

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

Dated: 25th August 2022

Date of Zero Draft MoM sent to EAC: 21.08.2022

Approval by Chairman: 24.08.2022

Uploading on PARIVESH: 25.08.2022

MINUTES OF THE 11th EXPERT APPRAISAL COMMITTEE (INDUSTRY-1 SECTOR) MEETING HELD ON AUGUST 16, 2022

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

Time: 10:30 AM onwards

AUGUST 16, 2022 [TUESDAY]

(i) Opening Remarks by the Chairman, EAC

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

Shri Rajive Kumar also appreciated the efforts of the 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 10th Meeting of the EAC (Industry-1 Sector) held during August 1-3, 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 **10th Meeting of the EAC (Industry-1 Sector) held during August 1-3, 2022** conducted through Video Conferencing (VC), and noted that one request has been received for modifications/factual correction, in the minutes of the 10th EAC meeting for the project/activities, and confirmed the same along with the correction in the minutes.

- (i) **10th EAC meeting (1-3 August, 2022) – Agenda No. 10.1:** Greenfield project of DRI based Steel plant to produce Beneficiated Iron Ore throughput 1,200,000 TPA; Iron Ore Pellets 1,800,000 TPA; Sponge Iron 198,000 TPA; Mild Steel Billets 194,040 TPA; Rerolled Steel Products through Hot Charging and through Reheating Furnace 224,070 TPA; Ferro Alloys 20,000 TPA and/ or Pig iron 40,000 TPA from 2.5 MVA x 4Nos SAF; Captive Power of 32MW (16MW through WHRB and 16MW through CFBC); Cement (PPC, PSC or OPC) 100,000 TPA and Fly Ash Bricks 138,600TPA by M/s GR Integrated Steel Private Limited at Village- Mudpar, Tahsil- Berla, District- Bemetara, Chhattisgarh-

[Proposal No. IA/CG/IND/236777/2021; File No. J-11011/455/2021-IA.II(I)]

Para No. of MOM	Statement in MOM in 10 th EAC Meeting	Correction/ rectification required	Remark
10.1.18	In view of the foregoing and after detailed deliberations, the committee recommended the instant <u>expansion</u> proposal for grant of Environment Clearance subject to uploading the written submission on portal 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	In view of the foregoing and after detailed deliberations, the committee recommended the instant <u>greenfield</u> proposal for grant of Environment Clearance subject to uploading the written submission on portal 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	Expansion word to be replaced with Greenfield. This is green field project. There is typing error. EAC found in order.
10.1.18 Under Sub Para A (v) bullet No.2	PP shall recycle/reuse 100 % solid waste generated in the plant	PP shall ensure 100% recycling/reuse of solid waste generated for beneficial purposes.	As per our proposal various waste will be sold to or given to other units for beneficial purpose. (Example: Tailing will be sold to Cement Plant etc.). EAC deliberated and found in order.

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

Consideration of Environmental Clearance Proposals

Agenda No. 11.1

- 11.1 Establishment of DRI Kilns (1,98,000 TPA), Induction Furnaces with LRF & CCM (Billets / Ingots / Hot Billets) (1,98,000 TPA), Rolling Mill (TMT Bars / Structural Steel) 1,98,000 TPA, Ferro Alloy Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA / Pig Iron- 50,400 TPA, WHRB based Power Plant - 15 MW & CFBC based Power Plant - 16 MW by M/s Risen Industries Pvt. Ltd., located at Village -Sarda, Tehsil -Berla, District -Bemetara, Chhattisgarh– Consideration of Environmental Clearance.**

[Proposal No. IA/CG/IND/193123/2021; File No. J-11011/16/2021-IA.II(I)]

[Consultant: Pioneer Enviro Laboratories & Consultants Private, Valid upto 21.09.2022]

- 11.1.1 M/s. Risen Industries Private Limited has made an online application vide proposal no. IA/CG/IND/193123/2021 dated 27th July, 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 S. No. 3(a) Metallurgical Industries and 1(d) Thermal Power Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.
- 11.1.2 Name of the EIA consultant: M/s. Pioneer Enviro Laboratories & Consultants Pvt. Ltd. [Sl. No. 137, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/SA0148; valid upto 21.09.2022, Rev. 24, July 05, 2022].

Details submitted by Project proponent

- 11.1.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
14 th January 2021	28 th EAC held during 18 th - 20 th January 2021	Terms of Reference	8 th February 2021	07/02/2025

- 11.1.4 The project of M/s. Risen Industries Private Limited is located at Sarda Village, Berla Tehsil, Bemetara District, Chhattisgarh is for setting up of a new steel plant for production of 0.198 Million Tons Per Annum (MTPA) of TMT bars / Structural Steel through establishment of DRI Kilns (1,98,000 TPA), Induction Furnaces with LRF & CCM (Billets / Ingots / Hot Billets) (1,98,000 TPA), Rolling Mill (TMT Bars / Structural Steel) 1,98,000 TPA, Ferro Alloy Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA / Pig Iron- 50,400 TPA, WHRB based Power Plant - 15 MW & CFBC based Power Plant - 16 MW.

11.1.5 Environmental Site Settings:

S.No.	Particulars	Details	Remarks																						
1.	Total land	17.27 Ha. (42.67 Acres). [Private land]	--																						
2.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land 17.27 ha has been registered & applied for land diversion.	--																						
3.	Existence of habitation & involvement of R&R, if any.	Project site: No habitation exists in the plant site. Hence R&R not applicable. Study Area: No habitation exists in the project site <table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Andu</td><td>0.9 Kms.</td><td>E</td></tr></table>	Habitation	Distance	Direction	Andu	0.9 Kms.	E	--																
Habitation	Distance	Direction																							
Andu	0.9 Kms.	E																							
4.	Latitude and Longitude of the project site	The Coordinates of the project site are following <table><tr><th>Point</th><th>Latitude and Longitude</th></tr><tr><td>Point # 1</td><td>21°36'27.03"N 81°33'23.68"E</td></tr><tr><td>Point # 2</td><td>21°36'20.48"N 81°33'26.39"E</td></tr><tr><td>Point # 3</td><td>21°36'19.57"N 81°33'30.70"E</td></tr><tr><td>Point # 4</td><td>21°36'22.14"N 81°33'31.15"E</td></tr><tr><td>Point # 5</td><td>21°36'20.08"N 81°33'41.57"E</td></tr><tr><td>Point # 6</td><td>21°36'27.26"N 81°33'42.67"E</td></tr><tr><td>Point # 7</td><td>21°36'31.63"N 81°33'37.13"E</td></tr><tr><td>Point # 8</td><td>21°36'33.70"N 81°33'36.95"E</td></tr><tr><td>Point # 9</td><td>21°36'33.52"N 81°33'33.65"E</td></tr><tr><td>Point # 10</td><td>21°36'34.24"N 81°33'30.27"E</td></tr></table>	Point	Latitude and Longitude	Point # 1	21°36'27.03"N 81°33'23.68"E	Point # 2	21°36'20.48"N 81°33'26.39"E	Point # 3	21°36'19.57"N 81°33'30.70"E	Point # 4	21°36'22.14"N 81°33'31.15"E	Point # 5	21°36'20.08"N 81°33'41.57"E	Point # 6	21°36'27.26"N 81°33'42.67"E	Point # 7	21°36'31.63"N 81°33'37.13"E	Point # 8	21°36'33.70"N 81°33'36.95"E	Point # 9	21°36'33.52"N 81°33'33.65"E	Point # 10	21°36'34.24"N 81°33'30.27"E	--
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5.	Elevation of the project site	261 to 264 m AMSL	--																						
6.	Involvement of Forest Land, if any	No Forest land is involved in the project site.	--																						
7.	Water body exists within the project site as well as study area	Project Site : Nil Study area: <table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Sarar Nallah</td><td>adjacent to the site</td><td>West</td></tr><tr><td>Seonath river</td><td>1.8 Kms.</td><td>North</td></tr></table>	Water Body	Distance	Direction	Sarar Nallah	adjacent to the site	West	Seonath river	1.8 Kms.	North	HFL of Sarar nallah is 263 M. 50 m wide green belt along the boundary of the plant situated towards the sarar nallah will be developed.													
Water Body	Distance	Direction																							
Sarar Nallah	adjacent to the site	West																							
Seonath river	1.8 Kms.	North																							
8.	Existence of ESZ / ESA / National Park / Wildlife	Nil	---																						

S.No.	Particulars	Details	Remarks
	Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area		

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

S. No.	Details of units	Products	Unit Configuration	Production capacity
1.	DRI Kilns	Sponge Iron	2 x 200 TPD & 2 x 100 TPD	1,98,000 TPA
2.	Induction furnaces with CCM & LRF	Hot Billets / M.S. Billets	4 x 15 T	1,98,000 TPA
3.	Rolling Mill through Hot charging (85% hot charging + 15% through RHF)	(TMT bars / Structural Steel)	1 x 600 TPD	1,98,000 TPA
4.	Power generation through WHRB	Electricity	15 MW	15 MW
5.	Power generation through CFBC Boiler	Electricity	16 MW	16 MW
6.	Submerged Electric Arc furnaces	Fe-Si, Fe Mn, Si Mn, FeCr & Pig Iron	2 x 9 MVA	(FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA/ Pig Iron- 50,400 TPA)
Note : - It is proposed to install a brick making plant of 40,000 Bricks/day within the premises. - It is also proposed to install a Briquetting plant of 200 Kg/hr for effective dust management in Ferro Alloy unit.				

11.1.7 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.	Pellets (100 %)	2,77,200	Orissa & Chhattisgarh	~ 500 Kms.	By rail & road (through covered trucks)
2.	Iron ore (100%)	3,16,800	Barbil, Orissa NMDC,	~ 500 Kms.	By rail & road (through covered trucks)

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
			Chhattisgarh		
3.	Indian Coal	3,43,800	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
4.	Imported Coal	2,19,700	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
5.	Dolomite	9,900	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
6.	Sponge Iron	1,98,000	Own generation	----	By Covered Conveyers
7.	MS Scrap / Pig Iron	30,000	Chhattisgarh	~ 100 Kms.	By road (through covered trucks)
8.	Ferro alloys	10,000	Own generation	---	By road (through covered trucks)
9.	Hot Billets / Billets / Ingots	2,06,000	Own generation & Purchased from outside	--- ~ 100 Kms.	By Covered Conveyers By road (through covered trucks)
10.	LDO / LSHS	1500 Kl/annum	Nearby IOCL Depot	~ 100 Kms.	By road
11.	Dolochar + Indian Coal	39,600	In plant generation	---	through covered conveyors
		75,240	SECL Chhattisgarh / MCL Odisha	~ 500 Kms.	By rail & road (through covered trucks)
12.	Dolochar + Imported Coal	39,600	In plant generation	---	through covered conveyors
		48,154	Indonesia / South Africa / Australia	~ 600 Kms. (from Vizag Port)	Through sea route, rail route & by road (through covered trucks)
For Ferro Silicon					
12.	Quartz	24,300	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
13.	LAM coke	18,900	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
14.	MS Scrap / Mill scales	4,230	Inhouse Generation	---	By road (through covered trucks)
15.	Electrode paste	360	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
For Ferro Manganese					
16.	Manganese Ore	68,400	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
17.	LAM coke	19,800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
18.	Dolomite	8,100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
19.	MS Scrap / Mill scales	7,200	Inhouse Generation	---	By road (through covered trucks)
20.	Electrode Paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
For Silico Manganese					
21.	Manganese Ore	48,600	MOIL / OMC	~ 500 Kms.	By Rail & Road (through covered trucks)
22.	LAM Coke	16,200	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
23.	FeMn. Slag	30,294	In house generation	---	----
24.	Dolomite	7,380	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
25.	Electrode paste	630	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
26.	Quartz	7,740	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
For Ferro Chrome					
16.	Chrome Ore	56,700	Sukinda, Odisha Import, South Africa	~ 500 Kms. ~ 600 Kms. (from Vizag Port)	By road (through covered trucks) Through sea route, rail route & by road (through covered trucks)
17.	LAM Coke	19,800	Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

S.No.	Raw Material	Quantity (TPA)	Sources	Distance from site (in Kms.)	Mode of Transport
18.	Quartz	8,100	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
19.	MS Scrap / Mill Scale	2,700	Inhouse Generation	---	By road (through covered trucks)
20.	Magnetite / Bauxite	5,400	Chhattisgarh / Maharashtra	~ 500 Kms.	By road (through covered trucks)
21.	Electrode Paste	540	Maharashtra / West Bengal	~ 300 Kms.	By road (through covered trucks)
For Pig Iron					
21.	Iron ore / Sinter	91,800	Barbil, Odisha NMDC, Chhattisgarh	~ 500 Kms.	By road (through covered trucks)
22.	LAM Coke	43,200	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
23.	Dolomite	5,940	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)
24.	Quartz	3,060	Chhattisgarh / Andhra Pradesh	~ 500 Kms.	By road (through covered trucks)

11.1.8 Water requirement for proposed project is estimated as 1210 KLD and same will be sourced from the Seonath River, which is at distance of 1.8 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 a assurance letter as per MoU enter with Govt. of Chhattisgarh, for supply of water from Seonath River vide letter no. 930/SIPB/2020/7449 dated 24th May 2021.

11.1.9 The total power requirement for the proposed project will be about 41.6 MW, this will be partly met from the Captive power plant of 31 MW & Remaining 10.6 MW will be sourced from the state grid.

11.1.10 Baseline Environmental Studies:

Period	1 st Dec 2020 to 28 th Feb 2021
AAQ parameters at 8 locations	PM _{2.5} = 18.7 to 26.5 µg/m ³ PM ₁₀ = 33.1 to 46.2 µg/m ³ SO ₂ = 5.2 to 7.6 µg/m ³ NO _x = 6.9 to 11.0 µg/m ³ CO = 305 to 680 µg/m ³
AAQ modelling	Incremental GLCs due to the proposed project: PM ₁₀ = 0.95 µg/m ³ (2300 m in SW); PM ₁₀ = 0.42 µg/m ³ (Vehicular) (The net resultant GLCs of PM ₁₀ will be 1.37 µg/m ³)

	PM_{2.5} = 0.54 µg/m³ (2300 m in SW) & PM_{2.5} = 0.26 µg/m³ (Vehicular) (The net resultant GLCs of PM_{2.5} will be 0.8 µg/m³) SO₂ = 4.0 µg/m³ (3890 m in SW) NO₂ = 5.4 µg/m³ (2290 m in SW) NO₂ (vehicular) = 3.25 µg/m³ CO (vehicular) = 2.0 µg/m³																				
Ground water quality at 8 locations	pH : 6.9 to 8.0 TSS : 0.12 to 0.3 mg/l TDS : 384 to 718 mg/l Total Hardness : 198 to 337 mg/l Chlorides : 202 to 366 mg/l Fluoride : 0.58 to 1.1 mg/l Heavy metals (Iron -Fe) : 0.05 to 0.16 mg/l																				
Surface water quality at 7 locations	pH : 7.6 to 7.8, DO (in mg/l) : 6.1 to 6.4, TDS (in mg/l) : 235 to 264, BOD (in mg/l) : 2.4 to 2.5, COD (in mg/l) : 8.8 to 9.8																				
Noise levels	The equivalent day-night noise levels in the study zone are ranging from 42.71 dBA to 53.95 dBA.																				
Traffic assessment study findings	- Traffic study has been conducted at NH # 30 (earlier NH # 12 A)- Simga –Kawardha - Iron Ore & Coal will be transported through railway upto the nearest railway station (Tilda RS) and then to the plant in covered trucks by road. - All other raw materials will be transported in covered trucks by road. - Existing PCU is 8287 PCU/day & existing level of service (LOS) is 0.41 <table><tr><th>Road</th><th>V (Volume in PCU/day)</th><th>C (Capacity in PCU/day)</th><th>V/C Ratio</th><th>LOS</th></tr><tr><td>NH # 30</td><td>8287</td><td>20000</td><td>0.41</td><td>Good</td></tr></table> - PCU load after proposed project will be 8287 (Existing) + 758 (Additional) PCU/day and level of service (LOS) will be: 0.45 PCU/day <table><tr><th>Road</th><th>V (Volume in PCU/day)</th><th>C (Capacity in PCU/day)</th><th>V/C Ratio</th><th>LOS</th></tr><tr><td>NH # 30</td><td>9045</td><td>20000</td><td>0.45</td><td>Good</td></tr></table> - Traffic Capacity as per the IRC 73: 1980 for highways road is 20000	Road	V (Volume in PCU/day)	C (Capacity in PCU/day)	V/C Ratio	LOS	NH # 30	8287	20000	0.41	Good	Road	V (Volume in PCU/day)	C (Capacity in PCU/day)	V/C Ratio	LOS	NH # 30	9045	20000	0.45	Good
Road	V (Volume in PCU/day)	C (Capacity in PCU/day)	V/C Ratio	LOS																	
NH # 30	8287	20000	0.41	Good																	
Road	V (Volume in PCU/day)	C (Capacity in PCU/day)	V/C Ratio	LOS																	
NH # 30	9045	20000	0.45	Good																	

	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 73: 1980 <table><tr><th>V/C</th><th>LOS</th><th>Performance</th></tr><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> 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.	V/C	LOS	Performance	0.0 – 0.2	A	Excellent	0.2 – 0.4	B	Very Good	0.4 – 0.6	C	Good	0.6 – 0.8	D	Fair/ Average	0.8 – 1.0	E	Poor	1.0 & Above	F	Very Poor
V/C	LOS	Performance																				
0.0 – 0.2	A	Excellent																				
0.2 – 0.4	B	Very Good																				
0.4 – 0.6	C	Good																				
0.6 – 0.8	D	Fair/ Average																				
0.8 – 1.0	E	Poor																				
1.0 & Above	F	Very Poor																				
Flora and fauna	No schedule-1 fauna within the study area																					

11.1.11 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)	Method of disposal	Agreement details for disposal
1	Ash from DRI	35,640	Will be given to Cement Plants & utilized in Brick manufacturing.	Own brick making plant of 40,000 Bricks/day
2	Dolochar	39,600	Will be used in FBC power plant as fuel.	---
3	Kiln Accretion Slag	1,782	Will be used in road construction & utilized in Brick manufacturing.	Own brick making plant of 40,000 Bricks/day
4	Wet scrapper sludge	9,108	Will be used in road construction & utilized in Brick manufacturing.	Own brick making plant of 40,000 Bricks/day
5	SMS Slag	19,800	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 internal road construction & utilized in Own brick making plant .	Own brick making plant of 40,000 Bricks/day
6	End Cuttings from Rolling	5,940	Will be reused in the SMS	---

S.No.	Waste / By product	Quantity (TPA)	Method of disposal	Agreement details for disposal
	Mill			
7	Mill scales from Rolling Mill	594	Mill scales will be utilized in Ferro Alloy unit	---
8	Ash from Power Plant (with Indian Coal + dolochar)	57,618	Ash generated is being given to Cement Plants / utilized in proposed Brick manufacturing unit.	Own brick making plant of 40,000 Bricks/day
9.	Slag from FeMn	30,294	Will be reused in manufacture of SiMn as it contains high SiO ₂ and Silicon.	---
10.	Slag from FeSi	1,000	Will be given to Cast iron foundries	Given to SRBH Eng. Works
11.	Slag from SiMn	30,888	will be used for Road construction / will be given to slag cement manufacturing	Given to SRBH Vinod Kumar Jain – Road Contractor
12.	Slag from FeCr	27,918	Will be processed in jigging plant for Chrome recovery. After Chrome recovery, the left-over slag will be analysed 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.	Given to SRBH Vinod Kumar Jain – Road Contractor
13.	Slag from Pig Iron	34,452	Will be given to slag cement manufacturing	-----

Note: Solid wastes such as Dolochar, accretion slag will be stored in designated storage yard. Ash generated will be stored in silos (2x500 Cum) only. There will not be any open storage of fly ash.

Note :

- it is proposed to install a brick making plant of 40,000 Bricks/day within the premises.
- it is also proposed to install a Briquetting plant of 200 Kg/hr for effective dust management generated from Ferro Alloy unit.

Hazardous waste Generation:

1) Used Oil & Waste Oil: 2.5 KL/Annum

Disposal: will be given to CECB approved Recyclers/reprocessors

2) Used batteries will be given back to the supplier under buyback arrangement.

11.1.12 Public Consultation:

Details of advertisement given	Times of India, New Delhi (1st advt. on 01-08-2021), (2nd Advt. on 05-09-2021 reg. postponement) (3rd advt. on 23-11-2021 reg. fresh PH) Navabharat , Raipur (1st advt. on 01-08-2021) , (2nd Advt. on 05-09-2021 reg. postponement) (3rd advt. on 23-11-2021 reg. fresh PH)
Date of Public Consultation	27 th December 2021
Venue	Govt. higher Secondary School, Sarda (V), Berla (T), Bemetara (D), Chhattisgarh
Presiding Officer	Additional District Magistrate
Major issues raised	The issues raised during Public Hearing are: • Pollution Problem • Effect on people, Crops & animals • All pollution control systems to be installed • Employment • Effect on health of the people

The following are the issues raised during Public Hearing & Management Response

S.No.	Issue raised	Management Response	Time schedule	Budget allocation
1	Pollution Problem due to proposed project	In the proposed project following environment protection measures will be provided /implemented and operated duly ensuring compliance with norms stipulated by MoEF&CC / SPCB for abatement of Pollution. • ESP with 4-fields (High performance rigid electrodes with transformer) will be provided to DRI kilns, CFBC boiler to bring down the particulate emission to less than 30 mg/Nm³. • Fume Extraction & Cleaning system with bagfilters (PTFE membrane) will be provided to SMS to bring down the particulate matter emission to less than 30 mg/Nm³. • 4th Hole extraction system with bagfilters (PTFE membrane) will be provided to Submerged electric arc furnaces to bring down the particulate matter emission to less than 30 mg/Nm³. • ESPs will be operated continuously in the proposed project and the CEMS data will be connected to CPCB & SPCB server.	2023-25 2025-27	Budget for Environment Protection within the Plant premises. Rs 16.45 Cr Rs 10.80 Cr

S.No.	Issue raised	Management Response	Time schedule	Budget allocation
		Sarda Villages. - In case if any crop damage occurs due to the industry as proven by the concerned Govt. authority, necessary compensation will be paid to the farmers as per the State Govt. norms. - By adopting the aforementioned measures there will not be any adverse impact animals.		
3	All pollution control systems to be installed	- DRI kilns with WHRB's (2 x 200 TPD) - Electro Static Precipitators with 4-fields (2 nos.) - DRI kilns with WHRB's (2 x 100 TPD) - Electro Static Precipitators (2 nos.) - Induction Furnaces with CCM (4 x 15 T) - Fume Extraction system with bag filters (4 nos.) - Reheating furnace of Rolling Mill - Stack of adequate Height - SEAF (1 x 12 MVA) - 4th Hole Extraction system with bag filters (2 nos.) - CFBC Boiler (1x15 MW) - Electro Static Precipitator 4-fields (1 no.) - All conveyors will be covered to control the fugitive emission. - Effluent will be treated in ETP and sanitary wastewater will be treated in STP 14,500 nos. of plants will be planted within the premises as per CPCB norms @2500 nos. per hectare covering 33% of the total area with greenbelt.	2023-25 2025-27	Rs 16.45 Cr Rs 10.80 Cr
4	Employment	- The proposed project will generate direct employment to 250 nos. which includes skilled, semi-skilled & unskilled & 400 nos. indirectly employed in contract works & transport. - Local people will be given top priority in employment based on their qualification & experience. - Skill development center will be established	--- 2023-24 2024-25 2025-26	--- Rs. 0.25 Cr Rs. 0.30 Cr Rs. 0.30 Cr
5	Effect on health of the people	- Periodic medical camps will be conducted in the village and basic medicines will be supplied. - Primary Health Centre will be established in Sarda Village with Ambulance Facility. - All proposed Air Emission control Systems, ETP ensuring ZLD, Disposal of Solid waste as per norms.	2023-25	Rs. 0.35 Cr

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

S. No.	Major Activity Heads		Budget (Rs. In Crores)			Total Expenditure (Rs. In Crores)
			1 st year (Rs. in Crores)	2 nd year (Rs. in Crores)	3 rd year (Rs. in Crores)	
A	Based on need based & SIA study					
1	Community & Infrastructure Development Programmes					
	Construction of Public Toilets @ 3.0 lakhs/toilet	Physical Nos. & (v)	2 nos. in Sarda (v) & 2 nos. in Bawanlakh (v)	2 nos. in Andu (v) & 2 nos. in singdehi (v)	2 nos. in Bhatgaon (v) & 2 nos. in Bhilauri (v)	
		Budget in Crores	0.12	0.12	0.12	0.36
	Providing proper drainage facilities in 6 nos. of villages @ Rs. 10 Lakhs	Physical Nos. & (v)	1 no. in Andu (v) & 1 no.in Sarda (v)	1 no.in Bawanlakh (v) & 1 no. in Singdehi (v)	1 no. in Bhilauri (v) & 1 no.in Bhatagaon (v)	
		Budget in Crores	0.20	0.20	0.20	0.60
	Providing 1 no. of Garbage collection van @ Rs.3.0 Lakhs for each van	Physical Nos. & (v)	1 no.in Bhilauri (v) & 1 no.in Singdehi	1 no.in Andu (v) & 1 no.in Bawanlakh	1 no.in Sarda (v) & 1 no.in Bhatagaon (v)	
		Budget in Crores	0.06	0.06	0.06	0.18
	Providing LED Street light with solar panel @ Rs. 3.0 Lakhs.	Physical Nos. & (v)	15 nos. in Bhatagaon (v), 15 nos. in Atargandhi (v) & 15 nos. in Bawanlakh (V)	15 nos. in Sarda (v), 15 nos. in Bhilauri (v)	15 nos. in Singedhi (v), 15 nos. in Andu (v)	
		Budget in Crores	0.09	0.06	0.06	0.21
2	Education					
	Construction of 2	Physical Nos. &	1 no. in Sarda	1 no. in	1 no in	

S. No.	Major Activity Heads		Budget (Rs. In Crores)			Total Expenditure (Rs. In Crores)
			1 st year (Rs. in Crores)	2 nd year (Rs. in Crores)	3 rd year (Rs. in Crores)	
	rooms each in school of size 8m x 5m x3 m @ Rs. 10 Lakhs per room)	(v)	(v)	Bhatagaon Village	Bawanlakh (v)	
		Budget in Crores	0.20	0.20	0.20	0.60
3	RWH pits & De-Siltation of ponds @ 5.0 Lakhs each	Physical Nos. & (v)	3 nos. in Singdehi (v) & 3 nos. in Bhatagaon (v)	3 nos. in Bawanlakh (v)	3 nos. in Sarda (v)	
		Budget in Crores	0.30	0.15	0.15	0.60
	Subtotal based on SIA (A)		0.97	0.79	0.79	2.55
B	Based on Public Consultation / Hearing					
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 Andu, Sarda, Bawanlakh, Singdehi, Bhilauri, Bhatagaon & Atargadhi	Physical Nos. & (v)	One DISHA centre			
		Budget in Crores	0.25	0.30	0.30	0.85
2	Health facilities development:	Physical Nos. & (v)	Sarda (v)			

S. No.	Major Activity Heads		Budget (Rs. In Crores)			Total Expenditure (Rs. In Crores)
			1 st year (Rs. in Crores)	2 nd year (Rs. in Crores)	3 rd year (Rs. in Crores)	
	Establishment of Primary health center & Providing ambulance					
		Budget in Crores	0.45	--	--	0.45
3	Plantation on both sides of the Berla – Bemetara Road	Physical Nos. & (v)	2000 nos. of Plants Berla – Bemetara Road	--	--	
		Budget in Crores	0.10	--	--	0.10
4.	Plantation in Villages	Physical Nos. & (v)	500 nos. of plants each in Andu & Sarda Vilages	--	--	
		Budget in Crores	0.05	--	--	0.05
	Subtotal based on PH (B)		0.85	0.30	0.30	1.45
	Grand total based on SIA & PH (A+B)		1.82	1.09	1.09	4.00
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					

11.1.13 The capital cost of the project is Rs. 370 Crores and the capital cost for environmental protection measures is proposed as Rs.31.25 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.2.51 Crores. The employment generation from the proposed project is 650 nos. The details of cost for environmental protection measures is as follows:

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
1.	Air Emission Management		
	ESPs	10.00	125.0
	Proposed Fume extraction systems with Bag filters	5.00	15.0
	Other APCS including covered conveyors	0.50	5.0

S.No	Item	Capital Cost (Rs.in Crores)	Recurring Cost / Annum (Rs.in Lacs)
	Chimneys for proposed units	4.50	---
	CEMS (11 nos)	0.55	1.0
	CAAQMS (4 nos.)	1.60	5.0
	Water Sprinklers	0.20	5.0
	Mechanical Dust Sweepers (4 nos.)	0.20	1.0
	Environment Monitoring	---	16.5
	Sub total	22.55	173.5
2.	Wastewater Management		
	ETP	0.50	5.0
	STP	0.50	5.0
	Sub total	1.00	10.0
3.	Solid waste Management		
	Ash silos	1.20	2.5
	Solid waste Handling & disposal	0.50	10.0
	Sub total	1.70	12.5
4.	Greenbelt development, Land scaping Noise Management	0.50	25.0
5.	Occupational Health & Safety (including Dispensary with Ambulance facility)	1.00	25.0
6	Storm water Management	0.50	5.0
7	Social & Infrastructural Development (SID)	4.00	---
	TOTAL	31.25	251.0

11.1.14 Greenbelt will be developed in 5.87 Ha out of 17.27 Ha which is 34% of the total Land area. Total no. of plants will be 15,000 nos. which is inclusive of additional 500 nos. 2500 nos. of plants will be planted per Hectare as per CPCB norms. Additionally, 50 m wide green belt towards the Sarar nallah with 3750 nos. of plants along the periphery of the Boundary towards sarar nallah shall be established.

11.1.15 It is submitted that there is no violation under EIA notification 2006/no court cases/no show cause/no direction.

