m N 9. 683341.00 m E 1674288.00 m N 10. 683351.00 m E 1674446.00 m N 11. 683567.00 m 1674406.00 m N 12. 683584.00 m E 1674371.00 m N	1674373.00 m N 8. 684219.00 m E 1674344.00 m N 8. 684172.00 m E 1674112.00 m N 9. 684194.00 m E 1674099.00 m N 10. 684186.00 m E 1674078.00 m N 11. 684173.00 m E 1674038.00 m N 12. 684155.00 m E 1674032.00 m N 13 684142.00 m E 1673961.00 m N 1. 684106.00 m E 1673944.00 m N 2. 684020.00 m E 1673960.00 m N 3. 683934.00 m E 1673984.00 m N 4. 683653.00 m E 1674049.00 m N 5. 683523.00 m E 1674071.00 m N 6. 683506.00 m E 1673980.00 m N 7. 683399.00 m E 1674080.00 m N 8. 683370.00 m E 1674128.00 m N 23. 683355.00 m E 1674149.00 m N
D	Utilities	1. Sponge Iron Plant – 4 X 100 DRI 2. Ferro Alloy plant- 4 X 4.5 MW SAF,37100 TPA 3. Coke oven plant- 1 unit of 24,000 TPA 4. Captive Power Generation (12 MW) 5. DG set- 250 KVA and 500 KVA 6. Cooling Tower 7. Water Reservoir 8. Residential Unit- 25 unit 9. Green Belt	1. Sponge Iron Plant 4 X 100 DRI cap., 120000TPA 2. DG set - 500 KVA 3. Green belt, roads, and open space	1. Ferro Alloy plant- 4 X 4.5 MW SAF, 37100 TPA 2. Coke oven plant- 1 unit of 24,000 TPA 3. Captive Power Generation (12 MW) 4. DG set- 250 KVA and 500 KVA 5. Cooling Tower 6. Water Reservoir 7. Residential Unit- 25 unit 8. Other- Green Belt, Road and open space
E	Products	1. Sponge Iron Plant 120000 TPA 2. Ferro Alloy plant- 37100 TPA 3. Coke oven plant- 24,000 TPA	1. Sponge Iron Plant 120000 TPA	1. Ferro Alloy plant-, 37100 TPA 2. Coke oven plant- 24,000 TPA
F	Land	72.737 acres (29.44 Ha.)	26.19 acres	46.547 acres
G	Raw Material	Coal – 10000 Coke- 1500 Ferro Manganese- 6000 Pellet- 16000 Quartz- 800 Dolomite- 300	Coal – 10000 Pellet- 16000 Dolomite- 300	Coal – 3000 Ferro Manganese- 6000 Quartz- 800 Dolomite- 300

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			Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
H	Water Requirement	760 kld	310	370
I	Manpower	120	120	330
J	Power	23 MW	5 MW (from Electricity board)	18.5 MW (12 MW from CPP and 6.5 from Electricity Board)
K	Air pollution Control System	ESP for DRI Kiln- 2 nos. ESP for Coke Oven – 1 nos.	ESP for DRI Kiln- 2 nos.	ESP for Coke Oven – 1 nos.
L	Solid Waste	Slag – 250 TPA Fly ash- 30000 TPA Fine Iron Ore and Coal Dust- 4500 TPA Ash- 1680 TPA Char, Char Fines & Dolochar -30000 TPA Waste oil – 10 LTPA	Fine Iron Ore and Coal Dust- 4500 TPA Ash- 1680 TPA Char, Char Fines & Dolochar -30000 TPA	Slag – 250 TPA Fly ash- 30000 TPA
M	Environmental Management cost	1200 lakhs (Capital Cost)	41.5 lakhs Recurring Cost	108.5 lakhs Recurring Cost

EC compliance matrix

Sr. no.	Existing EC J- 11011/67/2007-IA- II(I) dated 2007 in favor of M/s Padmavati Ferrous Ltd. (PFL)	Facilities/utilities after Amendment	
		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
Specific Conditions:			
(i).	On-line stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control methods such as Electrostatic precipitators (ESP). After Burning Chamber (ABC), bag filters and stack of adequate height as per the guidelines shall be provided to keep the emission levels below 100 mg/Nrn-. Data on stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore, Karnataka State Pollution Control Board (KPCB) and Central Pollution Control Board (CPCB) once in six months.	On-line stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control methods such as Electrostatic precipitators (ESP). After Burning Chamber (ABC), bag filters and stack of adequate height as per the guidelines shall be provided to keep the emission levels below 100 mg/Nrn-. Data on stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore, Karnataka State Pollution Control Board (KPCB) and Central Pollution Control Board (CPCB) once in six months.	On-line stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control methods such as Electrostatic precipitators (ESP). After Burning Chamber (ABC), bag filters and stack of adequate height as per the guidelines shall be provided to keep the emission levels below 100 mg/Nrn-. Data on stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore, Karnataka State Pollution Control Board (KPCB) and Central Pollution Control Board (CPCB) once in six months.
(ii).	Gaseous emission levels including secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Gaseous emission levels including secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Gaseous emission levels including secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.
(iii).	Total water requirement from M/s Jindal Steel Works Ltd. who will draw water from Tungbhadra River shall 760 m^3/day, All the	Total water requirement from M/s Jindal Steel Works Ltd. who will draw water from Tungbhadra River shall 310 m^3/day, All the treated	Total water requirement from M/s Jindal Steel Works Ltd. who will draw water from Tungbhadra River shall 370 m^3/day, All the treated

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		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
	treated wastewater shall be recycled and reused in the process and/or used for dust suppression, green belt development and other plant related activities within the plant premises. No wastewater shall be discharged outside the plant premises and 'Zero' discharge shall be strictly adopted as proposed. Domestic effluent after treatment shall be used for green belt development.	wastewater shall be recycled and reused in the process and/or used for dust suppression, green belt development and other plant related activities within the plant premises. No wastewater shall be discharged outside the plant premises and 'Zero' discharge shall be strictly adopted as proposed. Domestic effluent after treatment shall be used for green belt development	wastewater shall be recycled and reused in the process and/or used for dust suppression, green belt development and other plant related activities within the plant premises. No wastewater shall be discharged outside the plant premises and 'Zero' discharge shall be strictly adopted as proposed. Domestic effluent after treatment shall be used for green belt development.
(iv).	A letter from M/s Jindal Steel Works Ltd. regarding supply of 760 m3/day water shall be obtained and also permission obtained by M/s Jindal Steel Works Ltd for the drawl of water from Tungbhadra river shall be submitted to the Ministry and Ministry's Regional Office at Bangalore within one month.	A letter from M/s Jindal Steel Works Ltd. Regarding supply of 310 m^3/day water shall be obtained and also permission obtained by M/s Jindal Steel Works Ltd for the drawl of water from Tungbhadra river shall be submitted to the Ministry and Ministry's Regional Office at Bangalore within one month.	A letter from M/s Jindal Steel Works Ltd. Regarding supply of 370 m^3/day water shall be obtained and also permission obtained by M/s Jindal Steel Works Ltd for the drawl of water from Tungbhadra river shall be submitted to the Ministry and Ministry's Regional Office at Bangalore within one month.
(v).	All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bangalore, KPCB and CPCB. All the other solid / hazardous waste shall be properly utilized or disposed off in environment friendly manner.	All the char from DRI plant shall be utilized in AFBC boiler of power plant which is now with A-One Steels & Alloys (P) Ltd.and no char shall be disposed off anywhere else. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bangalore, KPCB and CPCB. All the other solid / hazardous waste shall be properly utilized or disposed off in environment friendly manner.	All the char from DRI plant shall be utilized in AFBC boiler of power plant and no char shall be disposed off anywhere else. Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bangalore, KPCB and CPCB. All the other solid / hazardous waste shall be properly utilized or disposed off in environment friendly manner.
(vi).	All the fly ash shall be utilized as per Fly Ash Notification, 1999 subsequently amendment in 2003	Not Applicable	All the fly ash shall be utilized as per Fly Ash Notification, 1999 subsequently amendment in 2003 and any further amendment fill date.
(vii).	As proposed, green belt shall be developed in 33 % area all around the plant boundary and wherever space is available to mitigate the effects of air emissions as per CPCB guidelines in consultation with local DFO	Green belt shall be developed in 33 % area all around the plant boundary and wherever space is available to mitigate the effects of air emissions as per CPCB guidelines in consultation with local DFO	Green belt shall be developed in 33 % area all around the plant boundary and wherever space is available to mitigate the effects of air emissions as per CPCB guidelines in consultation with local DFO
(viii).	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel sector shall be strictly implemented.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel sector shall be strictly implemented.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the steel sector shall be strictly implemented.

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		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	**M/s A-One Steels & Alloys (P) Ltd. (AOne)**
B. General Conditions:			
i.	The project authorities shall strictly adhere to the stipulations made by the Karnataka Pollution Control Board (KPCB) and the State Government.	The project authorities shall strictly adhere to the stipulations made by the Karnataka Pollution Control Board (KPCB) and the State Government.	The project authorities shall strictly adhere to the stipulations made by the Karnataka Pollution Control Board (KPCB) and the State Government.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.
iii.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19'h May, 1993 and standards prescribed from time to time The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. On-line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19'h May, 1993 and standards prescribed from time to time The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. On-line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19'h May, 1993 and standards prescribed from time to time The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. On-line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit
iv.	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO2 and NOx are anticipated in consultation with the KPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore / KPCB and CPCB once in six months.	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NOx are anticipated in consultation with the KPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore / KPCB and CPCB once in six months.	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NOx are anticipated in consultation with the KPCB Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore / KPCB and CPCB once in six months.
v.	In-plant control measures like tarring of roads, green belt and good housekeeping shall be done to control fugitive emissions from all the vulnerable sources. Dust extraction system to raw material handling areas to control fugitive emissions and fume extraction system to control fumes shall be provided. All the material transfer points, discharge points and raw	In-plant control measures like tarring of roads, green belt and good housekeeping shall be done to control fugitive emissions from all the vulnerable sources. Dust extraction system to raw material handling areas to control fugitive emissions and fume extraction system to control fumes shall be provided. All the material transfer points, discharge points and raw	In-plant control measures like tarring of roads, green belt and good housekeeping shall be done to control fugitive emissions from all the vulnerable sources. Dust extraction system to raw material handling areas to control fugitive emissions and fume extraction system to control fumes shall be provided. All the material transfer points, discharge points and raw

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		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
	material storage area shall be completely covered Monitoring of fugitive emissions in the work zone environment shall be carried out regularly as per the CPCB guidelines and reports submitted to KPCB / CPCB and Ministry's Regional Office at Bangalore.	material storage area shall be completely covered Monitoring of fugitive emissions in the work zone environment shall be carried out regularly as per the CPCB guidelines and reports submitted to KPCB / CPCB and Ministry's Regional Office at Bangalore.	material storage area shall be completely covered Monitoring of fugitive emissions in the work zone environment shall be carried out regularly as per the CPCB guidelines and reports submitted to KPCB / CPCB and Ministry's Regional Office at Bangalore.
vi.	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19"' May, 1993 and 31' December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19"' May, 1993 and 31' December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19"' May, 1993 and 31' December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.
vii.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA by providing noise control measures including acoustic hoods, silencers. enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers. enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers. enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.
ix.	All the measures regarding occupational health surveillance of the workers shall be undertaken and regular medical examination of all the employees shall be ensured as per the Factories Act and records maintained.	All the measures regarding occupational health surveillance of the workers shall be undertaken and regular medical examination of all the employees shall be ensured as per the Factories Act and records maintained.	All the measures regarding occupational health surveillance of the workers shall be undertaken and regular medical examination of all the employees shall be ensured as per the Factories Act and records maintained.
x.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc.

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		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
xi.	As mentioned in EIA/EMP, Rs. 12.00 Crores earmarked towards environmental pollution control measures shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.	As mentioned in EIA/EMP, Rs. 41.5 lakhs earmarked towards environmental pollution control measures shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.	As mentioned in EIA/EMP, Rs. 108.5 lakhs earmarked towards environmental pollution control measures shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for all the conditions stipulated herein shall be submitted to the Regional Office of this Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.
xii.	The Regional Office of this Ministry at Bangalore / CPCB / KPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	The Regional Office of this Ministry at Bangalore / CPCB / KPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	The Regional Office of this Ministry at Bangalore / CPCB / KPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.
xiii.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the KPCB and may also be seen at Website of the Ministry of Environment and Forests at httn./envfor nic.in This shat! be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bangalore.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the KPCB and may also be seen at Website of the Ministry of Environment and Forests at httn./envfor nic.in This shat! be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bangalore.	Not Applicable
xiv.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

Other terms and conditions of EC

Sr.no	Existing EC J- 11011/67/2007-IA- II(I) dated 2007 in favor of M/s Padmavati Ferrous Ltd. (PFL)	Facilities/utilities after Amendment	
		Parent Company M/s Padmavati Ferrous Ltd. (PFL)	M/s A-One Steels & Alloys (P) Ltd. (AOne)
6.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory
7.0	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997
8.0	The Ministry reserves the right to stipulate additional conditions if found necessary_ The Company in a time bound manner shall implement these conditions.	The Ministry reserves the right to stipulate additional conditions if found necessary_ The Company in a time bound manner shall implement these conditions.	The Ministry reserves the right to stipulate additional conditions if found necessary_ The Company in a time bound manner shall implement these conditions.
9.0	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.

Deliberations by the Committee

5.12.10 The Committee noted the following

i. The proponent has originally obtained EC on 16/04/2007 for Sponge Iron Plant (120000 TPA), Ferro Alloy plant (37100 TPA), CPP (12 MW) and Coke Oven Plant (24000 TPA) located at Village Chikkantapur, Taluk Sandur, District Bellary, Karnataka.

ii. As per the implementation status, all the units envisaged in the EC dated 16/04/2007 have been implemented as mentioned at para 5.12.5 above.

iii. Instant proposal is for seeking amendment in the EC dated 16/04/2007 w.r.t. exclusion of facilities namely Ferro Alloy plant (37100 TPA) & CPP (12 MW) and transfer to M/s. A-One Steel and Alloys Private Limited (AONE).

Recommendations of the Committee

5.12.11 In view of the foregoing and after deliberations, the Committee **recommended** for following:

(a) Amendment in the Environmental Clearance dated 16/04/2007 in the name of M/s Padmavati Ferrous Ltd. for exclusion of facilities namely Ferro Alloy plant (37100 TPA)

& CPP (12 MW) and also modifying the specific as well as general conditions as per the compliance matrix given above at para no. 5.12.9. All the other terms and conditions stipulated in environmental clearance vide letter no. J-11011/67/2007-IA.II (I), dated 16/04/2007 shall remain unchanged. EAC also **recommended** the additional condition, viz. As committed, PP shall conserve the nearby Ponds and shall develop additional Ponds in the nearby villages and PP shall also adopt one school.

(b) Part transfer of facilities of aforesaid EC dated 16/04/2007 namely Ferro Alloy plant (37100 TPA) & CPP (12 MW) in the name of the M/s. A-One Steel and Alloys Private Limited by issuing a part transfer EC letter along with prescription of specific as well as general conditions as per the compliance matrix given above at para no. 5.12.9. All the other terms and conditions stipulated in environmental clearance vide letter no. J-11011/67/2007-IA.II(I), dated 16/04/2007 shall remain unchanged. EAC also **recommended** the additional condition, viz. As committed, PP shall conserve the nearby Ponds and shall develop additional Ponds in the nearby villages and PP shall also adopt one school.

Consideration of Terms of Reference

Agenda No. 5.13

5.13 Greenfield project comprising of Establishment of Iron ore beneficiation (20,00,000 TPA), Pellet Plant (15,00,000 TPA), DRI Kilns (4,62,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars / Structural Steel) (2,10,000 TPA), Ferro Alloys Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA), WHRB based Power Plant – 32.0 MW (4 x 38 TPH), FBC based Power Plant - 43 MW (1 x 210 TPH), Brick Manufacturing unit (65,000 Bricks / Day) & & Briquetting Plant (200 Kg/Hr.) by M/s. Nisarg Ispat Pvt. Ltd. located at Ghotpal Village, Geedam Tehsil, Dantewada District, Chhattisgarh- Consideration of Terms of Reference.

[Proposal No. IA/CG/IND/259892/2022; File No. IA-J-11011/320/2021-IA-II(IND-I)]

5.13.1 M/s. Nisarg Ispat Pvt. Ltd. has made an application online vide proposal no. IA/CG/IND/259892/2022 dated 23/04/2022 in prescribed format (Form-I), copy of pre-feasibility report along-with proposed ToR 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. 2(b) Mineral Beneficiation, 3(a) Metallurgical Industries and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification and appraised at central level.

5.13.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 138, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0148; valid upto 21/09/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.13.3 The project of M/s. Nisarg Ispat Pvt. Ltd located at Ghotpal Village, Geedam Tehsil, Dantewada District, Chhattisgarh is for establishment of Iron ore beneficiation (20,00,000 TPA), Pellet Plant (15,00,000 TPA), DRI Kilns (4,62,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars / Structural Steel) (2,10,000 TPA), Ferro Alloys Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA), WHRB based Power Plant – 32.0 MW (4 x 38 TPH), FBC

based Power Plant - 43 MW (1 x 210 TPH), Brick Manufacturing unit (65,000 Bricks / Day) & & Briquetting Plant (200 Kg/Hr.).