Written representations:

11.1.16 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 16.08.2022 through email dated 16.08.2022 submitted the revised information w.r.t. to the following:

Point # 1	Revised PH compliance to be submitted
Reply	Revised PH compliance is submitted and has been incorporated at para 11.1.12

	above.
Point # 2	Commitment for adoption of villages
Reply	Project Proponent confirm that they will adopt 3 nos. of villages i.e. Sarda (v), Andu (V), Bawanlakh (V).
Point # 3	Water consumption shall be below 3.0 m³/Ton
Reply	The total water requirement is 1210 m³/day. The break-up of water requirement is as follows Steel making - 580 m³/day Power Generation - 610 m³/day Domestic requirement - 20 m³/day The total production of Steel will be 1,98,000 TPA i.e. 600 TPD (330 days of operation) Total water consumption per ton of Steel will be : 580/600 = 1.0 m³/ton of steel <u>Total water consumption is less than 3.0 m³/ton of steel</u> It is proposed to adopt Air cooled Condensers for Power Plant which significantly reduces the water requirement. Water consumption for Power Generation is considered as 0.82 m³ per MWH which is within 2.5 m³/MWH as per MoEF&CC norms (S.O. no. 3305 € dated 07-12 2015). Hence the total water consumption for 31 MW power generation – 610 m³/day
Point # 4	Explore to develop greenbelt in excess of 33% of the total land.
Reply	• Earlier PP proposed to develop a Greenbelt in 5.79 Ha. Out of 17.27 Ha. Which is 33.5% of the total Land area. • Now PP propose to develop a total greenbelt of 5.87 Ha. Out of 17.27 Ha. Which is 34% of the total Land area. • Total no. of plants will be 15,000 nos. which is inclusive of additional 500 nos. • 2500 nos. of plants will be planted per Hectare as per CPCB norms. • 50 m wide green belt along the boundary of the plant situated towards the sarar nallah with 3750 nos. of plants along the periphery of the Boundary towards sarar nallah. The revised details are updated at para 11.1.14 above.
Point # 5	Please recheck and confirm the incremental GLCs of PM₁₀ in AAQ modelling
Reply # 5	As per the advice of the EAC committee, PP has reverified the incremental GLCs of PM₁₀ in AAQ modelling and which is as follows PM₁₀ = 0.95 µg/m³ (2300 m in SW);

	PM₁₀ = 0.42 µg/m³ (Vehicular) The net resultant GLCs of PM₁₀ will be 1.37 µg/m³ The revised details are updated at para 11.1.10 above.
Point # 6	In AAQ modelling results to be furnished for PM_{2.5}
Reply # 6	The incremental GLC of PM_{2.5} is 0.54 µg/m³ (2300 m in SW) & PM_{2.5} = 0.26 µg/m³ (Vehicular) The net resultant GLCs of PM_{2.5} will be 0.8 µg/m³ Isopleths shows PM₁₀ & PM_{2.5} are submitted. The revised details are updated at para 11.1.10 above.
Point # 7	Power Requirement is differing from the ToR. Please confirm the actual Power Requirement & source of Power.
Reply # 7	PP confirms that the total Power Requirement is 41.6 MW. Out of which 31 MW will be sourced from Captive Power plant Remaining 10.6 MW will be sourced from the State Grid.

Deliberations by the Committee

11.1.17 The Committee noted the following:

1. The instant proposal is for setting up of a new steel plant for production of 0.198 Million Tons Per Annum (MTPA) of TMT bars / Structural Steel through establishment of DRI Kilns (1,98,000 TPA), Induction Furnaces with LRF & CCM (Billets / Ingots / Hot Billets) (1,98,000 TPA), Rolling Mill (TMT Bars / Structural Steel) 1,98,000 TPA, Ferro Alloy Unit 2 x 9 MVA (FeSi-14,000 TPA / FeMn-50,400 TPA / SiMn-28,800 TPA / FeCr-30,000 TPA / Pig Iron- 50,400 TPA, WHRB based Power Plant - 15 MW & CFBC based Power Plant - 16 MW.
2. 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.
3. 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.
4. 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.

5. The total project area is 17.27 ha which is a private land. Company has already purchased 17.27 ha land and the same has been registered in the name of company. Application has been made for the conversion of land and as reported, the process of same is expected to be completed within 2-3 months.
6. The water requirement is estimated to be 1210 KLD which will be sourced from Seonath River, which is at distance of 1.8 Kms. The project proponent has submitted the application for Water drawl permission to Water Resource Department, Chhattisgarh which is under process. State Investment Promotion Board (SIPB) has issued a assurance letter as per MoU enter with Govt. of Chhattisgarh, for supply of water from Seonath River vide letter no. 930/SIPB/2020/7449 dated 24th May 2021. The Committee deliberated on water consumption and advised the Project Proponent to reduce the water consumption to bring it down to less than 3.0 m³/ton of steel.
7. Sarar Nallah exists adjacent to the project site. HFL of Sarar Nallah is 263 m. Letter has been issued by Executive Engineer, Water Resource Department, Chhattisgarh regarding High Flood Level (HFL) of Sarar Nallah and depicting the HFL on the map. Also, Seonath River is a distance of 1.8 kms from the project site within the study area.
8. The EAC noted that as per the granted ToR dated 08.02.2021, power requirement was 37.6 MW (CPP - 31 MW, State Grid – 6.6 MW). As per the present EC proposal, the power requirement has increased to 41.6 MW (CPP - 31 MW, State Grid – 10.6 MW). PP has confirmed the same through written representation.
9. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
10. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP that the green belt development shall be completed within a year. Additionally, 50 m wide green belt towards the Sarar nallah with 3750 nos. of plants along the periphery of the Boundary towards sarar nallah is proposed to be established.
11. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.
12. 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.
13. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
14. 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.

15. 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:

- 11.1.18 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance, subject to uploading the written submission on Parivesh Portal, 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 Condition:

- 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. No construction activity/infringement will take place in flood plain of saran nallah situated in the vicinity of the project site. As committed by the PP, 50 m wide green belt towards the Sarar nallah with 3750 nos. of plants along the periphery of the boundary towards Sarar nallah shall be established (other than 33%). This green belt as to be developed within six months. Additionally, a bund / retaining wall of 1.5 shall be constructed to prevent entry of water into the site from Sarar nallah during high floods. In addition to this, in the context of RCC retaining wall, which is proposed to protect nallala, the PP shall ensure that the height of such retaining wall shall be more than the required flood plain with sufficient free board beyond HFL. Further, a water storage tank proposed towards north side and the nallaha is towards west side, the PP shall ensure that the water storage shall be in accordance to the contour map.
- iv. The Seonath River (1.8 kms from the project site) shall not be disturbed. 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 implemented.
- 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. 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.
- vii. Particulate matter emission from stacks shall be less than 30 mg/Nm³. Action plan in this regard shall be strictly implemented.
- viii. 85-90 % rolling shall be done by direct hot charging. Balance 10- 15 % may be done through RHF using LDO as fuel.
- ix. 1210 KLD water shall be sourced from Seonath River which is at a distance of 1.8 km from project site. GW abstraction is not permitted.
- x. The project proponent shall make all efforts to reduce the water consumption and bring it down to less than 3.0 m³/ton of steel production.
- xi. The PP shall also undertake rain water harvesting measures as per the plan submitted in the EIA/EMP report and reduce water dependence from the outside source.
- xii. As committed by the PP to adopt 3 villages, namely Sarda (v), Andu (V), Bawanlakh (V), Project Proponent shall prepare and implement a robust plan to develop them into model villages in next 5 years.
- xiii. Air cooled condensers shall be used in the Power plant.
- xiv. SAFs shall have 4th hole extraction system for fume pollution control.
- xv. Fe-Cr slag shall be subjected to TCLP to finalize if it could be used for construction or should be sent to TSDF.
- xvi. The Jigging plant shall be installed in Ferro Alloys Plant.
- xvii. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant.
- xviii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- xix. Three tier Green Belt shall be developed in at least 33% 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. Additionally, 50 m wide green belt towards the Sarar nallah with 3750 nos. of plants along the periphery of the Boundary towards sarar nallah shall be established. Compliance status in this regard, shall be submitted to concerned Integrated Regional Office of the MoEF&CC.
- xx. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- xxi. Ultralow NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xxii. The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic waste water shall be treated in STP and treated water shall be re-used for greenbelt development and plantation and dust suppression.
- xxiii. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have provision of garland

- drains and catch pits to trap run off material. Action plan submitted in the EIA/EMP Report shall be strictly implemented.
- xxiv. No parking on road side for any vehicle pertaining to the plant. Proper arrangement for vehicle parking within the plant will be made.
- xxv. All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xxvi. During operational phase, at unloading of quartz, grinding and loading operations personal and area PM2.5 dust monitoring has be carried out and silica content to be quantified and compared with permissible exposure limits as per Indian Factories Act.
- xxvii. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- xxviii. The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. 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.

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 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 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 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 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 nearby 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, NO_x (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. 11.2

11.2 Expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 Million TPA), Cement (6.0 to 12.0 Million TPA), CPP [(2 x 15.7) to (2 x 17 MW)] and WHRS (20 to 40 MW) by M/s. Ultra Tech Cement Ltd. (Unit: Maihar Cement Works), located at Village: Sarlanagar, Tehsil: Maihar, District: Satna, Madhya Pradesh. - Consideration of Environmental Clearance.

[Proposal No. IA/MP/IND/73253/2018; File No. IA-J-11011/113/2018-IA-II(I)]
[Consultant: J.M. EnviroNet Pvt. Ltd.; Valid upto 07.02.2023]

- 11.2.1 M/s. UltraTech Cement Limited (Unit: Maihar Cement Works) has made an online application *vide* proposal no. IA/MP/IND/73253/2018, dated 26th July, 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.
- 11.2.2 Name of the EIA consultant: M/s J.M. EnviroNet Pvt. Ltd. [Sl. No. 41, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/RA 0186; valid upto 07.02.2023, Rev. 24, July 05, 2022].

Details submitted by Project proponent

- 11.2.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
27 th Oct., 2021	Standard ToR	Terms of	02 nd Nov,	01 st Nov, 2025

Date of application	Consideration	Details	Date of accord	Validity of ToR
		Reference	2021	

11.2.4 The project of M/s. UltraTech Cement Limited (Unit: Maihar Cement Works) is located in Village: Sarlanagar, Tehsil: Maihar, District: Satna (Madhya Pradesh) is for expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 MTPA), Cement (6.0 to 12.0 MTPA), CPP [(2 x 15.7) to (2 x 17 MW)] and WHRS (20 to 40 MW).

11.2.5 Environmental Site Settings:

S. No.	Particulars	Details			Remarks																															
1.	Total land	213.30 ha; Proposed expansion will be done within the existing plant premises.			Land use of the existing land is already industrial.																															
2.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land is under the possession of the company.			-																															
3.	Existence of habitation & involvement of R&R, if any.	Plant Site: No habitation exists within the plant site and R&R is not applicable. Study Area: <table><tr><th>Habitation</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>Sonbari</td><td>~1.2</td><td>NNW</td></tr><tr><td>Jhanda Tola</td><td>~1.8</td><td>NW</td></tr><tr><td>Delha</td><td>~2.4</td><td>NE</td></tr><tr><td>Hardaspur</td><td>~2.6</td><td>NE</td></tr><tr><td>Girgita</td><td>~2.7</td><td>NNE</td></tr><tr><td>Bamhani</td><td>~2.9</td><td>East</td></tr></table> There are approx. 93 villages in 10 km radius study area.			Habitation	Distance (km)	Direction	Sonbari	~1.2	NNW	Jhanda Tola	~1.8	NW	Delha	~2.4	NE	Hardaspur	~2.6	NE	Girgita	~2.7	NNE	Bamhani	~2.9	East	-										
Habitation	Distance (km)	Direction																																		
Sonbari	~1.2	NNW																																		
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Hardaspur	~2.6	NE																																		
Girgita	~2.7	NNE																																		
Bamhani	~2.9	East																																		
4.	Latitude and Longitude of all corners of the project site	<table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td colspan="3">Part A (Plant Site)</td></tr><tr><td>1.</td><td>24°12'29.69"N</td><td>80°48'2.39"E</td></tr><tr><td>2.</td><td>24°12'7.56"N</td><td>80°47'40.05"E</td></tr><tr><td>3.</td><td>24°12'2.02"N</td><td>80°47'23.81"E</td></tr><tr><td>4.</td><td>24°11'59.91"N</td><td>80°47'24.91"E</td></tr><tr><td>5.</td><td>24°11'55.87"N</td><td>80°47'29.30"E</td></tr><tr><td>6.</td><td>24°11'51.31"N</td><td>80°47'24.83"E</td></tr><tr><td>7.</td><td>24°11'29.20"N</td><td>80°47'52.69"E</td></tr><tr><td>8.</td><td>24°12'9.27"N</td><td>80°48'29.52"E</td></tr><tr><td>9.</td><td>24°12'24.99"N</td><td>80°48'11.82"E</td></tr></table>	Point	Latitude	Longitude	Part A (Plant Site)			1.	24°12'29.69"N	80°48'2.39"E	2.	24°12'7.56"N	80°47'40.05"E	3.	24°12'2.02"N	80°47'23.81"E	4.	24°11'59.91"N	80°47'24.91"E	5.	24°11'55.87"N	80°47'29.30"E	6.	24°11'51.31"N	80°47'24.83"E	7.	24°11'29.20"N	80°47'52.69"E	8.	24°12'9.27"N	80°48'29.52"E	9.	24°12'24.99"N	80°48'11.82"E	-
Point	Latitude	Longitude																																		
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8.	24°12'9.27"N	80°48'29.52"E																																		
9.	24°12'24.99"N	80°48'11.82"E																																		

S. No.	Particulars	Details			Remarks			
		Part B (Colony)						
		10.	24°12'5.03"N	80°48'35.64"E				
		11.	24°12'12.70"N	80°48'26.43"E				
		12.	24°12'19.86"N	80°48'33.31"E				
		13.	24°12'15.78"N	80°48'41.56"E				
		14.	24°12'12.89"N	80°48'44.96"E				
		15.	24°12'12.51"N	80°48'49.14"E				
		16.	24°12'10.41"N	80°48'54.72"E				
		17.	24°11'58.61"N	80°48'43.39"E				
		Part C (STP)						
		18.	24°12'27.89"N	80°48'7.25"E				
		19.	24°12'30.98"N	80°48'0.28"E				
		20.	24°12'32.56"N	80°47'58.77"E				
		21.	24°12'36.61"N	80°48'0.71"E				
		22.	24°12'37.17"N	80°48'0.66"E				
		23.	24°12'37.81"N	80°47'59.82"E				
		24.	24°12'40.31"N	80°48'1.17"E				
		25.	24°12'43.10"N	80°47'56.24"E				
		26.	24°12'47.42"N	80°47'50.94"E				
		27.	24°12'48.41"N	80°47'49.45"E				
		28.	24°12'49.83"N	80°47'49.57"E				
		29.	24°12'50.68"N	80°47'48.34"E				
		30.	24°12'50.92"N	80°47'48.34"E				
		31.	24°12'52.75"N	80°47'49.49"E				
		32.	24°12'59.30"N	80°47'46.35"E				
		33.	24°13'1.20"N	80°47'49.44"E				
		34.	24°12'50.04"N	80°47'57.73"E				
		35.	24°12'35.33"N	80°48'7.71"E				
		36.	24°12'28.76"N	80°48'8.39"E				
		5.	Elevation of the project site	330 m to 460 m above mean sea level.			-	
		6.	Involvement of Forest land if any.	No Forest Land is involved in the plant site.			-	

S. No.	Particulars	Details	Remarks																		
7.	Water body exists within the project site as well as study area	Project site: No water body exists within the plant site except artificial Rainwater Harvesting ponds/reservoir developed by the company. Study area: Following water bodies falls within 10 km radius: <table><tr><th>Water body</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>Tons or Tamasa River</td><td>~ 0.2</td><td>NW</td></tr><tr><td>Ghusru Nala</td><td>~ 1.0</td><td>West</td></tr><tr><td>Serainji Nala</td><td>~ 6.0</td><td>NNE</td></tr><tr><td>Kalindari Nadi</td><td>~ 6.5</td><td>South</td></tr><tr><td>Lilji Nala</td><td>~ 9.5</td><td>WNW</td></tr></table>	Water body	Distance (km)	Direction	Tons or Tamasa River	~ 0.2	NW	Ghusru Nala	~ 1.0	West	Serainji Nala	~ 6.0	NNE	Kalindari Nadi	~ 6.5	South	Lilji Nala	~ 9.5	WNW	HFL of Tamas River is 325 m.
Water body	Distance (km)	Direction																			
Tons or Tamasa River	~ 0.2	NW																			
Ghusru Nala	~ 1.0	West																			
Serainji Nala	~ 6.0	NNE																			
Kalindari Nadi	~ 6.5	South																			
Lilji Nala	~ 9.5	WNW																			
8.	Existence of ESZ/ESA/national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area.	Nil.	-																		

11.2.6 The existing project was accorded Environment Clearance from MoEFCC, New Delhi for Increase in Clinker production from 3.0 MTPA to 4.0 MTPA, Cement production from 5.0 MTPA to 6.0 MTPA and existing CPP (2x15.7 MW) through up-gradation and optimization of plant parameters/capacity utilization *vide* letter no. J-11011/113/2018-IA-II (I) dated 24th January, 2020 in the name of M/s. Maihar Cement (A Division of Century Textile & Industries Ltd.); and EC was transferred in the name of M/s. UltraTech Cement Limited (Unit: Maihar Cement Works) *vide* letter no. J-11011/113/2008-IA.II(I) dated 19th May, 2020. Consent to Operate (CTO) for the existing unit was accorded by MPPCB *vide* their Consent No.: AW-54212, Outward No.: 113480 dated 17th September, 2021 for Clinker (3.0 MTPA), Cement (5.0 MTPA). The validity of CTO is up to 30th September, 2022. CTO for CPP No. 1 for 15.7 MWH has been obtained *vide* Outward No.: 113477 dated 17th September, 2021 and for CPP No. 2 for 15.7 MWH has been obtained *vide* Outward No.: 113480 dated 17th September, 2021. Both are also valid up to 30th September, 2022.

11.2.7 Implementation Status of the existing EC:

S. No.	Facilities	Units	As per EC dated 24 th January, 2020	Implementation Status as on date	Production as per CTO
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S. No.	Facilities	Units	As per EC dated 24 th January, 2020	Implementation Status as on date	Production as per CTO
1.	Clinker	Million TPA	4.0 (Line I, II & III)	Under Implementation	3.0
2.	Cement	Million TPA	6.0 (Line I, II & III)	Under Implementation	5.0
3.	CPP - I	MW	15.7	Implemented	15.7
4.	CPP - II	MW	15.7	Implemented	15.7
5.	WHRS	MW	16* (As per CTO - 20 MW)	Implemented	20*
<i>Note: * CTO for 20 MW WHRS has been obtained from MPPCB</i>					

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

S. No.	Plant Equipment / Facility	Existing Facilities as per EC dated 24 th June, 2008.								Proposed Unit* In all Line		Final (Existing + Proposed)	
		Total (A + B)		Implemented (A)		Un - implemented (B)		As per CTO					
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity
1.	Clinker	Kiln: 2 x 3750 TPD 1 x 4500 TPD	4.0 Million TPA	Kiln: 2 x 2300 TPD 1 x 4500 TPD	3.0 Million TPA	Kiln: 2 x 1450 TPD	1.0 Million TPA	Kiln: 2 x 3750 TPD 1 x 4500 TPD	3.0 Million TPA	Kiln: 1 x 12000 TPD	4.0 Million TPA	Kiln: 2 x 3750 TPD + 1 x 4500 TPD + 12000 TPD	8.0 Million TPA
2.	Cement	Mill: 2 x 150 TPH 1 x 160 TPH 2 x 200 TPH	6.0 Million TPA	Mill: 3 x 120 TPH 2 x 165TPH	5.0 Million TPA	Mill: 2 x 30 TPH 1 x 40 TPH 2 x 35 TPH	1.0 Million TPA	Mill: 3 x 120 TPH 2 x 165TPH	5.0 Million TPA	Mill: 2 x 450 TPH	6.0 Million TPA	Mill: 2 x 150 TPH 1 x 160 TPH 2 x 200 TPH + 2 x 450 TPH	12.0 Million TPA
3.	CPP	Boiler capacity 2 x 70 TPH	2 x 15.7 MW	Boiler capacity 2 x 70 TPH	2 x 15.7 MW	Nil	Nil	Boiler capacity 2 x 70 TPH	2 x 15.7 MW	**Boiler capacity 2 x 6 TPH	**2 x 1.3 MW	Boiler capacity 2 x 76 TPH	2 x 17 MW
4.	WHRS	16 MW Turbine	16 MW	16 MW Turbine	16 MW	Nil	Nil	20 MW Turbine	20 MW	20 MW Turbine	20 MW	40 MW Turbine	40 MW
*Note: Part of Clinker will be dispatched to split Grinding Units of UltraTech. **Capacity expansion will be done by optimization and running hours increased from 320 days to 330 days *** RMC of 2x30 M3/hour capacity to be installed for construction purpose													

11.2.9 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	Quantity (Million TPA)			Source	Distance from Site	Mode of Transportation
		Existing	Additional	Total			
1.	Limestone	6.0	6.0	12.0	Four Captive Limestone Mines	~6 - 9 km / 12-28 km (From mine to crusher)	via Conveyor belt / Road
2.	Laterite / Iron Ore	0.150	0.150	0.30	National Minerals (Katni), Fort city Mining (Katni), Vishwakarma Mining (Katni) and Maruti Minerals (Mining) (Satna)	50 - 100 km	Road
3.	Red Mud	0.150	0.150	0.3	Hindalco, Renukoot (UP)	290 km	Rail
4.	Gypsum (Chemical Gypsum/ Phospho - gypsum or Mineral gypsum / Industrial Gypsum)	0.30	0.30	0.60	Hindalco Dahej (Gujarat), Paradeep Port (Orissa) & local area of Madhya Pradesh / Uttar Pradesh / Gujarat / Karnataka & Uttar Pradesh	500 - 1600 km	Road / Rail
5.	Fly Ash	2.10	2.10	4.2	Thermal Power Plant Birsinghpur Umari (Madhya Pradesh), NTPC – Singrauli & Vindhyanagar (Madhya Pradesh) and nearby TPP	180 - 300 km	Road

Fuel:

S. No.	Fuel	Quantity (Million TPA)			Source	Distance & Mode of Transportation	Calorific Value (Kcal/Kg)	% Ash	% Sulphur
		Existing	Proposed	Total					
Cement Plant									

S. No.	Fuel	Quantity (Million TPA)			Source	Distance & Mode of Transportation	Calorific Value (Kcal/Kg)	% Ash	% Sulphur
		Existing	Proposed	Total					
1.	Indian Coal (100%)	0.48	0.48	0.96	SECL (Chhattisgarh), NCL (Madhya Pradesh), and Bicharpur mines (Chhattisgarh)	Rail/Road / 150-250 km	3000 - 4500	25 - 45	1 - 3
2.	Imported Coal (100%)				South African, Australian, Mozambican & US via Gangavaram Port, Vishakhapatnam (A.P)	Rail / 1025 km	5000 - 6500	8 - 35	0.2 - 1.5
3.	Imported Petcoke				Saudi Arabia, US, Sinopec International (Middle East), Dubai, Aramco Trading Company, Dhahran via Gangavaram Port, Vishakhapatnam (A.P)	Rail / 1025 km	7000 – 8500	0.5 - 2.0	3 - 9
4.	Indigenous Petcoke				Bharat Petroleum Corporation, Bina (M.P), Indian Oil Corporation, Paradeep	335 – 1025 km by Rail	3200-5000	9 - 25	2 - 6
CPP									
4.	Indian Coal	0.32	0.03	0.35	SECL (Chhattisgarh), NCL (Madhya Pradesh), and Bicharpur mines (Chhattisgarh)	1025 km by rail	3000-4500	25-45	1 - 3
	Imported Coal				South African, Australian, Mozambican & US via	150 km - 250 km by road	5000-6500	8-35	0.2 - 1.5

S. No.	Fuel	Quantity (Million TPA)			Source	Distance & Mode of Transportation	Calorific Value (Kcal/Kg)	% Ash	% Sulphur
		Existing	Proposed	Total					
					Gangavaram Port, Vishakhapatnam (A.P)				

11.2.10 The existing water requirement is 2975 KLD; which is being sourced from Tamasa River (during rainy season only), Rainwater Stored in Mine Pits of Captive Mine Sites and Plant Reservoir and permission for withdrawal of surface water (2 cusecs of water ~4890.2 KLD) from Tamasa River has been obtained from Irrigation department of Madhya Pradesh vide letter no. 6/6/74/G/33/Bhopal dated 13th Feb., 1975. Agreement for withdrawal of surface water from Tamasa River has been made between Governor of Madhya Pradesh, acting through Executive Engineer, Water Resources Department, Satna (Madhya Pradesh) on dated 9th June, 2004. Additional 1200 KLD water will be required for proposed expansion project; which will be sourced from Tamasa River, Rainwater Stored in Mine Pits of Captive Mine Sites and Plant Reservoir. Thus total of 4175 KLD water is required for the whole project.

11.2.11 Existing power requirement of 61 MW is obtained from CPP, WHRS and Grid. The Power requirement for the proposed expansion project is estimated as 50 MW, out of which 34 MW will be obtained from CPP, 40 MW from WHRS, Solar Power Plant (12.5 MW) & Grid (24.5 MW).

11.2.12 Baseline Environmental Studies:

Period	Pre - Monsoon (March to May, 2021)
AAQ Parameters at 08 locations	- PM₁₀ - 60.0 to 85.8 µg/m³ - PM_{2.5} - 28.2 to 47.2 µg/m³ - SO₂ - 6.0 to 15.2 µg/m³ - NO₂ - 12.8 to 26.3 µg/m³ - CO - BDL (DL- 0.50) to 0.96 mg/m³
Incremental GLC	- PM₁₀ = 3.91 µg/m³ (500 m in South East direction) - SO₂ = 4.69 µg/m³ (354 m in South East direction) - NO_x = 7.67 µg/m³ (350 m in South East direction) - CO = 0.09 µg/m³ at approx. 1.0 km
Ground Water Quality at 08 locations	- pH - 7.57 to 7.96 - Total Hardness – 171.15 to 462.35 mg/l - Chloride - 32.41 to 66.48 mg/l - Fluoride - 0.63 to 0.98 mg/l - Heavy Metals - Iron as Fe – 0.23 to 0.12 mg/l
Surface Water Quality at 04 locations	- pH: 7.65 to 7.81 - DO: 6.4 to 7.1 mg/l

	• BOD: 7.9 to 12.5 mg/l • COD from 22.4 to 32.0 mg/l																				
Noise Levels Leq (Day and Night)	52.8 to 67.8 Leq dB (A) for the Day time and 42.0 to 59.9 Leq dB (A) for the Night time																				
Traffic assessment study findings	✓ Traffic study has been conducted at SH- 11 (adjacent in East direction) from the Plant site. ✓ Transportation of raw material & finished product will be done as per details given below: ▪ Laterite/Iron Ore: 100% by road ▪ Red Mud: 100% by road ▪ Fly ash: 94 % by road & 6 % by rail ▪ Gypsum: 100% by rail ▪ Coal for CPP: 35 % by road & 65 % by rail ▪ Coal for Kiln: 65 % by road & 35 % by rail ▪ Petcoke: 100 % by rail ▪ Clinker: 100 % by rail ▪ Cement: 27 % by road & 73 % by rail ✓ Existing PCU is 230 PCU/hr. on SH - 11 and existing level of service (LOS) is A: <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>SH - 11</td><td>230</td><td>1500*</td><td>0.15</td><td>A</td></tr></table> * Capacity as per IRC: 106-1990 Guidelines {*Arterial (2 lane two way)} ▪ PCU load after proposed expansion project will be 336 (230 Existing + 106 Additional) PCU/hr. on SH - 11 and existing Level of Service (LOS) will be B: <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>SH-11</td><td>230 + 106 = 336</td><td>1500*</td><td>0.22</td><td>B</td></tr></table> * Capacity as per IRC: 106-1990 Guidelines {*Arterial (2 lane two way)} Conclusion: The level of service will change from A to B (Very Good) after including additional traffic due to proposed expansion project.	Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS	SH - 11	230	1500*	0.15	A	Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS	SH-11	230 + 106 = 336	1500*	0.22	B
Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS																	
SH - 11	230	1500*	0.15	A																	
Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS																	
SH-11	230 + 106 = 336	1500*	0.22	B																	
Flora and fauna	Three Schedule - I species i.e., <i>Crocodilus palustris</i> (Crocodile), <i>Python molurus</i> (Python) and <i>Pavo cristatus</i> (Peafowl) were recorded in the study area.																				

	Earlier, Wildlife Conservation Plan was prepared and approved in the name of Maihar Cement separately for Cement Plant (dated 22nd Dec., 2018) and 03 Captive Limestone Mines (31st Jan., 2016). Since, Cement Plant and 03 captive limestones mines are in near vicinity and have overlapped 10 km radius study area; therefore, UltraTech Cement Ltd., after taking over Maihar Cement on 19th May, 2020, submitted request letter to PCCF, Bhopal for combining all the 04 Conservation Plan in the name of UltraTech Cement Ltd. on 31st Aug., 2021. The letter regarding the same is submitted by the project proponent. The matter of overlapping of four Wildlife Conservation Plans falling under the preview of the cement plant and adjoining mines was referred to MoEF&CC by the State Forest Department.
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11.2.13 The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No.	Type of Waste	Waste	Source		Quantity			Mode of Treatment / Disposal
			Plant Unit	Section	Existing	Additional	Total	
1.	SW	Dust	Cement Plant	APCE	610 TPD	610 TPD	1220 TPD	Dust collected from various APCEs will be totally recycled into the process.
2.	SW	Fly ash	Cement Plant	CPP	320 TPD	40 TPD	360 TPD	Used in manufacturing of PPC grade cement
3.	SW	STP Sludge	Cement Plant	STP	11-12 kg/day	3-4 kg/day	12 - 15 kg/day	Used as manure for greenbelt development / plantation
4.	HW	Used Oil	Different sections	Plant Maintenance	25.4	20	45.4 TPA	Sold to CPCB registered recycler
		Grease			8 TPA	6 TPA	14 TPA	
		Contaminated cotton rags or other cleaning materials			3- 4 TPA	2 - 3 TPA	5 - 6 TPA	
		Empty barrels/ containers/ liners			4 - 6 TPA	4 - 6 TPA	8 - 12 TPA	Will be sold to CPCB registered recyclers per Hazardous Waste Management Rules, 2016.
5.	MSW	Bottles, Paper, Cans, Textiles, etc.	Plant and Colony	Dry	150 kg / day	50 kg / day	200 kg / day	Sold to registered recycler.
		Kitchen and canteen/ Green waste		Wet	100 kg / day	50 kg / day	~ 150 kg/day	Organic waste utilized as manure for greenbelt development/ plantation.