5.13.4 Environmental site settings:

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>i.</td><td>Total Land</td><td>39.582 Ha. (97.80 Acres) [Govt. Land]</td></tr>
<tr><td>ii.</td><td>Land Acquisition details as per MoEF O.M dated 7/10/2014.</td><td>Total Land of 39.582 Ha. (97.80 Acres) is allotted by Chhattisgarh State Industrial Development Corporation Ltd. (CSIDC Ltd.)</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R & R, if any</td><td>No habitation exists in project site; Hence no R & R is involved.</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of the project site</td><td>Latitude and Longitude of the project site:
<table>
<tr><th>Point</th><th>Coordinates</th></tr>
<tr><td>Point # 1</td><td>19° 0'18.55"N ; 81°23'34.87"E</td></tr>
<tr><td>Point # 2</td><td>19° 0'11.18"N; 81°23'30.35"E</td></tr>
<tr><td>Point # 3</td><td>19° 0'9.78"N; 81°23'47.86"E</td></tr>
<tr><td>Point # 4</td><td>19° 0'11.18"N; 81°23'49.57"E</td></tr>
<tr><td>Point # 5</td><td>19° 0'10.10"N; 81°23'54.37"E</td></tr>
<tr><td>Point # 6</td><td>19° 0'0.49"N; 81°24'2.89"E</td></tr>
<tr><td>Point # 7</td><td>19° 0'8.32"N; 81°24'4.86"E</td></tr>
<tr><td>Point # 8</td><td>19°0'11.61"N; 81°24'5.04"E</td></tr>
<tr><td>Point # 9</td><td>19° 0'13.24"N; 81°24'8.34"E</td></tr>
<tr><td>Point # 10</td><td>19° 0'16.20"N; 81°24'7.42"E</td></tr>
<tr><td>Point # 11</td><td>19° 0'19.64"N; 81°23'54.13"E</td></tr>
<tr><td>Point # 12</td><td>19° 0'20.30"N; 81°23'54.39"E</td></tr>
<tr><td>Point # 13</td><td>19° 0'21.69"N; 81°23'52.87"E</td></tr>
<tr><td>Point # 14</td><td>19° 0'21.03"N; 81°23'52.24"E</td></tr>
<tr><td>Point # 15</td><td>19° 0'21.18"N; 81°23'51.69"E</td></tr>
<tr><td>Point # 16</td><td>19° 0'22.94"N; 81°23'50.21"E</td></tr>
<tr><td>Point # 17</td><td>19° 0'23.98"N; 81°23'45.73"E</td></tr>
<tr><td>Point # 18</td><td>19° 0'26.68"N; 81°23'41.32"E</td></tr>
<tr><td>Point # 19</td><td>19° 0'27.31"N; 81°23'40.48"E</td></tr>
<tr><td>Point # 20</td><td>19° 0'26.54"N; 81°23'39.54"E</td></tr>
<tr><td>Point # 21</td><td>19° 0'25.31"N; 81°23'40.26"E</td></tr>
<tr><td>Point # 22</td><td>19° 0'24.36"N; 81°23'38.86"E</td></tr>
<tr><td>Point # 23</td><td>19° 0'24.94"N; 81°23'37.97"E</td></tr>
<tr><td>Point # 24</td><td>19° 0'27.30"N; 81°23'37.59"E</td></tr>
<tr><td>Point # 25</td><td>19° 0'28.41"N; 81°23'36.63"E</td></tr>
<tr><td>Point # 26</td><td>19° 0'21.15"N; 81°23'35.88"E</td></tr>
<tr><td>Point # 27</td><td>19° 0'17.85"N; 81°23'41.52"E</td></tr>
<tr><td>Point # 28</td><td>19° 0'15.98"N; 81°23'40.02"E</td></tr>
</table></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>397 m to 411 m AMSL</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site.</td></tr>
</table>

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
The project site comprises of two parcels of excavated pits. During monsoon period, the run-off water gets filled into this two parcels of land.
The excavated soil will be filled back in the two pacels of excavated pits and other areas.

<u>Study area:</u>
<table><tr><th>Water Body</th><th>Distance & Direction</th></tr><tr><td>Geedam River</td><td>1.7 Kms. - SE Direction</td></tr></table></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area</td><td>Nil</td></tr>
<tr><td>ix.</td><td>Forest within the study area</td><td>Karli RF (6.0 Kms. – SW Direction), Barsur RF (3.2 Kms. – North Direction)</td></tr>
<tr><td>x.</td><td>Road Diversion</td><td>A village road (Geedam to Nangul) is passing through the project site. Road will be diverted by State Investment Promotion Board (SIPB), Govt. of Chhattisgarh.</td></tr>
</table>

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

S. No.	Units (Products)		Plant Configuration (Production Capacity)
1.	Iron ore Beneficiation (to produce Beneficiated ore)		1 x 2.0 MTPA
2.	Pellet Plant (to produce Pellet)		1 x 1.5 MTPA
3.	DRI Kilns (Sponge Iron)		4 x 350 TPD (4,62,000TPA)
4.	Induction Furnace with LRF & CCM (Hot MS Ingots / Billets)		3 x 30 T (2,97,000 TPA)
5	Rolling mill (TMT bars / Structural Steel) (85% Hot charging with Hot Billets and remaining 15% through RHF with LDO as fuel)		1 x 637 TPD (2,10,000 TPA)
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		65,000 Brick/ day
8.	Briquetting Plant		200 Kg/Hr.
9.	Power Plant (75 MW)	WHRB Power Plant (4 x 38 TPH)	32.0 MW
		CFBC Power Plant	43.0 MW

S. No.	Units (Products)		Plant Configuration (Production Capacity)
		(1 x 190 TPH)	

5.13.6 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 Kms.)	Mode of Transport
1.	**For Iron Ore Beneficiation Plant (20,00,00 TPA – throughput capacity)**					
a)	Iron ore fines		20,00,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)
2.	**For Pellet Plant (Pellets) – 15,00,000 TPA**					
a)	Iron Ore Concentrate		15,50,000	Own generation	---	Through covered conveyers
b)	Bentonite		12,000	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Limestone		22,500	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
d)	Anthracite Coal		15,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
e)	LDO		20,000 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
3.	**For DRI Kilns (Sponge Iron) – 4,62,000 TPA**					
a)	Pellets		6,93,000	Own generation	---	Through covered conveyers
b)	Coal	Indian	6,00,600	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	3,84,384	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
c)	Dolomite		23,100	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
4.	**For Steel Melting Shop (Billets/ Ingots/Hot Billets) – 2,97,000 TPA**					
a)	Sponge Iron		3,00,000	Own generation	---	Through covered conveyers
b)	MS Scrap / Pig Iron		45,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	Ferro alloys		15,000	Own generation	---	By road (through covered trucks)
5.	**For Rolling Mill through Hot charging (Rolled Products) – 2,10,000 TPA**					

S. No.	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
a)	Hot Billets / Billets / Ingots		2,24,900	Own generation	---	----
b)	LDO / LSHS		11500 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
6.	**For FBC Boiler [Power Generation 1 x 43 MW]**					
a)	Indian Coal (100 %)		2,82,150	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
b)	Imported Coal (100 %)		1,80,858	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
	OR					
c)	Dolochar + Indian Coal	Dolochar	83,160	In plant generation	---	through covered conveyors
		Indian Coal	2,40,570	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
d)	Dolochar + Imported Coal	Dolochar	83,160	In plant generation	---	through covered conveyors
		Imported Coal	1,39,278	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
7.	**For Ferro Alloys (2 x 9 MVA)**					
7 (i)	For Ferro Silicon – 14,000 TPA					
a)	Quartz		24,300	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
b)	LAM coke		18,900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	MS Scrap / Mill scales		4,230	Inhouse Generation	---	By road (through covered trucks)
d)	Electrode paste		360	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
e)	Bagfilter dust		200	Own generation	---	---
7 (ii)	For Ferro Manganese – 50,400 TPA					
a)	Manganese Ore		68,400	MOIL / OMC	~ 500 Kms.	By Rail & Road (throughcovered trucks)

S. No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
b)	LAM coke	19,800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite	8,100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill scales	7,200	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode Paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Bagfilter dust	1,000	Own generation	---	---
7 (iii)	For Silico Manganese –28,800 TPA				
a)	Manganese Ore	48,600	MOIL / OMC	~ 500 Kms.	By Rail & Road (throughcovered trucks)
b)	LAM Coke	16,200	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn Slag	30,294	In house generation	---	----
d)	Dolomite	7,380	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	7,740	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Bagfilter dust	200	Own generation	---	---
7(iv)	For Ferro Chrome – 30,000 TPA				
a)	Chrome Ore	56,700	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	19,800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	8,100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

S. No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
d)	MS Scrap / Mill Scale	2,700	Inhouse Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	5,400	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	540	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	1,200	Own generation	---	---

5.13.7 Water required for the proposed project will be 7465 KLD which will be sourced from Geedam River (which is at a distance of 2.2 Kms. from the project site). Water drawl permission Water Resource Department, Chhattisgarh will be obtained.

5.13.8 Power required for the proposed project will be 78.5 MW and same will be sourced from Captive Power Plant (75.0 MW) and remaining (3.5 MW) from State Grid.

5.13.9 The capital cost of the project is Rs. 995.20 Crores. Employment generation from proposed project will be 350 nos. through direct employment and 500 nos. through indirect employment.

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

5.13.11 Proposed Terms of Reference: **(Baseline data collection period: 1st October 2021 to 31st December 2021)**

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters Monitored: • $PM_{2.5}$ • PM_{10} • SO_2 • NOx • CO
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters Monitored: • Day equivalent • Night equivalent
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters Monitored: as per IS: 10500

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
b. Surface Water	3	One sample at each of the locations	Parameters Monitored: as per BIS: 2296
D. Land			
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 prepared by concerned FAE for study area
E. Biological			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment by concerned FAE for study area
G. Traffic Density	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

5.13.12 The project proponent had earlier applied for ToR vide proposal no. IA/CG/IND/224398/2021 dated 12/08/2021 and the proposal was considered in in 43rd REAC (Industry – 1) on 26th – 27th August 2021 wherein the Committee returned the proposal in its present form and advised the PP to furnish enumeration of trees at the project site, along with their height, number of trees required to be cut including details of translocation and compensatory plantation.

5.13.13 The project proponent has revised the application and has again applied for ToR vide proposal no. IA/CG/IND/259892/2022 dated 23/04/2022. PP has submitted the tree enumeration data, along with their height, number of trees required to be cut including details of translocation and compensatory plantation. PP has submitted that total number of trees existing in the project site is 501 [Total Trees to be Retained – 401, Total Trees to be Translocated – 100, Compensatory afforestation @ 1:5: 500 nos., Additional greenbelt of 0.5 acres to be developed in addition to 33% greenbelt. Hence total greenbelt is 32.3 Acres + 0.5 acres = 32.8 Acres]. Further, PP has proposed to develop a green belt of 36.4 Acres (14.74 Ha.) which amounts to 37.2% of the total area. The proposal is considered in the 5th meeting of the EAC held on 12-13th May, 2022. The observations and recommendations of the EAC are as follows:

Deliberation by the Committee

5.13.14 The Committee noted the following:

i. Instant proposal is for establishment of Iron ore beneficiation (20,00,000 TPA), Pellet Plant (15,00,000 TPA), DRI Kilns (4,62,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets) (2,97,000 TPA), Rolling Mill (TMT Bars / Structural Steel) (2,10,000 TPA), Ferro Alloys Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA), WHRB based Power Plant – 32.0 MW (4 x 38 TPH), FBC based Power Plant - 43 MW (1 x 210 TPH), Brick Manufacturing unit (65,000 Bricks / Day) & & Briquetting Plant (200 Kg/Hr.).

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is green filed project and no activities on the site started and no violation case is observed.

Recommendations of the Committee

5.13.15 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 ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:

i. Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
ii. Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
iii. PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.
iv. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
v. Tailing management plan shall be included in EIA.
vi. PP should submit action plan rainwater harvesting.
vii. Action plan for 100 % solid waste utilization shall be submitted.
viii. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
ix. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.
x. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
xi. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
xii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
xiii. Action plan to limit the dust emission from all the stacks below 30 mg/Nm3 shall be furnished.
xiv. An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

xv. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

Agenda No. 5.14

5.14 Establishment of Greenfield steel plant comprising of Iron ore beneficiation (8,50,000 TPA), Pellet Plant (6,00,000 TPA), Gasifier for Pellet Plant (21,000 Nm3/hr) DRI Kilns (6,27,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets- 4,62,000 TPA), Rolling Mill (TMT Bars / Structural Steel - 4,62,000 TPA),Gasifier for Reheating Furnace (3570 Nm3/hr), Ferro Alloy Unit (FeSi – 42,000 TPA/FeMn – 1,51,200 TPA/SiMn – 86,400 TPA/FeCr – 90,000 TPA/Pig Iron – 60,000 TPA), Briquetting Plant (600 Kg/Hr.), WHRB based power Plant – 46 MW, FBC based Power Plant-20 MW & Brick manufacturing unit (1,00,000 Bricks /Day) by M/s Navic Steel & Power Private Limited, located at Jhiriya & Bitkuli Villages, Bemetara Tehsil & District, Chhattisgarh - Consideration of Terms of Reference.

[Proposal No. IA/CG/IND/266110/2022; File No. IA-J-11011/122/2022-IA-II(IND-I)]

5.14.1 M/s. Navic Steel & Power Pvt. Ltd. has made an application online vide proposal no. IA/CG/IND/266110/2022 dated 26/04/2022 in prescribed format (Form-I), copy of pre-feasibility report along-with proposed ToR 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. 2(b) Mineral Beneficiation, 3(a) Metallurgical Industries and 1(d) Thermal Power Plants under Category "A" of the schedule of the EIA Notification and appraised at central level.

5.14.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 138, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0148; valid upto 21/09/2022, Rev. 23, May 09, 2022].

Details submitted by Project proponent

5.14.3 The project of M/s. Navic Steel & Power Pvt. Ltd. is located at Jhiriya & Bitkuli Villages, Bemetara Tehsil & District, Chhattisgarh for establishment of Iron ore beneficiation (8,50,000 TPA), Pellet Plant (6,00,000 TPA), Gasifier for Pellet Plant (21,000 Nm3/hr) DRI Kilns (6,27,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets-4,62,000 TPA), Rolling Mill (TMT Bars / Structural Steel - 4,62,000 TPA),Gasifier for Reheating Furnace (3570 Nm3/hr), Ferro Alloy Unit (FeSi – 42,000 TPA/FeMn – 1,51,200 TPA/SiMn – 86,400 TPA/FeCr – 90,000 TPA/Pig Iron – 60,000 TPA), Briquetting Plant (600 Kg/Hr.), WHRB based power Plant – 46 MW, FBC based Power Plant-20 MW & Brick manufacturing unit (1,00,000 Bricks /Day).

5.14.4 Environmental site settings:

S.No.	Particulars	Details
i.	Total Land	Total land: 43.55Ha. (107.575 Acres)
ii.	Land Acquisition details as per MoEF O.M dated 7/10/2014.	• 0.860 Ha. (2.125 Acres) is in the name of M/s. Navic Steel & Power Pvt. Ltd., • Agreement has been entered for 36.968 Ha. (91.350 Acres) with M/s. Shourya Ispat Pvt. Ltd. (Sister Concern Unit)

<table>
<tr><th>S.No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td></td><td></td><td>• Agreements have been entered for remaining 5.706 Ha. (14.100 Acres) by M/s. Navic Steel & Power Pvt. Ltd. with the private land owners.</td></tr>
<tr><td>iii.</td><td>Existence of habitation & involvement of R & R, if any</td><td>No habitation exists in project site; Hence no R & R is involved.
Nearest village - Jhiria Village (0.63 kms).</td></tr>
<tr><td>iv.</td><td>Latitude and Longitude of all corners of the project site</td><td>Latitude and Longitude of the project site:
<table>
<tr><th>Point</th><th>Coordinates</th></tr>
<tr><td>Point # 1</td><td>21°46'58.44"N, 81°40'28.46"E</td></tr>
<tr><td>Point # 2</td><td>21°46'54.53"N, 81°40'42.24"E</td></tr>
<tr><td>Point # 3</td><td>21°46'43.86"N, 81°40'42.58"E</td></tr>
<tr><td>Point # 4</td><td>21°46'32.61"N, 81°40'45.34"E</td></tr>
<tr><td>Point # 5</td><td>21°46'19.06"N, 81°40'44.30"E</td></tr>
<tr><td>Point # 6</td><td>21°46'12.29"N, 81°40'41.89"E</td></tr>
<tr><td>Point # 7</td><td>21°46'13.78"N, 81°40'32.82"E</td></tr>
<tr><td>Point # 8</td><td>21°46'21.70"N, 81°40'31.68"E</td></tr>
<tr><td>Point # 9</td><td>21°46'29.62"N, 81°40'29.04"E</td></tr>
<tr><td>Point # 10</td><td>21°46'36.17"N, 81°40'25.59"E</td></tr>
<tr><td>Point # 11</td><td>21°46'50.86"N, 81°40'31.33"E</td></tr>
</table></td></tr>
<tr><td>v.</td><td>Elevation of the project site</td><td>251 m to 260 m AMSL</td></tr>
<tr><td>vi.</td><td>Involvement of Forest land, if any</td><td>No Forest land is involved in the project site.</td></tr>
<tr><td>vii.</td><td>Water body exists within the project site as well as study area</td><td><u>Project site:</u>
Unnamed nallah is passing through site from North to South and same will be diverted within the site, with landscaping on the both side of nallah along with measures for soil stabilization including development of lawns with shrubs.