11.2.14 Public Consultation:

Details of Advertisement Given	Public Hearing Notice published in Newspapers the “Nav Swadesh” & “Dainik Bhasker” on 04 th Feb., 2022.
Date of Public Consultation	09 th March, 2022
Venue	Sharda Mahavidyalaya Premises at Village: Sarlanagar, Gram Panchayat: Sonwari, Tehsil: Maihar, District: Satna (Madhya Pradesh)
Presiding Officer	Additional Collector, Satna
Major Issues Raised	Employment, Environment & Pollution, Health, Socio - Economic Development, Land related, etc.

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

S. No.	Concerns raised during the Public Hearing	Physical activities to be done	Unit of Measurement					Tentative Budget (Rs. in lacs)
			1st Year	2nd Year	3rd Year	4th Year	5th Year	
1	Employment	Renovation / Upgradation of Existing Vocational Training Center	01 (Plant site)	-	-	-	-	20
2	Education	Renovation of Primary School	01 (Village Madai Naya Tola)	01 (Village Tilora)	01 (Village Saliya Khari)	01 (Village Delha)	01 (Village Amgar)	150
3	Health	Renovation work in Hospital / OHS centre of Unit	01 (Plant site)	-	-	-	-	25
		New Pathology equipment i.e., Automatic Cell Counter, Digital X-Ray Machine and Oxygen Concentrator etc.	01 No. of each equipment (Plant Site)	-	-	-	-	25
		Provision of Mobile medical van in nearby villages	01	-	-	01	-	24
4	Plantation	Plantation in nearby land	3000 saplings	-	-	-		30
5	Socio-economic Development	Completion of construction of Muktidham	01 (Gram Panchayat Sonwari)	01 (Gram Panchayat Chopada)	-	-	-	20
		Construction of Stop Dam at Tamus River	01 (Village Sonwari)	-	-	-	-	90

11.2.15 The existing capital cost of project was Rs. 989.11 Crore. The capital cost of the proposed expansion project is Rs. 1500 Crores and the capital cost for environmental protection measures is proposed as Rs. 120 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 3.0 Crores. The employment generation from the proposed expansion is 250 (50 regular employees and 200 as contractual). The details of cost for environmental protection measures are as follows:

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
i.	Air Pollution Control	72.0	2.10	116	2.0
ii.	Water Pollution Control and Rain Water Harvesting Measures	2.0	0.10	1.15	0.20
iii.	Noise Pollution	1.5	0.08	1.0	0.05
iv.	Environment Monitoring and management	2.50	0.25	1.35	0.25
v.	Greenbelt Development	5.69	1.5	0.50	0.50
	Total	83.69	4.03	Rs. 120	Rs. 3.0
vi.	Addressal of Public Consultation concerns	1.33	-	2.23 Crores	-
vii	Details of Adoption of Villages, if any	12.00	-	4.0 * Villages: Chopada, Sarlanagar, Sagmaniya, Delha, Sonwari, Bhadanpur Uttar Patti, Bhadanpur Daxin Patti, Pipraparband, Amgar, Saliya Khari, Umrur and Tilora	-
	Grand Total	97.02	4.03	126.23	3.0
*CSR Expenditure done in last 5 years.					

11.2.16 Existing greenbelt has been developed in 70.40 ha area which is about 33% of the total project area of 213.30 ha with total 8,43,800 saplings have been planted till date which include 1,76,000 trees @ 2500 plants/ha and remaining 6,67,800 shrubs and herbs have been planted.

11.2.17 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 IRO, MoEFCC:

11.2.18 The Status of compliance of earlier EC was obtained from Regional Officer, Bhopal vide File no. 5-7/2022/Env/082 dated 05th May, 2022 in the name of M/s. UltraTech Cement Ltd. The Action taken report regarding the partially complied condition was submitted to Regional Officer, MoEFCC for closure vide letter no. UTCL/Maihar/Plant/2022/20 dated 30th May, 2022. MoEFCC (RO), evaluated the same and has issued letter dated 25th July, 2022. The details of the observations made by RO in the report dated 25th July, 2022 along with its re-assessment / present status as furnished by the PP is given as below.

S. No.	Partially Compliance details	Observation of RO (abridged)	Condition no.			Re-assessment by RO
			EC date	Specific	General	
1.	The implementation status of Wildlife Conservation Plan shall be submitted with six monthly compliance reports.	Since, the matter of overlapping of 04 Wildlife Conservation Plan falling under the purview of the cement plant and adjoin mines is pending at MoEFCC, New Delhi, the implementation of the wildlife conservation plan is yet to start. The stipulated condition is considered Partly Complied for the actions initiated at the end of the project proponent.	24 th Jan., 2020	(ii)	-	As the requisite amount has been recently deposited with the MP Forest Department, the implementation of the plan lies with the Forest Department and requisite co-operation (if any) as desired by the Forest Department shall be provided by the project authorities. Further, the project authorities shall obtain six-monthly implementation status from the Forest Department and submit the status (as received) on a six-monthly basis along with the six-monthly compliance report. In view of the observations noted above, the stipulated condition is considered as Compliance in Progress .

Written representations:

11.2.19 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter No. UTCL/ENV/MUM/2022/96 dated 16.08.2022 through email dated 16.08.2022 submitted the revised information w.r.t. to the following:

S. No.	Point	Reply
1.	Revised Socio-Economic	Cost of the Socio-Economic Development Plan has been revised from Rs. 2.235 Crores to Rs. 7.5 Crores, which will be implemented in 5

S. No.	Point	Reply
	Development Plan	years. The revised plan is incorporated at para 11.2.14 above.
2.	Air quality modelling for CO	Air quality modelling for CO has been done and max. GLC was found to be 0.09 µg/m ³ at approx. 1.0 km. Isopleth showing the max. GLC for CO is submitted along with this reply. The GLC is also updated at para 11.2.12 above.
3.	Revised Water Balance	Revised water balance w.r.t. reduction in total water requirement in CPP & WHRS (from 940 KLD to 700 KLD after RO treatment) is submitted along with this reply. With this, the total water requirement after proposed expansion will be 4175 KLD which is also updated at para 11.2.10 above.
4.	Check figure of Relative Humidity	Relative Humidity ranges from 23 to 96% during March to May, 2021. It was mentioned as 3% due to typographical error.
5.	HFL of Tamas River	HFL of Tamas River is 325 m. Elevation of Plant site is 330 m to 460 m above mean sea level. The same is updated at para 11.2.5 above.
6.	Status of Name Change of Wildlife Conservation Plan from Maihar Cement to UltraTech Cement Ltd.	Earlier, Wildlife Conservation Plan was prepared and approved in the name of Maihar Cement separately for Cement Plant (dated 22 nd Dec., 2018) and 03 Captive Limestone Mines (31 st Jan., 2016). Since, Cement Plant and 03 captive limestones mines are in near vicinity and have overlapped 10 km radius study area; therefore, UltraTech Cement Ltd., after taking over Maihar Cement on 19 th May, 2020, submitted request letter to PCCF, Bhopal for combining all the 04 Conservation Plan in the name of UltraTech Cement Ltd. on 31 st Aug., 2021. The letter regarding the same is submitted by the project proponent. The matter of overlapping of four Wildlife Conservation Plans falling under the preview of the cement plant and adjoining mines was referred to MoEF&CC by the State Forest Department. The details are also updated at para 11.2.12 above.
7.	Mitigation plan for Tamas River & Ghusru Nala	The Cement Plant is based on Dry Process Technology for Cement manufacturing with Pre-Heating and Pre-Calcliner Technology. No wastewater will be discharged outside the plant premises. The following measures are being / will be adopted: ✓ Zero discharge is being / will be maintained by Unit. ✓ Storm water drains have been channelized and is diverted to three nos of Water Reservoirs within the plant premises having capacity of 5.75 lacs m ³ for storage of rain water.

Deliberations by the Committee

11.2.20 The Committee noted the following:

1. The instant proposal is for expansion of Integrated Cement Plant - Clinker (4.0 to 8.0 MTPA), Cement (6.0 to 12.0 MTPA), CPP [(2 x 15.7) to (2 x 17 MW)] and WHRS (20 to 40 MW).
2. 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.
3. 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.
4. 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.
5. Tamasa River, Ghusru Nala, Serainji Nala, Kalindari Nala and Lilji Nala exists within the study area project site.
6. 4175 KLD water will be required for existing cum proposed expansion project; which will be sourced from Tamasa River, Rainwater Stored in Mine Pits of Captive Mine Sites and Plant Reservoir.
7. Existing greenbelt has been developed in 70.40 ha area which is about 33% of the total project area of 213.30 ha with total 8,43,800 saplings have been planted till date which include 1,76,000 trees @ 2500 plants/ha and remaining 6,67,800 shrubs and herbs have been planted.
8. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
9. There are approx. 93 villages in 10 km radius study area. As committed, PP shall adopt 13 villages, namely Chopada, Sarlanagar, Sagmaniya, Delha, Sonwari, Bhadanpur Uttar Patti, Bhadanpur Daxin Patti, Pipraparband, Amgar, Saliya Khari, Umrar and Tilora and develop them into model villages in next 10 years.
10. Three Schedule - I species i.e., *Crocodilus palustris* (Crocodile), *Python molurus* (Python) and *Pavo cristatus* (Peafowl) were recorded in the study area. As reported, Earlier, Wildlife Conservation Plan was prepared and approved in the name of Maihar Cement separately for Cement Plant (dated 22nd December, 2018) and 03 Captive Limestone Mines (31st January, 2016). Since, Cement Plant and 03 captive limestones mines are in near vicinity and have overlapped 10 km radius study area; therefore, UltraTech Cement Ltd., after taking over Maihar Cement on 19th May, 2020, submitted

request letter to PCCF, Bhopal for combining all the 04 Conservation Plan in the name of UltraTech Cement Ltd. on 31st August, 2021.

11. 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 in a year.
12. 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. As committed, the cost of the Socio-Economic Development Plan has been revised from Rs. 2.235 Crores to Rs. 7.5 Crores, which will be implemented in 5 years.
13. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
14. 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.
15. 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

- 11.2.21 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant proposal for grant of Environment Clearance, subject to uploading the written submission on Parivesh Portal, under the provisions of EIA Notification, 2006 and further 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 PP 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) Tamasa River, Ghusru Nala, Serainji Nala, Kalindari Nala and Lilji Nala exists within the study area project site. A robust Conservation scheme to protect these water bodies; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.
- (v) As committed, PP shall adopt 13 villages, namely Chopada, Sarlanagar, Sagmaniya, Delha, Sonwari, Bhadanpur Uttar Patti, Bhadanpur Daxin Patti, Pipraparband, Amgar, Saliya Khari, Umrar and Tilora and develop them into model villages in next 10 years.
- (vi) 4175 KLD water will be required for existing cum proposed expansion project; which will be sourced from Tamasa River, Rainwater Stored in Mine Pits of Captive Mine Sites and Plant Reservoir. Necessary permission shall be obtained from the Competent Authority in this regard.
- (vii) Three tier Green Belt shall be developed in a time frame of one year covering at least 33% of the total project 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.
- (viii) Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- (ix) Air cooled condensers shall be used in the Power plant.
- (x) Rain water harvesting system as committed in EIA/EMP shall be implemented.
- (xi) 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.
- (xii) Slip roads shall be provided at the gates and along crossings on main roads.
- (xiii) 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.
- (xiv) 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.
- (xv) 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.
- (xvi) Particulate matter emissions from all the stacks shall be less than 30 mg/Nm³.
- (xvii) The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic waste water shall be treated in STP and treated water shall be re-used for greenbelt development and plantation and dust suppression.
- (xviii) DeSOx system shall be provided dry type. NOx level shall be maintained below 600 mg/Nm³ by using best available technology.
- (xix) Petcoke dosing shall be controlled automatically to control SO₂ emission from chimney within the prescribed limits.

- (xx) The PP shall implement a project specific AQMP (Air Quality Management Plan) with Best practices; 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.
- (xxi) The PP shall develop a control strategy and mitigation 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, adsorbers, and biological degradation.
- (xxii) The PP shall monitor cement dust exposures in clinker, grinding and packing areas using personal and area air samplers and to compare the results of cement dust (8 hours' average exposures) with permissible limits for Portland cement.
- (xxiii) A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- (xxiv) 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.
- (xxv) The recommendations of the approved Site-Specific 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.
- (xxvi) The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- (xxvii) The PP shall complete and start the implementation of the 500 kg /day Bio-gas plant in two months' period and report needs to be submitted to IRO MoEF&CC in this regard.
- (xxviii) All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC. As committed, the cost of the Socio-Economic Development Plan has been revised to Rs. 7.5 Crores, which will be implemented in 5 years.
- (xxix) Sufficient number 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. The PP to this affect shall implement a time line action Plan.

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 with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement); 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 fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120°each), covering upwind and downwind directions.
- iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
- v. 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.
- vi. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.
- vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.
- viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

- x. Provide wind shelter fence and chemical spraying on the raw material stock piles; and
- xi. Provide Low NOX burners as primary measures and SCR /NSCR technologies as secondary measure to control NOX emissions.
- xii. Have separate truck parking area and monitor vehicular emissions at regular interval.
- xiii. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of covered conveyor belts/railways as a mode of transport
- xiv. Ventilation system shall be designed for adequate air changes as per ACGIH document for all tunnels, motor houses, 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 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and 10th May, 2016 (in case of Co-processing Cement); 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.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

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.
- ii. Project proponent shall submit a study report within six months 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.

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 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. 11.3

11.3 Installation of 2 X 7 MTPA Greenfield Pellet Plant by M/s Essar Minmet Limited, located at Paradeep, District Jagatsinghpur, Odisha- Consideration of Environmental Clearance.

[Proposal No. IA/OR/IND/198977/2021, File No. J-11011/38/2021-IA.II(I)]
[Consultant: M N Dastur & Co (P) Ltd.; Valid upto 10.10.2022]

- 11.3.1 M/s. Essar Minmet Limited (EML) has made an online application vide proposal no. IA/OR/IND/198977/2021 dated 27.07.2022 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) under Category ‘A’ of the schedule of the EIA Notification, 2006) and appraised at Central Level.
- 11.3.2 Name of the EIA consultant: M/s. M N Dastur & Co (P) Ltd. [Certificate no. NABET/EIA/1821/RA0131; NABET Extension Letter no. QCI/NABET/ENV/ACO/22/2417 dated 11.07.2022; Valid up to 10.10.2022].

Details submitted by Project proponent

- 11.3.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	ToR Validity
19 th February, 2021	31 st meeting of REAC 25-26 th February, 2021	Terms of Reference	04.03.2021	03.03.2025

11.3.4 The project of M/s. Essar Minmet Limited (EML) located in Paradip in Kujanga Tehsil of Jagatsinghpur district of Odisha is for setting up of a new Pellet Plant for production of 14 MTPA iron ore pellets.

11.3.5 Environmental Site Settings:

S.No.	Particulars	Details			Remarks																
i.	Total land	40.49 ha [Government Land]			Land use: Industrial land;																
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The land is in possession of Paradip Port Trust Authority and would be taken on long term lease basis for sixty (60) years.																			
iii.	Existence of habitation & involvement of R&R, if any.	Project site: Industrial Park under Paradeep Smart Industrial Port City (SIPC) Study Area: <table><tr><th>Habitation</th><th>Direction</th><th>Distance</th></tr><tr><td>Paradip Port Trust Township</td><td>SE</td><td>3 km</td></tr><tr><td>IOCL Township</td><td>NW</td><td>1.7 km</td></tr></table>			Habitation	Direction	Distance	Paradip Port Trust Township	SE	3 km	IOCL Township	NW	1.7 km	Status of R&R.: NA							
Habitation	Direction	Distance																			
Paradip Port Trust Township	SE	3 km																			
IOCL Township	NW	1.7 km																			
iv.	Latitude and Longitude of all corners of the project site.	<table><tr><th>Sl. No.</th><th>Coordinate</th></tr><tr><td>1.</td><td>20.289 N, 86.633 E</td></tr><tr><td>2.</td><td>20.290 N, 86.645 E</td></tr><tr><td>3.</td><td>20.286 N, 86.642 E</td></tr><tr><td>4.</td><td>20.283 N, 86.632 E</td></tr></table>	Sl. No.	Coordinate	1.	20.289 N, 86.633 E	2.	20.290 N, 86.645 E	3.	20.286 N, 86.642 E	4.	20.283 N, 86.632 E									
Sl. No.	Coordinate																				
1.	20.289 N, 86.633 E																				
2.	20.290 N, 86.645 E																				
3.	20.286 N, 86.642 E																				
4.	20.283 N, 86.632 E																				
v.	Elevation of the project site	3 m above mean sea level																			
vi.	Involvement of Forest land if any.	Not Applicable																			
vii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study	Project site: No Study area : <table><tr><th>Waterbody</th><th>Direction</th><th>Distance</th></tr><tr><td>Mahanadi</td><td>North</td><td>3.9 km</td></tr><tr><td>Santra</td><td>South West</td><td>3.9 km</td></tr><tr><td>PPT Reservoir</td><td>North</td><td>Adjacent</td></tr><tr><td>Taladanda Canal</td><td>North East</td><td>300 m</td></tr></table>			Waterbody	Direction	Distance	Mahanadi	North	3.9 km	Santra	South West	3.9 km	PPT Reservoir	North	Adjacent	Taladanda Canal	North East	300 m	Distance of HFL from Project Site : 3.9 km	
Waterbody	Direction	Distance																			
Mahanadi	North	3.9 km																			
Santra	South West	3.9 km																			
PPT Reservoir	North	Adjacent																			
Taladanda Canal	North East	300 m																			

	area		
viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Bhitarkanika Wildlife Sanctuary Paradeep Severely Polluted Area (SPA)	7.8 km, NE Project is located within Paradeep SPA

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

Sl No	Plant Facility	Proposed Units	
		Configuration	Capacity
1.	Pellet Plant (Module-I and Module-II)	2 x 7 MTPA	14
2.	Proportioning and mixing, green balling, induration drying, pre-heating, firing, after firing and cooling and product screening	-	Matching Capacity
3.	Terminal facilities (slurry receiving, thickening and filtration) for iron ore slurry	-	Matching Capacity

11.3.7 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	Total Annual requirements, tons	Source	Distance from site (km)	Mode of Transportation
1	Iron ore concentrate	14,294,000	Proposed captive beneficiation plant at Keonjhar district, Odisha, through slurry pipe line.	250	Slurry Pipeline
2	Bentonite	80,000	Procured from Gujarat	4	Sea (by road from Paradeep Port to plant site)
3	Limestone	320,000	Imported from Middle East Countries (UAE, Oman)	4	Sea (by road from Paradeep Port to plant site)
4	Dolomite	156,000			

Sl No.	Raw Material	Total Annual requirements, tons	Source	Distance from site (km)	Mode of Transportation
5	Anthracite coal	202,000	Imported (Russia/ Vietnam/ Indonesia/Australia)	4	Sea (by road from Paradeep Port to plant site)
6	Natural Gas	30,000 Nm ³ /hr	IOCL/Gail	0	By pipeline
7	Furnace Oil	210,000 KL (Only in the event of non-availability of NG)	IOCL Paradeep	2	By road
8	LDO	440 KL	IOCL Paradeep	2	By road

11.3.8 The water requirement for the proposed project is estimated as 9,240 m³ /day, which will be obtained by recovered water after dewatering/filtration of iron ore concentrate slurry and partly by recycling of treated water from ETP and treated water of STP.

11.3.9 The power requirement for the proposed project is estimated as 87 MW (max), which will be obtained from the Paradipgarh switchyard of OPTCL.

11.3.10 Baseline Environmental Studies:

Period	Parameters
AAQ parameters at 8 Locations	PM _{2.5} = 43.2 to 70.0 µg/m ³ PM ₁₀ = 80.6 to 130.3 µg/m ³ SO ₂ = 4.0 to 24.4 µg/m ³ NO _x = 25.6 to 37.3 µg/m ³ CO = 0.1 to 0.6 mg/m ³
Incremental GLC level	PM ₁₀ = 5.7 µg/m ³ (Level at 2.17 km in NNW Direction) SO ₂ = 2.2 µg/m ³ (Level at 2.17 km in NNW Direction) NO _x = 4.3 µg/m ³ (Level at 2.17 km in NNW Direction) CO = 32.4 µg/m ³ (Level at 6.5 km in SSE Direction)
Ground water quality at 8 locations	pH: 7.51 to 7.80 Total Hardness: 505.63 to 605.59 mg/l, Chlorides: 288.99 to 503.33 mg/l, Fluoride: < 0.1 mg/l Heavy metals (Cr 6+) : <0.02 mg/l
Surface water quality at 8 locations	pH: 4.85 to 7.91 DO: 5.2 to 6.8 mg/l BOD: 5.33 to 20.67mg/l COD: 20.63 to 67.12 mg/l
Noise levels Leq (Day and Night)	60.67 to 67.87 dBA for the day time and 57.33 to 65.43 dBA for the Night time

Traffic assessment study findings	•Traffic study has been conducted on Athar Banki on NH-53 which is approximately 250 m from the plant site. •Transportation of raw material, fuel & finished product will be done 5% by road (from Paradip port and IOCL to plant). The finished product would be transported to Paradip Port by covered conveyer. •Existing PCU is 1145.79 PCU/hr at Athar Banki on NH 53 and existing level of service (LOS) is: C <table><tr><th>Road</th><th>Location</th><th>V (Vol in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LOS</th></tr><tr><td>NH53</td><td>Athar Banki</td><td>1145.79</td><td>3600</td><td>0.32</td><td>C</td></tr></table> • PCU load after proposed project will be 1145.79 (Existing) + 26.21 (Additional) PCU/hr and level of service (LOS) will be: C * Note: Capacity as per IRC-106-1990 Guide line for capacity for roads. Conclusion: The level of service will remain C after including additional traffic due to proposed project.	Road	Location	V (Vol in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS	NH53	Athar Banki	1145.79	3600	0.32	C
Road	Location	V (Vol in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS								
NH53	Athar Banki	1145.79	3600	0.32	C								
Flora and fauna	Since Bhitarkanika Wildlife Sanctuary falls in the study area, there is presence of Schedule 1 species like Olive Ridley Turtle, Dolphins, Indian Python, Crocodiles etc. A wildlife conservation plan approved by PCCF, Odisha has been prepared and INR 357.781 lakhs has been allocated for the said plan												

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

Sl No	Type of waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal
1.	Pellet plant fines	Raw material, product handling and APC dust	70,000	-	Recycling within the plant
2.	STP sludge	STP	110	-	Used as manure for greenbelt
3.	Used oil	Various processes	30 KL	-	Authorized Recyclers

11.3.12 Public Consultation:

Details of advertisement given	Advertisement dated 03.12.2021 published in The Times of India (English) Advertisement dated 03.12.2021 published in Prameya (Odia)
Date of public consultation	05.01.2022
Venue	Land in front of Kalyan Mandap, Paradeep in Jagatsinghpur District.
Presiding Officer	Additional District Magistrate
Major issues raised	i. Plantation Activities ii. Skill development to provide local employment. iii. Utilizing CSR fund for peripheral development. iv. Establishment of superspeciality hospital v. Pollution control and prevention measures vi. Storm water drainage issue at adjacent bastis

11.3.13 The capital cost of the proposed project is Rs 3,347 Crores and the capital cost for environmental protection measures is proposed as Rs 63.95 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 1.0 Crores. The employment generation from the proposed project is 1,349 (both direct and indirect). The details of cost for environmental protection measures is as follows:

Description of item	Rs. in crore CAPEX	Rs. in crore OPEX
Water Conservation and Wastewater Treatment	2	0.1
Air Pollution Control Measure	10	0.2
Solid Waste management	0.1	0.1
Energy Conservation	0.5	-
Greenbelt Development	3.3	0.1
On-line Monitoring & Environmental Laboratory	11	0.5
Socio economic development activities	37.05	-
Total	63.95	1.0

11.3.14 Proposed greenbelt will be developed in 16.19 ha which is about 40% of the total project area. A 10-100m 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/Ha. Total no. of 40,475 saplings will be planted and nurtured in 16.19 hectares in 3 years.

11.3.15 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.

Deliberations by the Committee

11.3.16 The Committee noted the following:

1. The EAC deliberated on the baseline data and observed that the baseline values of parameters such as PM10, PM2.5, total hardness, Noise levels etc. are too high or beyond the NAAQS standards. Since the proposed project falls under Paradeep Severely Polluted Area (SPA), the EAC is of view that the Project Proponent shall comply to the Ministry's OM vide F.No. 22-23/2018-IA.III (Pt) dated 31st October, 2019 in relation to compliance of Hon'ble NGT order dated 19.08.2019 (published on 23.08.2019) in O.A. No. 1038 /2018 pertaining to formulation of a mechanism for environmental management of critically and severely polluted areas and consideration of activities/projects in such areas. The EAC observed that the proposed project is located in SPA and having PM10, & PM2.5 and other data of AAQ, however the Consultant has not prepared adequate the mitigation plan as per Ministry's Guidelines. The Plan is very qualitatively and not found in order. The Committee advised the Consultant to rework on the Plan. Project proponent shall submit a detailed mitigation measures plan with respect to the conditions stipulated for projects falling in CPA/SPA as per the OM.
2. The EAC noted that the SPCB has made the Action Plan in Year 2020 and still the baseline data is very high. The EAC also suggested that a meeting can be conducted by Project Proponent with the State Government to discuss on the preparation and implementation on the action plan to mitigate the pollution in SPA areas.
3. The EAC observed that the baseline modelling shall be reworked / re-verified for the data submitted in the EIA/EMP Report.
4. The EAC observed that the EMP cost is very less. PP shall rework on the issues.
5. The EAC deliberated on the action plan submitted to address the issues raised during the public consultation and found it unsatisfactory. PP shall explore the possibility to implement some of the activities in the 1st year itself which are committed in the subsequent years. Project Proponent is required to submit revised action plan to address the PH issues as per Ministry's OM F.No. 22-65/2017-IA.III dated 30/09/2020. The Consultant has to read the various provisions of the OM and accordingly rework the action plan.
6. The water balance diagram submitted in the EIA Report do not include the water required for greenbelt development. The EAC is of the opinion that the water balance diagram shall be revisited and the optimized water balance shall be updated in the EIA/EMP Report. The Consultant has to revise the water balance including all the water requirement.
7. The EAC observed that the instant proposal is a part of inter-linked project and a separate ToR has been obtained for a Beneficiation Plant from the MoEF&CC. The EAC advised PP to expedite the submission of EC application for obtaining desired EC for Beneficiation Plant. Without beneficiation plant, how PP will implement this instant project?
8. The project proponent shall undertake village adoption and develop a robust action plan to develop the villages in model villages.

9. The project proponent reported that the land is in possession of Paradip Port Trust Authority and would be taken on long term lease basis for sixty (60) years. The project proponent is required to submit the acquisition status of the same.
10. Mahanadi River, Santra, PPT Reservoir and Taladanda canal are in the vicinity of the project site within the study area. A robust Conservation scheme to protect these water bodies; along with Soil conservation scheme and multiple Erosion control measures shall be prepared.
11. The PP is going to use 2,02,000 Anthracite coal. During operational phase PP shall submit the Action Plan to monitor the coal dust exposures at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; and compare with permissible exposure limit for PM2.5 dust (coal dust 2 mg/m3) in respirable dust containing less than 5% silica/quartz.
12. Based on the above observations, the EAC is of the view that the EIA/EMP Report shall be revised with the requisite changes and shall be uploaded on PARIVESH Portal. The EAC advised the Consultant to rework and prepare good quality of Report including all the mitigation measures for further deliberations by the EAC.

Recommendations of the Committee

- 11.3.17 In view of the foregoing and after detailed deliberations, the committee recommended to **defer the proposal** and sought requisite information on the points referred at para no. 11.3.16 above along with revised EIA/EMP Report. The proposal shall be considered after submission of requisite information in next EAC meeting.



Agenda No. 11.4

- 11.4 Leather Manufacturing Unit Production Capacity: 100 Hides & 500 Skins Per Day by M/s Hindustan Industries, located at Village Panchwa, Tehsil Kuchaman, District Nagaur, Rajasthan- Consideration of Environmental Clearance.**

[Proposal No. IA/RJ/IND/280328/2021; File No. IA-J-11011/419/2021-IA-II(IND-I)]
[Consultant: SBA Enviro Systems Private Limited; valid upto 24.05.2023]

- 11.4.1 M/s. Hindustan Industries has made an online application vide proposal no. IA/RJ/IND/280328/2021 dated 30/07/2022 along with copy of EIA/EMP Report and Form - 2 seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at schedule no. 4(f) Leather/Skin/Hide Processing Industry under Category "A" of the schedule of the EIA Notification, 2006 and appraised at central level.

- 11.4.2 Name of the EIA consultant: M/s SBA Enviro Systems Private Limited [Sl. No. 9, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2023/RA 0198; valid upto 24.05.2023, Rev. 24, July 05, 2022].

Details submitted by Project proponent

- 11.4.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
14/10/2021	47 th meeting of EAC held on 28-29 th October, 2021.	Terms of Reference	22/11/2021	21/11/2025

- 11.4.4 The project of M/s. Hindustan Industries located in Panchwa Village, Kuchaman Tehsil, Nagaur District, Rajasthan is for setting up of a new Leather Manufacturing Unit for production of 474.5 Metric Tonnes Per Annum (MTPA) of semi-finished leather having a capacity to process 100 hides and 500 skins per day.