<u>Study area:</u>
<table>
<tr><th>Water Body</th><th>Distance & Direction</th></tr>
<tr><td>Seonath River</td><td>2.3 Kms. - SE Direction</td></tr>
<tr><td>Karua Nala</td><td>0.18 Kms. – South Direction</td></tr>
<tr><td>Hanp River</td><td>3.55 Kms. – North Direction</td></tr>
</table></td></tr>
<tr><td>viii.</td><td>Existence of ESZ/ESA/National Park/Wildlife Sanctuary/Biosphere Reserve/Tiger Reserve/Elephant Reserve etc. if any within the study area</td><td>Nil</td></tr>
<tr><td>ix.</td><td>Forest within the study area</td><td>Nil</td></tr>
</table>

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

S.No.	Units (Products)	Plant Configuration (Production Capacity)

1.	Iron ore Beneficiation (Iron ore concentrate)		0.85 MTPA
2.	Pellet Plant (Pellet)		0.60 MTPA
3.	Gasifier for Pellet Plant		21,000 NM^3/Hr.
4.	DRI Kilns (Sponge Iron)		6,27,000 TPA (2 x 350 TPD & 2 x 600 TPD)
5.	Induction Furnaces with LRF & CCM (Hot Billets / MS Ingots / Ingots)		4,62,000 TPA (4 x 15 T & 4 x 20 T)
6.	Rolling mill (TMT bars / Structural Steel) (85% Hot charging with Hot Billets and remaining 15% through RHF)		4,62,000 TPA (4 x 350 TPD)
7.	Gasifier for Reheating Furnace		3,570 Nm^3/hr
8.	Ferro Alloys Unit (FeSi / FeMn / SiMn / FeCr / Pig Iron)		FeSi – 42000 TPA/ FeMn – 151200 TPA SiMn – 86400 TPA/ FeCr – 90000 TPA/ Pig Iron – 60000 TPA (2 x 18 MVA & 2 x 9 MVA)
9.	Briquetting Plant		600 Kg/Hr
10.	Brick Manufacturing Unit		1,00,000 Bricks/ day
11.	Power Plant (66 MW)	WHRB Power Plant (2 x 8 MW & 2 x 15 MW)	46.0 MW
		CFBC Power Plant (1 x 20 MW)	20.0 MW

5.14.6 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 Kms.)	Mode of Transport
1.	**Iron Ore Beneficiation Plant (8,50,000 TPA – throughput capacity)**					
a)	Iron ore fines		8,50,000	Chhattisgarh / Orissa	~ 600 Kms.	By rail & road (through covered trucks)
2.	**Pellet Plant (Pellets) - 6,00,000 TPA**					
a)	Iron Ore Concentrate		6,60,000	Own generation	---	Through covered conveyers
b)	Bentonite		4,800	Gujarat	~ 600 Kms.	By rail & road (through covered trucks)
c)	Limestone		9,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
d)	Anthracite Coal		21,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
e)	Coal for Gasifier	Indian Coal	63,000	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)

S.No.	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
	(21,000 Nm^3/hr.)	Imported Coal	40,320	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
3.	**DRI Kilns (Sponge Iron) – 6,27,000 TPA**					
a)	Pellets (100 %)		9,09,150	Own generation & purchased from outside	---	Through covered conveyers & By road (through covered trucks)
	Or					
b)	Iron ore (100%)		10,03,200	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
c)	Coal	Indian	8,15,100	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported	5,21,664	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
d)	Dolomite		31,350	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
4.	**Steel Melting Shop (Billets/ Ingots/Hot Billets) – 4,62,000 TPA**					
a)	Sponge Iron		4,67,000	Own generation	---	Through covered conveyers
b)	MS Scrap / Pig Iron		70,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
c)	Ferro alloys		23,000	Own generation	---	By road (through covered trucks)
5.	**Rolling Mill through Hot charging (Rolled Products) – 4,62,000 TPA**					
a)	Hot Billets / Billets / Ingots		4,08,408	Own generation	---	----
b)	Coal for Gasifier (3,570Nm^3/hr)	Indian Coal	10,810	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
		Imported Coal	7,000	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
c)	LDO		2244 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road (through Tankers)
6.	**FBC Boiler [Power Generation - 1 x 20 MW]**					
a)	Indian Coal (100 %)		1,18,800	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					

S.No.	Raw Material		Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
b)	Imported Coal (100 %)		76,032	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
	OR					
c)	Dolochar + Indian Coal	Dolochar	1,25,400	In plant generation	---	through covered conveyors
		Indian Coal	56,100	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
	OR					
d)	Dolochar + Imported Coal	Dolochar	1,25,400	In plant generation	---	through covered conveyors
		Imported Coal	48,660	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
7.	**For Ferro Alloys (2 x 18 MVA & 2 x 9 MVA)**					
7 (i)	*Ferro Silicon – 42,000 TPA*					
a)	Quartz		63,840	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
b)	LAM coke		23,520	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	MS Scrap		1,470	Inhouse Generation	---	By road (through covered trucks)
d)	Mill scales		9870	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode paste		840	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Briquetted Bag filter dust		1,596	Inhouse Generation	---	By road (through covered trucks)
7 (ii)	*Ferro Manganese – 1,51,200TPA*					
a)	Manganese Ore		3,43,980	MOIL / OMC	~ 500 Kms.	By Rail & Road (throughcovered trucks)
b)	LAM coke		55,188	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Dolomite		25,704	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill scales		22,680	Inhouse Generation	---	By road (through covered trucks)
e)	Electrode Paste		1,966	Maharashtra /	~ 300 Kms.	By road

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
			West Bengal		(through covered trucks)
f)	Briquetted Bag filter dust	7,560	Own generation	---	---
7 (iii)	*Silico Manganese –86,400TPA*				
a)	Manganese Ore	1,40,832	MOIL / OMC	~ 500 Kms.	By Rail & Road (throughcovered trucks)
b)	LAM Coke	32,400	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	FeMn. Slag	91,416	In house generation	---	----
d)	Dolomite	19,440	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode paste	1,728	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Quartz	20,736	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
g)	Briquetted B agfilter dust	1,728	Own generation	---	---
7 (iv)	*For Ferro Chrome – 90,000 TPA*				
a)	Chrome Ore	1,80,000	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) From Port By Road (through covered Trucks)
b)	LAM Coke	29,700	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
c)	Quartz	15,750	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	MS Scrap / Mill Scale	13,500	Inhouse Generation	---	By road (through covered trucks)
e)	Magnetite / Bauxite	15,210	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
f)	Electrode Paste	2,700	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
g)	Bagfilter dust	5,760	Own generation	---	---
7 (v)	For Pig Iron - 1,51,200 TPA				
a)	HG Iron ore	2,23,020	Barbil, Orissa NMDC, Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
b)	LAM Coke	73,332	Andhra Pradesh	~ 500 Kms.	By road

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
					(through covered trucks)
c)	Lime stone	18,900	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
d)	Quartz	9,072	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
e)	Electrode Paste	3,024	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
f)	Briquetted Bag filter dust	4,536	Own generation	---	---

5.14.7 Water required for the proposed project will be 3,400 KLD which will be met from partly from Water Reservoir at the site and partly from Shivnath river (which is at a distance of 2.3 Kms. from the project site). Water drawl permission Water Resource Department, Chhattisgarh will be obtained.

5.14.8 Power required for the proposed project will be 124.0 MW and same will be sourced from Captive Power Plant (66.0 MW) and remaining (58.0 MW) from State Grid.

5.14.9 The capital cost of the project is Rs. 850.0 Crores and the Capital cost for environmental protection measures is Rs. 80 Crores. Employment generation from proposed project will be 500 nos. through direct employment and 600 nos. through indirect employment.

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

5.14.11 Proposed Terms of Reference: **(Baseline data collection period: 1st March 2022 to 31st May 2022)**

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
A. Air			
a. Meteorological parameters	1	On hourly basis for one season	• Wind Speed • Wind Direction • Temperature • Relative Humidity • Rainfall
b. AAQ parameters	8	24 hourly Twice a week for 3 months (One Season)	Parameters to be Monitored: • $PM_{2.5}$ • PM_{10} • SO_2 • NOx • CO

Attributes	Sampling		Remarks
	No. of Stations	Frequency	
B. Noise	8	On hourly basis for 24 Hrs. at each station	Parameters to be Monitored: • Day equivalent • Night equivalent
C. Water			
a. Ground Water	8	One sample at each of the locations	Parameters will be Monitored: as per IS: 10500
b. Surface Water	4	One sample at each of the locations	Parameters will be Monitored: as per BIS: 2296
D. Land			
a. Soil quality	8	One sample at each of the locations	Parameters will be 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
E. Biological			
a. Aquatic	--	Once in Season	---
b. Terrestrial	--	Once in Season	---
F. Socio economic parameters	--	Once in Season	Social Impact Assessment will be carried out by concerned FAE for study area
G. Traffic Density	--	Once in Season	Vehicular traffic study will be carried out at Transportation route.

Deliberation by the Committee

5.14.12 The Committee noted the following:

i. Instant proposal is for establishment of Iron ore beneficiation (8,50,000 TPA), Pellet Plant (6,00,000 TPA), Gasifier for Pellet Plant (21,000 Nm3/hr) DRI Kilns (6,27,000 TPA), Induction Furnace with matching LRF & CCM (Billets / Ingots / Hot Billets- 4,62,000 TPA), Rolling Mill (TMT Bars / Structural Steel - 4,62,000 TPA),Gasifier for Reheating Furnace (3570 Nm3/hr), Ferro Alloy Unit (FeSi – 42,000 TPA/FeMn – 1,51,200 TPA/SiMn – 86,400 TPA/FeCr – 90,000 TPA/Pig Iron – 60,000 TPA), Briquetting Plant (600 Kg/Hr.), WHRB based power Plant – 46 MW, FBC based Power Plant-20 MW & Brick manufacturing unit (1,00,000 Bricks /Day).

ii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is green filed project and no activities on the site started and no violation case is observed.

Recommendations of the Committee

5.14.13 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 ToRs enclosed at Annexure-1 read with additional ToRs at **Annexure-2:**

i. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.
ii. As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration. In this regard, time bound action plan as per the MoEF&CC Office Memorandum dated 30/09/2020 shall be submitted.
iii. Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
iv. Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
v. PP should conduct Public Hearing and all issues should be addressed in the EIA/EMP.
vi. PP should develop Greenbelt 2500 saplings/ha, accordingly the plant species selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.
vii. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
viii. Tailing management plan shall be included in EIA.
ix. PP should submit action plan rainwater harvesting.
x. Action plan for 100 % solid waste utilization shall be submitted.
xi. Project proponent shall prepare layout plan showing all internal roads minimum 6m width and 9m turning radius with proper looping for smooth traffic flow, including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.
xii. Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.
xiii. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
xiv. Action plan to limit the dust emission from all the stacks below 30 mg/Nm3 shall be furnished.
xv. An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of total area with a tree density of not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years.

Any other item with permission of the Chair.

Agenda No. 5.15

5.15 Expansion of Integrated Steel Plant from 9.6 to 15.6 MTPA (Liquid Steel) by M/s. Arcelormittal Nippon Steel India Limited located at Hazira Village, Chorasi Tehsil, District Surat, Gujarat– Amendment in Terms of Reference

[Proposal No. IA/GJ/IND/265243/2022; File No. IA-J- 11011/44/2004-IA-II(IND-I)]

5.15.1 M/s. Arcelor Mittal Nippon Steel India Ltd. has made an online application vide proposal no. IA/GJ/IND/265243/2022 dated 20/04/2022 along with Form 3, revised Form-1 and revised PFR seeking amendment in Terms of Reference accorded by the Ministry vide letter no. IA-J-11011/44/2004-IA.II(I) dated 03/12/2021. The proposed project activity is listed at S. No. 3(a) Metallurgical Industries (ferrous & non-ferrous), 1(d) Thermal Power Plant & 4(b) Coke Oven Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central level.

5.15.2 The aforementioned proposal was considered by the EAC (Industry 1) in its 4th meeting during 27th – 28th April, 2022. After detailed deliberation, it was observed that

i. Total involvement of forest land is reported to be 116.44 ha whereas amendment is sought for inclusion of forest land of 86.49 ha only.

ii. Project proponent was unable to explain the overall involvement of forest land in the entire steel complex along with the present land use pattern of the said forest land. Further, PP has excluded three parcels of land which are reported to be under sub-judice. A comprehensive layout of the entire steel complex in this regard was not presented before the EAC to take an appropriate view in the matter.

iii. Due to the change in land requirement, project proponent was unable to explain the likely changes to be made in the existing and expansion plant facilities inter-alia including the material handling & management of the entire steel complex.

5.15.3 In view of the above observation by the EAC, the instant proposal was deferred and it was recommended that a subcommittee of EAC Industry-1 shall undertake a site visit of the project and based on the site visit report the instant proposal for ToR amendment shall be considered by the EAC.

5.15.4 Accordingly, the EAC (Industry-1) sub-committee, along with Officers from the State Forest Department, has conducted a site visit at Hazira, Surat, Gujarat on 10th May 2022 to ascertain the issues for the proposed project "Expansion of Integrated Steel Plant from 9.6 to 15.6 MTPA (Liquid Steel) by M/s. Arcelormittal Nippon Steel India Limited".

5.15.5 At this instance, the proposal was further re-considered by the EAC (Industry 1) in its 5th meeting during 12th – 13th May, 2022.

Details submitted by Project proponent

5.15.6 The proposed project activity is listed at S. No. 3(a) Metallurgical Industries (ferrous & non-ferrous), 1(d) Thermal Power Plant & 4 (b) Coke Oven Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central levels.

5.15.7 Details of forest land is as following: Total 116.44 Ha Forest land involved in the project out of which, 86.49 Ha is the part the present proposal and 29.95 Ha is excluded from our present proposal as mentioned below-

Forest Details		
Survey No.	**Area in Ha**	**Remarks**
179	65.73	Stage -II Approval obtained, possession taken and end use change application submitted on 08.04.2022
434	20.76	• Stage-I Approval obtained. This portion of land was part of the earlier proposal as part of the Township. However, during recent DILR Survey (report dated 17.03.2022), we came to know that this is Forest Land. On scrutinizing our records, we found that Stage-I Forest Clearance was obtained for this land in 2013 by erstwhile management, hence now shown as Forest Land in the layout and ToR amendment application. • Status quo on 20.76 Ha of forest land shall be maintained and this land is included in the proposed project but shall not be considered for calculation of greenbelt area. • Total area will remain 824.82 Ha which includes 20.76 Ha of forest land. Greenbelt area is 33% which will be 272.21 Ha in which greenbelt of 20.76 Ha will not be considered.
178 & 434	29.95(18.3 + 11.65)	• The 18.3 Ha applied on 07.03.2022 for regularization. 11.65 ha applied on 19.03.2022 as a part of 30.66 ha application for regularization with balance (19.01 ha) area outside AMNS premises (Note: No industrial/township facilities in this area. This area has been excluded from the proposed layout). • Through the recent DILR survey report dated 17.03.2022 we came to know that this portion of land, which is lying beside the boundary of the plant, is forest land. No plant or township facility exists in this area. Application submitted for Stage-1 Forest Clearance in March 22 for regularization in view of Forest lands involved.
Total	**116.44**	

5.15.8 The proposed ToR amendment involves the following:

A) Amendment in Plant land details & revised plant boundary based on recent DILR survey.:

Particulars	**Description as per approved TOR**	**Description after Amendment**	**Remarks**
Total Land	**Total Land : 884.88 Ha** Industrial: 805 Ha. Private: 14.15 Ha. Forest land 65.73 Ha.	**Total Land : 824.82 Ha** Industrial: 750.18 Ha. Private: 8.91 Ha. Forest Land :65.73 Ha Total Forest land involved in the project – 86.49 Ha	1) 35 Ha raw material handling & storage (RMHS) area allotted by GMB – Removed from the layout in view of matter being sub-judice. Alternate RMHS area arranged near Coke oven unit.

Particulars	Description as per approved TOR	Description after Amendment	Remarks
	For Expansion : 65.73 Ha Forest land (Stage- FC approved) 14.15Ha _ applied for acquisition to State Govt 35 ha Material handling area from GMB 71.2 Ha area will be used from Existing area	• 20.76 Ha Forest land under existing area. • 65.73 Ha under the proposed area. **For Expansion:** 65.73 Ha Forest land (Possession taken and end use change under process) 8.91Ha – Direct purchase from land owners 72.53 Ha area will be used from Existing area	2) 29.95 Ha area reduced from existing plant/Township area in view of Forest lands which are notified by Revenue officials through recent DILR Survey and forest application for regularization submitted. This forest land is excluded from the layout and no industrial facilities are existing nor proposed in this forest land. 3) 1.5 Ha Captive jetty area – used for Ro-Ro terminal by EBTL – Removed from the layout as matter is sub-judice. 4) 11.63 Ha Land was not included in the TOR application layout earlier. Now we are including this. 5) 20.76 Ha stage-I approval obtained and Stage II approval under process.

(B) Amendment in Project configuration in line with modernization Project EC dated.02.03.2022.

Plant/ Equipment /Facility	Configuration as per approved TOR dated.03.12.2021	Proposed Configuration	Final configuration after amendment	Remarks, if any
HBI Plant (DRI Mod I to VI) (in MTPA)	Mod I-IV: 4.0 Mod:V -1.98 Mod VI: 1.85	No change	Mod I-IV: 4.0 Mod: V -1.98 Mod VI: 1.85	
Blast Furnace (BF) (in MTPA)	1 x 3.0 2 x 4.0	No change	1 x 3.0 2 x 4.0	
Sinter Plant	1x 1.48 (1 x 120 m^2)	7.0	1x 1.48 (1 x 120 m2)	***7.0 MTPA plant could not be**

Plant/ Equipment /Facility	Configuration as per approved TOR dated.03.12.2021	Proposed Configuration	Final configuration after amendment	Remarks, if any
	2 x 3.5* (~ 325 m^2 each)		2 x 3.5 (~ 325 m^2 each)	**implemented due to fund constraints and legal cases at the NCLT, and it was dropped vide modification EC dated 02.03.2022. Now, it is proposed to install 7.0 MTPA sinter plants part of expansion. (It will comprise of 02 number plants).**
Coke Oven (Recovery Type)	2 x 59 Ovens 4 x 59 Ovens	No Change	2 x 59 Ovens 4 x 59 Ovens	
Air Separation Plant (Nm3/Hr)	1 X 343 TPD 1 X 257 TPD 1 X 785 TPD 3 X 1714 TPD 1 X 700 TPD 1 X 2200 TPD (Only oxygen)	No Change	1 X 343 TPD 1 X 257 TPD 1 X 785 TPD 3 X 1714 TPD 1 X 700 TPD 1 X 2200 TPD (Only oxygen)	
SMS-1 (EAF 4 Nos.)	4 x 150 MT Heat size	No Change	4 x 150 MT Heat size	
SMS-2	4 x 200 MT Heat size	No Change	4 x 200 MT Heat size	
SMS-3 (BOF-3 nos.)	3 x 350 MT Heat size	No Change	3 x 350 MT Heat size	
Corex Plant	2 x 0.85	No Change	2 x 0.85	
Lime Plant (Lime/Dolime	1 x 0.45 1 x 0.48 1 x 0.27 1 x 0.8	No Change	1 x 0.45 1 x 0.48 1 x 0.27 1 x 0.8	
Plate Mill	1 x 1.5	No Change	1 x 1.5	
CSP and HRC	1 x 3.5 1 x 4.5 1 x 6.0	No Change	1 x 3.5 1 x 4.5 1 x 6.0	
CRM	1 x 1.5 1 x 0.54 1 x 2.2	No Change	1 x 1.5 1 x 0.54 1 x 2.2	