- 11.4.5 Environmental Site Settings:

S. No.	Particulars	Details			Remarks
i.	Total land	0.9962 Ha [Private Land]			Land use: Industrial
ii.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	0.9962 hectares (Company owned Land) is in the possession of Company for the proposed installation of leather processing industry.			Date of Acquirement : 16/07/21.
iii.	Existence of habitation & involvement of R&R, if any.	The project site is barren and does not have any habitation within or near it. No R&R is required. There are 40 villages present within the 10 km study area.			-
iv.	Latitude and Longitude of the project site	Point	Latitude	Longitude	-
		A	27°13'17.03"N	74°55'3.79"E	
		B	27°13'17.84"N	74°55'9.22"E	
		C	27°13'15.23"N	74°55'9.38"E	
		D	27°13'15.34"N	74°55'4.07"E	
v.	Elevation of the project site	380 m above mean sea level			-
vi.	Involvement of Forest land if any.	No forest land is involved.			-
vii.	Water body exists within the project site as well as study area	No water body exists within the project site and within the 10 km study area.			-
viii.	Existence of ESZ/ESA/national	Nil			-

S. No.	Particulars	Details	Remarks
	park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area		

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

S. No.	Name	Proposed Units	
		Configuration	Production (MTPA)
1	Hides	36500 Raw Hides/Year	292
2	Skins	182500 Raw Skins/Year	182.5

11.4.7 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 Required per Annum (MTPA)	Source	Distance from Site (km)	Mode of Transportation
1	Hides	292	Nearby abattoirs	Within 100	Truck
2	Skin	182.5	Nearby abattoirs	Within 100	Truck
3	Chemicals				
3.1	Salt	9.2	Nearby markets	9.5	Truck
3.2	Sulphuric Acid	2.45	Nearby markets	9.5	Truck
3.3	Hydrochloric Acid	4.2	Nearby markets	9.5	Truck
3.4	Basic Chromium Sulphate	28	Nearby markets	9.5	Truck
3.5	Formic Acid	22.75	Nearby markets	9.5	Truck
3.6	Sodium Sulfide	13.7	Nearby markets	9.5	Truck
3.7	Vegetable Tannins	16	Nearby markets	9.5	Truck
3.8	Lime	22.5	Nearby markets	9.5	Truck
3.9	Ammonium Chloride	4.8	Nearby markets	9.5	Truck
3.10	Sodium Bicarbonate	3.0	Nearby markets	9.5	Truck

11.4.8 The water requirement for the proposed project is estimated as 26.2 KLD, out of which 8.6 KLD of fresh water requirement will be obtained from the Ground Water and the remaining requirement of 17.6 KLD will be met from the ETP. The permission for withdrawal of groundwater is obtained from CGWA Vide Lr. No. 21-4/16332/RJ/IND/2021 Dated 26.11.2021. PP reported that there is no Surface water availability in the entire study area and beyond. Also, there is no public water supply arrangement in the nearby vicinity. Hence there is no alternative could be selected except ground water.

11.4.9 The power requirement for the proposed project is estimated as 45 KW, which will be obtained from the Rajasthan Vidyut Vitran Nigam.

11.4.10 Baseline Environmental Studies:

Period	Post – Monsoon Season (Oct., to Dec., 2020)				
AAQ parameters at 08 locations	PM ₁₀ – 61.32 to 76.46 µg/m ³ PM _{2.5} – 25.04 to 38.30 µg/m ³ NO ₂ – 15.54 to 20.64 µg/m ³ SO ₂ – 7.05 to 10.74 µg/m ³ CO – 0.53 to 1.29 mg/m ³				
Ground Water Quality at 08 locations	S.No.	Criteria Pollutants	Unit	Maximum Value	Minimum Value
	1	PH	NA	8.3	7.49
	2	Total Hardness	mg/l	330	124
	3	TDS	mg/l	1107	249
	4	Chlorides	mg/l	249.50	23.48
	5	Fluoride	mg/l	0.70	0.12
	6	Lead	mg/l	0.01	0.01
	7	TSS	mg/l	1107	249
Surface Water Quality	PP has reported that no surface water bodies are present within 10 km study area.				
Noise Levels Leq at 08 locations (Day and Night)	During Day Time – 50.6 to 61.7 Leq dB (A) During Night Time – 39.4 to 43 Leq dB(A)				
Traffic assessment study findings	- Traffic study was carried out on MDR46 so as to estimate the existing traffic density. Enumeration and calculation of traffic density as per IRC 106:1990 has been calculated to estimate level of services. - It is a four-lane two-way road. Transportation survey was carried out between 9:00 AM to 9:00 PM. Current Scenario The roadway studied under the traffic study is having “A” LOS i.e. “excellent” performance and can thus easily handle the existing traffic load. Construction Phase Carrying capacity of the road can bear the additional traffic load of 7				

Period	Post – Monsoon Season (Oct., to Dec., 2020)
	trucks/day which will be added during the construction phase of the proposed project. V/C ratio will remain the same at 0.09 with LOS remaining same at “A” which is “excellent”. Operation Phase Carrying capacity of the road can bear the additional traffic load of 25 two-wheelers/cycles, 2 passenger cars/pick-up vans and 2 trucks which will be added during the construction phase of the proposed project. V/C ratio will remain the same at 0.09 with LOS remaining same at “A” which is “excellent”.
Flora & Fauna	No schedule - I species were recorded in the study area.

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

Anticipated Impacts	Proposed Mitigation Measures
Construction Phase	
1. Construction and demolition waste The construction and demolition waste includes debris, concrete, steel and other metals, pallets, packaging and paper products, fluorescent tubes, wood beams, joists, studs, baseboards, bricks etc.	1. Specific areas within the project site shall be allotted for temporary storage of construction and demolition waste. 2. Construction and demolition waste storage area will be covered to prevent it affecting its surroundings. 3. Construction and demolition waste will be disposed off as per Construction and Demolition Waste Management Rules, 2016.
2. Municipal solid waste Domestic wastes include food leftovers, vegetable peels, plastic, clothes, ash, etc.	1. A three bin system will be adopted for the segregation of waste into biodegradable, recyclable and hazardous waste. 2. Food waste will be composted on site and the compost will be used for greenbelt development. 3. These wastes will in turn be disposed of as per Solid Waste Management Rules, 2016.
3. Hazardous waste Hazardous wastes include products such as paints, cleaners, oils, batteries, etc. that contain potentially hazardous ingredients	1. Hazardous wastes will be stored in Non-leachate and impervious HW store separately. 2. Fire extinguishers and buckets of sand will be kept near storage shed of hazardous wastes. 3. Hazardous wastes will be disposed off as per Hazardous and Other Wastes

Anticipated Impacts	Proposed Mitigation Measures
	(Management and Transboundary Movement) Rules, 2016.
Operation Phase	
1. Municipal solid waste Domestic wastes include food leftovers, vegetable peels, plastic, clothes, ash, etc.	1. A three bin system will be adopted for the segregation of waste into domestic food waste, recyclable and hazardous waste. 2. Food waste will be composted on site and the compost will be used for greenbelt development. 3. These wastes will in turn be disposed of as per Solid Waste Management Rules, 2016.
2. Hazardous Waste ETP sludge, leather pieces/scrambles, salt, used oil etc.	1. ETP sludge, leather pieces/scrambles, salt will be sent to TSDF for disposal. 2. Used oil will be sold to authorised companies as per norms.
3. Packing Material.	1. Packing material not containing any hazardous material traces such as polythene, gunny bags, cartons, paperboard, waste paper etc. will be sold to scrap dealers.
4. Empty bags, drums and containers containing chemical traces.	2. Empty bags, drums and containers containing chemical traces will be sold to authorised persons as per norms.

11.4.12 Public Consultation:

Details of Advertisement Given	The public hearing advertisement was published by Rajasthan State pollution control Board in English newspaper (THE INDIAN EXPRESS) & one regional newspaper (SANTHYA JOTHI DARPAN) on 01.04.2022.
Date of Public Consultation	09.05.2022.
Venue	Bharat Nirmaan Rajeev Seva Kendra (IT centre), Panchwa, Tehsil Kuchaman, District Nagaur, State Rajasthan.
Presiding Officer	District magistrate
Major Issues Raised	1. Significance of the project 2. Socio-Economic improvement of nearby villages 3. Employment

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

S. No.	Physical Activity and Action Plan		Year of Implementation (Budget in INR)			Total Expenditure (Rs. In Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	
1.	Greenbelt	33% (0.33 hectares) of	0.005 Cr	0.0025	0.0025	0.01 Cr per

S. No.	Physical Activity and Action Plan		Year of Implementation (Budget in INR)			Total Expenditure (Rs. In Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	
	Development	project area will be developed as green belt and same will be completed within 3 years from the date of start of project construction.		Cr	Cr	year
2.	Employment Opportunities	25 direct employment and 125 indirect employment	-	-	-	-
3.	Usage of the output products	There is a huge demand for the product of proposed project for traditional Rajasthani footwear and handicrafts.	-	-	-	-
4.	Treatment of wastewater	The ETP, chrome recovery and ATFD will be installed to treat the waste water and ensure ZLD before commissioning of the unit.	0.93 Cr before commissioning of the unit	-	-	0.93 Cr
5.	CSR benefits	i. 50 tress have been planted in Bhairo Pond.	0.004 Cr already spent for the benefits of the Panchwa Village	-	-	0.004 Cr
		ii. In Diwali clothes have been distributed to the local poor people.		-	-	

S. No.	Physical Activity and Action Plan		Year of Implementation (Budget in INR)			Total Expenditure (Rs. In Crores)
	Name of the Activity	Physical Targets	1st	2nd	3rd	
		iii. In Covid-19 Pandemic, Sanitizers, masks and Oxygen gas cylinders have been distributed.				
		iv. Water cooler have been installed in Government Schools.		-	-	
		v. Relief Fund have been provided for Girl's Education.		-	-	
		vi. 2% of Project profit will be allocated as CSR fund which will be spent on public interest.	Every year	Every year	Every year	Every year
6.	Solid waste management	The solid waste and hazardous waste are disposed off as per CPCB norms. Udaipur city of Chamber and Udaipur city will use a special type of vehicle to dispose of these wastes.	0.008 Cr per year	0.008 Cr per year	0.008 Cr per year	0.008 Cr per year

11.4.13 The capital cost of the proposed project is Rs.2 Crores and the capital cost for environmental protection measures is proposed as Rs. 94.8 lakhs. The annual recurring cost towards the

environmental protection measures is proposed as Rs. 16.22 lakhs. The employment generation from the proposed project is 25 direct and 125 indirect employment opportunities. The details of cost for environmental protection measures is as follows:

S. No.	Description	Allocated Budget	
		Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/year)
1.	ETP	40	11.5
2.	ZLD	22	1.5
3.	ATFD	31	3.0
4.	HW Storage	0.8	0.02
5.	DOCC	Cost included in DG set	Cost included in DG set maintenance
6.	DG Stack	Cost included in DG set	Cost included in DG set maintenance
7.	Acoustic Enclosure	Cost included in DG set	Cost included in DG set maintenance
8.	Septic Tank and Soak Pit	Cost included in Civil Construction	Cost included in Building maintenance
9.	Greenbelt Development	1.0	0.2
Total		94.8	16.22

11.4.14 Proposed greenbelt will be developed in 0.33 ha which is about 33.13% of the total project area. Thus total of 0.9962 ha area (33.13% of total project area) will be developed as greenbelt. A 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 2500 trees per hectare. Total no. of 825 saplings will be planted and nurtured in 0.33 ha. in 3 year.

11.4.15 It is submitted that there is no violation under EIA notification 2006/no court cases/no show cause/no direction.

Written representations:

11.4.16 During the meeting, based on the deliberations made by the EAC, the project proponent vide email dated 16.08.2022 submitted the revised information w.r.t. to the following:

1. Revised Action Plan to address the issues raised during the public consultation. The same is updated at para 11.4.12 above.
2. Possibility for alternate source of water supply other than ground water: PP reported that there is no Surface water availability in the entire study area and beyond. Also, there is no public water supply arrangement in the nearby vicinity. Hence there is no alternative could be selected except ground water to the extent of 8.6 KLD with due

- permission in the form of NOC for Ground water Extraction from CGWA. The same is updated at para 11.4.8 above.
3. Revised brief write-up with respect to the proposed project.

Deliberations by the Committee

11.4.17 The Committee noted the following:

1. The instant proposal is for setting up of a new Leather Manufacturing Unit for production of 474.5 Metric Tonnes Per Annum (MTPA) of semi-finished leather having a capacity to process 100 hides and 500 skins per day.
2. 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.
3. 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.
4. 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.
5. The total project area is 0.9962 ha which is under the possession of the company.
6. Panchwa village is 1.5 km SE from site.
7. Proposed greenbelt will be developed in 0.33 ha which is about 33.13% of the total project area. Total no. of 825 saplings will be planted and nurtured in 0.33 ha. in 3 year.
8. The water requirement for the proposed project is estimated as 26.2 KLD, out of which 8.6 KLD of fresh water requirement will be obtained from the Ground Water and the remaining requirement of 17.6 KLD will be met from the ETP.
9. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
10. The Committee deliberated on the action plan and budget allocation for green belt development and found it satisfactory.
11. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.

12. 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.
13. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
14. 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.
15. 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

- 11.4.18 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant expansion 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 Condition:

- 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 company shall also undertake rain water harvesting measures as per the plan submitted and reduce water dependence from the outside source.
- iii. Effluent Treatment Plant (ETP) shall be installed and action plan to achieve the revised effluent quality norms as per MoEF&CC notification no. G.S.R. 657(E) dated 10/09/2021 shall be implemented.
- iv. As the project relates to tanning of leather, the project proponent shall ensure to mitigate the foul odour impact and disposal/ recycling of Brine/ salt water as per CPCB/SPCB Standard/Guidelines.
- v. Hazardous waste generated from tannery shall be sent to TSDF. Action plan for hazardous waste disposal shall be implemented.

- vi. The proposed project shall be designed as "Zero Liquid Discharge" Plant. There shall be no discharge of effluent from the plant. Domestic waste water shall be treated in STP and treated water shall be re-used for greenbelt development and plantation.
- vii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- 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. 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. Internal roads of plant premises shall be concreted and maintained in good condition. Industrial vacuum cleaners shall be used regularly to clean roads to reduce fugitive emissions.
- xi. Panchwa village is 1.5 km SE from site. PP shall carry out socio-economic development of the village.
- xii. 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. Action plan submitted in EIA/EMP report shall be implemented.
- xiii. The PP may use sulphuric acid, HCl acid chromium salt and ammonium chloride for leather production. Therefore, airborne exposure to acid fumes and chromium dust assessment has to be carried out through personal and area monitoring at different process plants within industry and compared with permissible exposure limits of Indian Factories Act.
- xiv. All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xv. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.

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 monitor fugitive emissions (for PM2.5, PM10, NH3 and VOCs) in the plant premises at least once in a year through labs recognised under Environment (Protection) Act, 1986.
- ii. The project proponent shall submit monthly summary report of monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB in the six-monthly monitoring report.
- iii. The project proponent shall provide appropriate Air Pollution Control (APC) system for all the emission generating points so as to comply prescribed stack emission standards (if any stack is proposed).
- iv. Adequate method shall be adopted to control odour and a report submitted to the Ministry's Regional Office.
- v. The Company shall provide stacks of adequate height to the D.G. Sets along with acoustic enclosures for noise control as per guidelines. The DG Sets should comply with the norms notified.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system at discharge points for effluents with respect to standards prescribed in Environment (Protection) Rules 1986 and connect 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 effluent shall monitor manually with respect to standards prescribed in Environment (Protection) Rules 1986 at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.
- iii. 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.
- iv. Ground water monitoring around the solid waste disposal site/secured landfill (SLF), if any, should be carried out regularly
- v. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

- vi. The project proponent provide the ETP for effluent to meet the standards prescribed under the Environment (Protection) Rules, 1986 as amended from time to time.
- vii. Provide Sewage Treatment Plant for domestic wastewater in case there is no municipal sewer line to convey sewage for treatment at Municipality sewage treatment plant.
- viii. 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.
- ix. The project proponent shall practice rainwater harvesting to maximum possible extent.
- x. Water meters shall be provided at the inlet to all unit processes in the steel plants.
- xi. The project proponent shall make efforts for reduction in specific water and power consumption and increase in the recycling of the treated effluent.

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. Spent chrome liquor should be segregated at the tannery premises and collected separately and processed for recovery and reuse of chromium in the tanneries. The process adopted should be the one involving precipitation of chromium with the help of a suitable alkali. Design of the proposed continuous Chrome Recovery plant should be approved by a Govt. institute such as NEERI, CLRI, IITs, NITs.
- ii. In-house various salt control measures shall be adopted by tanneries: such as mechanical desalting of hide, counter current soaking and recycling of pickle liquor to reduce TDS.
- iii. The company shall dispose of solid waste in the secured double lined landfill site. The fleshings from the tannery shall be supplied to the manufacturers of dog chew and glue or properly dispose of in environment-friendly manner.
- iv. The waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016 and Solid Waste Management Rules, 2016.

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. 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 nearby 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. 11.5

- 11.5 Expansion of Integrated Steel Plant (1.0 Million TPA To 2.0 Million TPA Finished Steel) With 385 MW Captive Power Plant by M/s Orissa Metallurgical Industry Pvt. Ltd., located at Mouza – Amba, Mathurakismat, Ghoshalchak, Radhanagar, Serampurgia, Mollarchak, Katapole, Tarabamni And Dhularchak, Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L) Dist. Paschim Medinipur, West Bengal- Consideration of Environmental Clearance.**

[Proposal No. IA/WB/IND/285991/2017; File No. IA-J-11011/56/2017-IA-II(I)]

[Consultant: Centre for Envotech and Management Consultancy Pvt Ltd.; valid upto 18.03.2024]

11.5.1 M/s Orissa Metallurgical Industry Private Limited has made an application IA/WB/IND/285991/2017 dated 30th July 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. '1(d)' Captive Power Plant, '2(a)' Coal Washery, '3(a)' Metallurgical industries (Ferrous & Non-ferrous) and '4(b)' Coke Oven Plant under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

11.5.2 Name of the EIA consultant: M/s Centre for Envotech and Management Consultancy Pvt Ltd. [Sl. No. 99, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/2124/RA 0243; valid upto 18.03.2024, Rev. 24, July 05, 2022].

Details submitted by Project proponent

11.5.3 The details of the ToR are furnished as below:

Date of Application	Consideration	Details	Date of Accord	ToR Validity
16.11.2021	Standard ToR issued	Terms of Reference	23.11.2021	22.11.2025

11.5.4 The project of M/s Orissa Metallurgical Industry Private Limited located at Mouja- Amba (J.L. No-115), Mathurakismat (J.L. NO-114), Ghoshalchak (J.L. No.-129), Radhanagar(J.L. No-98), Serampurgia (J.L. No-97), Mollarchak (J.L. No-128), Katapole (J.L. No-127), Tarabamni (J.L. No-138) and Dhularchak (J.L. No-126), Village – Gokulpur, P.O – Shyamraipur, P.S – Kharagpur (L), Dist. Paschim Medinipur, West Bengal is for expansion of Integrated Steel Plant (1.0 Million TPA To 2.0 Million TPA Finished Steel) With 385 MW Captive Power Plant.

11.5.5 Environmental Site Settings:

Sl. No.	Particulars	Details				Remarks
i.	Total land	147.71 ha [Private: 105.83 ha; Govt.: 41.88 ha; Agriculture: NIL ha; Grazing Land: NIL ha; Other Land: NIL ha]				---
		S. No.	Particulars	Area (Ha)	%	
		1	Main Plant	66.46	44.99	
		2	Water Reservoir	8.46	5.73	
		3	Built up Area & Internal roads	8.60	5.83	
		4	Green Belt	49.10	33.24	
		5	Middling Area	1.70	1.15	
		6	Open Space/ Truck Parking	4.08	2.76	
		7	Raw Material	9.31	6.30	

Sl. No.	Particulars	Details				Remarks																																	
			Storage																																				
		TOTAL PROJECT AREA		147.71	100.0																																		
ii	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Out of the 147.71 hectare of land, 130.31 hectare of land is already in possession of M/s Orissa Metallurgical Industry Private Limited & for rest of land (17.40 hectare) consent from private rayat obtained.				Out of 130.31 hectare of land already in possession, 41.88 hectare of Govt. land is at Kharagpur General Industrial Park acquired through WBIDCL vide Deed of Agreement dated 27-08-2021.																																	
iii.	Existence of habitation & involvement of R&R, if any.	Project Site: No habitation in the proposed site. Study Area: <table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Gokulpur</td><td>1.0 Km</td><td>NE</td></tr><tr><td>Shyamraipur</td><td>1.2 Km</td><td>E</td></tr><tr><td>Bargai</td><td>2.1 Km</td><td>ES</td></tr><tr><td>Kharagpur</td><td>4.5 km</td><td>SE</td></tr></table>				Habitation	Distance	Direction	Gokulpur	1.0 Km	NE	Shyamraipur	1.2 Km	E	Bargai	2.1 Km	ES	Kharagpur	4.5 km	SE	No rehabilitation and resettlement is involved for the subject project. Land acquisition is carried out under Land Acquisition Act of West Bengal. Land is purchased through private negotiations from private rayat. Apart from Govt. valuation of the land, Additional One time Welfare Fund is given to the land looser in addition to the land cost.																		
Habitation	Distance	Direction																																					
Gokulpur	1.0 Km	NE																																					
Shyamraipur	1.2 Km	E																																					
Bargai	2.1 Km	ES																																					
Kharagpur	4.5 km	SE																																					
iv.	Latitude and Longitude of the project site	<table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>22°22'01.75"</td><td>87°17'20.33"</td></tr><tr><td>B</td><td>22°22'04.24"</td><td>87°16'45.27"</td></tr><tr><td>C</td><td>22°22'16.30"</td><td>87°16'37.71"</td></tr><tr><td>D</td><td>22°22'16.49"</td><td>87°16'10.44"</td></tr><tr><td>E</td><td>22°22'35.15"</td><td>87°16'22.77"</td></tr><tr><td>F</td><td>22°22'45.71"</td><td>87°16'32.14"</td></tr><tr><td>G</td><td>22°22'51.09"</td><td>87°16'42.87"</td></tr><tr><td>H</td><td>22°22'31.27"</td><td>87°16'48.61"</td></tr><tr><td>I</td><td>22°22'30.98"</td><td>87°17'15.99"</td></tr><tr><td>J</td><td>22°22'17.28"</td><td>87°17'20.32"</td></tr></table>				Point	Latitude	Longitude	A	22°22'01.75"	87°17'20.33"	B	22°22'04.24"	87°16'45.27"	C	22°22'16.30"	87°16'37.71"	D	22°22'16.49"	87°16'10.44"	E	22°22'35.15"	87°16'22.77"	F	22°22'45.71"	87°16'32.14"	G	22°22'51.09"	87°16'42.87"	H	22°22'31.27"	87°16'48.61"	I	22°22'30.98"	87°17'15.99"	J	22°22'17.28"	87°17'20.32"	--
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J	22°22'17.28"	87°17'20.32"																																					
v.	Elevation of the project site	Elevation of the project site varies from 32 m to 35 m AMSL.				--																																	
vi.	Involvement of Forest land if any.	No forest land involved.				--																																	

Sl. No.	Particulars	Details	Remarks																																										
vii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: 02 Nos. rain water harvesting pond.	--																																										
		Study area:																																											
		<table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>01 Nos. R.W.H Structure of OMPL-I</td><td>0.5 km</td><td>NE</td></tr><tr><td>02 Nos. R.W.H Structure of Ramswarup Udyog Ltd.</td><td>0.5 km</td><td>S</td></tr><tr><td>01 Nos. R.W.H Structure of OMPL.</td><td>0.6 km</td><td>NE</td></tr><tr><td>01 Nos. R.W.H Structure of BCPL.</td><td>1.0 km</td><td>NNW</td></tr><tr><td>Tata Metaliks Ltd.</td><td>1.5 Km</td><td>NE</td></tr><tr><td>Shyamraipur Village Pond</td><td>0.6 Km</td><td>ES</td></tr><tr><td>Najirchalk Village Pond</td><td>0.6 Km</td><td>WS</td></tr><tr><td>Dhekia Village Pond</td><td>1.9 Km</td><td>SE</td></tr><tr><td>Saha Chowk Pond</td><td>1.9 Km</td><td>SSW</td></tr><tr><td>01 Nos. R.W.H Structure of OMPL-II</td><td>2.0 km</td><td>S</td></tr><tr><td>01 Nos. R.W.H Structure of RML</td><td>2.0 km</td><td>SE</td></tr><tr><td>02 Nos. R.W.H Structure of OASPL</td><td>2.5 Km</td><td>ESE</td></tr><tr><td>Kangsabati River</td><td>4.5 Km</td><td>N</td></tr></table>		Water body	Distance	Direction	01 Nos. R.W.H Structure of OMPL-I	0.5 km	NE	02 Nos. R.W.H Structure of Ramswarup Udyog Ltd.	0.5 km	S	01 Nos. R.W.H Structure of OMPL.	0.6 km	NE	01 Nos. R.W.H Structure of BCPL.	1.0 km	NNW	Tata Metaliks Ltd.	1.5 Km	NE	Shyamraipur Village Pond	0.6 Km	ES	Najirchalk Village Pond	0.6 Km	WS	Dhekia Village Pond	1.9 Km	SE	Saha Chowk Pond	1.9 Km	SSW	01 Nos. R.W.H Structure of OMPL-II	2.0 km	S	01 Nos. R.W.H Structure of RML	2.0 km	SE	02 Nos. R.W.H Structure of OASPL	2.5 Km	ESE	Kangsabati River	4.5 Km	N
		Water body		Distance	Direction																																								
		01 Nos. R.W.H Structure of OMPL-I		0.5 km	NE																																								
		02 Nos. R.W.H Structure of Ramswarup Udyog Ltd.		0.5 km	S																																								
		01 Nos. R.W.H Structure of OMPL.		0.6 km	NE																																								
		01 Nos. R.W.H Structure of BCPL.		1.0 km	NNW																																								
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02 Nos. R.W.H Structure of OASPL	2.5 Km	ESE																																											
Kangsabati River	4.5 Km	N																																											

viii.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve / tiger reserve/ elephant	Study area No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Reserve Forest lies within 10 km radius.	
		Three protected forest is present in the 10 km area of project site.	

Sl. No.	Particulars	Details	Remarks
	reserve etc. if any within the study area	~4.3 km in N direction; ~8.0 km in S direction and ~8.9 km in SSW direction	

11.5.6 The existing project was accorded environmental clearance in the name of M/s Orissa Metaliks Private Limited vide letter J-11011/56/2017-IA.II (I) dated 18.05.2021 which was transferred to M/s Orissa Metallurgical Industry Private Limited vide letter no. J-11011/56/2017-IA.II (I) dated 03.08.2021. As a measure of tax planning, to get the other possible incentives & benefits and to optimize the capital expenditure for setting up the EC accorded project EC was transferred. Consent to Establish for the existing unit was accorded by West Bengal Pollution Control Board vide NOC NO-164589, dated 01.09.2021 and NOC No-164600, dated 27.12.2021. The validity of CTE is up to 31.08.2028.