Plant/ Equipment /Facility	Configuration as per approved TOR dated.03.12.2021	Proposed Configuration	Final configuration after amendment	Remarks, if any
	1 x 1.0		1 x 1.0	
H Saw Pipes (in MTPA)	1 x 0.15 1 x 0.15	No Change	1 x 0.15 1 x 0.15	
L Saw Pipes (in MTPA)	1 x 0.33	No Change	1 x 0.33	
CPP (in MW)	1x475 MW 1X31 MW 1X40 MW 1X10 MW **1X48MW** 2X100 MW 2X25MW	854 – 48# **=806**	1x475 MW 1X31 MW 1X40 MW 1X10 MW 2X100 MW 2X25MW	**#48 MW Power plant dropped vide modification project EC dated.02.03.2022.**
Waste Heat Recovery based Power Plant	1 x 25 MW 1 x 20 MW 1x 100 MW CDQ	No change	1 x 25 MW 1 x 20 MW 1x 100 MW CDQ	
Jetty (length in M)	456 m + 734 m	No Change	456 m + 734 m	

Deliberation by the Committee

5.15.9 The Committee noted the following:

i. Total 116.44 Ha Forest land is involved in the project out of which, 29.95 Ha is from the existing Plant / Township area. However, through the recent DILR survey report dated 17.03.2022 it has been noticed by the State Forest Department that this portion of land, which is lying beside the boundary of the plant, is the forest land. No plant or township facility exists in this area.

ii. The brown area shown towards North-East, which is excluded from the project area (C1/C2: 29.95 Ha). However, a railway track/road is in existence in that area for evacuating the finished products and road is also passing through this area which was constructed long time back by the erstwhile management.

iii. The B-parcel of the land i.e., 20.76 ha may not be considered under 33% green area calculation. But the same land parcel is allowed to be in the layout plan to maintain the status-quo as per Hon Court of Law. The PP has submitted an undertaking vide letter dated 13.05.2022 to maintain the status-quo for the B-parcel of the land (i.e., 20.76 ha) and to make an alternate arrangement for the rail track/road for evacuating the finished products.

iv. A notified document (Map) regarding the DILR Survey (No. 434) Report dated 17.03.2022 has been submitted by the State Forest Department.

Recommendations of the Committee

5.15.10 After deliberations, the Committee **recommended** the project proposal for **amendments in TOR** as mentioned in para 5.15.8, above, along with following additional specific conditions in addition to the conditions prescribed in the TOR dated 03.12.2021:

i. The rail track and road which are passing through the area should be shifted within the plant premises in case the PP does not get the necessary clearance from the Forest Department.

ii. There is sparse mangrove vegetation now. As a CER activity, AMNS will put full efforts in conserving and improving the mangroves

iii. As per discussion, the PP has to submit the revised layout of the project area during the final EIA report.

iv. As a part of Corporate Environment Responsibility (CER) activity, the company shall undertake community development programmes either in terms of adoption of nearby villages or putting plastic recycling unit and plantation of mangroves/trees whichever is applicable to the surrounding area in consultation with local forest department & district administration.

v. All earlier ToR conditions shall be prevailed.

vi. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

vii. Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

Agenda No. 5.16

5.16 Proposed Mineral Beneficiation of 1.25 MTPA of Iron ore and 0.15 MTPA of Manganese ore by M/s. Taanish Resources Pvt. Ltd located at Emmihatti Village, Sandur Taluka, Bellary District, Karnataka-Prescription of Terms of Reference regarding.

[Proposal No. IA/KA/IND/255717/2022; File No. IAJ-11011/84/2022-IA-II(IND-I)]

5.16.1 M/s. Taanish Resources Pvt. Ltd. has made an application online vide proposal no. IA/KA/IND/255717/2022 dated 01/03/2022in 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. 2(b) Mineral Beneficiation under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

5.16.2 The proposal cited above was considered during the 2nd meeting of Expert Appraisal Committee held on 22-23rdMarch, 2022. After detailed deliberation, it was observed that

i. Ramgarh Reserved Forest is 20 m from project site and site is covered by Hills in SW and NE sides. Further as per the KML file, lot of vegetation present at the site.

ii. The proposed project site seems to involve forest land as per Survey of India Topo sheet map land use and KML file.

iii. The proposed project site area for tailing management needs to be revisited due to the presence of hilly terrain.

iv. Raw material will be procured from far away locations and transported through road.

v. Project proponent has not provided the details regarding the alternate sites envisaged for the project.

5.16.3 In view of the foregoing and after deliberations, the Committee recommended for site visit of the proposed project area by a subcommittee of EAC Industry-1 members. Further, EAC recommended that PP may explore alternate sites for the proposed project.

5.16.4 Accordingly, the EAC (Industry-1) sub-committee conducted a site visit to Taanish Resources Pvt. Ltd located at Emmihatti Village, Sandur Taluka, Bellary District, Karnataka was undertaken on 09/05/2022.

5.16.5 At this instance, the proposal was further considered by the EAC (Industry 1) in its 5th meeting during 12th – 13th May, 2022.

Details submitted by Project proponent

5.16.6 The project of M/s Taanish Resources Pvt. Limited located in Emmihattti Village, Sandur Tehsil, Bellary District, Karnataka is for setting up of a new Mineral Beneficiation Plant for production of 1.25 MTPA of Iron ore and 0.15 MTPA of Manganese ore.

5.16.7 Environmental site settings:

S No	Particulars	Details
i	Total land	Total Land: 10.66 ha (26.34 acres) [Private Land]
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	26.34 Acres (20 Acres + 6.34 Acres) 1.Non-agricultural land (Industrial Converted) bearing survey No. 28/4, measuring 20 acres situated at Emmihatti Village, Sandurtaluq, Bellary district, Karnataka having Rural Development & Panchayath Raj Property No.: 244, Property No. 1505006001010.152. 2. Non-agricultural land (Industrial Converted) bearing survey No. 29/C, measuring 06 acres 34 cents situated at Emmihatti Village, Sandurtaluq, Bellary district, Karnataka Rural Development & Panchayath Raj Property No: 245, property No.1505006001010.154.
iii	Existence of habitation & involvement of R&R, if any	No Settlements has been found within the project site. Therefore, R&R is not involved. **Projectsite:**Emmihatti Village **StudyArea:** 1. Sidappur 2.5 Km/SE 2. Jaisingpura 1.9 Km/ NE 3. Hospet 11.65 Km/NW

<table>
<tr><th>S No</th><th>Particulars</th><th>Details</th></tr>
<tr><td>iv</td><td>Latitude and Longitude of all corners of the project site.</td><td>
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1.</td><td>15°10'1.21"N</td><td>76°26'58.61"E</td></tr>
<tr><td>2.</td><td>15°10'3.70"N</td><td>76°27'1.70"E</td></tr>
<tr><td>3.</td><td>15°10'6.09"N</td><td>76°27'3.05"E</td></tr>
<tr><td>4.</td><td>15°10'8.89"N</td><td>76°27'1.61"E</td></tr>
<tr><td>5.</td><td>15°10'16.84"N</td><td>76°26'56.83"E</td></tr>
<tr><td>6.</td><td>15°10'9.20"N</td><td>76°26'51.69"E</td></tr>
<tr><td>7.</td><td>15°10'5.59"N</td><td>76°26'46.31"E</td></tr>
<tr><td>8.</td><td>15°10'4.50"N</td><td>76°26'48.81"E</td></tr>
<tr><td>9.</td><td>15°10'2.90"N</td><td>76°26'54.09"E</td></tr>
</table>
</td></tr>
<tr><td>v</td><td>Elevation of the project site</td><td>636 m above MSL</td></tr>
<tr><td>vi</td><td>Involvement of Forest land if any.</td><td>No forest land is involved.</td></tr>
<tr><td>vii</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural drainage, Canal etc.) exists within the project site as well as study area</td><td>Project Site – Nil

Study Area
<table>
<tr><th>Water body</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Tungabhadra Reservoir</td><td>6.62</td><td>NW</td></tr>
<tr><td>DarojiKere</td><td>23.40</td><td>NE</td></tr>
<tr><td>Kamlapura Lake</td><td>3.83</td><td>NE</td></tr>
<tr><td>Tungabhadra High Level Canal</td><td>11.5</td><td>NE</td></tr>
<tr><td>DayanadaKere</td><td>7.4</td><td>SW</td></tr>
</table>
</td></tr>
<tr><td>viii</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve /elephant reserve etc. if any within the study area</td><td><u>Project Area</u>: Nil.