11.5.7 Implementation status of the existing EC:

Sl. No.	Plant	As per EC dated 18.05.2021 & 03.08.2021		Implementation Status after obtaining CTE as on JULY 2022	Production as per CTO
		Configuration	Capacity		
1	Blast Furnace with matching PCM	2 x 450 m ³	0.7 Million TPA	--	--
2	Sinter	1 x 105 m ²	0.6 Million TPA	--	--
3	DRI	2 x 500 + 2 x 350	0.5 Million TPA	Civil/foundation work under process. Order for procurement of material made and partially material reached at the site.	--
4	SMS with LRF/AOD,CCM and oxygen optimized furnace	10 x 20 T IF + 2 x 20 T EAF	0.8 Million TPA	Civil/foundation work under process.	--
5	SMS Slag Crusher	6 x 20 TPH	120 TPH	--	--
6	SAF (Ferro Alloy Plant)	10 x 9 MVA	0.12 Million TPA	Civil/foundation work under process	--
7	Jigging Plant	6 x 20 TPD	80 TPD	Civil/foundation work under process	--
8	Chrome Briquette plant	1 x 40 TPH	40 TPH	Civil/foundation work under process	--
9	Non-recovery type	2 x 0.25 MTPA	0.5 Million	Civil/foundation	--

Sl. No.	Plant	As per EC dated 18.05.2021 & 03.08.2021		Implementation Status after obtaining CTE as on JULY 2022	Production as per CTO
		Configuration	Capacity		
	Coke Oven Plant (modified wet quenching type)		TPA	work under process	
10	Lime Dolomite Plant	1 x 200 TPD	200 TPD	--	--
11	Oxygen Plant	1 x 200 TPD	200 TPD	--	--
12	Hot Rolling Mill	***	0.35 Million TPA	--	--
13	Rolling Mill with Pickling Line & Continuous Galvanizing	***	0.35 Million TPA	--	--
14	Ductile Iron Pipe Unit, Fitting & Accessories	***	0.30 Million TPA	Proposed to be surrender	--
15	Pellet Plant	4 x 0.9 MTPA	3.6 Million TPA	Proposed to be surrender	--
16	I/O Beneficiation Plant	2 x 1.8 MTPA	3.6 Million TPA	Proposed to be surrender	--
17	Producer Gas Plant	20 x 7,500 Nm ³ /hr	1,50,000	Proposed to surrender 15 x 7,500 Nm ³ /hr	--
18	Captive Power Plant	90 MW WHRB Based (56 MW from DRI Plant+ 34 MW from Coke Oven Plant + TRT B.F.) 135 MW CFBC (Coal & Dolochar Mix based 3 x 45 MW)	225 MW	Civil/foundation work under process for WHRB based CPP. Order for procurement of material made	--
19	Railway Siding	**	01 no.	In principal approval obtained from Indian Railway vide letter no- GW/1/OMIPL-NWOSC (IPA)/159;	--

Sl. No.	Plant	As per EC dated 18.05.2021 & 03.08.2021		Implementation Status after obtaining CTE as on JULY 2022 dated 08.08.2022.	Production as per CTO
		Configuration	Capacity		

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

Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 18.05.2021 & 03.08.2021								Expansion Proposal considering 330 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per last CTO						
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Configuration	Capacity	
1.	Mini Blast Furnace with PCM	2 x 450 m ³	0.7 Million TPA	**	**	2 x 450 m ³	0.7 Million TPA	**	**	Change In Module to 1 x 686 m ³	(+) 0.05 Million TPA	1 x 686 m ³	0.75 Million TPA	Hot Liquid Metal / Pig Iron/ High Quality Billet & steel product
	Matching New LD, CCM & Rolling Mill	**	**	**	**	**	**	**	**	1 x 50 T	50 TPH	1 x 50 T		
2.	Sinter Plant	1 x 105 m ²	0.6 Million TPA	**	**	1 x 105 m ²	0.6 Million TPA	**	**	Change In Module to 1 x 130 m ²	(+) 0.69 Million TPA	1 x 130 m ²	1.29 Million TPA	Sinter
3.	DRI plant	2 x 300 TPD + 2 x 500 TPD	0.5 Million TPA	**	**	2 x 300 TPD + 2 x 500 TPD	0.5 Million TPA	**	**	Addition of 10 x 700 TPD	(+) 2.4 Million TPA	2 x 500 TPD + 2 x 350 TPD + 10 x 700 TPD	2.90 Million TPA	Sponge Iron
	Matching Coal Dryer (Stand by)	**	**	**	**	**	**	**	**					
4.	Steel Melting Shop with matching LRF/AOD,CCM and oxygen optimized furnace	10 x 20 T I.F. + 2 x 20 T EAF	0.8 Million TPA	**	**	10 x 20 T I.F. + 2 x 20 T EAF	0.8 Million TPA	**	**	Addition & change in technology (10 x 25 T I.F + 10 x 30 T I.F)	(+) 1.36 Million TPA	10 x 25 T I.F + 10 x 20 T I.F + 10 x 30 T I.F	2.16 Million TPA	Billets & Slab
5.	SMS Slag Crusher	6 x 20 TPH	120 TPH	**	**	6 x 20 TPH	120 TPH	**	**	Change In Module to 3 x 40 TPH	No Change	3 x 40 TPH	120 TPH	Metal Recovery
6.	Ferro Alloy Plant	10 x 9 MVA	0.12 Million TPA	**	**	10 x 9 MVA	0.12 Million TPA	**	**	No change in configuration		10 x 9 MVA	0.18 Million TPA	Ferro Alloys (FeMn, FeSi, SiMn & FeCr)
7.	Jigging Plant	4 x 20 TPD	80 TPD	**	**	4 x 20 TPD	80 TPD	**	**	No change		4 x 20 TPD	80 TPD	Metal Recovery
8.	Chrome	1 x 40	40 TPH	**	**	1 x 40 TPH	40 TPH	**	**	No change		1 x 40 TPH	40 TPH	Briquette

Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 18.05.2021 & 03.08.2021								Expansion Proposal considering 330 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per last CTO						
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Configuration	Capacity	
	Briquette plant	TPH												
9.	Non-recovery type Coke Oven Plant (<i>modified wet quenching type</i>)	2 x 0.25 MTPA	0.5 Million TPA	**	**	2 x 0.25 MTPA	0.5 Million TPA	**	**	Capacity enhancement by increasing the no. of working days	(+) 0.05 Million TPA	2 x 0.275 MTPA	0.55 Million TPA	Metallurgical Coke
10.	Lime Dolomite Plant	1 x 200 TPD	200 TPD	**	**	1 x 200 TPD	200 TPD	**	**	Change in configuration to 1 x 300 TPD	300 TPD	1 x 300 TPD	300 TPD	Calcined Lime & Dolomite
11.	Oxygen Plant	1 x 200 TPD	200 TPD	**	**	1 x 200 TPD	200 TPD	**	**	Addition 1 x 200 TPD	200 TPD	2 x 200 TPD	400 TPD	Oxygen
12.	Coal Washery	**	**	**	**	**	**	**	**	New	2 x 500 TPH	2 x 500 TPH	2.1 Million TPA	Washed Coal
13.	Hot Rolling Mill with CRM Annealing, Pickling & Galvanizing/ Galvalume, CCL Line	**	0.35 Million TPA	**	**	**	0.35 Million TPA	**	**	Expansion	(+) 0.85 Million TPA	**	1.2 Million TPA	HR Product (Flat, Coil); Seamless Pipes Galvanized/ Galvalume / Colour Coated Product
14.	Bar/Wire Drawing Mill	**	0.35 Million TPA	**	**	**	0.35 Million TPA	**	**	Expansion	(+) 0.45 Million TPA	**	0.8 Million TPA	TMT Bar, Wire & Wire Rod
15.	Ductile Iron Plant	**	0.30 Million TPA	**	**	**	0.30 Million TPA	**	**	Dropping		SURRENDERING THE UNIT		
16.	Pellet plant	4 x 0.9 Million TPA	3.60 Million TPA	**	**	4 x 0.9 Million TPA	3.60 Million TPA	**	**	Dropping		SURRENDERING THE UNIT		

Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 18.05.2021 & 03.08.2021								Expansion Proposal considering 330 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per last CTO						
		Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Config.	Capacity	Configuration	Capacity	
17.	I/O Beneficiation	2 x 1.8 Million TPA	3.60 Million TPA	**	**	2 x 1.8 Million TPA	3.60 Million TPA	**	**	Dropping		SURRENDERING THE UNIT		
18.	Producer Gas Plant	20 x 7,500 Nm³/hr	1,50,000 Nm³/hr	**	**	20 x 7,500 Nm³/hr	1,50,000 Nm³/hr	**	**	Surrendering 15 x 7,500 Nm³/hr	(-) 1,12,500 Nm³/hr	5 x 7,500 Nm³/hr	37,500 Nm³/hr	Producer Gas
19.	Captive Power Plant	WHRB Based 90 MW (56 MW from DRI Plant) + 34 MW from Coke Oven Plant + TRT BF) CFBC – 135 MW (Coal & Dolochar Mix based) 3 x 45 MW]	225 MW	**	**	WHRB Based 90 MW (56 MW from DRI Plant) + 34 MW from Coke Oven Plant + TRT BF) CFBC – 135 MW (Coal & Dolochar Mix based) 3 x 45 MW]	225 MW	**	**	Expansion of WHRB Based CPP	(+) 150 MW from WHRB DRI Plant + (+) 7 MW from Coke Oven Plant + 3 MW TRT BF	250 MW WHRB Based (206 MW from DRI Plant) + 41 MW from Coke Oven Plant + 3 MW from B.F. – TRT 135 MW CFBC (Coal & Dolochar Mix based) 3 x 45 MW	385 MW	Power
20.	Railway Siding	01 No.	01 No.	**	**	01 No.	01 No.	**	**	**	**	01 No.		Material Handling

11.5.9 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.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (Rail/ Port)	Plant site	
		As per EC sanctioned	For Proposed Expansion Project	Ultimate		First Unloading Point (km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
1	Iron Ore Fines/ lumps/ Pellets	50,63,800	10,10,750	60,74,550	Purchased from Barbil-Joda, Orissa and Jharkhand	270-300	--	Train up to plant side or Nimpura Public Siding or Associate Company (RML, OMPL & OASPL) Siding	2.0-5.0 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
								Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	
2	Non-coking coal	17,38,610	20,28,090	37,66,700	CCL, MCL & Imported Coal. Captive Coal mines (Jagnnathpur-B, Raniganj Coal Field, West Bengal)	300-500	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by train up to Nimpura Public Siding	5 km	By Road NH-6 & Zilla Parishad Road (Tata Metaliks Road)
								By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by Train up to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
3	Coking Coal & Coke fines	6,70,000	1,72,110	8,42,110	Imported, E-Auction	150-200	---	By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by	5 km	By Road NH-6 & Zilla Parishad Road (Tata Metaliks Road)

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (Rail/ Port)	Plant site	
		As per EC sanctioned	For Proposed Expansion Project	Ultimate		First Unloading Point (km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
								Train up to Nimpura Public Siding		
								By vessel up to nearest port (Haldia / Paradeep / Vizag) and followed by Train up to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from
4	Dolomite	1,26,953	(+) 1,80,347	3,07,300	From Birmitrapur, Orissa /Bilaspur, CG	270-550	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
5	Bentonite	72,000	(-) 72,000	0	From Gujarat, Rajasthan	1000	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
6	Limestone	2,50,800	(+) 2,93,350	5,44,150	From Birmitrapur, Orissa/Bilaspur, Raipur CG Katni MP	270-550	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (Rail/ Port)	Plant site	
		As per EC sanctioned	For Proposed Expansion Project	Ultimate		First Unloading Point (km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
										construction of dedicated railway siding inside the plant premises
7	Manganese ore	3,12,000	(+) 1,38,000	4,50,000	From Balaghat, MP & Orissa	1000	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
8	Chromium Ore	2,64,000	(+) 1,45,700	4,09,700	Orissa, Jharkhand etc.	300	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
9	Quartzite	3,15,125	(+) 76,510	3,91,635	From Belpahar Orissa / Bilaspur, Raipur CG	500	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL) Siding	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company Railway siding to plant site till construction of dedicated railway siding inside the plant premises
10	Pyroxenite	**	12,700	12,700	Jharkhand, Orissa	300	---	Train up to plant side or to Associate Company (RML, OMPL & OASPL)	2.0-2.5 km	By Road NH-6 & Zilla Parishad Road; Dedicated Road corridor from associate company

Sl. No.	Name of the Raw Materials	Quantity (TPA)			Source	Distance of source from		Up to First Unloading point (Rail/ Port)	Plant site	
		As per EC sanctioned	For Proposed Expansion Project	Ultimate		First Unloading Point (km)	Project site		Distance from first unloading point (Approx.)	(Mode of Transportation)
								Siding		Railway siding to plant site till construction of dedicated railway siding inside the plant premises
11	Ferro Alloy	**	17,580	17,580	From West Bengal (Associate Company)	---	<30	**	**	By Road
12	Runner Coat	1,533	(-) 1,533	0	**	**	**	**	**	**
13	Slag Coagulant	416	(-) 416	0	**	**	**	**	**	**
14	Inoculants	288	(-) 288	0	**	**	**	**	**	**
15	Zinc	567	(-) 567	0	**	**	**	**	**	**
16	Magnesium	510	(-) 510	0	**	**	**	**	**	**
17	Bitumen Solution	842 KL/year	(-) 842	0	**	**	**	**	**	**
18	Epoxy Pant	420 KL/year	(-) 420	0	**	**	**	**	**	**

11.5.10 The existing water requirement (as per sanctioned EC) is 500 m³/hr. The additional water requirement for the proposed project is estimated as 50 m³/hr. The net water requirement of the ISP after implementation of the proposed expansion project would be around 550 m³/hr (13,200 KLD) which will be obtained from Kansabati River & rain water harvesting structure. The permission for drawl of surface water 22,248 KLD from Kansabati River is obtained from Irrigation & Water Department, West Bengal vide Memo no-167-I/I-4M-05/14 (Pt. II) dated 16.10.2020 Existing Water requirement (as per sanctioned EC) is 500 m³/hr. The additional water requirement for the proposed project is estimated as 50 m³/hr. The net water requirement of the ISP after implementation of the proposed expansion project would be around 550 m³/hr (13,200 KLD) which will be obtained from Kansabati River & rain water harvesting structure. The permission for drawl of surface water 22,248 KLD from Kansabati River is obtained from Irrigation & Water Department, West Bengal vide Memo no-167-I/I-4M-05/14 (Pt. II) dated 16.10.2020.

11.5.11 Existing power requirement of 306 MW is obtained from Captive power plant & State grid. The power requirement for the proposed project is estimated as 167.0 MW. Total power 473.0MW will be obtained from the 385 MW captive power plant {250 MW WHRB Based + 135 MW CFBC (Coal & Dolochar Mix based)} & balance 88.0 MW from State Grid power supply system at 220 kV/ 400 kV and associate company.

11.5.12 Baseline Environmental Studies:

Period	1 st December 2020 to 28 th February 2021
AAQ parameters at 10 Locations (min and max)	• PM_{2.5} = 25.5 to 37.6 µg/m³ • PM₁₀ = 56.1 to 83.7 µg/m³ • SO₂ = 4.0 to 8.9 µg/m³ • NO_x = 10.2 to 25.3 µg/m³ • CO = <0.1 to 0.30 mg/m³
Incremental GLC level	• PM₁₀ = 6.88 µg/m³ (Level at 0.48 km in S of SW Direction) • SO₂ = 7.02 µg/m³ (Level at 0.80 km in S of SW Direction) • NO_x = 7.05 µg/m³ (Level at 0.60 km in S of SW Direction) • CO = 0.313 mg/m³ (Level at 0.70 km in SW Direction)
Ground water quality at 8 Locations	• pH: 6.24 to 7.14, • Total Hardness: 108 to 232 mg/l, • Chloride: 18.9 to 85.9 mg/l, • Fluoride : <0.05 mg/l • Heavy metals (Mercury, Lead, Cadmium & Arsenic): BDL
Surface water quality at 9 Locations	• pH: 6.83 to 7.20, • DO: 4.6 to 5.7 mg/l, • BOD: 2.6 to 9.4 mg/l, • COD: 11.0 to 35.0 mg/l
Noise levels Leq (Day and Night)	• 47.2 to 69.4 for the day time and 38.4 to 63.6 for the Night time.
Traffic assessment study findings	• Traffic study has been conducted on NH-49 (Formerly NH-6) passing through south direction at around 1.5 km w.r.t the proposed project site and Zilla Parishad Road (Tata Metaliks Road) connects the proposed project site with National Highway-49 (Previously NH-6) at Saha Chowk. NH 49 (Formerly known as NH 6) is a four-lane concrete/ metallic National highway & Zilla Parishad Road (Tata Metaliks Road) is two lane concrete/ metallic road. • At least 85% transportation of raw materials and finished products shall be by rail to the nearest operational railway siding of associate company (OMPL, RML & OASPL). Apart from that the company is proposing to construct dedicated private railway siding inside the plant premises and In principal approval obtained from Indian Railway vide letter no-GW/1/OMIPL-NWOSC (IPA)/159; dated 08.08.2022. Till commissioning of dedicated railway siding, from associate company railway siding raw materials will be received first by railway rakes and then will be shifted to the plant site through trucks either through dedicated corridor (material conveyor belt) or through dedicated road corridor (7 m wide) to the plant site. Balance 15% will be transported through road.

	- Existing PCU is 21,736 PCU/hr on NH-49 (Formerly NH-6) & 7,440 PCU/hr on Zilla Parishad Road (Tata Metaliks Road) 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-49 (Formerly NH-6)</td><td>21,736/24 = 906</td><td>3600*</td><td>0.25</td><td>B</td></tr><tr><td>Zilla Parishad Road (Tata Metaliks Road)</td><td>7440/24 = 310</td><td>1500*</td><td>0.21</td><td>B</td></tr></table> - PCU load after proposed project will be: <i>(Considering 100% movement by Road. (In a worst case scenario due to delay in construction of dedicated corridor/ road/ railway siding or due to the unavailability of rakes.)</i><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-49 (Formerly NH-6)</td><td>35,352/24 = 1473</td><td>3600*</td><td>0.40</td><td>B</td></tr><tr><td>Zilla Parishad Road (Tata Metaliks Road)</td><td>10,533/24 = 531</td><td>1500*</td><td>0.35</td><td>B</td></tr></table> * Note: Capacity as per IRC-106:1990 Guide line for capacity for roads. Conclusion The level of service (LOS) is “B” for National Highway 49 (formerly NH-6); and for Zilla Parishad Road (Tata Metaliks Road) is “B” after including additional traffic due to proposed project. The additional load on the carrying Capacity of the concern roads is not likely to have any change in the LOS value. Thus, it can be concluded that the present road network is good enough to bear the minor increased traffic load.	Road	V (Volume in PCU/hr)	C (Capacity in PCU/Hr)	Existing (V/C Ratio)	LOS	NH-49 (Formerly NH-6)	21,736/24 = 906	3600*	0.25	B	Zilla Parishad Road (Tata Metaliks Road)	7440/24 = 310	1500*	0.21	B	Road	V (Volume in PCU/hr)	C (Capacity in PCU/Hr)	Existing (V/C Ratio)	LOS	NH-49 (Formerly NH-6)	35,352/24 = 1473	3600*	0.40	B	Zilla Parishad Road (Tata Metaliks Road)	10,533/24 = 531	1500*	0.35	B
Road	V (Volume in PCU/hr)	C (Capacity in PCU/Hr)	Existing (V/C Ratio)	LOS																											
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NH-49 (Formerly NH-6)	35,352/24 = 1473	3600*	0.40	B																											
Zilla Parishad Road (Tata Metaliks Road)	10,533/24 = 531	1500*	0.35	B																											
Flora and fauna	No schedule-I species & endangered fauna were recorded in the core & buffer zone of plant area.																														

11.5.13 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 (TPA)			Mode of Treatment	Disposal	Remarks
			Existing	Additional	Total			

S. No.	Type of waste	Source	Quantity (TPA)			Mode of Treatment	Disposal	Remarks
			Existing	Additional	Total			
1	Dolo Char	DRI Plant	1,50,00	3,96,670	5,46,940	Not Applicable	100% used in CFBC Boilers.	--
2	MBF Slag & Sludge	MBF Plant	6,39,330	(-) 2,91,330	3,48,000	Granulation	Used for Cement making & in Sinter plant	Agreement made with associate companies cement plant
3	Slag & Scale	SMS	87,266	6,00,654	6,87,920	Recovery of metal & flux from Slag Crushing unit	Used for Road construction/ Land levelling purpose, Paver Block Making after recovering metal from Slag Crushing unit;	--
4	Slag	Ferro Alloys Plant	1,50,000	28,500	1,78,500	Not Applicable	• Slag generated during FeMn production - used as raw material for SiMn production. • Slag generated during SiMn production - used for road construction/land levelling. • After maximum recovery of Chrome from FeCr slag it will undergo TCPL Test & then used in green concreting.	--
5	Miss Roll/End Cuts	Rolling Mill	30,000	62,000	92,000	Not Applicable	Used as raw material in SMS Plant	--
6	Core Sand and Slag	DIP	7,826	(-) 7,826	0	Not Applicable	Eliminated due to surrendering DIP	--

S. No.	Type of waste	Source	Quantity (TPA)			Mode of Treatment	Disposal	Remarks
			Existing	Additional	Total			
7	Cement Slurry	DIP	857	(-) 857	0	Not Applicable	plant	
8	Bottom Ash	CPP	1,20,570	1,00,487	2,21,057	Not Applicable	Used for Road construction/ Land levelling purpose	--
9	Dust	APC Devices	1,35,173	4,86,720	6,21,893	Not Applicable	Used in Sinter Plant and Brick Manufacturing, Pelletisation mix	--
10	Kiln Accretion	DRI Plant	5,000	18,332	23,332	Not Applicable	Road Construction	--
11	Tar Sludge & Coal Tar	Producer gas plant	15,552	(-) 6,844	8,708	Not Applicable	Sold to WBPCB authorized vendor	--
12	Zinc Ash/ Dross	DIP & Rolling Mill	875	825	1700	Not Applicable	Sold to WBPCB authorized vendor	--
13	Fly Ash	CPP	2,81,340	4,83,858	7,65,198	Not Applicable	Used for Brick making and also in Cement Plant	Agreement made with associate companies cement plant
14	Middling	Coal Washery	0	17,64,000	17,64,000	Not Applicable	To be used in proposed CFBC Boilers and in associate company boiler (OMPL-I, OASPL), Kharagpur	--
15	Rejects	Coal Washery	0	3,36,000	3,36,000	Not Applicable	To be used for Road construction / Land levelling	--
16	Tailing	I/O Beneficiation plant	3,17,000	(-) 3,17,000	0	Not Applicable	Eliminated due to surrendering of beneficiation plant.	--
17	Iron oxide Powder from ARP	Rolling Mill	1750	1750	3500	Not Applicable	To be sold to Tape & Paint manufacture.	--
18	Sludge	ETP of Galvanizin	58	871	929	Not Applicable	Sent to CHWTSDF or	--

S. No.	Type of waste	Source	Quantity (TPA)			Mode of Treatment	Disposal	Remarks
			Existing	Additional	Total			
		g & Pickling Line					Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried and briquetted and reused in Furnaces	
19	Molding Line	DIP Fitting	5	(-) 5	0	Not Applicable	Eliminated due to surrendering DIP plant.	--
20	Shot Blasting	& Accessorie	8	(-) 8	0	Not Applicable		--
21	Fettling & Grinding	s Unit	2	(-) 2	0	Not Applicable		--

Hazardous Waste

S. No.	Type of waste (Hazardous)	Quantity			Mode of Treatment	Disposal	Remarks
		Existing	Additional	Total			
1	Damaged Bag Filters	850 Nos.	250 Nos.	1000 Nos.	Not Applicable	Sent to WBPCB Authorized CHWTSDF	Membership obtained by the Group from CHWTSDF, Haldia W.B.
2	Used Oil	11,500 lit	8,500 lit	20,000 lit	Not Applicable	Sold to WBPCB Authorized Vendors	Sold to WBPCB authorised vendor as per HWM ,2016
3	Cotton Waste	520 kg	280 kg	800 kg	Not Applicable	Sent to WBPCB Authorized CHWTSDF	Membership obtained by the Group from CHWTSDF, Haldia W.B.
4	Process Residue FeCr Plant	18,830 TPA	1,59,670 TPA	1,78,000 TPA	Not Applicable	After TCLP test sent to WBPCB Authorized CHWTSDF	
5	Phenolic Water	Variable	Variable	Variable	Not Applicable	Phenolic water of PGP used in ABC of DRI Plant	Not Applicable
6	Zinc Dross	875 TPA	825 TPA	1700 TPA	Not	Sold to WBPCB	Sold to

S. No.	Type of waste (Hazardous)	Quantity			Mode of Treatment	Disposal	Remarks
		Existing	Additional	Total			
					Applicable	Authorized Vendors	WBPCB authorised vendor as per HWM ,2016
7	Sludge from ETP	58 TPA	42 TPA	100 TPA	Not Applicable	Sold to WBPCB Authorized Vendors	
8	Tar Sludge	15,552	(-) 6,844	8,708	Not Applicable	Sold to WBPCB Authorized Vendors	

11.5.14 Public Consultation:

Details of advertisement	“Millennium Post” (in English) dated 5th March, 2022. “Aajkaal” (in Bengali) dated 5th March, 2022. “Sanmarg” (in Hindi) 5th March, 2022.
Date/Time of Public Hearing	07 th April, 2022 at 12:00 P.M.
Venue	Mahasakti Mahasangha, Satkui, P.O. Matkatpur (near BDO Office Kharagpur-I), Dist.- Paschim Medinipur, West Bengal
Presiding Officer	Shri. Suman Sourav Mohanty, IAS, Additional District Magistrate LR & DL&LRO, Paschim Medinipur
Major Issues Raised	1. Employment 2. Health care facility 3. Education- Construction/ Development of Technical Schools. 4. Environment – APCD, Pollution Control, Effluent Discharge etc. 5. Avenue Plantation/ Green Belt development. 6. CSR Activities related like: - Installation of street lights. - Road Construction & Development/ maintenance. - Development of village canal. - Construction of Temple.

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

S. No.	Physical activity and action plan		Year of implementation (Budget in ₹)			Total Expenditure (₹ in Crores)
	Name of the activity	Physical Targets	1 st (2022-23)	2 nd (2023-24)	3 rd (2024-25)	
PUBLIC HEARING BASED ACTIVITIES						

1.	Local employment	Maximum employment will be given to the Local youth as per State Government norms based on their knowledge and skill. In addition, vocational training will be given for the employment to local. Total 160 persons will receive stipend of Rs. 12,500 per month for three months training.	₹ 0.20 Crores	₹ 0.20 Crores	₹ 0.20 Crores	0.60
2.	Provision for health care facility	Free ambulance service for meeting emergency demand.	₹ 0.12 Crores	-	-	0.12
		Financial support to existing health center [(Kalaikunda Primary Health Center (1 st year), Matkatdpur (2 nd year) and Mahespur (3 rd year)] with specialist doctor, compounder & assistant etc.	₹ 0.12 Crores	₹ 0.12 Crores	₹ 0.12 Crores	0.36
3.	Construction / Development of Technical Schools	Financial Support to the 02 nos. technical schools Private I.T.I & Midnapore I.T.I- ₹ 5 Lakhs each in 1 st year, 2 nd Year & in 3 rd Year will be provided for development of lab & infrastructure. Free lectures /classes at least 144 classes annually from experienced industrial experts in consultation with school administration will be provided at the cost of ₹ 2 Lakhs annually. Industrial/ Vocational training will be provided to 100 local youths per year based on their academic qualification for better education and practical experiences and also eligible candidates will be engage by the unit in near future.	₹ 0.07 Crores	₹ 0.07 Crores	₹ 0.07 Crores	0.21
4.	Financial Support to the Local School for better education facility and development of infrastructure (toilets) & library facilities	Barkola Primary School in 1 st year, Bargai Primary School, in 2 nd year and Walipur High School in 3 rd year with 02 nos. toilets at each school. (01 no. toilets @ 1.0 lac)	₹ 0.06 Crores	₹ 0.06 Crores	₹ 0.06 Crores	0.18
5.	Proper action to	Most effective and advanced stage technology having techno-	Description		Capital cost, Rs. in crores	Recurring cost Rs. in crores

	control pollution and construction of plant effluent discharge drainage system.	economic viability for air pollution control devices of adequate capacity have been installed for existing operational units and will be installed in parallel with implementation of the proposed plant and it will be regularly monitored by dedicated team. Also third party audit / monitoring will be conducted by approved lab / agency on quarterly basis. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEFCC/ WBPCB with EC compliance report. Boundary of the plant will be increased from 6 foot to 8 to 10 foot with barbed wire. Plant is being design as Zero Liquid Discharge plant and entire waste water after treatment used in plant. For the existing EC accorded and expansion project 02 x 140 KLD STP and 1 x 1300 KLD + 1 x 600 KLD ETP will be installed. A network of drainage system having size 0.5 m Depth × 0.5 m width will be provided along the internal roads to collect storm water and will be interlinked with higher size drain 1 m wide & 1 m depth that will be connected to surface 03 Nos. Guard Pond of Dimension 200 m x 150 m x 7 m ; 180 m x 60 m x 7 m & 150 m x 120 m x 7 m.	<table><tr><td>Air pollution control</td><td>195.00</td><td>16.00</td></tr><tr><td>Water pollution control</td><td>11.00</td><td>0.95</td></tr><tr><td>Solid Waste Management System</td><td>13.50</td><td>0.65</td></tr><tr><td>Green belt Development</td><td>20.00</td><td>0.70</td></tr><tr><td>Noise pollution control</td><td>4.50</td><td>0.80</td></tr><tr><td>Env. Monitoring and management</td><td>4.79</td><td>1.80</td></tr><tr><td>Implementation of Controlling measures to minimize impacts due to transportation and traffic</td><td>4.50</td><td>0.80</td></tr><tr><td>Setting Environmental Laboratory</td><td>1.74</td><td>0.35</td></tr><tr><td>Total</td><td>255.03</td><td>22.05</td></tr></table>				Air pollution control	195.00	16.00	Water pollution control	11.00	0.95	Solid Waste Management System	13.50	0.65	Green belt Development	20.00	0.70	Noise pollution control	4.50	0.80	Env. Monitoring and management	4.79	1.80	Implementation of Controlling measures to minimize impacts due to transportation and traffic	4.50	0.80	Setting Environmental Laboratory	1.74	0.35	Total	255.03	22.05
Air pollution control	195.00	16.00																															
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Solid Waste Management System	13.50	0.65																															
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Env. Monitoring and management	4.79	1.80																															
Implementation of Controlling measures to minimize impacts due to transportation and traffic	4.50	0.80																															
Setting Environmental Laboratory	1.74	0.35																															
Total	255.03	22.05																															
6.	To do more plantation	Green belt is being developed inside & outside the plant boundary CPCB guideline. With the expansion proposal the green belt will be increased from 40.01 hectare to 49.10 hectare. Greenbelt @ 2500 trees per hectare will be developed. Total 1,22,750 nos. of trees will be planted all along the plant boundary. Additional avenue plantation will be done in nearby villages by	₹ 0.08 Crores	₹ 0.08 Crores	₹ 0.08 Crores	0.24																											

		planting more or less approx. 1,50,000 nos. of trees. (Nimpura area-1 st year, along the NH-49-2 nd year and Kalyanpur village -3 rd year)				
7.	Installation of street lights	Installation of LED solar Street Lights with pole 30 nos. at a gap of 50 meter apart on road measuring 1.5 km from Charchak to Gokulpur.	₹ 0.15 Crores	-	-	0.15
8.	Development of village canal	Development of 'Mara Kasai canal in Gokulpur village approximately 3.0 Km -2 nd (1.5 km) & 3 rd Year (1.5 km)- (1 Km.@ ₹ 16.0 lacs)	-	₹ 0.24 Crores	₹ 0.24 Crores	0.48
9.	Maintenance, Development & Construction of road in nearby villages	Maintenance & development of 3.0 km road. (From Saha Chowk Dhekia Village to Latibpur village) in 1 st , 2 nd year and & development of road to the burial sites in Amba Village in 3 rd year respectively.	₹ 0.27 Crores	₹ 0.27 Crores	₹ 0.27 Crores	0.81
10	Construction of Temple	Construction of Temple 'Sitala Temple' in Amba village. (1 No.) in 2 nd year.	₹ 0.05	-	-	0.05
NEED BASED ACTIVITIES (Adopting 07 nos. of villages –Shyamraipur, Dhekia, Latibpur, Risha, Tentulia, Gokulpur and Amdai in nearby project area)						
11.	Drinking water facility	Bore well (60 Nos. @ 1.5 lacs per bore well) in villages Latibpur (Village-10 Nos.), Risha (10 Nos.) & Tentulia (10 Nos.) – 1 st Year (Latibpur); 2 nd year two villages (Risha) & 3 rd year (Tentulia).	₹ 0.30 Crores	₹ 0.30 Crores	₹ 0.30 Crores	0.90
12.	Providing collection bins/ dustbin	60 nos. of collection bins with stand each in Gokulpur (1 st year), Dhekia (2 nd year) and Latibpur (3 rd year) villages.	₹ 0.10 Crores	₹ 0.10 Crores	₹ 0.10 Crores	0.30
13.	Infrastructure Development	Construction of 02 nos. community hall- Risha (01 No.)– 1 st Year; & Tentulia (01 no)-3 rd year	₹ 0.10 Crores	-	₹ 0.10 Crores	0.20
14.	Construction/ Development of Sewage pipeline	Construction & development of 0.5 km sewage pipeline for discharge of sewage in Gokulpur Village in 2 nd year.	-	₹ 0.20 Crores	-	0.20
15.	Street Lighting (Solar/Led) provision at suitable public places	Shyamraipur - 10 Nos. in 1 st year, Dhekia- 10 Nos. in 2 nd year and Amdai - 10 Nos. & Risha -10 nos. in 3 rd year. (01 no. solar LED light with battery & stand @ Rs. 0.50 Lakhs)	₹ 0.05 Crores	₹ 0.05 Crores	₹ 0.10 Crores	0.20
TOTAL			1.67 Crores	1.69 Crores	1.64 Crores	5.00 Crores

11.5.15 The existing capital cost of project was Rs 1,500 Crores. The capital cost of the proposed project is Rs. 1,000 Crores and the capital cost for environmental protection measures is proposed as Rs. 285.47 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 23.50 Crores. The total employment generation from the complete project is 5,000 (Direct - Regular & Contractual). The details of cost for environmental protection measures is as follows:

S. No.	Description	Existing ECs (Rs. in Crores)		Proposed (Rs. in Crores)	
		Capital cost	Recurring cost	Capital cost	Recurring cost
1	Air pollution control	40.00	4.00	155.0	12.00
2	Water pollution control	6.50	0.55	4.50	0.40
3	Solid Waste Management System	8.00	0.35	5.50	0.30
4	Green belt Development	18.00	0.55	2.00	0.15
5	Noise pollution control	3.00	0.50	1.50	0.30
6	Occupational health Management	3.00	0.45	2.00	0.15
7	Risk Mitigation & Safety Plan	4.00	0.30	2.00	0.55
8	Monitoring and Surveillance System	4.00	1.50	0.79	0.30
9	Implementation of Controlling measures to minimize impacts due to transportation and traffic	2.50	0.50	2.00	0.30
10	Setting Environmental Laboratory	1.00	0.30	0.74	0.05
11	EMP for Social & Infrastructure development: - Addressal of public consultation concerns. - Need base assessment (Adopting 07 nos. of villages – Shyamraipur, Dhekia, Latibpur, Risha, Tentulia, Gokulpur and Amdai) in nearby project area.	--	--	--	3.94 (To be spent in 3 years)
	Total	12.43	1.81	150.00	9.00

11.5.16 Existing green belt as per EC condition to be developed on 40.1 ha (33%) @ 2500 nos. trees per hectare (around 1, 00,250 nos.) in 03 years span of time. An area of around 17.88 ha @ 2500 trees per hectare with total sapling of 44,700 nos. has already been covered under greenbelt within 1 year 02 months from date of grant of existing EC. Proposed additional greenbelt will be developed in 9.0 ha which is about 6.1 % of the total project area. Thus total of 49.10 ha area (33.24 % of total project area) will be developed as greenbelt. A 10-15 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB, guidelines. Local and native species will be planted with a

density of 2,500 trees per hectare. Total no. of 122,750 saplings (Existing as per EC -1, 00,250 + New-22,500) will be planted and nurtured in 49.10 hectares in first two year.

11.5.17 It is submitted that there is no violation under EIA notification 2006/no court cases/no show cause/no direction.

Certified compliance report from Regional Office:

11.5.18 The Status of compliance of earlier EC was obtained from Integrated Regional Office, Kolkata vide letter no 102-683/21/EPE/184 dated 29.04.2022 in the name of M/s Orissa Metallurgical Industry Private Limited. No Non-compliances detected. The EAC deliberated the status of compliance of earlier EC and found in order.

Written representations:

11.5.19 During the meeting, based on the deliberations made by the EAC, the project proponent vide letter dated 16.08.2022 through email dated 16.08.2022 submitted the information w.r.t. revised action plan to address the issues raised during public consultation and to address the socio-economic needs of the surrounding area. The same is updated at para at 11.5.14.

Deliberations by the Committee

11.5.20 The Committee noted the following:

1. The instant proposal is for expansion of Integrated Steel Plant (1.0 Million TPA to 2.0 Million TPA Finished Steel) With 385 MW Captive Power Plant.
2. 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.
3. 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.
4. 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.

5. The total project area is 147.71 out of which 130.31 hectare of land is already in possession of M/s Orissa Metallurgical Industry Private Limited & for rest of land (17.40 hectare) consent from private rayat obtained.
6. Existing green belt as per EC condition to be developed on 40.1 ha (33%) @ 2500 nos. trees per hectare (around 1, 00,250 nos.) in 03 years span of time. An area of around 17.88 ha @ 2500 trees per hectare with total sapling of 44,700 nos. has already been covered under greenbelt. Proposed additional greenbelt will be developed in 9.0 ha which is about 6.1 % of the total project area. Thus total of 49.10 ha area (33.24 % of total project area) will be developed as greenbelt. Total no. of 122,750 saplings (Existing as per EC -1, 00,250 + New-22,500) will be planted and nurtured in 49.10 hectares in first two year.
7. After expansion, the total water requirement of 13,200 KLD will be obtained from Kansabati River & rain water harvesting structure.
8. 02 Nos. rain water harvesting pond exist within project site. Also, Kansabati River, other rainwater harvesting structures and ponds exists within the study area of 10 km from the project site. The water bodies shall not be disturbed.
9. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
10. The Committee deliberated on the action plan and budget allocation for green belt development and noted that as committed by the PP that the green belt development shall be completed within a year.
11. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.
12. 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.
13. The Committee deliberated upon the certified compliance report of IRO and found it satisfactory.
14. The EAC also deliberated on the written submissions submitted by the proponent and found it satisfactory.
15. 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.
16. 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

11.5.21 In view of the foregoing and after detailed deliberations, the committee **recommended** the instant expansion proposal for grant of Environment Clearance, subject to uploading the written submission on Parivesh Portal, 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 Condition:

- 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. Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.
- iv. Solid waste utilization
 - a. 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.
 - b. PP shall recycle/reuse solid waste generated in the plant as far as possible.
 - c. Used refractories shall be recycled as far as possible.
- v. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.
- vi. Tar shall be recovered from producer gas and shall be sold to registered processors and Phenolic water from PGP shall be treated for phenol, tar and cyanide.
- vii. Coke oven plant shall be equipped with modified wet quenching system.
- viii. Blast Furnaces shall be equipped with Top Recovery Turbine (capacity more than 450 m³), dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- ix. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.
- x. EAF shall be closed type and fourth hole extraction system shall be included for fume control from these furnaces.

- xi. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas.
- xii. 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. Acid recovery plant shall be provided in CRM.
- xiii. Dust emission from Steel Plant stacks shall be up to 30 mg/Nm³.
- xiv. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xv. Recuperator shall be installed to recover heat from BF stove waste gas and used for stove gas reheating reducing requirement of fuel gas.
- xvi. The company shall also undertake rain water harvesting measures as per the plan submitted and reduce water dependence from the outside source.
- xvii. 85% of raw materials and finished goods shall be transported by dedicated railway siding facility. In the event of delay in establishment of dedicated railway line, PP shall use another railway siding facility of Rashmi Group.
- xviii. The total water requirement of 13,200 KLD will be obtained from Kansabati River & rain water harvesting structure. No ground water abstraction is permitted.
- xix. 02 Nos. rain water harvesting pond existis within project site. Also, Kansabati River, other rainwater harvesting structures and ponds exists within the study area of 10 km from the project site. The water bodies shall not be disturbed. 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 implemented.
- xx. Air cooled condensers shall be used in the Power plant. 100% consumption of Dolo char in CFBC based boiler.
- xxi. Ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xxii. Energy efficient drives, VFD for auxiliary motors, slip power recovery for motors above 1000 KW shall be provided.
- xxiii. Ventilation system for odour control in bitumen coating area shall be included.
- xxiv. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- xxv. 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.
- xxvi. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- xxvii. The coal dust to be measured at coal handling areas, ball mills, furnace charging areas through personal and area monitoring and to be compared and it should be within 2 mg/m³, respirable dust fraction containing less than 5% quartz as per Indian Factories Act, 1948.

- xxviii. The proposed project shall be designed as "Zero Liquid Discharge" Plant. There shall be no discharge of effluent from the plant. Domestic waste water will be treated in STP and treated water shall be re-used for greenbelt development and plantation and dust suppression.
- xxix. All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project. All plant roads shall be paved and industrial vacuum cleaners shall be used to clean the roads regularly.
- xxx. 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.
- xxxi. The project proponent shall undertake village adoption and develop a robust action plan to develop the villages in model villages.
- xxxii. All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xxxiii. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- xxxiv. There are two nos. of Ponds in the vicinity of the Project, so the PP shall ensure that the quality and pond profiles are not disturbed and shall implement a Pond conservation plan.
- xxxv. 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. The PP to this affect shall implement a time line action Plan.
- xxxvi. The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. 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.

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. 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. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vi. 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/recuperative type burners on all reheating furnaces.

VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.
- ii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iii. Used refractories shall be recycled as far as possible.
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

- v. 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.
- vi. 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 Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon capture, use and storage and 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.
- 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 nearby 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, NO_x (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

Agenda No. 11.6

11.6 Expansion of Integrated Steel Plant with addition Steel Melting Shop-3,72,352 TPA producing steel Rolled Product of 3,43,312 TPA, Sponge Iron Plant of 2× 350 TPD , Captive Power plant 40 MW(AFBC-21, WHRB-19) to the Existing Facility: Sponge Iron Plant: 6× 100 TPD, Pellet Plant: 6,00,000 TPA, Captive Power Plant 15 MW(WHRB) and Iron Ore beneficiation Plant 6,00,000 TPA by M/s. Janki Corporation Limited located at Sidiginamola village, Bellary Taluk and District, Karnataka – Consideration of Environmental Clearance.

[Proposal No. IA/KA/IND/269776/2009; File No. J-11011/576/2009-IA-II (I)]

[Consultant: Ardra Consulting Services Pvt. Ltd.; Valid upto: 29.12.2022]

- 11.6.1 M/s. Janki Corp Limited has made an online application vide proposal no. IA/KA/IND/269776/2009, dated 16.06.2022 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), 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.
- 11.6.2 Name of the EIA consultant: M/s Ardra Consulting Services Pvt. Ltd. [Sl. No. 96, List of ACOs with their Certificate / Extension Letter no. NABET/EIA/1922/IA0055; valid upto 29.12.2022, Rev. 24, July 05, 2022].

Details submitted by Project proponent

- 11.6.3 The details of the ToR are furnished as below:

Date of application	Consideration	Details	Date of accord	Validity of ToR
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Date of application	Consideration	Details	Date of accord	Validity of ToR
29.03.2020	17 th meeting of EAC held on 09.04.2019	Terms of Reference	10.06.2020	09.06.2024

11.6.4 The project of M/s Janki Corp Limited located in Sidiginamola Village, Bellary Tehsil, Bellary District, Karnataka State is for setting up of for new Steel Melting Shop-3,72,352 (TPA), Steel Rolled Product of 3,43,312 TPA, Sponge Iron Plant of 2× 350 TPD, Captive Power plant of 40 MW (AFBC-21 MW, WHRB-19 MW) to the Existing Facility: Sponge Iron Plant: 6× 100 TPD, Pellet Plant: 6,00,000 TPA, Captive Power Plant 15 MW (WHRB) and Iron Ore Beneficiation Plant 6,00,000 TPA within the existing premises.

11.6.5 Environmental Site Settings:

S. No.	Particulars	Details		
1.	Total land	155.805 ha (385.16 acres) [KIADB: 219.11acres, NA Land: 116.37acres and KLA(u/s) 109: 49.68acres]		
2.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Total land is in possession of JCL		
3.	Existence of habitation & involvement of R&R, if any.	R&R is not applicable		
		Habitation	Distance	Direction
		Karekallu Village	2.26	N
		SidiginamolaVillage	3.10	W
		MeenahalliVillage	4.08	WSW
		GollanaganahalliVillage	3.25	NNW
		KarekalluVeerapuraVillage	5.24	E
		Godehal Village	9.64	SSW
		Chakibanda Village	7.60	E
4.	Latitude and Longitude of all corners of the project site.	Corner	Latitude	Longitude
		01	15°11'17.47"	77°6'23.94"
		02	15°11'17.18"	77°6'25.96"
		03	15°11'3.86"	77°6'25.40"
		04	15°11'2.13"	77°6'32.35"
		05	15°11'0.00"	77°6'32.78"
		06	15°10'57.17"	77°6'44.54"
		07	15°10'52.51"	77°6'43.42"
		08	15°10'53.72"	77°6'38.12"
		09	15°10'40.62"	77°6'25.50"
		10	15°10'39.67"	77°6'31.31"
		11	15°10'28.91"	77°6'28.78"
		12	15°10'43.33"	77°6'35.82"

S. No.	Particulars	Details															
		13	15°10'44.16"	77° 6'33.20"													
		14	15°10'54.51"	77° 6'35.54"													
		15	15°10'56.40"	77° 6'29.97"													
		16	15°10'28.82"	77° 6'25.30"													
		17	15°10'18.19"	77° 6'21.83"													
		18	15°10'21.73"	77° 6'11.11"													
		19	15°10'23.55"	77° 5'58.08"													
		20	15°10'32.25"	77° 5'59.60"													
		21	15°10'46.41"	77° 6'7.76"													
		22	15°10'32.33"	77° 6'4.94"													
		23	15°10'48.78"	77° 5'54.99"													
		24	15°10'56.47"	77° 5'56.12"													
		25	15°10'58.03"	77° 5'43.22"													
		26	15°11'9.25"	77° 5'47.24"													
		27	15°11'11.25"	77° 5'43.74"													
		28	15°11'14.21"	77° 5'43.87"													
		29	15°11'17.02"	77° 5'40.92"													
		30	15°11'19.57"	77° 5'44.22"													
		31	15°11'21.15"	77° 5'52.41"													
		32	15°11'11.96"	77° 5'51.33"													
		33	15°11'7.21"	77° 6'12.87"													
		34	15°11'13.18"	77° 6'15.53"													
		35	15°11'13.00"	77° 6'22.62"													
		36	15°11'14.33"	77° 6'23.41"													
		5.	Elevation of the project site	426 m above mean sea level													
		6.	Involvement of Forest land if any.	No involvement of Forest Land.													
		7.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	<u>Project site:</u> Name: Village Pond in Sidiginamola <u>Study area</u> Within 10 km Radius <table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Tungabhadra Right Canal</td><td>5.49 km</td><td>WNW</td></tr><tr><td>Hagari/Vedavathi</td><td>3.9 km</td><td>W</td></tr></table>				Water body	Distance	Direction	Tungabhadra Right Canal	5.49 km	WNW	Hagari/Vedavathi	3.9 km	W	
		Water body	Distance	Direction													
		Tungabhadra Right Canal	5.49 km	WNW													
		Hagari/Vedavathi	3.9 km	W													
		8.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/	Nil Tungabhadra Otter conservation WLS is at 54km in S direction Moka Reserve Forest 7.20 km													

S. No.	Particulars	Details
	elephant reserve etc. if any within the study area	

11.6.6 The existing project was accorded environmental clearance vide Ir.no. F.No.J-11011/576/2009-IA-II(I) dated 23.01.2012 for expansion of Sponge Iron Plant (1,80,000 TPA to 4,00,000 TPA) and installation of Iron Ore Beneficiation Plant (0.6 MTPA). The latest Consent to Operate for the existing unit was accorded by Karnataka State Pollution Control Board vide Ir. No.AW-330986 dated 21.04.2022. The validity of CTO is upto 30.06.2027.

11.6.7 Implementation status of the existing EC

S. No.	Facilities	Units	As per EC dated 23.01.2012	Implementation Status as on date	Production as per CTO
1	Sponge Iron Plant	6 x 100 TPD (1,80,000 TPA)	23.01.2012	Implemented	180000 TPA
2	Sponge Iron Plant	2 x 350 TPD (2,20,000 TPA)	23.01.2012	Not Installed	Nil
3	Pellet Plant	600000 TPA	23.01.2012	Implemented	600000 TPA
4	Iron Ore Beneficiation Plant	600000 TPA	23.01.2012	Implemented	600000 TPA
5	Captive Power	WHRB-15 MW AFBC - 9 MW	23.01.2012	Implemented WHRB-15 MW	15 MW

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

S. No	Plant Equipment / Facility	Existing facilities as per EC dated 23.01.2012								Proposed Units		Final (Existing + Proposed)	
		Total (A+B)		Implement ed (A)		Un- implemented (B)		As perCTO					
		Config	Capacity	Config	Capacity	Config	Capacity	Config	Capacity	Config	Capacity	Config	Capacity
1	Sponge Iron Plant	6 ×100 TPD, 2 x350 TPD	4,00,000	6 ×100 TPD	1,80,000 TPA	2 x350 TPD	2,20,000 TPA	6 ×100 TPD	1,80,000 TPA	2×350 TPD	2,30,000 TPA	6 ×100 TPD, 2 x350 TPD	4,10,000 TPA
2	Pellet Plant	6,00,000 TPA	6,00,000 TPA	6,00,000 TPA	6,00,000 TPA	--	--	6,00,000 TPA	6,00,000 TPA	--	--	6,00,000 TPA	6,00,000 TPA
3	Iron Ore Beneficiation Plant	6,00,000 TPA	6,00,000 TPA	6,00,000 TPA	6,00,000 TPA	--	--	6,00,000 TPA	6,00,000 TPA	--	--	6,00,000 TPA	6,00,000 TPA
4	Captive Power	15MW (WHRB) + 9 MW (AFBC)	15MW (WHRB) + 9 MW (AFBC)	15MW (WHRB)	15MW (WHRB)	9 MW (AFBC)	9 MW (AFBC)	15MW (WHRB)	15 MW (WHRB)	(AFBC-21, WHRB-19)	40 MW	(AFBC-21, WHRB-34)	55 MW
5	Steel Melting Shop	--	--	--	--	--	--	--	--	3,72,352 TPA	3,72,352 TPA	3,72,352 TPA	3,72,352 TPA
6	Rolling Mill	--	--	--	--	--	--	--	--	3,43,312 TPA	3,43,312 TPA	3,43,312 TPA	3,43,312 TPA

11.6.9 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			
1	Iron Ore Fines	9,00,000	Nil	9,00,000	Karnataka M/s NMDC Limited M/s BKG Mines M/s SMIRORE M/s Vedanta M/s R Praven Chandra	80 km 80 km 90 km 180 km 180 km	Either by Road or by Rail
2	Lime stone	15,000	6900	21900	Karnataka M/s Unico Minerals	100 km	By Road
3	Bentonite	7,500	Nil	7,500	Gujarat M/s Foundwell Minechem M/s SAMIO Minerals Pvt Ltd	1,700 km	1) Kutch to Mangaluru by Sea and Mangaluru to Plant by Road 2) By Road from Kutch
4	Coke Fines	37500	Nil	37500	Andhra Pradesh M/s RashtriyaIspat Nigam Limited	800 km	By Road
5	Imported Coal	1,73,076	2,60,522	4,33,598	South Africa 1) Adani Enterprises Limited 2) Tata International Limited 3) Swiss Singapore Pty Ltd	600 km Received through Mangaluru or Ennore or KP Port, which are located at about 440, 600 & 400 km respectively	- By sea from source to Port - Either by Road or by Rail from Port to Plant
6	Dolomite	9,900	11,600	21,500	Karnataka M/s Unico Minerals	100 km	By Road
7	Pig Iron	Nil	46,400	46,400	Karnataka Kirloskar Ferrous Industries Ltd	100 km	By Road

8	Indian Coal	Nil	22,830	22,830	Telangana M/s Singareni Collieries Co Ltd	700 km	By Road
9	Scrap/Mill scale	Nil	37040	37040	In House From RM & SMS	-----	By Road

11.6.10 Existing Water requirement is 2610 KLD, water requirement is obtained from Sewage Treatment Plant of Ballari, City Corporation and permission for the same has been obtained from City Corporation, Ballari vide letter no. MB/T/SW/01/2006-2007 dated 19.06.2007. The total water requirement for the Existing and Proposed Project is 8,835 KLD. 133 KLD of Drinking and Domestic Water is drawn from Open Well of City Corporation at Hagari. Salvaged portion of this water is treated in Modular STP. It yields about 100 KLD. It will be recycled as Process Water. Thus, a total quantity of 8,602 KLD water will be drawn from Sewage Treatment Plant of City Corporation, Bellary. The permission for drawl of water from Hagari water supply is obtained vide Lr. No.9/0809/2011-12 Dated 23.03.2017.

11.6.11 Existing power requirement of 10.20 MW is obtained from own 15 MW CPP plant. The total power requirement after the expansion project is estimated as 41.23.MW, which will be obtained from the 55 MW CPP plant.

11.6.12 Baseline Environmental Studies:

Period	01.12.2019 to 29.02.2020
AAQ parameters at 8 Locations (min and max)	PM _{2.5} = 9.4 to 21.6 µg/m ³ PM ₁₀ = 42.1 to 78.6 µg/m ³ SO ₂ = 4.1 to 14.8 µg/m ³ NO _x = 9.1 to 18.7 µg/m ³ CO = 0.08 to 0.3 mg/m ³
Incremental GLC level	PM ₁₀ = 0.041 µg/m ³ (Level at 3.10.km in WDirection) SO ₂ = 0.160 µg/m ³ (Level at Project Site) NO _x = 0.150 µg/m ³ (Level at Project Site)
Ground water quality at 8 locations	pH: 6.97.to7.52, Total Hardness: 144 to 602 mg/l, Chlorides: 15 to 68 mg/l, Fluoride: 0.24 to 0.88 mg/l.
Surface water quality at 2 locations	pH: 6.79 to 7.48, DO: 3.2 to 3.4 mg/l BOD: 1 to 2 mg/l COD: 8.2 to 10 mg/l
Noise levels Leq (Day and Night)	35.5 to 88.3 for the day time and 32.7 to 65.5 For the Night time.
Traffic assessment study findings	- The Project site is located along Ballari – Adoni stretch of NH-167 Road which connects to Ballari – Adoni. - The project site is 19 Km from the Ballari City in the direction of East.

	• The project site is connected to the Ballari – Adoni Road which is diverted from the main road connected from Ballari to Guntakal which is NH 67. • The project site is located East part of the Ballari where there are no much steel industries located compared to West and South parts of Ballari. • The project site is having the existing road in the North direction which is having the width of 12 meter. • Existing Traffic Scenario:																											
	<table><tr><th>Towards</th><th>V (PCU's/hr)</th><th>C</th><th>Existing V/C</th><th>LOS</th></tr><tr><td>Adoni</td><td>262</td><td>1500</td><td>0.17</td><td>A</td></tr><tr><td>Ballari</td><td>247</td><td>1500</td><td>0.16</td><td>A</td></tr></table>	Towards	V (PCU's/hr)	C	Existing V/C	LOS	Adoni	262	1500	0.17	A	Ballari	247	1500	0.16	A												
Towards	V (PCU's/hr)	C	Existing V/C	LOS																								
Adoni	262	1500	0.17	A																								
Ballari	247	1500	0.16	A																								
	• Approximately 450 trucks parking has been considered for proposed expansion Project. • PCU load after proposed project:																											
	<table><tr><th rowspan="2">Towards</th><th colspan="3">Existing Scenario</th><th colspan="3">Changed Scenario</th></tr><tr><th>V</th><th>C</th><th>V/C</th><th>V</th><th>V/C</th><th>LOS</th></tr><tr><td>Ballari</td><td>247</td><td>1500</td><td>0.16</td><td>247+140=387</td><td>0.25</td><td>“B”</td></tr><tr><td>Adoni</td><td>262</td><td>1500</td><td>0.17</td><td>262+60=322</td><td>0.21</td><td>“B”</td></tr></table>	Towards	Existing Scenario			Changed Scenario			V	C	V/C	V	V/C	LOS	Ballari	247	1500	0.16	247+140=387	0.25	“B”	Adoni	262	1500	0.17	262+60=322	0.21	“B”
Towards	Existing Scenario			Changed Scenario																								
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	* Note: Capacity as per IRC-106;1990 for guideline, for capacity, V= Volume in PCU's/hr & C= Capacity in PCU's/hr LOS = Level of Service. Conclusion: The level of service will change from A to B on either side of the Road.																											
Flora and fauna	No Endangered species of Flora and schedule I species of Fauna observed in study area.																											

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

(A) Solid waste generation and management

S. No.	Type of Waste	Source	Existing quantity (TPA)	Proposed quantity (TPA)	Total Quantity (TPA)	Disposal
1	Tailing	Beneficiation Plant	1,50,000	-	1,50,000	Stored at earmarked area in cake form and

S. No.	Type of Waste	Source	Existing quantity (TPA)	Proposed quantity (TPA)	Total Quantity (TPA)	Disposal
						sold to the Cement Plants
2	MS Scrap	SMS& Rolling mill	-	29,040	29,040	Used as raw material in Induction Furnace
3	Ash	DRI	25500	67500	93,000	Sold to Cement plants and Used for Land fill
4	Dolochar	DRI	128700	150150	2,78,850	Used as fuel in AFBC Boiler of Power plant
5	Slag	IF	-	55900	55,900	Used for construction and road making
6	Pellet Waste	Pellet Plant	18,360	-	18,360	Recycle in Pellet Plant
7	Fly Ash and Bottom Ash	AFBC Boiler	52930	123500	1,76,430	Sold to local Cement Plants and for road making
8	Clarifier Sludge	From Common ETP	13700	21940	35,640	From Sludge Bed to Bio Manure to be utilized for Greenbelt Development
9	Metallic Scale (mill)	From SMS& Rolling mill	-	8000	8,000	Used as raw material in Pellet plant
10	Used Refractories	Pellet, DRI, IF	200	500	700	Sold as raw material for manufacture of Refractory Grog and fire clay refractories.