<u>Study Area</u>
Name of the ESZ/ESA:
• Gudekote Sloth Bear Sanctuary
• Status of Notification No.: Notification No. 127.S.O.2145(E) [06.07.2017] Distance of project from ESZ/ESA: 34.8 Km

List of Reserved and protected forests:
• Ramgad FR Adjacent
• Joga RF 4.9Kms towards NE
• Billakula West RF 7.9Kms towards South
• Sandur RF 1.12Kms towards NE
• Gunda RF 17Kms NW
• Bandri RF 10.6Kms towards SE</td></tr>
</table>

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

Sl. No.	Plant Equipment / Facility	Product	Configuration & Capacity	Remarks
1	Mineral Beneficiation Plant	Iron Ore	1.25 MTPA	-
		Mn Ore	0.15 MTPA	-

5.16.9 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 Material	Quantity required per annum	Source	Distance from site (km)	Mode of transportation
1	Low Grade Iron Ore	Not provided	BellarySanduru - Hospet Region [Through E-Auction conducted by the monitoring committee and MSTC, as per the orders of the Govt. of Karnataka]		Covered tipper trucks
2	Low Grade Manganese Ore (Mn)				

5.16.10 Initially 350 KLD water will be required for the proposed plant and the water of about 297 KLD will be reused in the process, 33 KLD of water will be in the form of sludge, the domestic water requirement is 20 KLD, hence the water usage will be about 53KL and is proposed to draw from the Bore wells, check dam, water tankers proposed within the identified project site. The water will be drawn and stored in a Tank and Pumped to the relevant units. Requisite permission from Ground water authority and No Objection Certificate from subsequent authority for drawing water from check dam will be obtained.

5.16.11 The power requirement for the proposed project is estimated as 700KW, which will be obtained from the GESCOM, Karnataka Government.

5.16.12 The capital cost of the overall project is Rs 24.25 Crores. The employment generation from the overall proposed project is 64.

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

5.16.14 Name of the EIA consultant: M/s Ecomen Laboratories Pvt. Ltd., Lucknow [S No 156, NABET Certificate no. NABET/EIA/2023/RA 0203 and valid up to 21/09/2023; Rev. 19, February 14, 2022].

5.16.15 Proposed Terms of Reference:(Baseline data collection period: December 2022 – February 2022)

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Wind Speed and Direction, Temperature, Relative Humidity & Rainfall	1	Hourly	Hourly recording at project site
b. AAQ parameters	RSPM(PM_{10}),$PM_{2.5}$, SO_2, NO_2 and CO	8	24 hourly sampling	Twice a Month
B. Noise	Noise levels in dB(A) Day And Night	8	24 Hours	Once during Study Period
C. Water				

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
a. Surface water parameters	Physical, Chemical and Bacteriological Parameters as per APHA and IS standards	3	One day	3 locations once in a Study Period.
b. Ground water quality	Physical, Chemical and Bacteriological Parameters as per APHA and IS standards	8	One day	8 locations once in a Study Period.
D. Land				
a. Soil quality	Soil profile, characteristics, soil type and texture, NKP value etc.	8	One day	8 locations once in a Study Period.
b. Land use	Land use for different categories (Satellite Imagery)			
E. Biological				
a. Aquatic	Not Applicable	-	-	Through field visit and secondary data
b. Terrestrial	Existing terrestrial flora and fauna	-	-	
F. Socio-economic parameters	Socio-economic characteristics	-	-	Through field visit and secondary data

Deliberation by the Committee

5.16.16 The Committee noted the following from the subcommittee's site visit report:

i. The forest officials who were with sub-committee at the site have informed that the proposed land does not involve any notified forest nor any notified forest land was encroached by the PP.

ii. The proposed location for Tailings collection was inspected by sub-committee. This site is flat and the sub-committee opined that there would not be any drainage issues due to sloping terrain.

iii. Based on of alternate sites analalysis in PFR and visit by sub-committe proposed site is more suitable.

Recommendations of the Committee

5.16.17 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 ToRs enclosed at **Annexure-1** read with additional ToRs at **Annexure-2:**

(i) Project proponent shall submit a written undertaking on whether the proposed land involves any notified forest or not. (The forest officials who were with sub-committee at the site have told that the proposed land does not involve any notified forest nor any notified forest land was encroached by the PP.) If at all any forest land is involved, the PP

shall obtain the Forest clearance (Stage-1 and Stage-2) before approaching for Environmental clearance to the MoEFCC/EAC.

(ii) Tailing shall be filter pressed and disposed to Cement Manufacturers/Brick Manufacturers in dry cake form and a scheme for Dry Disposal Beneficiation Plant tailings after dewatering shall be submitted.

(iii) Action plan for Solid waste utilization shall be submitted.

(iv) Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

(v) The Ground water permission from Ground water authority and the NOC from subsequent authority shall be obtained.

(vi) An action plan for Green Belt development consisting of 3 tiers of plantations of native species all along the periphery of the project of adequate width shall be raised in 33% of the project area with a tree density shall not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. A plan shall be provided for extra green belt towards reserved forest located in west from project site. The natural vegetation grown in last decade in the western region of the project site shall be proposed as a part of Greenbelt.

(vii) Detail regarding no. of trees to be cut if any, girth & height, age and species of the trees and the mode of compensatory plantation proposed against each tree cut (if any) shall be provided in the EIA/EMP report.

(viii) Details of flora and fauna existing in the study area shall duly be authenticated by the concerned DFO of the area. In case of existence of any endangered species and schedule I fauna, authenticated conservation plan shall be submitted.

(ix) Project proponent shall prepare layout plan showing all internal roads minimum 6 m width and 9m turning radius for smooth traffic flow inside including fire tender as per NBC. Road network shall connect all service areas in layout. This drawing shall include area statement showing plot area, area under roads, parking, green belt with calculations and % with respect to plot area of project site and proper indexing.

(x) Project proponent shall submit contour map of project site along with drainage disposal system with calculations and drawings supported with proper indexing including rain water harvesting details with calculations mentioning about GW recharge along with relevant drawing.

(xi) Action plan for fugitive emission control in the plant premises shall be provided.

(xii) A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

(xiii) Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage after offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitor able with defined time frames.

(xiv) The ToR may be issued to Taanish Resources indicating unambiguously that the PP will comply with the riders (i)-(xiii) above.

The meeting ended with thanks to the Chair.

***

ANNEXURE –1

GENERAL 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 30th 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_{10}, $PM_{2.5}$, SO_2, NO_X, 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 4th 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 (QCl)/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_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} 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_{10} and $P_{2.5}$) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM_{10} 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 is 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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ANNEXURE-3

List of the Expert Appraisal Committee (Industry-1) members participated during Video Conferencing (VC) meeting

S No	Name	Position	12/05/2022	13/05/2022
1.	Shri. Rajive Kumar	Chairman	Present	Present
2.	Dr. S. Ranganathan	Member	Present	Present
3.	Dr. Ranjit Prasad	Member	Present	Present
4.	Dr. E V R Raju	Member	Present	Present
5.	Dr. S. K. Singh	Member	Present	Present
6.	Dr. Jai Krishna Pandey	Member	Present	Present
7.	Dr. Dipankar Shome	Member	Present	Present
8.	Dr. Tejaswini Ananthkumar	Member	Present	Present
9.	Dr. Hemant Sahasrabuddhe	Member	Present	Present
10.	Dr. B. N. Mohapatra, DG, (Representatives of NCCBM)	Member	Present	Present
11.	Representative of CPCB	Member	Absent	Absent
12.	*Dr. S. Raghavan, Scientist 'D' National Institute of Occupational Health (NIOH)*	*Member*	Present	Present
13.	Dr. Sanjay Bist, Scientist 'E' Indian Meteorological Department	Member	Present	Present
14.	Dr. R.B. Lal, Scientist E, MoEFCC	Member Secretary	Present	Present
Officials from MoEF&CC				
15.	Dr. Rajesh Prasad Rastogi	Scientist 'C'	Present	Present
16.	Dr. Sandeepan B.S.	Scientist 'B'	Present	Present

ANNEXURE-4

Approval of EAC Chairman

Email **Additional Director MoEFCC Dr R B LAL**

Re: Approval of Draft Minutes of the 5th EAC (Industry 1 Sector) meeting held during 12-13 May, 2022 (through Video Conferencing)

From : chairman eac ind 1 <chairman.eac.ind.1@gmail.com> Tue, May 24, 2022 11:06 AM

Subject : Re: Approval of Draft Minutes of the 5th EAC (Industry 1 Sector) meeting held during 12-13 May, 2022 (through Video Conferencing)

To : Additional Director MoEFCC Dr R B LAL <rb.lal@nic.in>

Cc : ranganathan metals <ranganathan.metals@gmail.com>, ranjitnitj@gmail.com, dshome61@gmail.com, rajuevr60@gmail.com, sksinghdce@gmail.com, jaikrishnapandey@gmail.com, tejaswini acf <tejaswini.acf@gmail.com>, sshemant 801 <sshemant_801@rediffmail.com>, NCCBM DIRECTOR GENERAL <dg@ncbindia.com>, Member Secretary CPCB <mscb.cpcb@nic.in>, Sanjay Bist <sanjay.bist@imd.gov.in>, Raghavan S <raghuharihar@gov.in>

Dear Dr Lal,

The minutes sent by you through your email dated 24 May 2022 at 10:42 AM are approved.
Kindly do needful.

Rajive Kumar
Chairman-EAC Industry-1

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