(B) Hazardous waste generation and management

S. No.	Type of Waste	Source	Quantity generated (TPA)	Disposal
1.	Waste residue containing Oil	Equipment	20MT	Collected in the leak proof containers and disposed to KPSCB authorized Re-processor/Incinerator
2.	Used/Spent Oil & Used grease	Equipment	25 KLT	Collected in the leak proof containers and disposed to KPSCB authorized Re-processor/Incinerator
3.	Empty	Equipment	2 MT	Handed over to

S. No.	Type of Waste	Source	Quantity generated (TPA)	Disposal
	barrels/ containers/ liners contaminated with hazardous chemicals /wastes			KPSCB authorized Re- Cyclers.
4.	Organic Residues	Producer Gas Plant	3500 MT	Utilized for quenching of Hot gases in after Burning chamber of Sponge Iron Plant.
5.	Exhaust Air or Gas cleaning residue	Producer Gas Plant	700 MT	Utilized as fuel in Hot Air Generator attached to Iron Ore Grinding Mill of Pellet plant.
6.	Used Lead acid battery	Equipment	4 MT	Handed over to KPSCB authorized Re- cyclers

11.6.14 Public Consultation:

Details of Advertisement	Deccan Herald & Kannada Prabha-24.07.2021
Date of Public consultation	24.08.2021
Venue	Plant site, Sidiginamola Village
Presiding Officer	Deputy Commissioner
Major issues raised	Medical facility/ Health, Skill based training, Water management, Employment, Solid waste disposal, Air pollution Control

Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020 - Revised Action Plan is still not as per the MoEF&CC O.M. dated 30/9/2020

S. No.	Issues Raised during PH	Proponents/KPCB Response	Physical Targets	Budget allocated in INR	Time bound budget provision (Rs. In Lakh)			Remark
					Within 1 st Year	2 nd Year	3 rd Year	
Plantation Management								
1	Plantation with tree guard at Nearby Villages in addition to Inside Plant premise plantation	Project proponent clarified that trees will be planted in the factory area as well in adjacent villages with tree guard.	2000 trees will be planted in the nearby village Sidiginamola, Karekallu & K Veerapura villages within the First Year & maintained for next two years before handing over to the villagers. 1500 trees / village with tree guard shall be supplied for better survival	8.00	5.00	1.50	1.50	Plantation shall be started after next rainy season for better survivability.
Employment Management								
2	Employment to be given to maximum people from Nearby villagers.	Preference will be given to the local people depending upon their eligibility in the proposed project and then only the employment will be given to the outside people.	Employment as per the qualification to be given to 30 peoples from nearby 3 villages viz. 10 people each from Sidiginamola, Karekallu & K Veerapura villages will be provided jobs within next two year.	Budget to be included in Project Operation cost as per actual				
Air Pollution & Management								
3	Control Measures for decreasing emission level & Dust Pollution	Provision of Pollution Control	• Installation of GCP/ESP at stacks • Fixed sprinkler	Budget is already include in the EMP cost as for				

		Devices	installation like at each strategic locations for control of fugitive dust Adequate steps will be taken for dust control in the plant by installing ESPs and Bag filters. The dust generated during movement of vehicles and due to blowing of wind will be minimized by water sprinkling and ensuring trucks are covered with Tarpaulin	Pollution Control measures					
Water Pollution & Management									
4	Protection of a lake adjacent to Karekallu Village	A pit of 6 mtr dia and 4 mtr depth exists gathering the storm water runoffs of the village. It will be protected from contamination by dust by adopting air pollution control methods as suggested in EIA-EMP report. Also, pond water analysis shall be carried at quarterly intervals to maintain the water quality No runoff or effluent shall be	The pond /Lake shall be de-silted and a berm shall be constructed around it for preventing any contaminations	15.00	5.00	5.00	5.00		

		allowed to channel to this pond /lake.						
5	Providing Water Facility at the Village level	Company Shall Provide RWH ponds in each of the Sidiginamola, Karekallu, Paramadevana Halli, Meenahalli, K. Veerapura, Gollanaganahalli villages.	Rainwater harvesting ponds shall be developed, in consultation with respective Gram Panchayats after proper site selection. Mostly the existing pond structures will be reclaimed for RWH.	15.00	5.00	5.00	5.00	
Noise Pollution & Management								
6	Noise Pollution levels should be controlled	Noise pollution and dust pollution – control will be done as part of our Corporate Environment Strategy.	Required controls for Noise pollution shall be carried out like installation of Acoustic enclosure to DG sets.	13.00	5.00	4.00	4.00	
Solid Waste Management								

7	Integral Development of the Villages including Solid Waste Management and assisting Farmers for Agriculture	The required vehicle for collection of solid waste will be handed over to Sidiginamola Gram Panchayat and Composting facility will be developed in consultation with the Village Committee to generate manure for the farmers..	One MSW carrier vehicle of capacity 5 T Load shall be engaged in collection of domestic waste from households and a composting facility shall be developed in consultation with the villagers at a suitable location in the outskirt of the village.	40.00	20.00	10.00	10.00	On successful operation, after the first year of implementation, another vehicle shall be engaged for Karekallu & K Veerapura villages
Social Infrastructure Management								
8	In addition to the existing developmental work there is further scope for development work in the villages	Sidiginamola village will be adopted by Janki Corp Limited for wholsum developmental activities and monitored regularly for the results of implementations. K Veerapura village also will be adopted by Janki Corp Limited for wholsum developmental activities and monitored regularly for the results of implementations.	After Detailed Socio-Economic Status of the villagers, the necessary development activities shall be planned in coordination with the villagers.	144.00	48.00	48.00	48.00	This will be expended in consultation with the local bodies and villagers for common interests for the overall development of the adopted villages
9	General Appeal for the company to provide the facilities such as uniforms, computers, water purification systems and furniture to the school.	Uniform, Computers, RO systems for drinking water shall be provided to Sidiginamola Village School	Initially 4 Computers, A water Purifier to cater to 300 persons shall be provided in the first year and then based on the student strength, the Uniforms for Girl Students shall be provided by the Company	14.00	8.00	3.00	3.00	

10	Industry has not provided any basic infrastructure to children's schools, Road's development etc.	Basic infrastructure to schools and Road development shall be carried out.	The 7km road length approaching to the Sidiginamola School shall be repaired for accessibility within three Years	18.00	6.00	6.00	6.00	
11	As a comprehensive development Plan for adopting two villages an ambulance need to be provided for public usage.	PP agreed to engage an Ambulance for the service of local public immediately	One equipped Ambulance shall be provided for the Public Usage.	15.00	15.00	-	-	This is a shared service for all villagers
12	Skill Based training to be given to local youth	Skill based training shall be organized to provide locals to gain the knowledge and abilities necessary to fulfil the specific job requirements.	The program shall be implemented in Sidiginamola, Karekallu, Paramadevana Halli, Meenahalli, K. Veerapura, Gollanaganahalli villages competent persons shall be involved in imparting the training. This will include vocational training for Women for Women Empowerment.	18.00	6.00	6.00	6.00	
Total				300.00	123.00	88.50	88.50	

- 11.6.15 Existing capital cost of project was 589.47 Crores. The capital cost of the proposed project is Rs 423.43 Crores and the capital cost for environmental protection measures is proposed as Rs 43.11 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 9.939 Crores. The employment generation from the proposed project / expansion is 618 direct employment & 1000 indirect employment. The details of cost for environmental protection measures are as follows:

S. No.	Description of Item	Existing (Rs. In Crores)		Proposed (Rs. In Crores)	
		Capital Cost	Recurring Cost	Capital Cost	Recurring Cost
(i).	Air Pollution Control/ Noise Management	1.41	0.56	5.18	0.17
(ii).	Water Pollution Control	11.27	1.77	23.7	6.11
(iii).	Environmental Monitoring and Management	1.84	0.11	4.06	0.58
(iv).	Green Belt Development	0.20	0.07	0.30	0.01
(v).	Addressal of Public Consultation concerns			3.00	

- 11.6.16 The total green belt area earmarked at the project site out of total site area of 155.85 Ha is 57.183 Ha. As a part of existing industrial activity, the developed area for green belt is 42.18 Ha and as a part of proposed activity, remaining area out of earmarked area for green belt will be developed which is 15 Ha. The total area of greenbelt will be 57.183 Ha which comes to 36.7%. Green belt will be developed all along the project boundary and inside the plant by choosing fast growing and native plants. A 7.5 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 1,43,000 saplings will be planted and nurtured in 57.18 hectares in next one year.

- 11.6.17 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 Integrated Regional Office

- 11.6.18 The Status of compliance of earlier EC was obtained from Regional Office, Karnataka *vide* letter no. EP/12.1/2011-12/25/KAR/1571 dated 15.03.2022 in the name of M/s. Janki Corp Limited. As per the report of RO, the conditions of environment clearance are compiled and has rated the compliance as Satisfactory.
- 11.6.19 The proposal was initially considered in the 9th meeting of the EAC for Industry-I sector held on 14-15th July, 2022 wherein the Committee deferred the proposal on account of the following technical shortcomings. The deliberations and recommendations of the EAC are as follows:

Deliberations by the Committee (EAC during 14-15th July, 2022)

11.6.20 The Committee noted the following:

1. The Committee observed that existing green belt has been developed in 27.07 % of the total project area and proposed greenbelt in additional 15 ha which is about 9.6% of the total project area. The Committee is of the opinion that greenbelt plan shall be revisited.
2. The EAC observed that project proponent has not clearly submitted the linkage details of the raw materials. Details of Raw material and its linkage (source details and supporting documents, distance etc.) and its mitigation measure during transportation needs to be submitted.
3. The Committee deliberated on the baseline data and observed that:
 - a. Project Proponent has not submitted the data of GLC Incremental data pertaining to CO.
 - b. The project proponent has not submitted the monitoring and analysis data w.r.t. BOD, COD and DO which are requisite as per TOR.
 - c. The maximum noise level is recorded as 88.3 dB(A). PP is required to submit the mitigation measures for noise management.
 - d. The units of data submitted w.r.t. AAQ parameters needs to be rechecked.
4. Action plan to address the issues raised during public hearing submitted as per the MoEF&CC O.M. dated 30/9/2020 shall be revisited and submitted.
5. The Committee observed that a nallah is passing through the project site. PP is required to submit the detailed management plan/conservation plan including technical and financial aspects to ensure that the nallah is not disturbed.
6. The traffic load study data is not in consonance to the data provided in EIA/EMP repor with the data submitted during brief submission and presented during the meeting. PP needs to re-analyze the monitored data and re-submit.
7. Project Proponent to consider adopting nearby villages to for socio-economic development.
8. The PP should confirm if the baseline CO level is 0.3 microgrmas (not milligrams) per cubic metre. The PP should include incremental GLC for CO also in its report
9. Project proponent to explore the ways to reduce the water consumption to 3-3.5 m³/tonne of production.
10. Project proponent shall also explore the possibility of meeting part of the plant's water requirement from RWH.

Recommendations of the Committee (EAC during 14-15th July, 2022)

11.6.21 In view of the foregoing and after detailed deliberations, the committee recommended to defer the proposal and sought requisite information on the points referred at para no. 9.2.19 above. The proposal shall be considered after submission of requisite information in next EAC meeting.

11.6.22 Based on the above, the project proponent vide Letter Ref. No. JCL/IA/MoEF&CC/ADS/6668/2022-23 dated 30.07.2022 (uploaded on PARIVESH on 05.08.2022) has submitted the following ADS information:

S No	ADS Point	Reply/Response of PP																
1.	The Committee observed that existing green belt has been developed in 27.07 % of the total project area and proposed greenbelt in additional 15 ha which is about 9.6% of the total project area. The Committee is of the opinion that greenbelt plan shall be revisited.	Revised Green Belt details are as follows: <table><tr><th>Details</th><th>Existing Area in Ha</th><th>Proposed Area in Ha</th><th>Total Area in Ha</th></tr><tr><td>Total Land</td><td>90.484</td><td>65.321</td><td>155.805</td></tr><tr><td>Green Belt</td><td>42.183</td><td>15.000</td><td>57.183</td></tr><tr><td>Green belt area %</td><td>46.6% (It is 27.07% if total land area with existing and proposed land areas are considered)</td><td>22.9% (It is 9.6% if total land area with existing and proposed land areas are considered)</td><td>36.67%</td></tr></table> The details are updated at para 11.6.16 above.	Details	Existing Area in Ha	Proposed Area in Ha	Total Area in Ha	Total Land	90.484	65.321	155.805	Green Belt	42.183	15.000	57.183	Green belt area %	46.6% (It is 27.07% if total land area with existing and proposed land areas are considered)	22.9% (It is 9.6% if total land area with existing and proposed land areas are considered)	36.67%
Details	Existing Area in Ha	Proposed Area in Ha	Total Area in Ha															
Total Land	90.484	65.321	155.805															
Green Belt	42.183	15.000	57.183															
Green belt area %	46.6% (It is 27.07% if total land area with existing and proposed land areas are considered)	22.9% (It is 9.6% if total land area with existing and proposed land areas are considered)	36.67%															
2.	The EAC observed that project proponent has not clearly submitted the linkage details of the raw materials. Details of Raw material and its linkage (source details and supporting documents, distance etc.) and its mitigation measure during transportation needs to be submitted.	Raw materials linkage are updated at para 11.6.9 above and mitigation measures submitted by the project proponent as follows: Mitigation Measures to Control: • While carrying raw materials trucks will be covered with tarpaulin sheets. • The roads are through NH and SH, which are either concrete or tar felt in nature. • All the internal roads will be made concreted and swept on daily basis by the Heavy-Duty Truck Mounted Vacuum Sweeping Machine for keeping the roads clean. • Static Water sprinklers will be installed with a gap of not more than 150 mtr between each other all along the internal roads. It helps in dust suppression as well as watering avenue plantation. • Vehicle speed will be restricted to less than 20 km/hr in the Plant. • Proper Preventive Maintenance of Vehicles shall be carried to minimize the noise. Vehicles without having PUC certificate will be not allowed into the Plant premises.																

S No	ADS Point	Reply/Response of PP
		- Silencers shall be used for all vehicles. - Greenbelt will be developed in and around the Plant premises, in particular around the material handling and storage areas.
3.	The Committee deliberated on the baseline data and observed that: a. Project Proponent has not submitted the data of GLC Incremental data pertaining to CO.	Due to the meagre quantity of CO generated from the process as well as from vehicular emissions, the CO isopleths were not generated for assessment of incremental values' spatial distribution.
	b. The project proponent has not submitted the monitoring and analysis data w.r.t. BOD, COD and DO which are requisite as per TOR.	PP has reported that although the respective values for SW1 and SW2 locations were provided by the laboratory in a separate sheet, it was inadvertently not included in the EIA Report. Therefore, PP has now submitted the respective analysis Report for the mentioned values as follows: DO: 3.2 to 3.4 mg/l BOD: 1 to 2 mg/l COD: 8.2 to 10 mg/l The details are updated at para 11.6.12 above.
	c. The maximum noise level is recorded as 88.3 dB(A). PP is required to submit the mitigation measures for noise management.	Reason of high noise level: This noise level has been observed at the plant site near the material handling area, in which there are movements of trucks and machinery operations. This location is 96 mt away from the west boundary and 220 mt away from the south boundary of the plant. Mitigation measures: On the south side as well as on the west boundary, a thick greenbelt area has been developed and there is no operational activities beyond this monitoring location on south or west sides. Therefore, as mitigation measure; the greenbelt will be further intensified in the south and west boundary areas for diffusing the noise level so generated from the material handling process. All equipment will be lubricated from time to time and housed in appropriate enclosures to reduce noise transmission. Proper Maintenance Management Plans will be in place to minimize the noise. Further the workers are provided with Ear Muffs, Ear Plugs, Dust Mask and Safety Glasses while working in this area to avoid the noise &

S No	ADS Point	Reply/Response of PP
		dust pollutions. The management shall take strong initiative to install silencers for all vehicles and other machines, stop idle vehicular operations to further reduce the working noise levels. In addition to this a 10 mt greenbelt shall be developed around the material handling area, in order to prevent the transmission of noise as well as arrest fugitive dust generated from the operation. Regular noise level at various areas shall be monitored.
	d. The units of data submitted w.r.t. AAQ parameters needs to be rechecked.	Inadvertently the unit of Ambient CO levels were reported as $\mu\text{g}/\text{m}^3$ in the EIA Report and thus in the presentation slides. This has been corrected in the report as mg/m^3 as the unit of measure. The same is updated at para 11.6.12 above.
4.	Action plan to address the issues raised during public hearing submitted as per the MoEF&CC O.M. dated 30/9/2020 shall be revisited and submitted.	Action plan to address the issues raised during public hearing has been revised and submitted. The same is updated at para 11.6.14 above.
5.	The Committee observed that a nallah is passing through the project site. PP is required to submit the detailed management plan/conservation plan including technical and financial aspects to ensure that the nallah is not disturbed.	The hydrology study is conducted for this project since the nallah is passing across the project area. For the hydrology study 50 years (1971-2020) of rain fall data has been considered. The total run off calculated from the catchment area is 14.45 CUM/sec and discharge capacity of the drain is 237.6 CUM/sec. <u>Nallah Management:</u> • Now it is protected by providing 10 m buffer zone, with plantation, on either side of the Nallah. Hence, natural drainage course is not getting disturbed.. • Protection of the Nallah will be strengthened further by making up 1.5 mtr high bunds on either side of the Nallah. • Stone pitching will be done to the bunds towards their respective Plant sides so that storm water flow will not be able to erode the bunds. • Nallah will be cleaned at regular intervals and no industrial waste or waste water will be allowed into the Nallah. • All storm water from the Plant premises is directed by Routed Drains into 4 no's of Siltation Tanks. • Over flow from the siltation tank and other areas will be routed to rainwater pond which will be created at the project site with capacity of 20,000 CUM.

S No	ADS Point	Reply/Response of PP
		- Based on the water requirement and the availability of the water at pond, water will be pumped for utilities and through STP if required. - The detailed plan is included in the Plant layout drawing and an amount of Rs 1,00,00,000 of Capital Cost is proposed for Nallah Management Plan/Conservation Plan. The detailed budget breakups with their respective timelines are submitted.
6.	The traffic load study data is not in consonance to the data provided in EIA/EMP report with the data submitted during brief submission and presented during the meeting. PP needs to re-analyze the monitored data and re-submit.	The revised details of Traffic load study have been incorporated at para 11.6.12 above.
7.	Project Proponent to consider adopting nearby villages to for socio-economic development.	The villages Sidgininamola and K Veerapura shall be adopted by Janki Corp Limited.
8.	The PP should confirm if the baseline CO level is 0.3 micrograms' (not milligrams) per cubic meter. The PP should include incremental GLC for CO also in its report.	Inadvertently the unit of Ambient CO levels were reported as $\mu\text{g}/\text{m}^3$ in the EIA Report and thus in the presentation slides. This has been corrected in the report as mg/m^3 as the unit of measure. The same is updated at para 11.6.12 above.
9.	Project proponent to explore the ways to reduce the water consumption to 3-3.5 m ³ / tonne of production.	PP has considered: 1) 2.5 m³/Tonne of Steel Production 2) 3.5 m³/hour/MW of Power Generation 3) Pellet Plant and Sponge Iron Plant - Only Evaporation make-up is considered 4) Iron Ore Fines Beneficiation Plant - Moisture Losses are considered The revised water balance scheme has been submitted and the details are updated at para 11.6.10 above.
10.	Project proponent shall also explore the possibility of meeting part of the plant's water requirement from RWH.	All the storm and rain water shall be collected in Siltation Tank # 4 and overflow of this tank is directed into equalization tank where it is neutralized and used up in the process. These details are provided in Nallah Management Plan/Conservation Plan. The rain water thus collected and conserved helps us in

S No	ADS Point	Reply/Response of PP
		reducing the drawl of Sewage Water from City Corporation.

Deliberations by the Committee

11.6.23 The Committee noted the following:

1. Instant proposal is for setting up of for new Steel Melting Shop-3,72,352 (TPA), Steel Rolled Product of 3,43,312 TPA, Sponge Iron Plant of 2× 350 TPD, Captive Power plant of 40 MW (AFBC-21 MW, WHRB-19 MW) to the Existing Facility: Sponge Iron Plant: 6× 100 TPD, Pellet Plant: 6,00,000 TPA, Captive Power Plant 15 MW (WHRB) and Iron Ore Beneficiation Plant 6,00,000 TPA within the existing premises.
2. 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.
3. 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.
4. 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.
5. Tungabhadra Right Canal at 3.8 km flowing from west to north of project site, Hagari/Vedavathi River flowing from north to south on west side of the project site 3.9Km exists within the study area from the project site.
6. Total water requirement for the Existing and Proposed Project is 8,835 KLD. 133 KLD of Drinking and Domestic Water is drawn from Open Well of City Corporation at Hagari. and 8,602 KLD water will be drawn from Sewage Treatment Plant of City Corporation, Bellary.
7. Existing green belt has been developed in 42.18 ha area which is about 27.07 % of the total project area of 155.805ha with total sapling of 76902 Trees. The total area of greenbelt will be 57.183 Ha which comes to 36.7%. Green belt will be developed all along the project boundary and inside the plant by choosing fast growing and native plants. A 7.5 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 1,43,000 saplings will be planted and nurtured in 57.18 hectares in next one year.

8. The Committee has also found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
9. 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.
10. The Committee also deliberated on the public hearing issues along with revised action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
11. The Committee deliberated upon the certified compliance report of IRO MoEFCC and found it satisfactory.
12. The EAC also deliberated on the ADS information submitted by the proponent and found it satisfactory.
13. 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.
14. 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

- 11.6.24 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. Tungabhadra Right Canal at 3.8 km flowing from west to north of project site, Hagari/Vedavathi River flowing from north to south on west side of the project site 3.9Km exists within the study area from the project site. The water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented. The management plan submitted w.r.t. canal shall be duly implemented for safeguarding the canal.
 - v. An adequate robust Erosion control and Soil Conservation Program (like Storm water diversion; Storm water drains with catch pits to trap run off material; Garland drains; Retention walls; Settling Ponds; Wheel washing arrangement; Silt removal from settling ponds & utilization; Greening & Paving; Excavated soil preservation for landscaping) shall be implemented.
 - vi. Total water requirement for the existing and proposed project of 8,835 KLD shall be met from Open Well of City Corporation at Hagari and from Sewage Treatment Plant of City Corporation, Bellary. No additional GW abstraction is permitted.
 - vii. Tailings from Iron Ore washing plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.
 - viii. Solid waste utilization
 - a. 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.
 - b. PP shall recycle/reuse 100 % solid waste generated in the plant.
 - c. Used refractories shall be recycled as far as possible.
 - ix. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.
 - x. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas. 100 % hot charging to ensure energy conservation.
 - xi. Dust emission from Steel Plant stacks shall be up to 30 mg/Nm³.
 - xii. Three tier Green Belt shall be developed in a time frame of one year in atleast 33% of project 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. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
 - xiii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
 - xiv. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.

- 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. As committed the project proponent shall adopt villages namely Sidgininamola and K Veerapura and implement a robust action plan to develop the villages in model villages.
- xviii. No sale of dolochar is permitted.
- xix. Producer gas plant shall be closed circuit type.
- xx. Air cooled condensers shall be used in the power plant.
- xxi. A proper action plan must be implemented to dispose of the electronic waste generated.
- xxii. All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xxiii. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- xxiv. The PP may use Non-coking coal and coking coal, quartzite. PP has to monitor coal dust and silica content in different process plants using personal and area sampling and compare the concentrations with permissible exposure limits of Indian Factories Act. PP shall also monitor coal dust exposure concentrations at coal handling areas, ball mills, furnace charging areas through personal/area monitoring and it shall be within permissible limit.
- xxv. The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. 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.

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 04 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. 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. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vi. 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/recuperative 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. Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant
- ii. 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.
- iii. 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.

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.
- ii. The company shall have a well laid down environmental policy duly approved 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, NO_x (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. 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. 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.
- 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.

Consideration of TOR

Agenda No. 11.7

- 11.7 Enhancement of Sponge Iron Production from 90,000 TPA to 99,000 TPA (by increasing number of operating days of existing 3x100 TPD DRI Plant) along with Installation of 12.5 MW Captive Power Plant (WHRB - 6 MW & AFBC - 6.5 MW) in the existing 3x100 TPD DRI Plant by M/s Balmukund Sponge and Iron Pvt. Ltd. (Sponge Division) at Mauza:- Manjhiladih, P.O. Gadi Srirampur, P.S. Giridih, Dist. Giridih, Jharkhand- Consideration of TOR.**

[Proposal No. IA/JH/IND/281861/2022; File No. J-11011/229/2022-IA-II (I)]
[Consultant: Vardan Environet; valid upto: 05.05.2023]

- 11.7.1 M/s. Balmukund Sponge & Iron Pvt. Ltd. (Sponge Division) has made an application online vide proposal no. IA/JH/IND/281861/2022 dated 02.08.2022 along with the application in prescribed format (Form-I), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at S. No.3(a) Metallurgical Industries (Ferrous and Non/ferrous) and 1(d) Thermal Power Plants under Category “A” of the schedule of the EIA Notification, 2006 and appraised at central level.
- 11.7.2 Name of the EIA consultant: M/s. Vardan Environet [S.No. 37, List of ACOs with their Certificate / Extension Letter No: NABET/EIA/2023/SA 0158 valid till 05.05.2023; Rev. 24, July 05, 2022].

Details submitted by Project proponent

- 11.7.3 The project of Balmukund Sponge & Iron Pvt. Ltd located in Khata No. – 3, 28, 62, 110, 132, Khasra/Plot No. 918, 920,921, 922, 923, 924 & 925, Mauza Manjhiladih, P.O. Gadi Srirampur, P.S. Giridih, Dist. – Giridih, Jharkhand is for enhancement of Sponge Iron Production from 90,000 TPA to 99,000 TPA (by increasing number of operating days of existing 3x100 TPD DRI Plant) along with installation of 12.5 MW Captive Power Plant (WHRB – 6 MW & AFBC – 6.5 MW) in the existing 3x100 TPD DRI Plant.
- 11.7.4 Environmental site settings:

Sl. No.	Particulars	Details			Remarks
i	Total land	3.55 ha [Private land]			Land use: Industrial
ii	Land Acquisition Details as per MoEFCC OM dated 7/10/2014	The proposed expansion will take place within the existing plant of 3.55 Ha which is under possession of the company. No additional land is required for the proposed expansion.			
ii	Existence of habitation & involvement of R&R, if any.	No existence of habitation. Hence R&R is not involved			
iii	Latitude and Longitude of all corners of project site	Point	Latitude	Longitude	
		A	24 ⁰ 07'15.05" N	86 ⁰ 21' 19.68"E	
		B	24 ⁰ 07'08.90" N	86 ⁰ 21' 25.74"E	
		C	24 ⁰ 07'06.42" N	86 ⁰ 21' 14.19"E	
		D	24 ⁰ 07'07.26" N	86 ⁰ 21' 14.87"E	
		E	24 ⁰ 07'06.96" N	86 ⁰ 21' 15.34"E	
		F	24 ⁰ 07'07.45" N	86 ⁰ 21' 15.73"E	
		G	24 ⁰ 07'07.71" N	86 ⁰ 21' 15.45"E	
		H	24 ⁰ 07'08.58" N	86 ⁰ 21' 16.28"E	
		I	24 ⁰ 07'08.71" N	86 ⁰ 21' 16.07"E	
		J	24 ⁰ 07'15.05" N	86 ⁰ 21' 19.68"E	
		K	24 ⁰ 07'11.18" N	86 ⁰ 21' 18.61"E	
		L	24 ⁰ 07'11.65" N	86 ⁰ 21' 18.21"E	
		M	24 ⁰ 07'12.48" N	86 ⁰ 21' 17.63"E	
		N	24 ⁰ 07'12.36" N	86 ⁰ 21' 17.15"E	
		O	24 ⁰ 07'12.06" N	86 ⁰ 21' 16.66"E	
		P	24 ⁰ 07'12.68" N	86 ⁰ 21' 16.04"E	
		Q	24 ⁰ 07'14.29" N	86 ⁰ 21' 17.46"E	
R	24 ⁰ 07'13.66" N	86 ⁰ 21' 18.25"E			
iv	Elevation of the project site	296 meters			AMSL
v	Involvement of Forest land if any.	No involvement of Forest Land			
vi	Water body exists within the project site as well as study area	Project site: No water body present within the plant site area			-

Sl. No.	Particulars	Details			Remarks									
		<i>Study area:</i> <table><tr><th>Water Body</th><th>Distance</th><th>Direction</th></tr><tr><td>Ursi River</td><td>1.25 kms.</td><td>East</td></tr><tr><td>Barakar River</td><td>7.05</td><td>South-West</td></tr></table>			Water Body	Distance	Direction	Ursi River	1.25 kms.	East	Barakar River	7.05	South-West	
Water Body	Distance	Direction												
Ursi River	1.25 kms.	East												
Barakar River	7.05	South-West												
vii	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/tiger reserve/elephant reserve etc. if any within the study area	Nil												

11.7.5 The existing project was accorded Consent to Establish vide Ir.no. T-5417 dated on 12.12.2000 from Bihar State Pollution Control Board (BSPCB) for installation of 100 TPD DRI kiln having production capacity of 30,000TPA Sponge Iron. The Company expanded its production from 30,000TPA to 90,000TPA Sponge Iron by installing additional 2x100TPD capacities DRI Kiln after obtaining CTE vide Ir. N-120 dated on 14.02.2004 from Jharkhand State Pollution Control Board (JSPCB). As the units were installed prior to the EIA Notification 2006 and project cost was less than Rs.100 crores thereby EIA Notification 1994 was not applicable, hence no Environmental Clearance was obtained for the existing units. Consent to Operate for the existing unit was accorded by Jharkhand State Pollution Control Board vide Ir. no. JSPCB/HO/RNC/CTO-9616607/2021/719 dated 27.05.2021. The validity of CTO is up to 30.09.2022.

11.7.6 Implementation status of the existing CTE/CTO:

S.No.	Facilities	Units	As per CTE	Implementation status	Production as per CTO
1	30000 TPA Sponge Iron unit	100 TPD DRI Kiln	CTE vide Ir.no. T-5417 dated 12.12.2000 by BSPCB	Implemented and Operational	90000 TPA Sponge Iron Production as per CTO vide Ir. no. JSPCB/HO/RNC/CTO-9616607/2021/719 dated 27.05.2021 and valid till 30.09.2022
2	60000 TPA Sponge Iron unit	2x100 TPD DRI Kiln	CTE vide Ir.no. N-120 dated 14.02.2004 by JSPCB	Implemented and Operational	

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

Plant equipment/ Facility	Existing units as per Valid CTE dated 12.12.2000 & 14.02.2004		Proposed		Final (Existing + Proposed)	
	Config.	Capacity TPA	Config.	Capacity TPA	Config.	Capacity TPA
Sponge Iron	3x100 TPD DRI Kiln (operating days 300)	90,000	Capacity enhancement of 3x100 TPD DRI Kiln by increasing the number of operating days to 330	Production increased by 9,000	3x100 TPD DRI Kiln (operating days 330)	99,000
WHRB Boiler	--	--	3 x 10 TPH (operating days 330)	6 MWh	3 x 10 TPH (operating days 330)	6 MWh
AFBC Boiler	--	--	1x 45 TPH (operating days 365)	6.5 MWh	1x 45 TPH (operating days 365)	6.5 MWh

11.7.8 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	Quantity required per annum			Source of Raw Material	Mode of Transportation	
	Existing TPA	Expansion TPA	Total TPA		Rail (km)	Road (km)
For Sponge Iron Unit:						
Iron Ore	145,800	14,580	160,380	Mines at Odisha	450	15-110 (from Railway siding- New Giridih – 15 Km; Bhaga & Malkera – 80 km and Bokaro – 110 Km) / 510
Coal	81,000	8,100	89,100	Import from port- (Haldia/ Dhamra – 300 Km &	300 – 480	15-110 (from Railway siding- New Giridih – 15

Raw Material	Quantity required per annum			Source of Raw Material	Mode of Transportation	
	Existing TPA	Expansion TPA	Total TPA		Rail (km)	Road (km)
				Vishakhapatnum – 480 Km)		Km; Bhaga & Malkera – 80 km and Bokaro – 110 Km)/ 550
Dolomite	2,970	297	3,267	Bhutan	-	900
For Power Plant:						
Coal	-	10,200	10,200	Import from port-Haldia/ Dhamra – 300 Km & Vishakhapatnum – 480 Km	300 – 480	15-110 (from Railway siding-New Giridih – 15 Km; Bhaga & Malkera – 80 km and Bokaro – 110 Km) / 550
Dolocahar	-	43560	43560	Captive	Captive	Captive
Waste Heat	-	3x26500 Nm ³ /hr	3x26500 Nm ³ /hr	Captive	Captive	Captive

11.7.9 Existing Water requirement is 80 m³/day, water requirement is obtained from Ground water and permission for the same has been obtained from CGWA vide NOC no CGWA/NOC/IND/REN/2/2022/6836 dated 04.03.2019. The water requirement for the proposed project is estimated as 313 m³/day, which will also be met from Ground water. The permission for additional water requirement will be obtained from CGWA. Thus total water requirement will be 393 m³/day.

11.7.10 Existing power requirement of 2.25 MW is obtained from Damodar Valley Corporation (DVC). The power requirement for the proposed project is estimated as 0.75 MW, thus total power requirement will be 3 MW which shall be sourced through Captive Power Plant.

11.7.11 The capital cost of the proposed project is Rs 72.3 Crores and the capital cost for environmental protection measures is proposed as 5-10% of proposed project cost. The employment generation from the proposed expansion is 40 and total manpower after expansion shall be 140.

11.7.12 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.

11.7.13 Proposed Terms of Reference: [Baseline data collection period: March to May 2022]

Attributes	Parameters	Sampling	Remarks
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		No. of stations	Frequency	
A. Air				
a. Meteorological parameters	Temp., Relative Humidity, Wind Speed, Wind Direction, Rainfall	1 Location	24-hourly sampling for three months	Secondary data from IMD, New-Delhi for the nearest IMD station
b. AAQ parameters	PM10, PM2.5, SO2, NOx, CO	8 Locations	24-hourly sampling, twice a week for 12 weeks	Monitoring Network: 2 locations in upwind side, 2 locations in downwind side / impact zone. All the sensitive receptors are covered
B. Noise	Leq (Day & Night), Lmax (Day & Night), Lmin (Day & Night)	8 Locations	24-hourly sampling, twice in a week (working and non-working day) for 3 months	Monitoring Network: 2 locations near to project site, 5 sites in impact zone. All the sensitive receptors are covered
C. Water				
a. Surface water quality parameters	pH, EC, NO3, Na, K, Fe, Al, Ca, Cl, Cr, Mg, TDS, TSS, DO, SO4, F, BOD, COD, Zn, Cu, Mn, Cd, Turbidity, Odour	8 Locations	Once in a day in each month for one season	One grab sample per location
b. Ground water quality parameters	pH, Ca, Cl, Mg, TDS, SO4, F, NO3, Fe, Al, Zn, Cu, Mn, Cd, Pb, Hg, EC, Turbidity, Odour	8 Locations	Once in a day in each month for one season	One grab sample per location
D. Land				
a. Soil quality	pH, Conductivity, Soil Texture, Water Holding Capacity, Cl, Ca, Na, K, Organic matter, Mg, N, Zn, Mn, Phosphorus, Pb,	8 Locations	Once in a day in each month for one season	One surface sample from project site, Agriculture, forest, water body and prime villages.

Attributes	Parameters	Sampling		Remarks
		No. of stations	Frequency	
	Cd, Cr, Cu			
<i>E. Biological</i>				
a. Aquatic	Species of Plants and Avifauna	10 km Radius study area	One season	Secondary data collected from Government offices, NGOs, published literature
b. Terrestrial	Species of Plants and Animals	10 km Radius study area	One season	Secondary data collected from Government offices, NGOs, published literature
<i>F. Socio-economic parameters</i>	Demographic details and Occupational details	10 km Radius study area	One season	Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

Deliberation by the Committee

11.7.14 The Committee noted the following:

- i. The instant proposal is for enhancement of Sponge Iron Production from 90,000 TPA to 99,000 TPA (by increasing number of operating days of existing 3x100 TPD DRI Plant) along with installation of 12.5 MW Captive Power Plant (WHRB – 6 MW & AFBC – 6.5 MW) in the existing 3x100 TPD DRI Plant.
- ii. The existing project is operation on the basis of CTE/CTO obtained from SPCB for production of 90,000TPA Sponge Iron (3x100TPD capacities DRI Kiln) as detailed in para 11.7.5 and 11.7.6 above. As the units were installed prior to the EIA Notification 2006 and project cost was less than Rs.100 crores thereby EIA Notification 1994 was not applicable, hence no Environmental Clearance was obtained for the existing units.
- iii. The EAC deliberated on the proposal. Based on the KML file presented by the PP, the proposed Unit is brown field project and the project was operational based on the CTE/CTO obtained from the State Pollution Control Board.
- iv. Existing water requirement is 80 m³/day which is obtained from Ground water. The water requirement for the proposed project is estimated as 313 m³/day, which will also be met from Ground water.

- v. Green belt has been developed over an area of 0.77 ha of the total land area. There is further proposal for development of green belt over an area of 0.40 ha making a total area of 1.17 ha (33% of the land).

Recommendations of the Committee

11.7.15 After deliberations, the Committee **recommended** the project proposal for prescribing following specific ToRs for undertaking detailed EIA and EMP study along with conduction of Public Hearing in addition to the generic ToRs enclosed at Annexure-1 read with additional ToRs at Annexure-2:

- (i) The Ursi River and Barakar River are within the study area to the plant site. The PP shall submit the suitable steps /conservation plan along with contouring (close intervals), Run - off calculations, disposal etc. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided.
- (ii) The greenbelt plantation shall be completed in 1.17 ha (i.e. 33% of total project area) within a timeframe of submission of EC application to the Ministry.
- (iii) CO gas sensors shall be installed at all relevant locations (furnaces).
- (iv) PP advised to submit the coal dust exposure concentrations at coal handling areas, ball mills, furnace charging areas through personal/area monitoring; whether they are within 2 mg/m³ in respirable dust containing less than 5% silica/quartz.
- (v) The water requirement for the proposed project is estimated as 393 m³/day, which will be met from Ground water. Project proponent shall explore the possibility for shifting to alternate source of water supply.
- (vi) Detailed description of micro flora and fauna (terrestrial and aquatic) existing in the study area with special reference to rare, endemic and endangered species.
- (vii) Explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.
- (viii) 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.
- (ix) PP shall submit action plan for rainwater harvesting system.
- (x) Action plan for 100 % solid waste utilization shall be submitted.
- (xi) PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.
- (xii) 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.
- (xiii) 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.

- (xiv) 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", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.
- (xv) As part of Corporate Environment Responsibility (CER) activity, company shall adopt nearby villages based on the socio-economic survey (10 Kms radial coverage from the project site) 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.
- (xvi) Traffic study shall be carried out inter-alia including existing road details with traffic load, proposed quantum of material to be transported by sea/rail/road with anticipated vessels/rakes/vehicles details, line source modelling and infrastructure strengthening details etc., These details shall be included in the EIA report.
- (xvii) Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
- (xviii) Action plan to limit the dust emission from all the stacks below 30 mg/Nm³ shall be furnished.
- (xix) Monitoring and control of NO_x, SO₂ and CO gases from the furnace must be included in the pollution control scheme.
- (xx) The total quantity of PM generated per annum and the percentage of this captured by the pollution control equipment must be reported regularly.
- (xxi) A Plan of Action for disposal of e-waste must be drawn up and implemented.
- (xxii) A Standard Operation Procedure for arresting emissions (PM as well as gas) when these approach critical values may be established.

The meeting ended with thanks to the Chair.

Standard ToR in line with Appendix III of the EIA, 2006.
applicable to Proposals Under Industry-1 Sector

Preliminary requirements:

- i. EIA/EMP report cover page shall consist of project title with location, applicable schedule of the EIA Notification, 2006, ToR letter No. with date, study period along with EIA consultant & laboratory details with QCI/NABET/NABL accreditation certificate detail.
- ii. Besides, following points shall be compiled as per QCI/NABET norms:
 - a. Disclaimer by the EIA consultant.
 - b. Declaration by the Functional Area Experts contributed to the EIA study and declaration by the head of the accredited consultant organization/authorized person.
 - c. Undertaking by the project proponent owning the contents (information and data) of the EIA/EMP report.
 - d. Undertaking by the EIA consultant regarding compliance of ToR issued by MoEF&CC.
 - e. Consultant shall submit the Plagiarism Certificate for the EIA/EMP Report.

Structure of EIA/EMP report

Executive Summary

- i. Table of Contents of the EIA report including list of tables/figures/annexures/abbreviations/symbols/notations.
- ii. Point wise compliance to the ToR issued by MoEF&CC.
- iii. Executive Summary
 - I. Introduction
 - i. Name of the project along with applicable schedule and category as per EIA, 2006.
 - ii. Location and accessibility
 - II. Project description
 - i. Resource requirements (Land; water; fuel; manpower)
 - ii. Operational activity
 - iii. Key pollution concerns
 - III. Baseline Environment Studies
 - i. Ambient air quality
 - ii. Ambient Noise quality
 - iii. Traffic study
 - iv. Surface water quality
 - v. Ground water quality
 - vi. Soil quality
 - vii. Biological Environment
 - viii. Land use
 - ix. Socio-economic environment
 - IV. Anticipated impacts

- i. Impact on ambient air quality
 - ii. Impact on ambient noise quality
 - iii. Impact on road and traffic
 - iv. Impact on surface water resource and quality
 - v. Impact on ground water resource and quality
 - vi. Impact on terrestrial and aquatic habitat
 - vii. Impact on socio-economic environment
- V. Alternative analysis
- VI. Environmental Monitoring program
 - i. Ambient air, noise, water and soil quality
 - ii. Emission and discharge from the plant
 - iii. Green belt
 - iv. Social parameters
- VII. Additional studies
 - i. Risk assessment
 - ii. Public consultation
 - iii. Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020
- VIII. Project benefits
- IX. Environment management plan
 - i. Air quality management plan
 - ii. Noise quality management plan
 - iii. Solid and hazardous waste management plan
 - iv. Effluent management plan
 - v. Storm water management plan
 - vi. Occupational health and safety management plan
 - vii. Green belt development plan
 - viii. Socio-economic management plan
 - ix. Project cost and EMP implementation budget.

EIA/EMP Report

1. Introduction

- i. Background about the project
- ii. Need of the project
- iii. Purpose of the EIA study
- iv. Scope of the EIA study

2. Project description

A. Site Details

- i. Location of the project site covering village, Taluka/Tehsil, District and State.
- ii. Site accessibility
- iii. A digital toposheet in pdf or shape file compatible to google earth of the study area of radius of 10km and site location preferably on 1:50,000 scale. (including all eco-sensitive areas and environmentally sensitive places).

- iv. Latest High-resolution satellite image data having 1 m - 5 m spatial resolution like quickbird, Ikonos, IRS P-6 pan sharpened etc., along with delineation of plant boundary co-ordinates. Area must include at least 100 m all around the project location.
- v. Environment settings of the site and its surrounding along with map.
- vi. A list of major industries with name, products and distance from plant site within study area (10km radius) and the location of the industries shall be depicted in the study area map.
- vii. In case if the project site is in vicinity of the water body, 50 meters from the edge of the water body towards the site shall be treated as no development/construction zone. If it's near the wetland, Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017 may be followed.
- viii. In case if the project site is in vicinity of the river, the industry shall not be located within the river flood plain corresponding to one in 25 years flood, as certified by concerned District Magistrate/Executive Engineer from State Water Resources Department (or) any other officer authorized by the State Government for this purpose as per the provisions contained in the MoEF&CC Office Memorandum dated 14/02/2022.
- ix. In case of canal/ nala/ seasonal drain and any other water body passing through project site, the PP shall submit the suitable steps /conservation plan/mitigation measures along with contouring, Run -off calculations, disposal etc. A robust and full proof Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be provided in the report.
- x. Type of land, land use of the project site needs to be submitted.
- xi. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process as per the MoEF&CC O.M. dated 7/10/2014 shall be furnished.
- xii. Project proponent shall prepare Engineering layout plan showing all internal roads minimum 6 m width and 9 m 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. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
- xiii. 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.
- xiv. A detailed report covering all aspects of Fire Safety Management and Fire Emergency Plan shall be submitted.
- xv. Details of drone survey for the site, needs to be included in report and presented before the EAC during appraisal of the project.

B. Forest and wildlife related issues (if applicable):

- i. Status of Forest Clearance for the use of forest land shall be submitted.
- ii. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife if the project site located within notified Eco-Sensitive Zone, 10 km radius of national park/sanctuary wherein final ESZ notification is not in place as per MoEF&CC Office Memorandum dated 8/8/2019.
- iii. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, Eco-sensitive Zone and Eco-sensitive areas, the project proponent shall submit the map duly authenticated by Divisional Forest Officer showing the distance between the project site and the said areas.
- iv. Wildlife Conservation Plan duly authenticated by the Competent Authority of the State Government for conservation of Schedule I fauna along with budget and action plan, if any exists in the study area.

C. Salient features of the project

- i. Products with capacities in **Tons per Annum** for the proposed project.
- ii. If expansion project, status of implementation of existing project, details of existing/proposed products with production capacities in Tons per Annum.
- iii. Site preparatory activities.
- iv. List of raw materials required and their source along with mode of transportation.
- v. Other than raw materials, other chemicals and materials required with quantities and storage capacities.
- vi. Manufacturing process details along with process flow diagram of proposed units.
- vii. Consolidated materials and energy balance for the project.
- viii. Total requirement of surface/ ground water and power with their respective sources, status of approval.
- ix. Water balance diagram
- x. Details of Emission, effluents, hazardous waste generation and mode of disposal during construction as well as operation phase.
- xi. Man-power requirement.
- xii. Cost of project and scheduled time of completion.
- xiii. In case of expansion projects, project proponent shall submit structural stability certificate showing whether existing structure withstand for proposed expansion activity.
- xiv. Brief on present status of compliance (Expansion/modernization proposals)
 - a. Cumulative Environment Impact Assessment for the existing as well as the proposed expansion/modernization shall be carried out.
 - b. In case of ground water drawl for the existing unit, action plan for phasing out of ground water abstraction in next two years except for domestic purposes and shall switch over to 100 % use of surface water from nearby source.
 - c. Copy of all the Environment Clearance(s) including Amendments/validity of extension/transfer of EC, there to obtained for the project from MoEF&CC/SEIAA shall be attached as Annexures. A Certified Compliance

Report (CCR) of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change/ or concerned authority as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022 on the status of compliance of conditions stipulated in all the existing environment clearances including amendments shall be provided. A Certified Compliance Report (CCR) issued by the concerned Authority shall be valid for a period of one year from the date of inspection.

- d. In case the existing project has not obtained Environment Clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. A proper justification needs to be submitted along with documentary proof. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 1994 or 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of CTO from the Regional Office of the SPCB shall be submitted, as per OM No. IA3-22/10/2022-IA.III [E 1772581], dated 8th June, 2022. CCR on CTO conditions issued by the concerned SPCBs/PCCs shall be valid for a period of one year from the date of inspection of the project.

3. Description of the Environment

- i. Study period
- ii. Approach and methodology for data collection as furnished below.

Attributes	Sampling		Remarks
	Network	Frequency	
A. Air Environment			
Micro-Meteorological - Wind speed (Hourly) - Wind direction - Dry bulb temperature - Wet bulb temperature - Relative humidity - Rainfall - Solar radiation - Cloud cover - Environmental Lapse Rate	Minimum 1 site in the project impact area	1 hourly continuous	- IS 5182 Part 1-20 - Site specific primary data is essential - Secondary data from IMD, New Delhi - CPCB guidelines to be considered.
Pollutants PM_{2.5}			
PM₁₀	At least 8-12 locations	As per National Ambient Air Quality Standards,	- Sampling as per CPCB guidelines - Collection of AAQ data (except in monsoon season) - Locations of various
SO₂			
NO_x			
CO			

Attributes	Sampling		Remarks
	Network	Frequency	
• HC • Other parameters relevant to the project and topography of the area		CPCB Notification.	stations for different parameters should be related to the characteristic properties of the parameters. • The monitoring stations shall be based on the NAAQM standards as per GSR 826(E) dated 16/11/2009 and take into account the predominant wind direction, population zone and sensitive receptors including reserved forests, • Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAAQM Notification of 16/11/2009 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.
B. Noise			
• Hourly equivalent noise levels	At least 8-12 locations	As per CPCB norms	-
C. Water			
Parameters for water quality • pH, temp, turbidity, magnesium hardness, total alkalinity,	Samples for water quality should be collected and analyzed as per: • IS: 2488 (Part 1-5) methods for sampling and testing of Industrial effluents • Standard methods for examination of water and		

Attributes	Sampling		Remarks
	Network	Frequency	
chloride, sulphate, nitrate, fluoride, sodium, potassium, salinity • Total nitrogen, total phosphorus, DO, BOD, COD, Phenol • Heavy metals • Total coliforms, faecal coliforms • Phyto-plankton • Zoo-plankton • Microalgae/microalgal bloom	wastewater analysis published by American Public Health Association.		
For River Bodies • Total Carbon • pH • Dissolved Oxygen • Biological Oxygen Demand • Free NH4 • Boron • Sodium Absorption Ratio • Electrical Conductivity • TDS	• Surface water quality of the nearest River (60m upstream and downstream) and other surface water bodies	• Yield of water sources to be measured during critical season • Standard methodology for collection of surface water (BIS standards)	
For Ground Water	• Ground water monitoring data should be collected at minimum of 8 locations (from existing wells /tube wells/existing current records) from the study area and shall be included.		
D. Traffic Study			
• Type of vehicles • Frequency of vehicles for transportation of materials • Additional traffic due to proposed project • Parking arrangement	-		
E. Land Environment			
Soil	Soil samples be collected as per BIS specifications		

Attributes	Sampling		Remarks
	Network	Frequency	
- Particle size distribution - Texture - pH - Electrical conductivity - Cation exchange capacity - Alkali metals - Sodium Absorption Ratio (SAR) - Permeability - Water holding capacity - Porosity			
Land use/Landscape - Location code - Total project area - Topography - Drainage (natural) - Cultivated, forest, plantations, water bodies, roads and settlements	-		
E. Biological Environment			
Aquatic - Primary productivity - Aquatic weeds - Enumeration of phyto plankton, zoo plankton and benthos - Fisheries - Diversity indices - Trophic levels - Rare and endangered species - Marine Parks/ Sanctuaries/ closed areas /coastal regulation zone (CRZ) Terrestrial - Vegetation-species list, economic importance,		- 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. Indicator species which indicate ecological and environment degradation should be identified and included to clearly state whether the proposed project would result in to any adverse effect on any species. - Samples to collect from upstream and downstream of discharge point, nearby tributaries at downstream, and also from dug wells close to activity site. - For forest studies, direction of wind should be considered while selecting forests. - Secondary data to collect from Government offices, NGOs, published literature.	

Attributes	Sampling		Remarks
	Network	Frequency	
forest produce, medicinal value • Importance value index (IVI) of trees • Fauna • Avi fauna • Rare and endangered species • Sanctuaries / National park / Biosphere reserve • Migratory routes			
F. Socio-economic			
• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education			• Socio-economic survey is based on proportionate, stratified and random sampling method. • Primary data collection through questionnaire • Secondary data from census records, statistical hard books, topo sheets, health records and relevant official records available with Govt. agencies

iii. Interpretation of each environment attribute shall be enumerated and summarized as given below:

- Ambient air quality
- Ambient Noise quality
- Surface water quality
- Ground water quality
- Soil quality
- Biological Environment
- Land use
- Socio-economic environment

4. Anticipated Environment Impacts and mitigation measures (In case of expansion, cumulative impact assessment shall be carried out)

i. Identification of potential impacts in the form of a **matrix** for the construction and operation phase for all the environment components

Activity	Environment	Ecological	Socio-economic

Construction phase			
Operation phase			

- ii. Impact on ambient air quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
 - Details of stack emissions from the existing as well as proposed activity.
 - Assessment of ground level concentration of pollutants from the stack emission based on AQIP Modelling The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any along with wind rose map for respective period
 - Impact on ground level concentration, under normal, abnormal and emergency conditions. Measures to handle emergency situations in the event of uncontrolled release of emissions.
- iii. Impact on ambient noise quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- iv. Impact on traffic (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- v. Impact on soil quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- vi. Impact on land use (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- vii. Impact on surface water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- viii. Impact on ground water resource and quality (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- ix. Impact on terrestrial and aquatic habitat (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase

- x. Impact on socio-economic environment (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase
- xi. Impact on occupational health and safety (Sources; Embedded control measures; Assessment; Mitigation measures; Residual impact)
 - a. Construction phase
 - b. Operation phase

5. Analysis of Alternatives (Technology & Site)

- i. No project scenario
- ii. Site alternative
- iii. Technical and social concerns
- iv. Conclusion

6. Environmental Monitoring Program

- i. Details of the Environment Management Cell
- ii. Performance monitoring schedule for all pollution control devices shall be furnished.
- iii. Corporate Environment Policy
 - a. 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.
 - b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environment or forest norms / conditions? If so, it may be detailed in the EIA.
 - c. What is the hierarchical system or Administrative order of the company to deal with the environment issues and for ensuring compliance with the environment clearance conditions? Details of this system may be given.
 - d. Does the company have system of reporting of non compliances / violations of environment 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
- iv. Action plan for **post-project environment monitoring matrix:**

Activity	Aspect	Monitoring Parameter	Location	Frequency	Responsibility
Construction phase					
Operation phase					

7. Additional Studies

- 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 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 monitorable with defined time frames.

- ii. Details of adoption/ implementation status/plan to achieve the goal of Glasgow COP26 Climate Submit with regard to enhance the non-fossil energy, use of renewable energy, minimization of net carbon emission and carbon intensity with long-term target of “net Zero” emission.
- iii. Implementation status/measures adopted for avoiding the generation of single used plastic waste.
- iv. In cases the project is located in Critically and Severely Polluted Areas, additional mitigation measures adopted and detailed action plan to be submitted in the EIA/EMP Report as per MoEF&CC O.M. No. 22-23/2028-IA.III dated 31/10/2019 and MoEF&CC O.M. No. 22-23/2028-IA.III dated 5/07/2022 has to be submitted.
- v. Public consultation details (Entire proceedings as separate annexure along with authenticated English Translation of Public Consultation proceedings).
- vi. 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.
- vii. Summary of issues raised during public consultation along with action plan to address the same as per MoEF&CC O.M. dated 30/09/2020

S N o	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Crores)
	Name of the Activity	Physical Targets	1 st	2 nd	3 rd	

viii. Risk assessment

- Methodology
- Hazard identification
- Frequency analysis
- Consequence analysis
- Risk assessment outcome

ix. Emergency response and preparedness plan

8. Project Benefits

- i. Environment benefits
- ii. Social infrastructure
- iii. Employment and business opportunity
- iv. Other tangible benefits

9. Environment Cost Benefit Analysis

- i. Net present value

- ii. Internal rate of return
- iii. Benefit cost ratio
- iv. Cost effectiveness analysis

10. Environment Management Plan (Construction and Operation phase)

- i. Air quality management plan
- ii. Noise quality management plan
- iii. Action plan for hazardous waste management
- iv. Action plan for solid waste management
- v. Action plan for e-waste management.
- vi. Action plan for plastic waste management.
- vii. Action plan for construction and demolition waste management.
- viii. Effluent management plan
- ix. Storm water management plan
- x. Rain water harvesting plan
- xi. Plan for maximum usage of waste water/treated water in the Unit
- xii. Occupational health and safety management plan
- xiii. Green belt development plan: 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 shall not less than 2500 per ha within a time frame of one year shall be submitted. Survival rate of green belt shall be monitored on periodic basis to ensure that survival rate not be less than 80 %.
- xiv. Socio-economic management plan
- xv. Wildlife conservation plan (In case of presence of schedule I species)
- xvi. Total capital cost and recurring cost/annum for environment pollution control measures shall be included.

11. Conclusion of the EIA study

12. In addition to the above, 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.

Standard ToRs FOR CEMENT INDUSTRY [3(b)]

1. Limestone and coal linkage documents along with the status of environment 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 Corporate Responsibility for Environmental Protection (CREP) guidelines shall 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. Provision of Alternate fuels.
10. Details of Implementation of Fly Ash Management Rules
11. Emission/Effluent norms as per GSR 496 (E) dated 9/5/2016 [EPA Rules 1986].
12. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
13. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
14. PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.
15. Action plan for 100 % solid waste utilization shall be submitted.
16. PM (PM₁₀ 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 PM₁₀ to be carried over.

Standard ToRs FOR INTEGRATED STEEL PLANT [3(a)]

1. Iron ore/coal linkage documents along with the status of environment 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 (PM₁₀ and PM_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations (trace elements) of PM₁₀ 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 specially in 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.
 21. Fourth Hole fume extraction system shall be provided for submerged Arc Furnace (SAF). Waste heat recovery (WHR) system shall be installed to recover the sensible heat from flue gases of electric arc furnace (EAF).
 22. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019 [EPA Rules 1986].
 23. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
 24. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
 25. Action plan for 100 % solid waste utilization shall be submitted.
 26. PP shall explore the possibility of plastic waste utilization in the Plant/Unit process.

Standard ToRs FOR METALLURGICAL INDUSTRY (Ferrous and Non-ferrous)[3(a)]

1. 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.

2. Plan for the implementation of the recommendations made for the proposed Unit in the Corporate Responsibility for Environmental Protection (CREP) guidelines.
3. Plan for solid wastes utilization.
4. Plan for utilization of energy in off gases (coke oven, blast furnace)
5. System of coke quenching adopted with full justification.
6. 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.
7. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
8. Details on toxic content using Toxicity Characteristic Leaching Procedure (TCLP), composition and end use of slag.
9. 100 % dolo char generated in the plant shall be used to generate power.
10. Fourth Hole fume extraction system shall be provided for SAF.WHR system shall be installed to recover sensible heat from flue gases of EAF. Provision for installation of jigging and briquetting plant to utilise the fines generated in the process.
11. No tailing pond is permitted for Iron ore slimes. Dewatering and filtration system shall be provided.
12. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019 [EPA Rules 1986].
13. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
14. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be submitted.
15. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
16. Action plan for 100 % solid waste utilization shall be submitted.
17. PM (PM₁₀ 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 PM₁₀ to be carried over.

Standard ToRs FOR PULP AND PAPER INDUSTRY [5(i)]

1. A note on pulp washing system capable of handling wood pulp shall be included.
2. 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

3. 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.
4. 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.
5. 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.
6. Undertaking to comply with the norms stipulated in the S.O. 3187 (E) dated 7/10/2016 for the projects located in Ganga basin.
7. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.
8. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
9. Action plan for 100 % waste utilization shall be submitted.

Standard ToRs FOR LEATHER/SKIN/HIDE PROCESSING INDUSTRY [4(f)]

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.
5. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
6. Action plan for 100 % waste utilization shall be submitted.

Standard ToRs FOR COKE OVEN PLANT [4(b)]

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.
6. Emission/effluent norms as per G.S.R 894 (E) dated 4/12/2019. Provision of CDQ in case of coke oven plant of 0.8 MTPA and above.
7. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
8. Action plan for 100 % solid waste utilization shall be submitted.
9. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

Standard ToRs FOR ASBESTOS MILLING AND ASBESTOS BASED PRODUCTS[4(c)]

1. Type of fibres used (Asbestos and others) and preference of selection from techno-environment angle should be furnished
2. 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
3. Technology adopted, flow chart, process description and layout marking areas of potential environment impacts
4. National standards and codes of practice in the use of asbestos particular to the industry should be furnished
5. In case of newly introduced technology, it should include the consequences of any failure of equipment/ technology and the product on environment status.
6. In case of expansion project asbestos fibre to be measured at stack emission and work zone area, besides base line air quality.
7. In case of green field project asbestos fibre to be measured in the ambient air.
8. Action plan to limit the particulate matter emission from all the stacks below 30 mg/Nm³ shall be furnished.
9. Action plan for 100 % solid waste utilization shall be submitted.
10. PM (PM₁₀ and P_{2.5}) present in the ambient air must be analysed for source analysis – natural dust/RSPM generated from plant operations in case of expansion projects (trace elements /asbestos fibre) of PM₁₀ to be carried over.
11. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

Standard ToRs FOR IRON ORE BENEFICIATION PLANT [2 (b)]

1. Details regarding pollution control measures to be adopted in the mineral handling area, loading and unloading areas including all transfer points shall be submitted.
2. The Project proponent shall submit action plan for conditioning of the ore with water to mitigate fugitive dust emission, without affecting flow of ore in the ore processing and handling areas.
3. Treatment details regarding effluent generated from the ore beneficiation plant and the mode of transportation of tailing slurry shall be submitted.
4. Separate chapter on slime management shall be submitted.
5. Action plan for regular monitoring of ground water level and quality in and around the project area of beneficiation plant and tailing/slime pond shall be submitted by establishing a network of existing wells and constructing new piezometers.
6. Details regarding lining of the tailing/slime pond to be provided shall be submitted in order to ensure that there is no leaching from the tailing/slime pond.
7. Details regarding establishment of garland drain around the tailing/slime pond and the quantity of decanted water to be re-circulated from the tailing/slime pond shall be submitted along with complete water balance.
8. Technology to be adopted for maximum recovery of ore in order to reduce slurry discharge and to increase the life of the tailing/slime pond shall be submitted.
9. Action plan for 100 % solid waste utilization shall be submitted.
10. Action plan for the stock piles with impervious floor, provision of garland drains and catch pits to trap run off material shall be submitted.

ANNEXURE-3**List of the Expert Appraisal Committee (Industry-1) members participated during VC meeting**

S. No.	Name	Position	16/08/2022
1.	Shri. Rajive Kumar	Chairman	<i>Present</i>
2.	Dr. Dipankar Shome	Vice Chairman	<i>Present</i>
3.	Dr. S. Ranganathan	Member	
4.	Dr. Ranjit Prasad	Member	<i>Present</i>
5.	Dr. S. K. Singh	Member	<i>Present</i>
6.	Dr. Jai Krishna Pandey	Member	<i>Present</i>
7.	Dr. Tejaswini Ananthkumar	Member	<i>Present</i>
8.	Dr. Hemant Sahasrabuddhe	Member	<i>Present</i>
9.	Dr. E V R Raju	Member	<i>Present</i>
10.	Dr. B. N. Mohapatra, DG, (Representatives of NCCBM)	Member	<i>Present</i>
11.	Shri Nazimuddin, Scientist 'F' (Representative of CPCB)	Member	<i>Present</i>
12.	Dr. Sanjay Bist, Scientist 'E' (Representative of Indian Meteorological Department)	Member	<i>Present</i>
13.	Dr. S. Raghavan, Scientist 'D' (Representative of National Institute of Occupational Health (NIOH))	Member	<i>Present</i>
14.	Dr. R.B. Lal, Scientist E, MoEFCC	Member Secretary	<i>Present</i>

Approval of EAC Chairman

Email**Additional Director MoEFCC Dr R B LAL**

Re: Draft Minutes of the 10th EAC (Industry 1 Sector) meeting held on 16th August 2022-Regarding

From : rajivekumar1983@gmail.com

Wed, Aug 24, 2022 05:12 PM

Subject : Re: Draft Minutes of the 10th EAC
(Industry 1 Sector) meeting held on 16th
August 2022-Regarding 1 attachment**To :** Additional Director MoEFCC Dr R B LAL
<rb.lal@nic.in>**Cc :** chairman eac ind 1
<chairman.eac.ind.1@gmail.com>,
ranganathan metals
<ranganathan.metals@gmail.com>,
ranjitnitj@gmail.com,
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eac industry1
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Dear Dr Lal,

The draft minutes of 10 EAC- Industry-1 are approved.
Kindly do the needful.

Best wishes

Rajive Kumar
Chairman EAC-Industry-1

